

**The influence of adaptive sport involvement on the
identity formation of mobility impaired adolescents**

by

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DEDICATION

This thesis is dedicated to my beloved parents, Willem and Christien de Jager, for their unconditional love, endless support, encouragement and sacrifices.

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Above all, I thank my Heavenly Father for His love, grace and blessings bestowed on me every day.

DECLARATION

I, Aletta Magdalena Moll, declare that this thesis, entitled *The influence of adaptive sport involvement on the identity formation of mobility impaired adolescents*, is my original work and that all the sources I have used or quoted have been indicated and acknowledged by means of complete references.

I further declare that I have not previously submitted this work, or any part of it, for examination at the University of South Africa for another qualification, or at any other higher education institution.

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A handwritten signature in black ink, reading 'A. Moll' in a cursive script.

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ABSTRACT

The aim of the research was to determine the influence of adapted sport on the identity formation of adolescents with a mobility impairment.

An empirical investigation was carried out to investigate the relationship between certain variables, such as social relationships and affective constructs, and the identity formation of adolescents with a mobility impairment as information emerged from the literature study.

A sample of 140 adolescents with a mobility impairment was drawn using purposive sampling. An instrument to measure the identity formation of adolescents with a mobility impairment was compiled. The data, which were obtained from the implementation of the instrument, were analysed using qualitative content analysis techniques.

The major findings of the study revealed that there was no significant difference in the identity of adolescents with a mobility impairment who participated in sport, compared with the identity of adolescents with a mobility impairment who did not participate in sport.

There was however, a significant positive correlation between social relationships with friends and parents, and the identity formation of adolescents with a mobility impairment. There was also a positive correlation between affective variables and the identity formation of adolescents with a mobility impairment. The two positive affective constructs with the highest correlation were trustfulness and gregariousness. The negative construct with the highest correlation was depression.

Based on the findings, conclusions were drawn and recommendations were made. The relationship of adolescents with their friends and parents, together with the health of adolescents, explained the largest proportion of the variance in the identity formation of adolescents with a mobility impairment, namely 42%. The remaining 58% of the variance in the identity formation has not been significantly explained as yet.

The implications for parents and educators are clearly explained.

KEY TERMS

Identity formation, identity, adolescence, adaptive sport, mobility impairment, disability

THE INFLUENCE OF ADAPTIVE SPORT INVOLVEMENT ON THE IDENTITY FORMATION OF MOBILITY IMPAIRED ADOLESCENTS

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THE INFLUENCE OF ADAPTIVE SPORT INVOLVEMENT ON THE IDENTITY FORMATION OF MOBILITY IMPAIRED ADOLESCENTS

CHAPTER 1 ANALYSIS OF THE PROBLEM AND RESEARCH PROGRAMME

1. INTRODUCTION

The renowned physicist Stephen Hawking was diagnosed with amyotrophic lateral sclerosis (ALS, also known as Lou Gehrig's disease) at the age of 21. Amyotrophic lateral sclerosis is a progressive neurodegenerative disease that affects nerve cells in the brain and spinal cord and individuals may lose the ability to speak, eat, move and breathe (Amyotrophic Lateral Sclerosis [ALS] Association, 2016:1). In spite of his disease Hawking received the Copley medal, which is the highest award for scientific achievement, for his work in theoretical physics and cosmology (Stephen Hawking, 2016). His disease does not prevent him from thriving personally and professionally. Hawking's timeless advice to persons with a disability is '*... concentrate on things your disability doesn't prevent you doing well, and don't regret the things it interferes with. Don't be disabled in spirit as well as physically*' (Dreifus, 2011:1). The 74-year-old Hawking was part of the opening proceedings at the London Paralympic Games in 2012. The Paralympic Games is a major international multi-sport event involving athletes with a range of disabilities. These games are designed to emphasize the participant's athletic achievements and not their disability. Paralympians celebrate the endless possibilities of the human spirit.

A true Paralympian is the British school girl, Ellie Robinson. Robinson was born in 2001 and has a form of dwarfism. She was diagnosed in 2012 with Perthes hip disease and requires daily physiotherapy to manage her condition. Robinson was just 11 years old when her parents took her to the 2012 London Paralympic Games to watch Ellie

Simmonds, the four-time gold medalist, in action. The performance inspired her. Robinson, who suffers from achondroplasia (a common cause of dwarfism), the same condition as Simmonds, was determined to follow in her new idol's footsteps (Mendick & Bloom, 2016:1). At the age of 15 Robinson was included in the 2016 Great Britain Paralympic swimming team participating in the Rio de Janeiro Paralympic Games. This teenager won the gold medal for the 50 meter butterfly and set a new Paralympic Record in this event. Robinson also won a bronze medal in the 100 meter freestyle.

Achieving success in the face of a disability is difficult, but not impossible. It is not the disability that defines the individual, but how he or she deals with the challenges the disability presents.

1.2 AWARENESS OF THE PROBLEM

The life of a child with a disability involves many challenges. According to the Human Rights Watch (2015:74), there are about 500,000 children in South Africa with a disability who are of school age, but because of various factors do not attend school. These children are often institutionalized and are subjected to verbal abuse, physical violence, the lack of medication and malnutrition (Human Rights Watch, 2011:3-7). Children with a disability thus face significant barriers exercising their human rights.

When children with a disability reach the adolescent stage, additional demands are made of them. According to Schlüter-Müller, Goth, Jung and Schmeck (2015:63), the consolidation of a stable identity is one of the fundamental developmental tasks of adolescence. An identity is not formed in isolation, but it is a process influenced by the social interactions between adolescents and other individuals who cross their paths. The influence of the society and the culture in which adolescents find themselves plays a vital role in their identity formation.

The environment in which adolescents with a disability are situated can probably differ from the environment in which adolescents without a disability find themselves. What remains fundamental is the social interaction between adolescents and other individuals. The identity of adolescents with a disability is influenced by the reactions of other individuals to their appearance and behavior, the feedback they receive from

others (positive as well as negative), the compassion and support they receive, and the relationships in which they are involved. These relationships include relationships with family members, friends, teachers and other individuals in the community. An additional environment to which adolescents can be exposed is the sport milieu which provides other opportunities for social relationships.

Sport is an integral part of every society and culture, especially in South Africa where sport is deeply rooted in the hearts of participants and spectators (Sanders, Phillips & Vanreusel, 2014:789-805). Apart from the health benefits of sport participation, sport is often described as a 'vehicle for social change' to bring about changes in individuals and in society (Haasler, 2012:11; Kaufman & Wolff, 2010:154). Sport may thus have an influence on the identity formation of adolescents. Consequently, sport may also have an influence on the identity formation of adolescents with a disability. There is no reason why adolescents with a disability should be excluded from participation in sport. Adaptive sport has been implemented as a measure to provide all individuals with a disability, regardless of the type or severity of the disability, with an opportunity to take part in the sport of their choice.

To enable adolescents with a disability to form their identity, they must be exposed to and engage in social relations, despite the barriers which they are already experiencing. The question now arises: What role can sport play in creating a healthy, stable identity, regardless of the disability and its impediments?

In order to analyze the problem, it is essential to explore the situatedness of adolescents with a disability and therefore the focus of this thesis is on adolescence, disability, identity formation and sport participation.

1.2.1 Adolescence

Adolescence is a challenging time for young people, their parents and their educators. This particular phase of human development is normally associated with conflict, turmoil and tension. Broughton (1981:23) presented the following poem written by a 16-year-old boy to illustrate his sense of tension and confusion:

*No one can describe
Me the way I am
No one can enter my brain
At least no mortal man
So if you say you know me,
Please sir, look again,
For no one knows who I am but me,
And then, do I really? (unknown 16-year-old)*

Dahl (2006:1) concurred when he described the adolescent as a puzzle, a volcano of emotions prone to impulsive and unpredictable behavior. As a developmental stage, the adolescent years are still not completely understood; yet it is a critical time in the lives of young people (Costello, Copeland & Angold, 2011:1015).

Adolescence can be seen as the period of developmental transition between childhood and adulthood. During this period children explore new dimensions, redefine themselves, change their self-image and create a self-concept (Endres, 2008:29-30). During adolescence the child aims to adapt to the cultural expectations of becoming an adult (Hardman, 2012:205) and this occurs more or less during the high school years (Newman & Newman, 2012:359). According to the American Psychological Association [APA] (VandenBos, 2013a:14; VandenBos, 2013b:21), adolescence starts with puberty (10-12 years) and ends with physiological maturity (\pm 19 years). It is not only one of the most dynamic stages in human development, but is also a difficult stage for adolescents.

The transition from childhood to adolescence is often traumatic and stressful for children (Hardman, 2012:204; Casey, Jones, Levita, Libby, Pattwell, Ruberry, Soliman & Somerville, 2010:225; Anderson, Belar, Breckler, Nordal, Ballard, Bufka, Bossolo, Bethune, Brownawell & Wiggins, 2015:12). Dynamic developmental changes occur on a cognitive, social and physical level during the adolescent years (Garcia, 2010:167). Of particular importance is the fact that these developmental changes do not happen in isolation but are intertwined. Changes in one area of development typically lead to changes in other areas of development and these changes can occur simultaneously (Blum, Astone, Decker & Mouli, 2014:321-323). Social changes present new challenges, such as using drugs or alcohol, which may continue into adulthood.

The changes in **cognitive** development during adolescence are dramatic. Adolescents develop the cognitive capacity to realize the impact of their present behavior on their future. Piaget believes that the highest level of intellectual development is reached during adolescence with formal-operational thinking, although further knowledge is continually gained (Piaget, 1972:10). Adolescents can think about abstract concepts and apply their logical reasoning to theoretical problems. These formal-operational thoughts prepare the individual to gain a sense of identity, think in more complex ways about moral issues and understand other people better (Sigelman & Rider, 2012:239). During this stage adolescents can reason without reference to concrete objects, events or actions. Theoretical, propositional, hypothetical and combinational reasoning patterns are typical of this stage (Özgelen, 2012:286).

As with most new skills, adolescents are keen to practice their improving arguing abilities (Hudson, 2016:1). This often leads to conflict with their parents and other authority figures, such as teachers, when their decisions are questioned. Adolescents become eager to gain and apply knowledge and to consider a range of ideas or options. They begin to anticipate how their parents will react to something they say or do, and then they prepare an answer or an explanation. Conflict with parents normally involves time limits which are not agreed upon; parents' disapproval of the adolescent's friends who may be seen as a bad influence; conflict about chores that have to be done; listening to loud music; and the disapproval of bad habits like smoking and drinking (Hudson, 2016:1).

Adolescents are striving towards their independence, yet they are often unwilling to assume the accompanying responsibility. They often want to make their own rules, yet have difficulty following family rules. Adolescents feel that their bodies and minds are ready to be independent, but society and their parents say the exact opposite. They have not learned what they need to know yet; they cannot support themselves and they do not fully understand the dangers of their environment (McNeely & Blanchard, 2009:23-27; Mergler & Patton, 2007:57-70).

Socially, adolescents migrate toward peer relationships and begin to separate from their parents (Garcia, 2010:167). During this period adolescents spend more time with their peers and peer relationships become more mature and significant (Hardman,

2012:215). Adolescents choose friendships to suit their needs for emotional support and exploration or re-affirmation of their values or aspirations (Hardman, 2012:220).

While peer and other social influences often reinforce family values, some influences may expose the adolescent to values that differ significantly from the family's values. The need to balance peer pressure and family expectations creates both new challenges and family tensions as adolescents begin to make independent decisions. Huitt and Dawson (2011:14) refer to studies of peer social status during adolescence, wherein adolescents in the popular group were found to have high levels of perspective-taking skills, self-regulation, and communication and language skills. These adolescents also had higher levels of cognitive and social problem-solving abilities. On the other hand, some adolescents were classified as non-popular or rejected by their peers. These adolescents displayed high levels of aggression and were more likely to be socially withdrawn (Huitt & Dawson, 2011:14).

During adolescence, friendships become closer and more important and play a key part in allowing young adolescents to sort out who they are and where they are heading. The influence of friends can become so influential that their own roles diminish. Poor self-esteem causes loneliness, awkward behavior towards others and sensitivity to criticism. These adolescents are less likely to join in activities and form friendships. They may act out to gain attention, for example, smoking or drinking. The need to 'fit in' is stronger than at any other stage.

Peers influence most aspects of adolescents' life, including how they dress, what music they listen to and what kind of activities they engage in. Many problems experienced by teenagers, for example, bullying, truancy, relationship problems, attitude problems, substance abuse, unsafe sex, and self-esteem issues, can be linked to the interaction between teenagers.

Major **physical** changes also occur during adolescence. The most noticeable change in adolescents is the rapid physical development of boys and girls which is set in motion by hormonal processes (Hardman, 2012:206-207; Sigelman & Rider, 2012:67). The first signs are the physical growth spurt (height and weight), the changes in primary sexual

characteristics (the reproductive organs) and the development of secondary sexual characteristics (e.g. underarm hair and deepening voice) (Hardman, 2012:207).

Boys and girls develop at different rates and a combination of genes, hormones, and environmental factors determines the timing and the rate of growth and puberty (Sigelman & Rider, 2012:167, 182). Girls often experience these changes more on the negative side, whereas boys tend to have a more positive reaction to growth and puberty (Sigelman & Rider, 2012:182). Both boys and girls spend hours on their appearance to fit in with the norms of the group with whom they most identify. At the same time they wish to have their own unique style, and they may spend hours in the bathroom or in front of the mirror to achieve this goal (APA, 2002:8).

Puberty is associated with weight gain and many adolescents experience dissatisfaction with their changing bodies. Eating disorders, such as anorexia nervosa and bulimia nervosa, can develop. These eating disorders most often occur in adolescent females and are accompanied by depression and other psychiatric disorders (Harrington, Jimerson, Haxton & Jimerson, 2015:46).

The pubertal development of boys and girls occurs in a sequential manner, within a range of time, and causes 'early' or 'late' developers (Garcia, 2010:167). Young adolescents who bloom very early or very late may have other concerns. Whatever the rate of growth, many adolescents have an unrealistic view of themselves. The effect of the age on the beginning of the physical changes, as well as the ways in which classmates, friends, family and the world respond to those changes, can have a long-lasting effect. Many adolescents are self-conscious and because they are experiencing all these changes, they are often overly sensitive about themselves. They often believe that they are the only ones going through this and nobody understands them. This may lead to loneliness and isolation.

For many adolescents it is difficult to deal with physical changes and the consequences of some of these changes. It stands to reason that it is much more difficult for adolescents living with a physical disability to cope with these changes. It has already been mentioned that there is an interrelationship between the cognitive, social and physical development during adolescence. It is not just the presence of a physical

disability that some adolescents have to deal with, but also the impact of the disability on the other levels of development.

1.2.2 Disability

Disability is an umbrella term which covers impairments, activity limitations and participation restrictions (World Health Organization [WHO], 2011:4). Disability is not just a health problem but it is a complex, dynamic and multidimensional phenomenon. The presence of a disability influences the interaction between a person and the society in which he or she lives (WHO, 2011:3-4).

Mobility impairment is a category of disability that includes people with varying types of physical disabilities. Mobility impairment specifically refers to the inability of a person to use one or more of his or her extremities, or a lack of strength to walk, grasp, or lift objects (Colorado State University, 2016). Mobility impairment can include an inability to move about as easily as others, limited movement of arms or legs, decrease in strength or control of the muscles, and abnormal or impaired coordination. It is thus a disability which interferes with a person's ability to perform tasks that require motor control and coordination. In some adolescents the impairments are visible and evident and in other adolescents, the impairment may be less obvious. The use of mobility aids such as canes, crutches, walkers, wheelchairs and scooters is normally an indication of the severity of the disability (Davis, Rockwood, Mitnitski & Rockwood, 2011:80).

Living with a disability can be challenging for an adolescent, from dealing with staring, teasing and bullying to the frustrations of being unable to take part in an activity or being part of a social group (Otto, 2013:1; Piek, Barrett, Allen, Jones & Louise, 2005:453; Berger, 2013:114). The visibility of the disability, or the extent of disfigurement, influences the dissatisfaction with one's appearance. Adolescents with a disability that is visible to others have more problems accepting their bodies (Pinquart & Pfeiffer, 2015:251). Different physical functions and appearance can lead to a higher risk of stigmatization and a physical and verbal victimization by peers.

When adolescents have a disability, they face significant physical barriers owing to a lack of physical activity and participation levels which are lower than for typically

developing children. This results in these adolescents being overweight, physically weaker and less fit than their typically developing peers (O'Brien, Noyes, Spencer, Kubis, Edwards, Bray & Whitaker, 2015:431). These adolescents have shown to be at a higher risk of obesity and associated secondary conditions which can hinder independence and social participation (McPherson & Lindsay, 2012:201; Kuper, Monteath-van Dok, Wing, Danquah, Evans, Zuurmond & Gallinetti, 2014:1).

The presence of a disability influences adolescents as they experience life through their bodies and they are aware of their differences. Their sense-making of their world is therefore different owing to contained freedom. The feelings of adolescents with a physical disability are not necessarily in being less, but in being different according to the norms of society. This has an impact on the relationships adolescents have with themselves and with other individuals. Chronic illnesses and treatment of the disability may also impact negatively on the adolescent because of the amount of time spent in hospitals or other medical facilities (Pinquart & Pfeiffer, 2015:250).

A disability is often the cause why adolescents may lack the necessary skills to socialize, owing to limitations of activities and participation restrictions (Conzatti, De Marchi, Fox, Monks, Yiu & Zwicker, 2009:1). Like any other child, the child with a disability will benefit from having positive relationships and a sense of belonging. Unfortunately, adolescents with a disability may face social rejection and experience negative societal stereotypes. In some cultures, disability is still viewed as a result of witchcraft or evil spirit possession. In other communities, children with a disability are perceived as low performers, consequently demanding less and offering fewer opportunities for participation (The Regional Psychosocial Support Initiative [REPSSI], sa:14).

Some children with a disability may miss out on participation opportunities because of their parents' over-protectiveness or feelings of shame and guilt which may lead to 'hiding' their children from the community (Behle & Pinquart, 2015:774). Parents may notice that their children lack certain skills to accomplish tasks successfully. Consequently they have little confidence in their children and refrain from encouraging them to reach their full potential. Children who are not encouraged to explore their environment and potential will probably doubt their own capacity which may lead to low self-esteem, feelings of inferiority and helplessness (REPSSI, sa:14).

Adolescents who have a disability may experience difficulty in making friends and possible rejection from peers, which often lead to social isolation, a lower quality of life, and a lack of self-confidence (Marini, Glover-Graf & Millington, 2012:176, 199). When adolescents with a disability form relationships, they are frequently not able to maintain these relationships because their friends may be concerned about them, but not ready to accept them in an intimate relationship. Kissow (2015:144) realised that individuals with a physical disability often find their social interactions and social networks limited, with isolation affecting their effectiveness in social situations. Mundhenke, Hermansson and Nätterlund (2010:130) also referred to studies which indicate that children with a disability often have fewer friends, are excluded from peer groups and instead spend much of their time with adults. The loss of friends and peers could be a catalyst for sadness and anxiety (Abbott & Carpenter, 2015:74) or depression, anger and blame (Campbell, Missiuna & Vaillancourt, 2012:328).

Adolescents who have some kind of disability are often the target of name-calling insults, verbal threats as well as being purposefully excluded and ostracized by their peers (Campbell et al., 2012:335; Estell, Farmer, Irvin, Crowther, Akos & Boudah, 2009:136:). Consequently, children with movement limitations experience low self-worth which also affects their identity formation (Piek et al., 2005:453).

1.2.3 Identity formation

Simpson (2011:2-3) considered the formation of an identity as an important developmental task of adolescence. *'Identity formation is in a sense a lifelong process, but crucial aspects of identity are typically forged at adolescence, including developing an identity that reflects a sense of individuality as well as connection to valued people and groups'*. The APA (VandenBos, 2013a:288) described identity as an individual's sense of self, defined by physical and psychological characteristics that are different from those of any other person. One's body sensations, body image, memories, purposes, values and experiences allow a sense of continuity where one has the feeling that one is the same person every day. Identity thus refers to an individual's clear and consistent sense of who he or she is, what he or she believes, the values he or she has, what he or she is going to do with his or her life, and where he or she fits into society (Hardman, 2012:234).

According to Erikson (1963:235; 1968b:118), adolescence is the time when the identity crisis in an individual's life has to be resolved. Adolescents must discover and find their own identity while navigating through social interactions as they try to fit in. The foundation for an identity is already laid in childhood, but adolescents start to take conscious decisions regarding their own identity. They find themselves in a phase of major changes wherein their childhood roles are no longer sufficient or appropriate. As a result, individuals are no longer sure about who they are. The issue of 'Who am I?' is the cause of this identity crisis (Sigelman & Rider, 2012:382). Identity formation is thus a dynamic process in which the adolescent takes deliberate decisions about his or her skills and expectations in a changing social context. Confused adolescents often protect themselves by strongly identifying with their friends, a specific cause or an idol. This leads to a temporary loss of individuality during which adolescents use a particular language, dress in a specific way or demonstrate certain values in an effort to belong.

Many factors influence adolescents during their formation of an identity such as gender, culture, language, family and friends. One of these factors can be the presence of a physical disability. The type and severity of the disability, the age of the child and the support structure of the family and teachers may influence the identity formation of a particular individual. Children with a physical disability often face the challenge of having to construct an identity based on their disability, which is a given and can't be changed (Shapiro & Martin, 2010:80).

The age of the child at the time of the injury or illness can have different influences on the identity formation. Dumont (2013) saw the presence of a disability from birth and the impact thereof on identity formation in the following way:

Being born different or with disabilities will influence the development of identity. Children may find [it] more difficult to reach adulthood, to stay dependent on their parents, which will lead them to follow different stages of identity development as compared to others. They will necessarily have different life experiences – occupations, social relationships and others – that will tailor their identity. During adolescence for example some of them will experience more difficulty in asserting themselves or identifying themselves with peer groups.

For the adolescent who was not born with a disability, the unexpected disability caused by an illness or an accident can be traumatic. A devastating and challenging consequence of an acquired disability is the challenge that it poses to children's sense of personal identity. Children who have already built their sense of self on their academic success, their athletic abilities, popularity and attractiveness may now find their sense of self to be lost. An altered sense of self is viewed as a typical process in adjustment to the disability, rather than a psychiatric problem (Ylvisaker, Hibbard & Feeney, 2016:1).

Dziura (2015:27) stated that people who acquire a physical disability are faced with the necessity of redefining their role and place in society and often developing a new identity. A debilitating injury or illness represents a 'biological disruption' in which the relationship between one's body, mind and everyday life is threatened (Ostrander, 2008:586). Erikson noted the need to rebuild one's identity following such a disruption. For individuals who cannot achieve this identity synthesis, Erikson (1963) commented that their identity would remain inchoate ('identity diffusion'), leaving them vulnerable to mental health conditions such as depression and anxiety. A newly acquired disability does not change a person. He or she is still the same person but the experience forces the issue of 'finding one's self again'. This implies that the individual will experience the crises of the psychosocial stages of development all over again until a new identity is formed.

The degree to which individuals are impaired, their desire to avoid stigmatization and the consistency of the messages they receive from society and significant others determine their identity (Ridolfo & Ward, 2013:145-146). Factors that affect the identity formation of adolescents with a disability are self-definition (how they view themselves in life), self-efficacy (how they view themselves as able to act successfully in their environment) and self-determination (the degree of control over their own life and decision making) (Sadowski, 2008:172). Adolescents with a disability do not necessarily have the power or means to change their physical situation. This means that adolescents must be able to adapt to their situation and form a solid identity around their disability.

It is possible for adolescents with a mobility impairment to form a disability identity. The concept 'disability identity' refers to claiming one's status as an individual with a disability

and incorporating this status in one's self (Bogart, 2015:105; Dunn & Burcaw, 2013:148; Murugami, 2009:14). A clear disability identity can support adolescents to adapt to their disability since they are part of, and connected to a disability community. This identity guides adolescents with a mobility impairment towards what to do, what to value and how to behave in those situations where their impairment stands out, as well as in those situations where their impairment is not so noticeable (APA, 2013:1). The disability identity does not necessarily supersede other identities a person may possess as identities develop from past experiences, personality traits, abilities, physical appearance, values, goals and social roles (Dunn & Burcaw, 2013:148).

Gibson (2006) developed a Disability Identity Model that facilitates an understanding of persons with a disability and their identity development by giving insight into perceptions and struggles they may experience. This model makes provision for three stages: passive awareness, realization, and acceptance of a disability (Myers, Laux & Murdock, 2011:3). This model enables researchers to determine in which stage the adolescents find themselves, but it does not measure the identity formation of these adolescents. Bogart (2015:106) mentions the 8-item Disability Personal Identity Scale which can be used to assess a sense of positive disability identity. However, with only eight items it cannot be considered as an accurate measure of identity. There is also no evidence of empirical research to determine whether the identity formation of the adolescent with a disability is different to the identity formation of the adolescent without a disability.

Because identity in adolescents with a disability has not been researched properly, it is difficult to determine which factors are related to the identity formation in adolescents with a disability. One such factor can be sport participation. From research conducted among children without a disability, it was established that sport has a positive influence on their identity (Holt & Neely, 2011:303-304; Bruner, Balish, Forrest, Brown, Webber, Gray, McGuckin, Keats, Rehman & Shields, 2014:1; Chetcuti, 2009). However, the question arises whether it is also the case with adolescents with a disability. A study that shed light on the matter is that of Lundberg, Taniguchi, McCormick and Tibbs (2011). Lundberg et al. (2011) interviewed individuals with a disability who experienced a stigmatized identity related to their disability. The self-perceptions of these individuals were influenced by their participation in adapted sport. Their participation enabled them to challenge negative perceptions people had about them. Through participation in

sport, individuals with a disability had an opportunity to discover, or re-discover their subjective self. The adapted sport environment facilitated an identity change by providing the opportunity to develop new skills. Identity formation was thus possible through the discovery of self-knowledge and by the positive feedback from other individuals as a result of their sport participation (Lundberg et al., 2011:212, 218, 220-221). This research is significant, but only one empirical study complicates generalization of the findings.

A further issue regarding identity formation lacking empirical research is the influence of the onset of a disability. Some adolescents are born with the disability (congenital), while others acquire the disability later in their life owing to an illness or an accident. It is generally assumed that individuals with a congenital disability are better adapted than individuals who acquire a disability later in life as they haven't experienced a functional loss (Bogart, 2014:107-109). Bogart revealed that individuals with a congenital disability compared to an acquired disability, have a better satisfaction with life because of a stronger disability self-concept (Bogart, 2014:108). The results indicate that the time of onset, but not the duration of the disability, relates significantly to the satisfaction with life.

From the above overview of the literature, the conclusion can be drawn that insufficient research exists to determine to what extent the identity formation of adolescents is affected by a disability and accompanying factors. It would however, be irresponsible to conclude that the identity formation of adolescents without a disability occurs in the exact same manner as in the adolescent with a disability. It is therefore inevitable that research should be undertaken to focus on the identity formation of adolescents with a disability.

1.2.4 Sport participation

Sport as a recreational activity is often used as an avenue to promote self-esteem and identity formation of adolescents without a disability. When participating in sport, a social environment is created in which children can develop certain skills and talents such as identity development, autonomy, initiative and persistence, conflict resolution skills, ability to overcome challenges, comfort with intimacy, community attachment and civic engagement (Witt & Caldwell, 2010:18). These outcomes lay the foundation for long-

term educational success and prepare young children for the transition to adulthood (Witt & Caldwell, 2010:35).

Both formal studies and anecdotal evidence prove that participation in physical activity and sport has numerous benefits for adolescence (Mahoney & Stattin, 2000; Ries, Gittelsohn, Voorhees, Roche, Clifton & Astone, 2008; Casey, Mooney, Eime, Harvey, Smyth, Telford & Payne, 2013). The most general positive outcomes of taking part in sport are the improvement in physical health, strength building, enhanced coordination and motor skills, and improved cardiovascular health (Allender, Cowburn & Foster, 2006:826). Virgilio (2012:5) identified the following physical benefits from physical activities: weight control, controlled blood pressure, a reduced risk of heart diseases, avoidance of some cancers and type 2 diabetes, reduced cholesterol levels and the development of strong bones and muscles.

Another important aspect of participation in physical activities and sport is the impact that it has on emotional healing and psychological wellbeing (Coakley & Dunning, 2000:477). Participation in physical activities and sport provides a positive outlet for aggression and stress and helps alleviate depression and anxiety. It improves mental functioning and concentration. Physically active people may also experience self-confidence and improved self-image (Coakley & Dunning, 2000:477; United States Agency for International Development [USAID], sa:4). Physical activities and sport experiences can enrich emotional development by cultivating capacities for care, self-worth, strength of will, good judgment, understanding, love and friendship (Potgieter, 2003:182). Coakley and Dunning (2000:477) also mentioned that involvement in sport helps in learning to control and manage emotions and disciplining the self. It results in an overall improved quality of life and psychological wellbeing (Virgilio, 2012:5).

From the research it is evident that participation in sport has physical, as well as psychosocial advantages for all individuals. If sport is harnessed to promote the successful self-esteem and identity formation of the adolescent without a disability, it can be assumed that sport will also have the same impact on the successful self-esteem and identity formation of the adolescent with a disability. However, participation in sport is often hindered by the presence of a disability. The challenge is thus to include the adolescent with a disability in sport which is accessible for him or her.

Adaptive sport, or sport for persons with a disability, is not a new concept, but its full potential as a powerful means to foster inclusion and wellbeing of persons with a disability has not been exploited fully as yet. The type of disability, as well as the severity, determines the specific adaptations required. Existing sport with minor modifications (adaptions) to accommodate individuals with a disability is, for example, when an athlete is allowed to use a strap in powerlifting to strap him or her to the bench. Major modifications (adaptions) to accommodate individuals with a disability would include wheelchair tennis where the rules are changed to allow the ball to bounce twice. Several sports have been specifically developed for athletes with a disability which have no equivalent in able-bodied sport, for example, boccia and goalball (Australian Sports Commission, 2015:1). Not all sport has to be adapted for athletes with a disability. Individuals with a disability also participate in sport without any modifications to the rules, for example, swimming and athletics. As a result of the introduction of adaptive sport, there is no reason for any adolescent with a disability to be excluded from participating in sport because of the presence of the specific disability.

Studies examining the sport experiences of adolescents with a disability are relatively limited in comparison with experiences of adolescents without a disability. A popular approach to investigate adolescents with a disability and their participation in sport is to obtain a general idea of the feelings of the adolescent as a result of his or her sport participation (Fitzgerald, 2005:42-55; Groff & Kleiber, 2001:324-326; Machida, Irwin & Feltz, 2013:1054-1065. Groff and Kleiber (2001:324-326) interviewed adolescents who participated in an adapted sports program. For most of these athletes sport provided an avenue through which they could develop an overall sense of competence in skills not necessarily associated with sport.

According to Machida et al. (2013:1061), sport is found to be part of the resilience process for individuals with spinal cord injuries. These athletes indicated that sport participation provided them with achievement experiences that increased their confidence. These achievements and accomplishments were transferred to life outside sport. Sport helped them to have a more positive attitude about life. One participant acknowledged that through sport he learned discipline, ways to set goals and focus on what was necessary. Sport also provides athletes with opportunities to learn and practice coping skills (Scarpa, 2011:46-47).

Huang (2005:223-225, 230) conducted interviews with athletes with a disability to explore their experiences. These athletes experienced self-empowerment in sport on a physical and mental level. They considered it an advantage to be physically fit and energetic as it helped their daily movement in life, which further facilitated their mental strength to take charge of their own lives. Bačanac, Milićević-Marinković, Kasum and Marinković (2014:68) found that valuable life skills are developed by adolescents who participate in sport which helps them to cope successfully with different everyday challenges, pressures and demands, not only in sport, but in other life situations.

Turnnidge, Vierimma and Côté (2012:1134-1135) interviewed athletes with a disability who were part of a swimming program. The athletes had an opportunity to discover new skills and they could re-evaluate the limits of their abilities. They expressed how developing new skills had enabled them to experience a sense of accomplishment and to develop a pride in their abilities. Their sport experience fostered the development of responsibility, time management and work ethic. According to Turnnidge et al. (2012:1134-1135), athletes participating in the sport program developed a stronger self-concept and an enhanced sense of confidence. Sport participation also encouraged them to set goals for themselves and to develop higher self-expectations. Smith, Wedgwood, Llewellyn and Shuttleworth (2015:2) claimed that some children with a disability experience positive social interactions only when they take part in disability-specific sport.

Research indicates that the social nature of sport is a remarkable vehicle for helping youth with a disability to develop friendships (Martin, 2010:50). According to Groff, Lundberg and Zabriskie (2009:320, 324-325) the majority of athletes indicated that their participation in adaptive sport had a positive influence on their quality of life. *'Their participation in sport was a significant factor in influencing the quality of their overall health, quality of life, quality of their family life, and quality of their social life'*. Sport thus has the power to install values and change lives.

From the research discussed above it is evident that there are positive outcomes for adolescents with a disability who participate in sport. These positive outcomes include aspects such as an overall sense of competence in skills, learned discipline and

responsibilities, self-empowerment, increased confidence, development of a strong self-concept and the opportunity to develop friendships.

Research has been conducted on a single dimension of identity; namely, the athletic identity of adolescents with a disability (Shapiro & Martin, 2010; Anderson, 2009; Hadiyan & Sheikh, 2015). According to these researchers, the athletic identity is the sport specific component of an adolescent's self-concept and determines the degree to which the adolescent identifies with the athlete role. The strength of an athletic identity in an individual's self-concept varies because of past and current athletic experiences and the success or failure associated with these experiences (Proios, Proios, Mavrovouniotis & Theofanis, 2012:99). Hadiyan and Sheikh (2015) even established different levels of athletic identity among different types of sport.

Perrier, Smith, Strachan and Latimer-Cheung (2014:106) explored why an athletic identity might be lost or (re)developed after acquiring a physical disability. The results indicated that some of these individuals could not see themselves as athletes because of the bodily changes associated with their impairment. The second group of individuals made comparisons between past and present selves, and these differences diminished athletic identity. The third group of individuals recognized themselves as athletes. They were able to see their pre- and post-injury selves as different people. It was the commitment to sport and making the needed sacrifices to excel in sport that defined these individuals, regardless of their disability status (Perrier et al., 2014:112-117). Van de Vliet, Van Biesen and Vanlandewijck (2008:9) found that 'elite' athletes with a disability possess a strong athletic identity and subsequent self-perceptions, in which they identify themselves as being 'real athletes'. Their athletic identity is embedded in a broad self-concept, largely independent of their athletic performances.

Studies regarding the self-concept (self-esteem) of adolescents with a physical disability and the role of sport participation were more readily available (Scarpa, 2011; Šuc, Lešnik & Erpič, 2015; Asi, 2016). The results from these studies highlighted that individuals with a physical disability, who participate in sport, present a positive physical self-concept and good self-esteem. Asi (2016:40) confirmed the role of sport activities in improving the level of self-esteem of athletes with a physical disability. Their participation in these activities enables them to overcome their problems and their

disability. It is therefore strongly suggested by Šuc et al. (2015:34) that participation in sport activities must already begin in the final stages of the rehabilitation process.

There is currently an absence of recent research to determine what the effect of sport participation is on the holistic identity formation of the adolescent with a disability. The research of Williams (1994:14-31) is the only study that could be obtained which specifically focused on disability sport and identity construction (formation). However, in Williams's own words: '*... the resulting information is too simplistic and theoretically deficient. This research is insightful but it is collectively unsystematic. It is concluded that the study of disability sport socialization is in its infancy and is in urgent need of an adequate theoretical foundation*' (Williams, 1994:14).

It is possible that the identity of the adolescent who takes part in sport will be influenced in a more positive manner than the identity of the adolescent who does not take part in sport. However, such a statement cannot be presented as an accurate prediction of the identity formation of all adolescents with a disability. Martin (2010:58-59) established that there are negative outcomes to sport participation as well. Some individuals with a disability perceive that their participation in sport is trivialized and their physical abilities often doubted. Some children have negative experiences, such as being excluded from physical education classes and being considered as not good enough to be selected for teams (Smith et al., 2015:2). Sport can thus not be labeled as an exclusively positive or negative factor which influences identity formation. It can be assumed that not all adolescents with a disability, who take part in sport, have the same positive and negative experiences with the same intensity during their identity formation. Variables such as gender, age, type of disability, the onset of the disability, the severity of the disability, and the specific sport in which the adolescent is involved, may influence the identity formation differently.

A comprehensive understanding of the identity formation of the adolescent with a disability would thus include establishing the resolution of the stages during identity formation, determining an emotional profile, as well as ascertaining the socializing skills and capabilities of the adolescent. In order to determine which adolescents experience which problems in their identity formation, a suitable measuring instrument is required.

An acceptable, educational instrument to measure the identity formation of adolescents with a disability has to be developed.

1.3 FORMAL STATEMENT OF THE PROBLEM

Children are faced with numerous demands and challenges in their adolescent years. Amid all these demands and challenges, certain developmental tasks also need to be carried out. One of the central tasks of the adolescent is forming an own identity. For some adolescents it may be problematic to do so. The unique situation of each adolescent can affect his or her identity formation. It may also be the case for adolescents with a disability – more specifically adolescents with a mobility impairment – when the presence of a specific impairment causes additional challenges to, and constraints on the identity formation. Owing to a lack of research, there is no clarity on how the identity of the adolescent with a mobility impairment is formed.

From the discussion in paragraph 1.2.4, it can be assumed that sport participation may play a role in the identity formation of adolescents. However, the influence of sport on the identity formation of the adolescent with a mobility impairment may not be the same for all adolescent girls and boys. The age and gender of the adolescent, as well as the type and severity of the disability, are also factors which may affect the sport participation and identity formation.

It may be possible that the identity formation of adolescents who are born with a mobility impairment can be influenced in a totally different manner from that of adolescents who acquired the mobility impairment later in their lives. The impact of the early or late presence of a mobility impairment and the social relations in which adolescents are involved, are important for the identity formation of adolescents with a mobility impairment. Identity formation, according to Erikson (1968a:53-54), is a socio-affective construct. It emphasizes the importance of social relationships and other affective constructs related to identity formation such as the parent-child relationship, relationship with peers, anxiety and depression. There is uncertainty as to whether participation in adaptive sport will affect these constructs. These uncertainties lead to the following question which is considered the formal problem of the investigation: What is the

influence of adapted sport involvement on the identity formation of mobility impaired adolescents? To be able to address this question, the following sub-questions arise:

- 1.3.1 Is there a significant difference in the identity of adolescents with a mobility impairment who participate in sport compared with the identity of adolescents with a mobility impairment who do not participate in sport?
- 1.3.2 Is there a significant difference in the identity formation of adolescents with a mobility impairment who participate in sport compared with the identity formation of adolescents with a mobility impairment who do not participate in sport?
- 1.3.3 Is there a significant difference between adolescent boys and girls with a mobility impairment in respect of their participation in sport and their identity formation?
- 1.3.4 What influence does the type of mobility impairment have on the sport participation of adolescents?
- 1.3.5 Is there a significant difference in adolescents' sport participation and identity formation if they were born with a mobility impairment, compared with adolescents who became disabled later in their lives?
- 1.3.6 Is there a correlation between social relations and identity formation of adolescents with a mobility impairment?
- 1.3.7 Is there a significant difference in the social relations of adolescents with a mobility impairment participating in sport compared with the social relations of adolescents with a mobility impairment who do not participate in sport?
- 1.3.8 Is there a relationship between affective variables and the identity formation of adolescents with a mobility impairment?

- 1.3.9 Is there a significant difference in the affective experiences of adolescents with a mobility impairment who take part in sport compared with adolescents with a mobility impairment who do not participate in sport?
- 1.3.10 What is the most important variable associated with the identity formation of adolescents with a mobility impairment?

1.4 AIM OF THE RESEARCH

The aim of the research is to determine the influence of adapted sport on the identity formation of adolescents with a mobility impairment. To be able to address the research question, as well as the sub-questions stated in paragraph 1.3, the research focus is twofold.

Aim one: To explore existing literature to gain knowledge and an understanding of the three main concepts in the research question. These concepts are disability, sport participation and identity formation.

- Explore the literature on disability to obtain an understanding of disability and the situatedness of individuals with a disability. Look at the most recent terminology and definitions and what they mean as the terminology and definitions for describing disability continue to change over time. Investigate the various models of disability to irradiate the phenomenon and single out the models of relevance to the study.
- Analyze the literature on sport participation with the aim of determining the importance of participation in physical activities and sport. Investigate what the possible intrapersonal, interpersonal and structural reasons for non-participation could be, as these reasons may also be applicable to athletes with a disability. Explore adapted sport as an alternative to encourage athletes with a disability to engage in sport.
- Explore existing literature on identity formation to understand how an identity is formed. Single out and analyze the psychosocial theory of Erik Erikson as Erikson

provides a valuable conceptual framework for the understanding of identity. Investigate the identity status approach, as well as the epigenetic approach in order to determine which approach is appropriate for measuring the identity formation of adolescents with a mobility impairment.

Aim two: Carry out an empirical investigation to investigate the relationship between certain variables such as social relationships and affective constructs, and the identity formation of adolescents with a mobility impairment as information emerges from the literature study. State a number of hypotheses with reference to the variables and their relationship with the identity formation of adolescents with a mobility impairment to be able to achieve this. These hypotheses include a comparison between the identity formation of adolescents with a mobility impairment who take part in sport and those adolescents with a mobility impairment who do not take part in sport. Include in the hypotheses the correlation between social relations and identity formation, as well as the correlation between affective experiences and the identity formation of adolescents with a mobility impairment. Accommodate in the respective hypotheses the variables such as gender, the type of mobility impairment and the onset of the impairment. An instrument to measure the identity formation of adolescents with a mobility impairment is thus required. The data obtained through the implementation of the instrument will be used to test the formulated hypotheses.

1.5 RESEARCH PROGRAM

In Chapter 2 the occurrence of disability is explored. An overview is provided regarding the historical views on disability as well as the more recent approaches and models to accommodate individuals with a disability. The possible causes responsible for the various categories of disabilities are analysed based on medical and environmental conditions, with special reference to mobility impairments as this is a focus area of the current study. The chapter concludes with a description of the psychosocial aspects of living with a disability.

Chapter 3 deals with the importance of participation in physical activities by all individuals, including individuals with a disability. An attempt is made to understand how athletes with a disability can be accommodated in physical activity and sport

participation and therefore adapted sport is discussed as an alternative way to encourage athletes with a disability to engage in sport.

Chapter 4 is devoted to the phenomenon of identity by understanding the concepts and structures of identity and identity formation. The theoretical contribution of Erikson is discussed. Erikson's approach is unique as his focus is not only on the identity of the adolescent, but also on the process of identity formation which influences the identity. This chapter concludes with an exploration of existing approaches to measure identity and an informed decision is made on the most appropriate approach to measure identity during the current empirical investigation.

Chapter 5 provides information on the research design which is used in the empirical investigation. Specific hypotheses associated with the formal problem formulated are stated and these hypotheses need to be tested statistically. Information about the final sample, as well as the way in which the sample was selected, is provided. The measuring instruments implemented to obtain the data are also discussed. This discussion includes the items for the questionnaire, the structure of the questionnaire, and the instructions for the completion of the questionnaire. Finally, the procedure followed in the investigation is explained.

The results of the empirical study are presented in chapter 6. The data is analyzed using the Statistical Analysis System computer program. Attention is given to the processing, analysis, and interpretation of the data.

Finally, the implications of the research are discussed in Chapter 7. The main focus is on providing guidelines for parents and teachers for supporting adolescents with a mobility impairment in their identity formation. Guidelines to support adolescents in their identity formation are also provided to coaches who are involved in the sport participation of adolescents in general, but specifically where adolescents with a mobility impairment participate in sport.

The chapter concludes with a discussion of the contribution of the investigation, the limitations of the study and recommendations for further research.



CHAPTER 2

EXPLORING DISABILITY

2.1 INTRODUCTION

Disability is part of the human condition. Almost everyone will be temporarily or permanently impaired at some point in life and those who survive to old age will experience increasing difficulties in functioning. Most extended families have a disabled member and many non-disabled people take responsibility for supporting and caring for their relatives and friends with disabilities. (WHO, 2011:3.)

In this chapter the concept 'disability' is explored. A broad overview is provided regarding the terms and phrases which were originally used to refer to individuals with a disability, as well as the more appropriate terminology currently used. This is followed by an investigation of how disability is viewed by various researchers to illustrate that the term 'disability' implies different things to different people. These views are nestled in certain sources which are also discussed to illustrate the comprehensiveness of disability. The possible causes responsible for the various categories of disabilities based on medical and environmental conditions, with special reference to mobility impairments as this is a focus area of the current study, are briefly mentioned. Against this background, a possible definition of disability is given with reference to the terms 'impairment', 'disability' and 'handicap'.

To enable a thorough understanding of disability, it is necessary to make use of various models of disability to irradiate the phenomenon. These models are based on certain approaches to deal with disability. General reference is made to some of these models of disability, with the main focus on the medical model, the social model, and the biopsychosocial model which is of relevance to the current study. The medical model is of relevance because of the nature of the origin of the impairment and the treatment thereof. The social model focuses on the inclusion of individuals with an impairment into society just like any other person. The biopsychosocial model is then introduced as the most recent model to ensure participation of all persons with a disability in all

activities, regardless of their impairment. The chapter concludes with a brief description of the psychosocial aspects of living with a disability.

In the next paragraph the language used to discuss disability issues is considered.

2.2 TOWARDS A COMMON LANGUAGE FOR DEFINING DISABILITY

Defining disability is a formidable challenge as there is no global definition of disability that fits all circumstances. Though such a definition would be very desirable, it is in reality nearly impossible to accomplish (Jette, 2009:1165). Berger (2013:5) warned that words and phrases should be used carefully and should not demean people with a disability, for example, by referring to them as retards. Negative and patronising language produces negative and patronising images. Most of the older terms such as cripple, spastic and mongol have lost their original meaning and become terms of abuse (Barnes & Mercer, 2010:11; Barnes, Mercer & Shakespeare, 2003:6).

The term handicap often appears in the literature, especially in early research regarding disability. Handicap, used in common-sense language as a synonym for disability and impairment, has a complex and unstable meaning. It dates back to 400 years ago in the English language when the word handicap had a curious and strange history which was linked to begging, gambling and sport. According to an urban legend, the link with begging dates back to Henry VII, who authorized war veterans to beg in the street (with 'cap in hand') after the brutal war in England (1504) which left the country with veterans with a disability (DePoy & Gilson, 2011:10). However, the Oxford English Dictionary (Oxford Dictionaries Online, 2013) links the etymology of handicap only to gambling and sport. Handicaps were not classified according to individuals or their attributes, but rather according to the circumstances in which people with a disability were likely to find themselves. It was expected that circumstances could place such individuals at a disadvantage in relation to their peers when viewed from the norms of society (WHO, 1980:14). Nowadays the term handicap has fallen into disrepute (Berger, 2013:5) possibly because in English-speaking countries, it has a historical association with begging and charity or reduced capacity, although this may not be the case in other

languages (Barnes & Mercer, 2010:11). Masala and Petretto (2010) regard it as a non-politically correct word.

The term disablement also appears in the literature. Nagi (1991) believed that medicine was applying too strong a control over the issues linked to functional consequences and he decided to shift the focus from the physical consequences of pathologies to the dynamic process that leads to functional consequences. He renamed this process disablement to highlight the dynamic nature of the process. Nagi's model aimed at describing the process whereby an individual with a specific active pathology may have some functional limitations and some disabilities. By doing so, he defined disability as an 'expression of a physical or a mental limitation in a social context' (Pope & Tarlov, 1991:31-34) – a gap between the individual's capabilities and the demands created by the physical and social environment. He described disablement using the following four concepts:

- active pathology: a state of the body's defense and coping mechanisms caused by infections, trauma, metabolic imbalance, degenerative disease processes, or other pathologies
- impairment: a loss or abnormality at the tissue, organ, and body system level
- functional limitation: the individual's ability to perform the tasks and obligations of his/her usual roles and normal daily activities, for example, seeing, walking, listening, or in terms of disablement, that is, limitations in performing socially defined roles (e.g. employment or self-care)
- disability.

These four concepts had often been used as synonyms. However, according to Nagi (1965; 1991), disability should be the expression of functional limitations in the social context, that is, the product of the interaction between the individual and the environment that poses demands on individuals.

According to Badley (1993:164), disablement has been suggested as a collective descriptor referring to experiences identified with impairment, disability and handicap.

By using the concept disablement, the clumsiness of having to repeat the terms impairment, disability and handicap is avoided. The only problem is that the words disability and disablement are very similar. However, disability is a condition and disablement may be seen as the state of a person with that condition (Badley, 1993:164).

Bickenbach (1993:21) focuses on the contentious issue of referring to people in the disablement environment:

There is some agreement that the phrase 'person with a disability' is unobjectionable. 'Disabled person' and 'handicapped person' (or worse, 'the disabled' or 'the handicapped'), however, are objectionable ... because they leave one with the impression that the physical condition totally engulfs the person, which can only be prejudicial to the individual. [Disablement is an] ... artificial but, so far, relatively neutral term ... to denote what is described by 'impairment', 'deficiency', 'medical problem', 'dysfunctioning', 'physical disability', 'physical inability', 'physical incapacity', 'handicap', and related terms.

Other terms will probably be introduced in future. Thomas (2010:37) already uses the term disablism when referring to the *'social imposition of avoidable restrictions on the life activities, aspirations and psycho-emotional well-being of people categorized as 'impaired'*.

In the civil rights movements around race, gender, nationality and sexuality, language has been a cornerstone of achieving respect and inclusion. Positive and respectful attitudes can be shaped through careful use of words that objectively explain and inform without judgmental implications (Heijnen, 2005:4-5). Attempts have now been made to define disability with simple statements, theoretical models and classification schemes, and even through different forms of measurement (Albrecht, Seelman & Bury, 2001:97). New euphemisms are becoming more common, for example, differently abled, physically challenged, or children with special needs but these terms are not always clear to all (Berger, 2013:5).

In common language, disability most probably refers to the lack of a bodily part or functions, which implicitly means that the word disability does not have a single meaning (Masala & Petretto, 2010).

The next paragraph takes a closer look at the understanding of disability.

2.3 WHAT IS MEANT BY A DISABILITY?

Defining disability is challenging since it is a complex, multidimensional concept. The use of different terminology, definitions and frameworks over the past years, as well as the latest international development in the field of disability, contributes to this challenge.

FIGURE 2.1: WHEELCHAIR USER



What can be seen in the picture above? Probably a person with a disability. Why is the person disabled? Most likely because of the wheelchair.

This kind of reasoning can be called an everyday life conceptualization of disability. The visible aid, in this case the wheelchair, identifies the person as disabled. By merely looking at a person's functions and appearance, people are identified as abled, and others as disabled (Davis 1995). However, it is possible that a researcher can actually see at least five different definitions of disability in this picture.

A first definition can be identified by a non-researcher as well; it is often called a functional definition, because it focuses on a person's functional limitation (Abberley, 1991).

Second, a researcher can focus on the interaction between individuals with an impairment and their environment. Persons with impairments find themselves in a disabling situation only when the surroundings are inaccessible. This is illustrated in the photo by the interaction between the person in the wheelchair and the stairs. This is often called a relative or environmental definition of disability, because disability is seen as a relation between a person and the environment (Söder, 1987).

Third, the researcher can also focus on the stairs only because it can create a disability without any reference to the person. Disability, in this case, is the same as barriers in society that keep people with impairments from fully participating in society. This definition is often called the social model of disability (Oliver, 1990).

Fourth, the researcher may consider this person as being supported by the welfare that provides wheelchairs to disabled people. The photo focuses primarily on the wheelchair, which is the centre of the picture. The 'decapitated' person plays a secondary role (Stone, 1986). This reflects a common notion of people categorized as disabled, that is, they are de-personalized. Their disability makes them the object of different treatment without taking into account how they conceive themselves.

A fifth, more subjective definition, is also possible. From the picture above it is difficult to determine whether this is a man or a woman. However, the structure of the arm may indicate that it is a male. Feminist researchers point out that there is no distinction between men or women with a disability. They are merely seen as one group. This is illustrated by restroom indications in buildings:

FIGURE 2.2: RESTROOM INDICATIONS



(Safety signs, 2016)

It is almost as if the person with a disability is de-genderized. For this reason scientific definitions of disability have been criticized for being insensitive to gender (Thomas, 1999).

It is evident that disability means different things to different researchers and the complexity of the concept is not necessarily solved by these five definitions (Grönvik, 2007:11-12).

In response to the question: What is disability? Oliver, Sapey and Thomas (2012:9) refer to three sources: *'First there is social consciousness generally or culture, then there are professional definitions of disability and third there are personal realities, as articulated by disabled people themselves'*.

- First source: general, social consciousness or cultural views of disability.

The dominant view of disability is one of personal tragedy or disaster. This may differ in certain societies. The view of disability as a personal disaster is more common in modern societies. Variations in the cultural views of disability may occur as a result of the environment. For example, restricted mobility is less likely to be a problem in an agricultural society than in a hunting one. The social structure and values of a society are important in shaping the cultural views of disability. Societies with high religious values may interpret disability as punishment for sin, or contrariwise, as a sign of being chosen by God (Oliver et al., 2012:10-11).

- Second source: current professional definitions of disability.

Oliver et al. (2012:11-14) refer to the professional definitions which were classified into five broad categories by Townsend in the late seventies (Townsend, 1979):

- Abnormality or loss: Individuals with a disability can be seen as people who have lost a limb, or part of a limb, or have damage to the nervous system through injury or surgery. The disabilities range from blind, deaf, paralysed, or other observable abnormalities. The loss or abnormality may have a considerable or an insignificant effect on daily activities (Townsend, 1979:686).
- Clinical condition: A chronic clinical condition, such as bronchitis, arthritis, tuberculosis, epilepsy, schizophrenia and manic depression is present, which causes a change to physiological or psychological processes (Townsend, 1979:686).
- Functional limitations of everyday activities: A functional limitation of ordinary activity, whether that activity is carried out alone or with others. An example is an inability for self-care and management when the person finds it difficult to walk or climb stairs. An estimate can also be made of the individual's incapacity to follow specific occupational roles (Townsend, 1979:687).
- Disability as deviance: This category refers to a pattern of behavior which has elements of a socially deviant nature. This pattern can be determined by an impairment or pathological conditions, such as a regular physical tremor or limp. Activity may not necessarily be limited only, but different from what society expects of a person in certain situations and what the specific individual fails to do (Townsend, 1979:687).

- Disability as disadvantage: Disability takes on the rather general meaning of a socially defined status and class. The status is determined by the public's opinion and often implies an inferior status rather than a different status (Townsend, 1979:688).
- Third source: personal realities.

The information for this source comes from the people with a disability themselves. The focus is now on the way physical structures, societal systems, culture and social environments impose limitations upon certain people, rather than focusing on the physical or mental limitations of individuals (Oliver et al., 2012:15). It is not just a matter of society's willingness to adjust its patterns and expectations, but also to remove the social oppression which stems from this failure to adjust (Oliver et al., 2012:15).

According to the World Health Organization (2001), disability is conceptualized as being a multidimensional experience for the person involved. The disability may affect organs or body parts or it may have an effect on a person's participation in areas of life. Consequently, three dimensions of disability are recognized in the International Classification of Functioning, Disability and Health (ICF): body structure and function (and impairment thereof), activity (and activity restrictions) and participation (and participation restrictions) (WHO, 2001). The classification also recognizes the role of physical and social environmental factors in affecting disability outcomes.

Professionals in the disability environment also consider the causes of disability in order to understand disability better. By identifying the causes of disability, the most appropriate treatment can be applied and it can also lead to the prevention of occurrence of disabilities.

Against this background it is clear that there could be a vast number of views regarding disability. Discussions and research about disability could be vague and non-specific if there is no clear definition to address disability. An accurate definition of disability is thus of importance to guide the current study. The next paragraph focuses on a possible definition of disability.

2.4 TOWARDS A POSSIBLE DEFINITION OF DISABILITY

The beliefs underpinning definitions can be offensive and provide the basis for stereotyping and stigmatization. People with a disability have become more sensitive to the way words propagate discriminatory behavior and language (Carson, 2009:15). Terminology is important, because words reflect our attitudes and beliefs. The way disability is defined is of crucial importance to persons with a disability in order to promote the necessary understanding and respect (Carson, 2009:15).

Since the 1970s the definition of disability has changed dramatically. Based on a report of the Committee on the Medical Rating of Physical Impairment, Garrad (1974:142) defined the terms disability and impairment. Accordingly disability is defined as *'limitation of performance in one or more activities which are generally accepted as essential basic components of daily living, such that inability to perform them necessitates dependence on another person'*. The severity of disability is thus proportional to the degree of dependence. The areas of essential activity are:

- **mobility:** walking, negotiating stairs, transfer in and out of bed or chair, and travel
- **self-care:** feeding, dressing and toilet care
- **domestic duties:** shopping, preparation and cooking of food, household cleaning and washing of clothes
- **occupation:** the ability to hold unmodified employment in open industry consistent with the individual's age, sex and skill (Garrad, 1974:142).

Garrad (1974:142) further distinguished impairment as *'an anatomical, pathological or psychological disorder which may be described in diagnostic or symptomatic terms. It may cause or be associated with disability so that while every disabled person has an impairment, not all people with impairments are necessarily disabled'*. Impairments are classified into four categories:

- impairments affecting locomotion or any motor activity
- impairments of sensory origin
- impairments referable to internal medicine (cardiac and respiratory disorders)
- impairments of primarily psychological origin together with unclassifiable organic disorder (Garrad, 1974:142).

The International Classification of Impairments, Disabilities and Handicaps (ICIDH) (WHO, 1980) was the first internationally shared conceptual formulation and it was the first internationally known system to classify the consequences of diseases. This model aimed at analyzing, describing and classifying three different consequences of diseases: impairments, disabilities and handicaps. The ICIDH (WHO, 1980:14) provided a conceptual framework for disability which involves three dimensions:

- **Impairment:** any loss or abnormality of psychological, physiological or anatomical structure or function.
- **Disability:** any restriction or lack (resulting from an impairment) of ability to perform an activity in the manner or within the range considered normal for a human being. Disability is concerned with functional performance and activity, affecting the whole person.
- **Handicap:** a disadvantage for a given individual, resulting from an impairment or a disability, which limits or prevents the fulfillment of a role that is normal (depending on age, sex, and social and cultural factors), for individuals. Handicaps thus refer to the interaction of individuals with their surroundings and to their adaptation to these surrounding.

Von Tetzchner (1991:40) illustrated the use of these dimensions as follows: *'Impairments and disabilities may be temporary or permanent, reversible or irreversible, and progressive or regressive. The situation people find themselves in may determine to what degree a disability is handicapping for them. ... a handicap is the result both of*

an impairment and of environmental conditions. If environmental barriers are taken away, the person will still be impaired, but not necessarily handicapped.'

The *Americans with Disabilities Act* (ADA) of 1990 used the definition of disability as an inclusive definition that tends to capture both the largest and broadest estimate of people with a disability. It describes a disability as a condition which limits a person's ability to function in major life activities – including communication, walking and self-care (such as feeding and dressing oneself) – and which is likely to continue indefinitely, resulting in the need for supportive services (Barton, 2009:14). The definition of disability set forth in ADA does not distinguish between type, severity, or duration of the disability. ADA (in Barton, 2009:14) stated: *'the term "disability" means, with respect to an individual: a physical or mental impairment that substantially limits one or more of the major life activities of such individual; a record of such impairment; being regarded as having such an impairment.'*

In Oliver et al. (2012:16) disability was summarized as *'the disadvantage or restriction of activity caused by the political, economic and cultural norms of a society which takes little or no account of people who have impairments and thus excludes them from mainstream activity'*. Further, Oliver et al. (2012:16) saw impairment as a *'characteristic of the mind, body or senses within an individual which is long term and may, or may not, be the result of disease, genetics or injury.'*

The literature indicates that the terms handicap, disability and impairment differ within the various frameworks and paradigms in which impairments are addressed.

According to Hahn (1985), three approaches define disability: the medical approach, the economic approach and the social-political approach.

- The **medical approach** reflects a strictly medical definition which emphasizes limitations on physical functioning. Disabilities are treated as separate diagnostic categories rather than concentrating on the problems of disabled people.

- The **economic approach** focuses on the economic problem of employment. This approach suggests that a disability can be described as a limitation on the kind of work that can be performed.
- The **social-political approach**. This model implies that disability stems from the failure of a structured social environment to adjust to the needs and aspirations of people with a disability. The emphasis is shifted from the individual to the broader social, economic, cultural and political environment.

These approaches form the foundation for various models to be developed in order to understand disability. The models of disability are used as tools for defining and understanding disability. Some of the relevant models for the current study are discussed in paragraph 2.6.

Once disability has been defined, it is important to note that there are many different types of disabilities and a disability can affect different people in different ways. It is important to realize that every person with a disability has his or her own unique experiences regarding disability. Some disabilities may be hidden or not readily seen by the general public. The next paragraph focuses on some of the manifestations of disability.

2.5 MANIFESTATIONS OF DISABILITY

The discussions around the main causes of disability have undergone a major shift over the past decades. Many factors or situations before, during or after birth can lead to abnormalities, impairments and disabilities. The causes of disability vary as much as the challenges people face in their daily living. According to a United Nations' report (1988: Part II), the causes of disability mentioned most often are the following:

Heredity, birth defects, lack of care during pregnancy and childbirth because of lack of coverage or ignorance, insalubrious housing, natural disasters, illiteracy and the resulting lack of information on available health services, poor sanitation and hygiene, congenital diseases, malnutrition, traffic accidents, work-related accidents and illnesses, sports accidents, the so-

called diseases of 'civilization' (cardiovascular disease, mental and nervous disorders, the use of certain chemicals, change of diet and lifestyle, etc.), marriage between close relatives, accidents in the home, respiratory diseases, metabolic diseases (diabetes, kidney failure, etc.), drugs, alcohol, smoking, high blood pressure, old age, Chagas' disease, poliomyelitis, measles, etc.

Non-governmental sources also place particular emphasis on factors related to the environment, air and water pollution, scientific experiments conducted without the informed consent of the victims, terrorist violence, wars, intentional physical mutilations carried out by the authorities and other attacks on the physical and mental integrity of persons, as well as violations of human rights and humanitarian law in general.

From the above it appears that disabilities may be:

- genetically and/or medically determined or
- environmentally and/or socially determined.

The National Dissemination Center for Children with Disabilities [NICHCY] (2012) identified the following manifestations of disabilities under the *Individuals with Disabilities Education Act* (IDEA): autism, deaf-blindness, deafness, emotional disturbance, hearing impairment, intellectual disability, multiple disabilities, orthopedic impairment, specific learning disability, speech or language impairment, traumatic brain injury, and visual impairment including blindness.

To remain within the framework of the current study, the focus is mainly on mobility impairment or orthopedic impairment which, according to the Women's and Children's Health Network (2016), may be the result of the following:

- inherited or genetic disorders, for example, muscular dystrophy
- conditions present at birth (congenital), such as spina bifida
- serious illness affecting the brain, nerves or muscles, for example meningitis

- spinal cord injury
- brain injury.

Below are brief descriptions of some of the various forms of mobility impairments (Disabled World Towards Tomorrow, 2013; Christian Blind Mission [CBM], 2016; Algozzine & Ysseldyke, 2006:18-25; Falvo, 2014):

- **Amputation** is the removal of one or more limbs, sometimes caused by trauma, malignancies or other conditions.
- **Arthritis** is the inflammation of the body's joints, causing pain and swelling which inhibit mobility.
- **Back disorders** can limit a person's ability to sit, stand, walk, bend, or carry objects. These disorders include, but are not limited to, degenerative disk disease, scoliosis, and herniated disks.
- **Cerebral palsy** is the result of damage to the brain prior to or shortly after birth. It is a chronic condition characterized by difficulty in controlling and coordinating voluntary muscle movements. Individuals with cerebral palsy can be slightly to severely affected, with one or more parts of the body involved and may experience:
 - stiff or excessively loose torso and limbs
 - involuntary motion of legs and arms
 - difficulty walking and/or
 - extreme difficulty in speaking, swallowing or chewing (Disabled World Towards Tomorrow, 2013; Falvo, 2014).
- **Clubfoot** (*Congenital talipes equinovarus* (CTEV)) is a condition which results in a child being born with a foot (or both feet) turned inward and pointing down.

- **Fibromyalgia** is a form of 'soft tissue' or muscular rheumatism causing constant pain in muscles and ligaments. Inactivity, depression, anxiety, chronic fatigue and sleep loss are common.
- **Neuromuscular disorders** include a variety of conditions, such as muscular dystrophy, multiple sclerosis, and ataxia, which result in degeneration and atrophy of muscle or nerve tissues.
- **Osteomyelitis** is a chronic bacterial bone and joint infection which progressively destroys the bone and affects the joints.
- **Paralysis** is caused by losing feeling in certain parts of the body and not being able to move these parts of the body, for example, paraplegia and quadriplegia.
- **Polio** is a disease that targets nerve tissue in the spinal cord, which causes paralysis of different muscles (Falvo, 2014:135).
- **Spina bifida** is a form of neural tube defect. Children who are born with spina bifida may have an open lesion on their spine where damage to their nerves and spinal cord has occurred. The nerve damage is permanent, although the opening in the spine can be surgically repaired. The damage to the child's nerves may result in various degrees of paralysis in their lower limbs (Disabled World Towards Tomorrow, 2013; Falvo, 2014:156).

According to Roebroek, Jahnsen, Carona, Kent and Chamberlain (2009:672), the main diagnoses of conditions leading to physical impairment in young adulthood are cerebral palsy, spina bifida, muscular dystrophy, cystic fibrosis, idiopathic arthritis, brain injury and spinal cord injury.

It is not the purpose of the current study to determine the possible causes of disability, but it is essential to know that mobility impairment is an indication of limitations that a person has in physical functions such as standing, walking and climbing stairs. These limitations involve the upper and lower body limbs.

The quote from Carol Banks (founder and co-moderator of the Advocacy list) (ThinkQuest, 2013), captures mobility impairment in the following manner:

Mobility impairments can cover a great number of disabilities or conditions in this broad category. People become paraplegics or quadriplegics through accidents most often but mobility impairment could also be due to a person having been born with cerebral palsy, where this condition severely limits movement of both legs and arms. People who have diabetes will become mobility impaired if they start to have problem with their circulation due to the ravaging effects of diabetes itself. Multiple sclerosis hits young adults in similar ways. With polio the muscles in your arms and legs become weakened so that they do not function enough to help you move about freely like most other individuals. I would say that mobility impairments ... will either limit or completely eliminate the use of a person's lower and often upper limbs also, either by lack of coordination, weakness, poor circulation, or by paralysis.

Owing to a variety of manifestations of disability, several models were designed over the years to approach and study these manifestations. Some of the most relevant models are discussed in the next paragraph.

2.6 MODELS OF DISABILITY

Stated simply, a model is a framework for understanding information (Carson, 2009:5). According to Swain, French, Barnes and Thomas (2004:16), models are constructed in such a way that a specific object, in this case disability, can be looked at from different perspectives and under different conditions. Models of disability can thus provide a framework for understanding disability issues, as well as the way in which people with impairments experience their disability.

A variety of new models have evolved recently regarding the study of disability. These models were constructed to investigate disability in a specific environment. The development of various models makes provision for a continuum of changing social attitudes towards disability within a specific given time. According to Masala and

Petretto (2010), the literature suggests that the different models may be categorized into three broad groups of models:

- models in which disability is an attribute of the person
- models in which disability is related to the environment
- models in which disability is linked to the person-environment relationship. All newer models are likely to belong to the third group (Masala & Petretto, 2010).

It is not possible for a single model to provide an adequate basis for the entire spectrum of intervention approaches. Each model of disability implies a different intervention approach. The most prevalent models for studying disability remain the following three models: the medical model, the social model and the biopsychosocial model (Connection for Human Leadership, 2007; Barnes & Mercer, 2010; Falvo, 2014:1-2; Bøttcher & Dammeyer, 2013:3607). These models provide different views about the impact of disability on wellbeing, and different opinions on how disability is relevant to decision making, medical interventions and social policy. The first model to be discussed is the medical model.

The medical model focuses on the medical conditions as the causes of disability. Disability is viewed as a result of physiological impairment owing to damage or a disease (Llewellyn & Hogan, 2008:321-322).

Disability has historically been regarded as a health and welfare issue. The responsibility for 'caring' for disabled people has generally fallen on civil society. There has been little or no commitment to addressing disability in other areas of government responsibility (South Africa, 1997). The vast majority of organizations for people with a disability were founded by non-disabled people concerned with creating a more 'caring' environment for different groups of people with a disability. Individuals with a disability very seldom had any say in the aims, objectives and management of these organizations. The emphasis was on dependence and the focus on the nature of impairment. All interventions were based on assessment, diagnosis and labelling, with therapy programs developed separately and through alternative services (South Africa, 1997).

The (bio)medical model, according to Bickenbach (1993:64), is based on the following:

The characteristics of the biomedical model of disablement are merely immediate, theoretical products of medicalization: the establishment of a definitive discourse of medical expertise; the ontological location of disablement in the body of an individual; and the resulting representation of that individual as a patient, a sufferer, a person with a medical problem and special needs.

The social attitudes which resulted from the perception of disability as a health and welfare issue have invaded all areas of society. The result is that people with a disability and their families have been isolated from their communities and mainstream activities. Dependency on state assistance has disempowered people with a disability and has seriously reduced their capacity and confidence to interact on an equal level with other people in society (South Africa, 1997). The medical model of disability also affects the way people with a disability think about themselves. Many individuals with a disability internalize the negative message that the problems of all people with a disability stem from not having 'normal' bodies (Carson, 2009:8). The medical model is thus a model by which illness or disability is the result of a physical condition and it is intrinsic to the individual. It may reduce the individual's quality of life and cause clear disadvantages to the individual. It promotes the view of a person with a disability as dependent and needing to be cured or cared for. As a result, curing or managing illness or disability revolves around identifying the illness or disability, understanding it and learning to control and alter its course. According to Gillespie-Sells and Campbell (in Burke, 2008:13), the medical model of disability views disability as a condition which must be cured. This is in line with the mainstream of medical training which is about preventative treatment or curing illness. However, if an individual is considered only in treatment terms, the pathological overrides the individual's sense of wellbeing.

The denial of opportunities, the restriction of choice and self-determination and lack of control over the support systems in their lives have led people with a disability to question the assumptions underlying the traditional dominance of the medical model. Rieser (2013) articulates this concern as follows: '*Other people's assessments of us, usually non-disabled professionals, are used to determine where we go to school, what*

support we get and what type of education, where we live, whether or not we can work and what type of work we can do' People with a disability have generally rejected this model. It has led to low self-esteem, undeveloped life skills, poor education and consequently high unemployment levels. People with a disability have recognized that the medical model requires the severance of natural relationships with their families, communities and society as a whole (Enabling teachers and trainers to improve the accessibility of adult education [ETTAD], 2013).

Society often considers disability to be a tragedy for the individual and a burden for the family and society. This model focuses on the lack of physical, sensory or mental functioning, and uses a clinical way of describing an individual's disability. There are certain 'norms' in development and in functioning against which the person is judged. This model leads to a dehumanizing view in which only the nature and severity of the impairment are important, together with the extent to which the difference can be put right or minimized. It defines and categorizes disabled people by their impairment and it casts the individual as the victim or problem (SOAS, University of London, 2013).

Today, the medical model cannot be discarded because of the importance of medical solutions, such as surgeries, orthotics and clinical physical therapy. The medical model looks at disability and managing disability from a scientific perspective. It is however only one side of the coin.

The social model offers an alternative by identifying causes of disability within social and political domains. Disability only exists in so far as it is socially constructed and imposed on people with impairments (Llewellyn & Hogan, 2008:311-323).

Watson (2008:3) refers to the work of Oliver which has been among the most influential in the development of an understanding of disability. Oliver (1983a;1996) records that the Union of the Physically Impaired Against Segregation [UPIAS] was responsible for sowing the seeds of the social model of disability in their manifesto *The Fundamental Principles of Disability* (UPIAS, 1976). UPIAS (1976:3-4) locates the cause of disability in society:

In our view it is society which disables physically impaired people. Disability is something imposed on top of our impairments by the way we are unnecessarily isolated and excluded from full participation in society. Disabled people are therefore an oppressed group in society. To understand this it is necessary to grasp the distinction between the physical impairment and the social situation, called 'disability' of people with such impairment. Thus we define impairment as lacking part of or all of a limb, or having a defective limb, organ or part of the body; and disability as the disadvantage or restriction of activity caused by a contemporary social organisation which takes little or no account of people who have physical impairments and thus excludes them from the mainstream of social activities. Physically disability is therefore a particular form of social oppression.

The location of disability in society shifts the focus away from the individual to disabling barriers and attitudes. Finkelstein (1980:33) states:

Once barriers to the reintegration of people with physical impairments are removed the disability itself is eliminated. The requirements are for changes to society, material changes to the environment, changes in environmental control systems, changes in social roles, and changes in attitudes by people in the community as a whole. The focus is decisively shifted to the source of the problem – the society in which disability is created.

The social model is based on the belief that the circumstances of people with a disability and the discrimination they face are socially created phenomena and have little to do with the impairments of disabled people. The disability rights movement believes therefore that the 'cure' to the 'problem' of disability lies in restructuring society.

In contrast to the medical model, the social model of disability argues that the 'problem' should not be located within the individual person, but rather in a 'disabling environment' which excludes and denigrates people with a disability (Carson, 2009:9; Swain et al., 2004; Thompson, 2005:111). Therefore the social model of disability implies a paradigm shift in constructing disability. This shift is demonstrated in the following examples:

- It is the stairs leading into a building that disable the wheelchair user rather than the wheelchair.
- It is defects in the design of everyday equipment that cause difficulties, not the abilities of people using it.
- It is society's lack of skill in using and accepting alternative ways to communicate that excludes people with communication disabilities.
- It is the inability of the ordinary schools to deal with diversity in the classroom that forces children with a disability into special schools (South Africa, 1997).

This model does not deny the problem of disability but locates it within the society. The problem is society's failure to provide appropriate services and adequately ensure that the needs of people with a disability are fully taken into account in their social environment. Disability, according to the social model, is all the things that impose restrictions on people with a disability, ranging from individual prejudice to institutional discrimination, from inaccessibility to public buildings to the unusable transport systems that are prevalent in the rural areas.

Shakespeare and Watson (2010:57) summarized the social model of disability as a very elementary model. This model argues that the disadvantages experienced by people with a disability are not as a result of their impairment but as a result of a social organization which excludes people with a disability. The social model approach to understanding disability reflects the growth of the disability movement. According to Shakespeare and Watson (2010:57), *'Broadly speaking, if you support the social model you are perceived as a disability studies scholar; if you question it you are seen as a medical sociologist.'*

The social model of disability transforms the lives of people with a disability, allowing a self-vision away from the oppressed ideas; it increases the self-worth of a person with a disability and provides people with a disability a self-identity and shared political fight (Swain et al., 2004:21-22).

The biopsychosocial model, which is the basis of the International Classification of Functioning, Disability, and Health (ICF), is an integration of the medical model and the social model which provides a coherent view of different perspectives of health; namely, a biological, individual and social perspective (WHO, 1980). This model focuses on how biological, psychological and social factors in combination interact to determine functional capacity (Falvo, 2014:10).

Shakespeare (2006:2) indicates that the medical and social models are presented as archetypes of various discourses concerning disability, allowing for a range of interpretations between these two extremes. The traditional medical model and supportive welfarist models were put aside in favor of a 'social model of disability' as Oliver coined it (Oliver, 1990; 1996). According to Berger (2013:27), critics accused the medical model of depicting people with a disability as '*deficient and inherently inferior to nondisabled people, and thus it is they, not society, who are most in need of change*'.

Neither the medical model nor the social model is sufficient to function on its own. Disability is a complex phenomenon that is both a problem at the level of a person's body, as well as the interaction of the person and the environment in which the person lives. Some aspects of disability are almost entirely internal to the person and other aspects are almost entirely external. In other words, both medical and social responses are appropriate to the problems associated with disability. The social model does not wish to deny the existence of impairments and physiological differences; rather it addresses them without attaching value judgments such as 'normality' and shifts the emphasis towards those aspects of our world that can be changed. Swain, French and Cameron (2003:23) consider this shift as '*disability ceases to be something that a person has, and becomes instead something that is done to a person*'.

The biopsychosocial model theorizes that it is the complex interaction of biological, psychological and social factors that plays a significant role in the individual's ability to function (Falvo, 2014:2). '*The biopsychosocial model implies that many variables, not simply the chronic illness or disability itself, determine the extent and type of function that individuals with a health condition experience*' (Falvo, 2014:2).

In this regard, a person with spina bifida made the following statement:

If a person with a disability lived in a society where being in a wheelchair was no more noteworthy than wearing glasses, and if the community was accepting and accessible, the specific disability would be an inconvenience and not much more than that. It is society which handicaps the person with a disability, far more seriously and completely than the fact that the person has a disability (National People with Disabilities and Carer Council, 2009:12).

It is important to acknowledge the valuable contribution of each of these three models. The major contribution of the biomedical medical model is the understanding of the different etiologies and the explanation of the relation between the biological defect and the risk of psychopathology. The idea is to gain knowledge about how to prevent or lessen the negative consequences of the disability through individual health care and special educational arrangements (Bøttcher & Dammeyer, 2013:3607). The central idea of the social model is that the main contributory factor to disability is not the physical impairment itself, but rather the society that fails to take individual differences into account. In most of the social model theories, the aim is to articulate the social barriers that emerge from living in a society that is constructed primarily for those without impairments (Bøttcher & Dammeyer, 2013:3607). The biopsychosocial model proposes ways to reconcile central features from the two models, overcoming the contradiction they represent (Bøttcher & Dammeyer, 2013:3607). It is from the biopsychosocial model perspective that the particulars of living with a disability need to be addressed. Questions relating to this are often: 'What is it like to ...?' and 'How do you ...?'

The collaboration between people with a disability, professionals, carers, family members and friends are important to improve life chances of people with disabilities (Iriarte, McConkey, & Gilligan, 2016:6). Bronfenbrenner (1994) formulated the ecological systems theory to explain how the specific qualities of children and their environment interact to influence their development (Donald, Lazarus & Moolla, 2014:44-46).

The impact or the effect of a disability on the daily life and activities of a child with a disability is discussed in the next paragraph.

2.7 PSYCHOSOCIAL ASPECTS OF LIVING WITH A DISABILITY

The psychosocial approach to study human development is the most widely accepted theory when studying human development and was developed by Erik H. Erikson in 1950 (Newman & Newman, 2012:86). The term psychosocial is used to '*emphasize the close connection between psychological aspects of our experience (that is, our thoughts and emotions) and our wider social experience (that is, our relationships, practices, traditions and culture). It also takes into account the physical and spiritual dimensions (values systems, beliefs, self-awareness) of an individual.*' (Southern African Development Community, 2011:19).

According to Newman and Newman (2012:30), Erikson's approach is based on the inter-relationship between the biological, psychological and societal systems. The biological system includes all the processes necessary for the physical functioning of the individual. The psychological system includes the mental processes central to a person's ability to make meaning of experiences and take action. The societal system comprises the processes that nurture or hamper a person's sense of social integration and social identity (Newman & Newman, 2012:30). (The psychosocial approach of Erik Erikson is discussed in more detail in Chapter 4.)

It is evident that the development of children is entwined in the biological, psychological and societal systems in which they find themselves. Parents, educators, coaches and health professionals are important role-players to assist in every child's development; also those children with a disability. It is important for children with a disability that their psychosocial needs be met to enable them to reach their full potential. These needs may vary from the needs of children without a disability.

The experience of a child with a disability is a unique and dynamic experience which varies in different environments and in different circumstances (Falvo, 2014:2).

Disability is experienced in the context of a life, of a family, and of a community. The person experiences disability not simply as an internal state, but in and through familial and community relationships. The culture in which the person is embedded creates the meaning of disability, creates

the identity of the individual, and in very real ways, directs what is possible in terms of adjustment and adaptation (Marini et al., 2012:82).

2.7.1 Psychosocial experiences of children with a disability

Children with a disability experience the same developmental changes as their peers without a disability during their intellectual development, physical development, emotional/psychological development, social development, and moral/ethical development (Smith, Gartin & Murdick, 2012:3). However, children with a disability face even more than the usual range of challenges (Berger, 2013:113-114). The presence of a disability can begin a psychosocial chain reaction that results in a transformation of the lives of children with a disability, and they have to find their own way of adjusting to and coping with their disability (Holder, Young, Nadarajah & Berger, 2015:749).

A disability at any age brings about profound changes to lifestyle and attitudes. A disability may be visible or hidden, it may be temporary or permanent and it may have a minimal or substantial impact on a person's abilities. Some children are born with a disabling health condition or impairment, while others may experience disability later in their lives as a result of illness, injury or poor nutrition. It requires a number of adjustments on a physical, cognitive, social, emotional, moral and spiritual level (Visser, 2013:60). The presence of a disability affects not only the individual with the disability, but family and friends as well. The everyday experiences of families living with childhood disability may include economic hardship, social isolation, limited recreational time and the need to negotiate complex and under-resourced services (Breen, Wildy & Saggars, 2011:137-138).

According to the World Health Organization (2012:8) children who experience disability early in life can be exposed to risk factors such as poverty, stigma and discrimination, poor caregiver interaction, institutionalization, violence, abuse and neglect. Children with a disability often face the risk of receiving inadequate emotional and social support from those around them (The Regional Psychosocial Support Initiative [REPSSI], sa:14). This may happen through negative attitudes, negligence, and misinterpretations of what these children need (REPSSI, sa:14). People's reaction to myths, stigma and

traditional beliefs about people with a disability may reduce social support and foster exclusion (REPSSI, sa:15; Marini et al., 2012:35-43).

Children with a disability often have to deal with others staring, teasing and bullying them. The frustration of not being able to take part in an activity or being part of a social group is another challenge (Otto, 2013; Piek et al., 2005:453; Berger, 2013:114). Children with a disability face significant physical barriers because of a lack of physical activity and participation levels which are lower than for typically developing children. This results in children being overweight, physically weaker and less fit than their typically developing peers (O'Brien, Noyes, Spencer, Kubis, Edwards, Bray & Whitaker, 2015:431). Children with a disability have shown to be at higher risk of obesity and associated secondary conditions which can hinder independence and social participation (McPherson & Lindsay, 2012:201; Kuper et al., 2014:10).

According to Mundhenke et al. (2010:130), studies have demonstrated that physical activity often decreases for adolescents with a disability, that children with a disability are more socially isolated and they spend more time with quiet, passive leisure activities compared with children without a disability. Adolescents with a disability may experience difficulty in making friends and possible rejection from peers, which lead to social isolation, a lower quality of life, and a lack of self-confidence (Marini et al., 2012:176, 199). If adolescents with a disability form relationships, they are often not able to maintain these relationships. Their friends may be concerned about them, but they are not ready to accept them in intimate relationships (Abraham, 2013:3). Kissow (2015:144) found that individuals with a physical disability often realize that their social interactions and social networks are limited, with isolation affecting their effectiveness in social situations. Mundhenke et al. (2010:130) also referred to studies which indicate that children with a disability often have fewer friends, are excluded from peer groups and instead spend much of their time with adults. The loss of friends and peers could be a catalyst for sadness and anxiety about the future (Abbott & Carpenter, 2015:74).

Sexual abuse and exploitation, particularly in the case of girls with a disability, may happen as abusers see that access to children with a disability is easy (Cheng & Udry, 2002). They may for example be caregivers performing tasks like bathing and dressing children with a disability. This can continue over the years to come if these children are

not provided with information about sexuality and their rights. Children with a disability have the same physical and emotional needs as others, but are often seen by society as asexual and therefore they may not receive the appropriate information regarding sexual education (Nyakanyanga, 2013:7).

Adolescent girls with a physical disability are more likely to report having been physically forced to have sexual intercourse than adolescent girls without a disability (Alriksson-Schmidt, Armour & Thibadeau, 2010:361). Girls with a physical disability are often victims of sexual abuse and they may not receive the necessary support to begin the healing process. Because children with a disability mostly rely on others to get tasks done, they may find it difficult to have a positive self-image and identity. Children are taught to be compliant and trust others, and often lack experience setting limits regarding physical contact (United Nations Children's Fund [UNICEF], 2013a:12). Their transition from childhood to adulthood can cause a lot of stress as adolescents may perceive that they do not have the capacity to take up new roles.

During their first years children with a disability may have limited opportunities to explore their environment which can lead to failure to develop meaningful social relationships with other children. Over the following years, these children may have less access to schools, learning opportunities and recreational activities. Their disability can alienate them from normal interaction with their peers and they are deprived of opportunities to form new relationships. They have the desire to be accepted and to belong to a group. Their perceived lack of physical attractiveness can affect their social and sexual relationships.

In general, literature on adolescents with a disability focuses mainly on the negative aspects of behavior of adolescents with a disability: emotional problems (Alesi, Rappo & Pepi, 2014:125); behavioral difficulties (Beresford, Stuttard, Clarke, Maddison & Beecham, (2010:2); social impairment (Wehmeier, Schacht & Barkley, 2010); loneliness (Lasgaard, Nielsen, Eriksen & Goossens, 2010); depression (Terzian, Hamilton & Ericson, 2011:2-3) and anxiety (Terzian, Hamilton & Ericson, 2011:2).

2.7.2 Prominent emotions of children with a disability

Children with a disability are simply children and they meet with and go through experiences in life just like their peers without a disability (Jemta, 2008:9; Smith et al., 2012:3). Living with any type of disability complicates life. The most expressed feelings when learning about the diagnosis of a disability are feelings of being scared, sad or confused (Boyd & MacMillan, 2005:335). Self-pity often occurs when the person questions why it has to happen to him or her. On the positive side the person feels relieved when there is an explanation for the symptoms he or she experiences (Boyd & MacMillan, 2005:336). Weisleder (2011:1052) and Mazzucchelli and Sanders (2011:2148) stated that in addition to the challenges inherent in physical impairments, children with a disability are at substantially greater risk of exhibiting emotional problems compared with their typically developing non-disabled peers.

Children with a disability face significant physical barriers owing to a lack of physical activity and participation levels which are lower than for typically developing children. This results in children being overweight, physically weaker and less fit than their typically developing peers (O'Brien et al., 2015:431). Children with a disability have shown to be at higher risk of obesity and associated secondary conditions which can hinder independence and social participation (McPherson & Lindsay, 2012:201; Kuper et al., 2014:10). Social isolation caused by physical limitations may lead to depression (Campbell et al., 2012:328). Depression in turn may lead to other medical conditions or illnesses (Hooper, 2010:339). Depression, anger and blame are possible effects of a disability. In a study by Skinner and Piek (2001), low self-esteem and high anxiety have been reported in children with developmental coordination disorder compared with their typically developing age peers.

Piek et al. (2005:453) referred to research which indicates that children with movement problems, for example, developmental coordination disorder, are considered at risk of peer-victimization and low self-worth. Adolescents with a disability are often the target of name-calling insults, verbal threats as well as being purposefully excluded and ostracized by their peers (Campbell et al., 2012:335). Adolescents may exhibit traits and behaviors which may increase their vulnerability to being bullied, for example, the child who is clumsy or who is walking in an awkward manner (Campbell et al., 2012:330).

Adolescents who are isolated from a peer group are more likely to be bullied and victimized than other adolescents who are in popular groups (Estell et al., 2009:136:16).

According to Mundhenke et al. (2010:130), studies demonstrate that physical activity often decreases for adolescents with a disability, that children with a disability are more socially isolated and they spend more time with quiet, passive leisure activities compared with children without a disability. Adolescents with a disability may experience difficulty in making friends and possible rejection from peers, which lead to social isolation, a lower quality of life, and a lack of self-confidence (Marini et al., 2012:176; 199). If adolescents with a disability form relationships, they are often not able to maintain these relationships. Their friends may be concerned about them, but they are not ready to accept them in intimate relationship (Abraham, 2013:3). Kissow (2015:144) discovered that individuals with a physical disability often find their social interactions and social networks limited, with isolation affecting their effectiveness in social situations. Mundhenke et al. (2010:130) also referred to studies which indicate that children with a disability often have fewer friends and are excluded from peer groups and instead spend much of their time with adults. The loss of friends and peers could be a catalyst for sadness and anxiety about the future (Abbott & Carpenter, 2015:74).

Children with a disability between the ages of 0 and 6 years require stimulation, love and care just like every other child. Problems occur if the necessary emotional and physical attention is not provided owing to a lack of demand from the child because of a medical condition. A child with low muscle tone, for example, may sleep a lot but he or she still needs regular feeding and physical stimulation. Some children with a disability are abandoned by their parents and are moved from one caregiver to the other which might lead to a lack of security. These children might also be exposed to neglect, abuse or maltreatment. On the other hand, a failure by caregivers to recognize what children with a disability can do for themselves often exists which prevents the child from becoming autonomous. Many children with a disability spend much of their lives in institutions, nursing homes or other residential institutions. They often experience treatment which is cruel, inhuman or degrading. Evidence exists that children are tied to their beds, and suffer from intentional lack of medical treatment, food or warmth and lack of love or care (UNICEF, 2013b:22).

Children with a disability between the ages of 7 and 12 years may experience frustration and a feeling of helplessness and inferiority because of an inability to reach their goals which is prevented by the presence of a disability. Negative attitudes and outright rejection from peers, caregivers and community may lead to lower self-concept and self-esteem.

Plutchik's theory of emotions states that primary emotions namely, joy, anticipation, anger, disgust, fear, sadness, surprise, and acceptance, are experienced by all individuals from birth (Plutchik, 1960:161; Hosany & Gilbert, 2010:515). Plutchik (1960) believed that there are no bad or good emotions but they all serve a valuable purpose in our relations with other. The way in which a person deals with these emotions, however, plays an important role in living life to the full. The exact impact of a disability on the emotions of a child varies according to a number of factors such as the specific nature and severity of the disability, the child's strength, stamina and age, the child's ability to cope, and the physical, social and economic environment within which the child is living (National People with Disabilities and Carer Council, 2009).

Children with a disability need to deal with issues which their peers without a disability are mostly not confronted with, for example, treatment of health conditions, possible restrictions on their lifestyle, the effect of their disability on other family members, and the uncertainty about their future (Boyd & MacMillan, 2005:337). They often want to challenge their parents, but they depend on their parents for personal care which affects the desire for independence (Berger, 2013:113-114).

Children with a disability may go through certain emotional states when dealing with their disability. The most shared emotional states include denial, anxiety and depression (The Iris Center, 2016; Falvo, 2014:14-15; Marini et al., 2012:176; Mazzucchelli & Sanders, 2011:2148):

Denial: The child denies that he or she has a disability. This allows the child some time to adjust to the disability and to find ways to deal with a situation for which he or she may not have been prepared. In the long-term denial may lead to delusional thinking and paranoia. Taleporos and McCabe (2001:302) referred to an individual who used to twist himself into extraordinary shapes to hide his deformed arm and leg to make him

acceptable to other. Sometimes he would not get off a bus at his stop because he couldn't bear the thought of people's reactions when they realized that he had a disability.

Anxiety: Anxiety is a normal reaction when one is confronted with danger, threat or fear. Children with a spinal cord injury, for example, may be troubled by frightening flashbacks or nightmares after the accident. Anxiety can also stem from children's interactions with medical practitioners and hospitals. Anxiety in children may worsen during adolescence when children become more aware of their differences compared with their non-disabled peers (White, Oswald, Ollendick & Scahill, 2009:216). Concerns about their health are an ongoing source of anxiety (Brossard-Racine, Hall, Majnemer, Shevell, Law, Poulin & Rosenbaum, 2012:39).

Depression: Acknowledging a new disability is not always easy (Gerber, 2016:1). Some children may experience feelings of depression after they realize the implications of their condition. They may experience uncontrollable tears, sadness and feelings of hopelessness. For the recently disabled, depression is a very common emotion. They may be struggling with their emotions in trying to accept their current physical or mental limitations. Failing to accept this new situation may lead to depression (Psarra & Kleftras, 2013:79). Some children are born with a disability and may have spent years struggling to find acceptance and forming relationships. For many persons with a spinal cord injury, depression can be a complication that poses a significant impediment to their normal functioning and adaptation (Orenczuk, Slivinski, Mehta & Teasell, 2010:24). If depression in children is not treated, suicidal thoughts may even occur.

According to Brenes, Penninx, Judd, Rockwell, Sewell and Wetherell (2008:163), there is growing evidence that a link exists between anxiety, depression and the physical disability which is present in an individual. Anderson, Kelly, Klaas, Russell, Daharsh and Vogel (2009b:827) referred to the research results addressing anxiety and depression among children with healthcare conditions. The results of these studies addressing children with a physical disability, including cerebral palsy and spina bifida, indicated that children with a disability experience more anxiety and depression problems than their peers without a disability (Anderson et al., 2009b:827; Campbell et al., 2012:337). Jones, Jones, Middleton, Ford, Tuite-Dalton, Lockhart-Jones, Peng, Lyons, John and

Noble (2014) also stated that people living with chronic physical conditions frequently suffer from depression or anxiety in addition to their physical impairment.

Children with a physical disability are more likely to be bullied than their peers, and children who are bullied are more likely to suffer from depression and anxiety (Stopbullying.gov, 2016). Some of these emotions may often be experienced simultaneously. In some instances these reactions may be prolonged. The prolonged effect may interfere with the child's functional ability, more than the medical condition itself (Falvo, 2014:14).

2.8 CONCLUSION

The terminology and definitions for describing disability continue to change over time and therefore clarity should be provided in a study such as this on the usage and meaning of the terminology and definitions to be used.

For this study, 'disability' refers to a range of conditions (such as illnesses or injuries) that impact people's lives by restricting certain normal functions. The term 'mobility impairment' is used to indicate a loss or abnormality which limits motor control and coordination in the normal movement of an individual. This impairment involves the upper or lower body or both.

The manifestations of disability and the various forms of mobility impairments were discussed in this chapter. The focus of this study is on adolescents with a mobility impairment which could include the following impairments: paralysis, amputation, cerebral palsy, spina Bifida, and neuromuscular disorders. These impairments usually require the use of assistive devices such as wheelchairs, walkers, canes, crutches, artificial limbs or motorized scooters.

It was important to look at the contribution of the models of disability. An aspect which determines the attitude of individuals without a disability towards individuals with a disability is embedded in the various models of disability that are available. These various models are frameworks to provide a better understanding of disability as a phenomenon, but the medical model and the social model are the two most prominent

models. The medical model is important to determine the aetiologies of the disability whereas the social model focuses on the contribution of society towards the disability. A model to reconcile the central features from these two models was chosen as the most appropriate model for this study. The study of adolescents with a mobility impairment is best investigated from the biopsychosocial model perspective.

It was also vital to focus on the psychosocial aspects of adolescents living with a disability as this would impact on their behavior. Positive and negative feelings are present in all humans, but the way of dealing with these feelings, especially the negative feelings, may be problematic. These unresolved negative feelings can undermine an adolescent's ability to succeed in school, live a healthy lifestyle, form and maintain close relationships with others, and accomplish lifetime goals.

Adolescence is a highly emotionally charged time of human development and it is important to provide adolescents with a disability with opportunities to express their positive and negative feelings. Physical exercise can be an ideal outlet for emotions and to promote general wellbeing in these adolescents. In general, physical activity can help relieve stress and burn away tension and frustration as exercise stimulates the release of endorphins that makes one feel good and calms and relaxes one.

Sport for persons with a disability is not a new concept, but its full potential as a powerful means to foster inclusion and wellbeing of adolescents with a disability has not fully been exploited as yet.

In the next chapter (Chapter 3), the focus is on the inclusion of individuals with a mobility impairment through sport, as well as sport participation in adapted sport, also called sport for the disabled.



CHAPTER 3

INCLUSION OF INDIVIDUALS WITH A MOBILITY IMPAIRMENT IN A SPORT ENVIRONMENT

Philosophers, poets, fans and academics have each tried to explain the intrinsic appeal of sport, to distill its essence, yet it remains seductively elusive, beyond lyrical and analytical efforts to define its 'true' nature. On a base level, sport is no more than a banal physical pastime, where bodies are set against one another to secure territory, take possession or outperform each other, or they compete only against themselves, challenging and conquering nature in the pursuit of increasingly extreme and amazing feats. But none who have known the highs and lows of competition would ever agree that sport is little more than actively passing the time. For many, sport means so much more. (Magdalinski, 2009:14).

3.1 INTRODUCTION

Chapter three deals with the inclusion of and participation in physical activity and sport by individuals, including individuals with a disability. The importance of participation in physical activities and sport in general is briefly discussed. Although participation in physical activities and sport is important, some individuals may prefer not to take part in these activities. It is therefore significant to investigate what the possible reasons for non-participation could be.

A specific section of the chapter focuses on athletes with a disability. An attempt is made to understand how athletes with a disability are accommodated in South African schools and how their sport participation is facilitated. Their specific reasons for non-participation are investigated. Suggestions are made about how to accommodate participation of all athletes. Adaptive sport is then discussed as an alternative to encourage athletes with a disability to engage in sport. A distinction is made between Paralympic sport and non-Paralympic sport. With regard to Paralympic sport, the history of the Paralympic movement and criteria for participation in the various sports under the Paralympic movement are discussed. A comprehensive explanation is provided which

includes images and a short description of all the Paralympic sports. If athletes do not qualify to take part in the identified Paralympic sports, or are not interested in those sports, the possibilities of alternative sport that they can consider must be investigated and therefore a need for non-Paralympic sport is established. For this reason the alternative sport is discussed.

For an athlete to participate in a non-Paralympic sport, exposure to various sports at school level is important. A brief overview of the situation of school sport is provided to determine how the needs of athletes with a mobility impairment are accommodated in schools to ensure full participation in sport. Guidelines, which include images and a short description of some of the non-Paralympic sports that could be adapted to suit athletes with a mobility impairment, are provided. This will demonstrate how to create more possibilities for athletes with a mobility impairment whose focus is not necessarily participation on the highest sport level, but participation for the love of the sport.

Finally, existing research is reviewed to determine the impact of participation in sport by athletes with a disability on a recreational level or on a professional level.

3.2 THE IMPORTANCE OF PARTICIPATION IN PHYSICAL ACTIVITIES AND SPORT

Taking part in physical activities and sport includes a variety of activities in different sport environments. Athletes have their own reasons for taking part in certain physical activities and sport. The diversity of reasons for sport participation indicates the diversity in experiences of sport activities. Seippel (2006:58) identified several general reasons for being active in a sport program: joy and fun; to keep fit; mental recreation; social factors; possible achievements and competition; expressivity; and body appearance.

Both formal studies and anecdotal evidence prove that participation in physical activity and sport has numerous benefits for individuals. The most general positive outcomes of taking part in sport are the improvement in physical health, strength building, enhanced coordination and motor skills, and improved cardiovascular health (Allender et al., 2006:826). Virgilio (2012:5) identified the following physical benefits from physical activities: weight control, controlled blood pressure, a reduced risk of heart diseases,

avoidance of some cancers and type 2 diabetes, reduced cholesterol levels and the development of strong bones and muscles.

Another important aspect of participation in physical activities and sport is the impact that it has on emotional healing and psychological wellbeing (Coakley & Dunning, 2000:477; Nancy, Murphy, Paul, Carbone & The Council on Children with Disabilities, 2008:1057-1058). Participation in physical activities and sport provides a positive outlet for aggression and stress and helps alleviate depression and anxiety. It improves mental functioning and concentration. Physically active people may also experience self-confidence and improved self-image (Coakley & Dunning, 2000:477; USAID, sa:4). Physical activities and sport experiences can enrich emotional development by cultivating capacities for care, self-worth, strength of will, good judgment, understanding, love and friendship (Potgieter, 2003:182). Coakley and Dunning (2000:477) also mentioned that involvement in sport helps learning to control emotions, disciplining the self and managing emotions. An overall improved quality of life and psychological wellbeing result (Virgilio, 2012:5).

Participation in physical activities and sport also plays a significant role in healthy social development and interaction. Allender et al. (2006:826) found that although most people recognized the health benefits, this was not their main reason for participation in sport. Factors such as enjoyment, social interaction and support were more common reasons for participation in physical activity. Through participation in sport individuals learn how to set and achieve goals through discipline and hard work. Physical activities nurture the development of decision making and leadership abilities while teaching people to deal with failure as well as success.

According to Hill (2007:3-4), the pattern of sports participation can be represented by a pyramid shape, with the majority of athletes at the bottom at grass-roots level. At this level, it is mainly school children and those playing sport as a hobby or social activity. They take part purely for the enjoyment it brings. From the second level of the pyramid, athletes are acquiring more skills and are more determined to succeed; therefore these athletes are training and competing on a regular daily or weekly basis. At the top of the pyramid are the elite or high level athletes who are totally committed to the sport, often as a career, although not all of them may be professionals. These elite athletes have a

special ability in sport that excels the norm. They have reached the pinnacle of performance in their sport and are competing at national and international level.

During the development of a young child, important skills must be learned. These skills are learned through practice. According to Honeybourne (2006:6-7), three main types of skill may be developed during physical activity and sport, namely cognitive skills, motor skills and perceptual skills. The cognitive skills are the intellectual and mental skills of the sports performer. These skills affect perception. The cognitive skills are critical for effective decision making and problem solving. Motor skills are physical limb movements that are directed towards the achievement of a particular goal. These skills are learned at a very young age, usually through play. If learned thoroughly, these motor skills can be adapted or refined to form part of specific sports skills. Perceptual skills involve the interpretation of information received so that a motor plan can be formulated. Perception is affected by previous experiences and attentional control (Honeybourne, 2006:7-8).

Physical activity is essential for healthy child development during the critical first six years of life. From an early age physical literacy can be divided into three sections (Canadian Sport for Life, sa:8-10):

- **Active start:** Ages 0-6

Physical activity during this time:

- *lays the foundation for future success in skill development, by helping children enjoy being active, learning to move efficiently, and improving coordination and balance*
- *creates neural connections across multiple pathways in the brain, particularly when rhythmic activities are used*
- *enhances development of brain function, coordination, social skills, gross motor skills, emotional development, leadership and imagination. Helps children to build confidence and develop positive self-esteem*

➤ *helps build strong bones and muscles, improves flexibility, develops good posture, improves fitness, promotes a healthy body weight, reduces stress and improves sleep. Canadian Sport for Life, sa:9).*

- **Fundamentals:** Ages 6-9

This is a critical stage and the foundations of many advance skills are laid down:

- *skill development for children this age is best achieved through a combination of unstructured play in a safe and challenging environment; and quality instruction from knowledgeable teachers/leaders/coaches in community recreation activities, schools, and minor sport programs*
- *skill development during this stage should be well-structured, positive and FUN, and should concentrate on developing the ABCs - Agility, Balance, Coordination and Speed, plus rhythmic activities*
- *hand and foot speed can be developed especially well by boys and girls during this stage and if this window of opportunity to develop speed is missed, body speed later in life may be compromised*
- *this is a great age for children to take part in a wide range of sports and they should be encouraged to take part in land-based, water-based and ice/snow based activities at different times of the year*
- *it is important that all children including those with a disability, master fundamental movement skills before sport specific skills are introduced*
- *strength, endurance and flexibility need to be developed, but through games and fun activities rather than a training regimen*
- *learning to 'read' the movements going on around them and make sound decisions during games are critical skills that should be developed at this stage (Canadian Sport for Life, sa:10).*

- **Learn to train:** Ages 9-12

This is the most important stage for the development of sport-specific skills as it is the period of accelerated learning of coordination and fine motor control. It is also

the time when children enjoy practicing skills they learn and they can see their own improvement.

- *It is still too early for specialization in late specialization sports. Although many children at this age will have developed a preference for one sport or another, for full athletic development they need to engage in a broad range of activities, playing at least 2-3 different sports.*
- *While competition is important, it is learning to compete that should be the focus – not winning. For best long-term results 70% of time in the sport should be spent in practice, with only 30% of the time spent on competition.*
- *This is an important time to work on flexibility and to develop endurance through games and relays (Canadian Sport for Life, sa:10).*

According to Higgs (Canadian Sport for Life, sa:13), athletes with a disability go through the same stages of athlete development as their non-disabled peers. Athletes who acquire a disability go through the same developmental stages as their peers until the onset of their disability, and then, especially for those with traumatic injury, pass through the same stages again – but now with their ‘new bodies’. The participation of children with a disability in physical activities and sport also promotes inclusion, minimizes deconditioning, optimizes physical functioning, and enhances overall-wellbeing (Murphy & Carbone, 2008:1057).

In the light of the importance and benefits of physical activity and sport, it is alarming to see that children in general are becoming less involved in physical activities and sport. According to McVeigh and Norris (2012:43), South African children show trends of obesity and overweight and less than one-third of the children participate in sufficient physical activity on a weekly basis. Draper, Basset, De Villiers, Lambert and the HAKSA Writing Group (2014) also reported on the decline of physical activity and concluded as follows: ‘*South Africa has moved from a C [grade] in 2010 to a D grade in terms of getting children physically active and eating healthily. The time has come for engaging parents and communities for advocacy and social mobilization*’ (Draper et al., 2014:S104). This leads to the question of what could be the possible reasons provided

for non-participation in physical activities and sport by children without impairments, as well as children with impairments.

3.3 REASONS FOR NON-PARTICIPATION IN SPORT

Research indicates specific reasons for non-participation in sport. Crawford and Godbey (1987:8) identified three categories of constraints: **intrapersonal** (lack of self-confidence, lack of encouragement or lack of information about opportunities), **interpersonal** (associated with other individuals including lack of leisure partners or lack of social interaction skills) and **structural** (lack of finances, lack of transportation, lack of time or architectural barriers).

Kirk and Kirk (1993:86) established that certain internal factors such as low self-esteem, lack of confidence, lack of general information, conflict between personal values and athletics goals, fear of failure and a lack of decision-making skills could be regarded as possible barriers. Singer, Hausenblas and Janelle (2001:517) identified the following as possible barriers to sports participation: lack of physical skills, lack of confidence, lack of feedback, unrealistically difficult goals and too many vague and conflicting goals.

A number of external factors can also be identified as possible causes to barriers to sport participation. Kirk and Kirk (1993:86) found that only a few role models, lack of mentors, stereotyping, discrimination, admission criteria, socioeconomic status and background, family expectations, a lack of trained staff and peer pressure were aspects that limited sport participation. Parents and peers can also have a negative influence on sport participation which could result in withdrawal from sport. Singer et al. (2001:517) identified barriers such as lack of time for proper training, personal and family responsibilities and lack of social support.

Mchunu (Mchunu, 2008:59-61; Mchunu & Le Roux, 2010:89-90) also mentions the following barriers:

- a lack of facilities (inadequate equipment for sports, no organized recreational activities in the area, lack of a coach and underdeveloped sporting facilities)

- political factors (racial inequality in sport, cultural isolation of black players and bias of coaches)
- social factors (siblings do not like sport; culture does not encourage sport participation; community associated sport participation with drugs and family members do not think the athlete is good enough)
- self-image (do not want to get sunburnt; too shy to make mistakes in front of others; do not like publicity; not happy with present body weight and a fear of failure)
- economic factors (lack of proper sport kit; expensive subscription fees; expensive equipment)
- health.

These general barriers could also apply to athletes with a mobility impairment, together with a few additional barriers. It is important for the current research to determine the barriers that are responsible for preventing sport participation by athletes with a disability.

3.3.1 Reasons for non-participation in sport by athletes with a disability

Moran and Block (2010:2) investigated possible barriers that prevent athletes with a disability from participating in sport. The four most common barriers to participation were identified and suggestions were made to overcome these barriers.

- **The coaches fear liability and/or do not know how to accommodate athletes with a disability.**

The coach fears a player with a disability will get hurt and then the parents might take legal action, or that the athlete's adaptive equipment (crutch or artificial arm) would injure another athlete. The safest option is therefore not to let the athlete with a disability take part in the activity.

Solution: Let the parents educate the coach. Parents can also suggest practical modifications that could be implemented to make participation possible without endangering other athletes.

- **Coaches may lack knowledge and specialized training.**

Many coaches agree that athletes with a disability deserve ‘the right to participate’ but they lack the knowledge to appropriately meet their needs.

Solution: Establish a relationship with a special education teacher or therapist who is knowledgeable about inclusion. A clinic for coaches can be provided on how to meet the needs of diverse athletes. Volunteers could also be asked to assist.

- **Parents’ and children’s fears**

Parents are concerned about the remarks of other athletes and their parents about their own child’s disability. Likewise, athletes are also concerned about the remarks of other athletes and their parents about their disability. Parents also fear for their child’s safety as they are concerned that their child might get hurt or harm others.

Solution: Coaches can talk to the team about the athlete. Introduce the athlete and explain the specific disability. Also focus on the ability that the athlete has. Indicate that the strengths and weaknesses of each athlete promote team togetherness.

- **The lack of appropriate programs**

This is particularly problematic in small rural areas where no specialized programs are offered. Some programs make provision for very young athletes only.

Solution: Resources can be combined with other communities and older athletes with a disability can be asked to participate with the young athletes (Moran & Block, 2010:4-10).

Rankin (2012) conducted interviews to identify barriers which make it difficult for people with a disability to take part in sport. The following barriers were mentioned by the participants:

- accessibility: either of buildings, equipment or the sport itself
- health and safety: the participants are convinced that this is used as an excuse not to have to make adjustments
- lack of awareness: people are unaware of the adaptations that allow people with a disability to take part
- lack of help and support: some people with a disability need someone to help them with certain actions
- absence of provision of sport for people with a disability once they leave school
- poor dissemination of information: it is not easy to find out about sport clubs for people with a disability
- difficulties in setting up impairment specific sports activities and clubs: not enough people in the area to form teams (Rankin, 2012:5-6).

Each form of disability and mobility impairment however has different requirements which influence the participation in sport by the athlete. From a study by Mockevičienė and Savenkovienė (2012) among athletes with a physical disability who are taking part in sport on all the levels (elite level, national level, club level and leisure time level), the following barriers were identified:

- unadjusted sport basis
- lack of sports equipment

- lack of support from close people
- lack of self-motivation
- distrust in their strengths
- lack of perception of the usefulness of sports
- lack of financial support
- lack of information about sports for people with a disability (Mockevičienė & Savenkovienė, 2012:91).

The reasons for non-participation in sport by athletes with spinal cord injuries were identified by Skučas (2013:85) as:

- lack of adapted sports facilities
- lack of sports equipment
- little choice of sport branches for athletes with a disability
- limited independence owing to a lack of daily living skills
- absence of access to favorite sport
- lack of time because of work or other reasons
- financial problems
- transport problems
- lack of coaches and sport specialists.

In a study conducted by Stephens, Neil and Smith (2012:2067) among permanent wheelchair users, the following barriers to sport participation were identified:

- medical barriers (secondary complications such as infections, fatigue and injuries)
- emotional barriers (traumatic injury which takes some adjustment and results in a general reduction in confidence)
- lack of information (lack of or inappropriate medical service, limited information about sports during rehabilitation and lack of awareness of benefits associated with being physically active)
- views held by others (being patronized by members of the public), and a lack of public awareness of the availability of sports for people with a disability.

Skučas (2013:84-85) also referred to various studies which indicate that individuals rarely continue participating in sport after a spinal cord injury (Stryker & Burke, 2000; Hanson & Nabavi, 2001; Stephan & Brewer, 2007; Wu & Williams, 2001). This could be caused by obstacles that face individuals after the injury, such as lack of appropriate equipment (e.g. special sport wheelchairs), lack of finance, poor access to sport facilities which are not adapted, and the acquiring of new sport skills necessary for the involvement in sport for athletes with a disability.

The lack of finance and the lack of information about sport for athletes with a disability comprise the biggest obstacles with which athletes with an impairment are faced (Mockevičienė & Savenkovienė, 2012:91; Rankin, 2012:6). The financial implications are often a barrier for athletes in a certain sport, for example, in cycling where the price of a new handcycle is about R60 000 and a new wheelchair basketball chair about R45 000. Unfortunately, this barrier is a reality which influences the athlete's choice of sport.

The possibility and practical implications of including athletes with an impairment in sport for athletes without an impairment are investigated in the next paragraph. The possibility of adapting sports programs to accommodate the needs of athletes with a mobility impairment and of allowing them to benefit from physical activity and sport is also investigated.

3.4 INTEGRATING SPORT TO ACCOMMODATE ATHLETES WITH A DISABILITY

A consequence of the paradigm shift from the medical to the social model (see paragraph 2.6.3) is increased opportunities for the participation of a child who has a disability. A movement towards integration aims to maximize the social interactions among individuals with a disability and individuals without a disability.

Mainstreaming was one of the early models to be introduced as the model of accommodating learners with a disability in the regular educational environment. Mainstreaming is defined as the integration of learners with a disability into the ordinary school without changes in curriculum, organization or teaching strategies (Department of Basic Education, 2011:51). Mainstreaming, as well as the later approaches of integration, stems from the normalization principle, which states that people with a disability have the right to life experiences that are the same, or very similar, to those of others in society (Swart & Pettipher, 2005:7). The goal with mainstreaming in the educational environment is to include learners with a disability in the mainstream as far as possible alongside normally developing peers. This also applies to a sport context.

The implication of mainstreaming, according to Pangrazi and Beighle (2014:13), is that learners with a disability can participate in physical education and sporting events on an equal level with peers without a disability, without any changes or adaption to the activities to accommodate learners with a disability. To accommodate all learners successfully without any adaption is however not always possible and thus it is understandable that mainstreaming has been criticized for neglecting to provide learners with a disability with the necessary support to benefit from regular physical education. Mainstreaming has been referred to as 'mainstream-dumping', 'dump-and-hope' or 'mainstreaming by default' (Swart & Pettipher, 2005:7). The implication for athletes with a mobility impairment was that they were still left out if they could not 'fit' into the sport and meet the requirements of its rules.

Although individuals with a disability are just as keen to participate in sport in spite of constraints, they do not participate in sport as regularly as those individuals without a disability (Jaarsma, Dijkstra, Geertzen & Dekker, 2014). Specific barriers regarding

sport participation are identified by individuals with a physical disability as a lack of sports possibilities; a lack of information about sports; difficulties with accessibility; and transport.

In an investigation by Musengi and Mudyahoto (2010), all the teachers involved in teaching learners with a disability acknowledged that they did not know how to adapt sports equipment, facilities and games to suit specific disability-related limitations. Kew (1997:115-116), Pangrazi and Beighle (2014:143) and Virgilio (2012:47) suggested the following general adaptations which could be implemented to ensure successful sport participation for all children:

- Alter the playing field: this can be done by decreasing the size of the playing field; and the targets (baskets, goalposts) can be lowered, increased or decreased depending on the needs.
- Change the rules, prompts and cues: introduce various changes, for example, disregard time limits; appoint a partner to assist; allow more bounces of the ball; and change the size of the teams.
- Modify the equipment: make use of larger or lighter equipment; vary the size, weight, color and texture of balls; and make use of additional equipment, for example, blocks of wood where necessary.
- Adjust the time and tempo: slow down the activity pace; lengthen or shorten the time; and provide frequent rest periods.
- Vary the actions: use different body parts; reduce the number of actions required; and modify body positions.
- Ensure the safety of all the participants: always ensure that activity modifications maintain high levels of safety for all the participants.

If adaptations are made, it provides the opportunity for players to become familiar with the game and to develop the skills required to master the game. As the fitness level

improves and the motor skills develop, the use of these adaptations can be limited. Kew (1997:116) further suggests that the adaptations be based on the abilities of the athlete together with the psychomotor requirements of the specific activity. The type of disability also has an impact on the adaptation of activities.

To illustrate the ease and effectiveness with which the implementation of the above can be done, volleyball is used as an example of how to make sport accessible for athletes with a mobility impairment. If needed, the following adaptations can be introduced to accommodate players with a mobility impairment:

- If the mobility of the players is very limited, reduce the playing area.
- Place players in wheelchairs closer to the net.
- If there is a lack of upper body and arm strength, lower the net.
- Use a bigger and lighter ball; even use balloons initially.
- Allow for multiple hits.
- Alter the teams by adding extra players to cover the playing area.
- Change the rules for service to throwing instead of hitting the ball.

Volleyball is a sport played by two teams on a court divided by a net. The object of the game is to send the ball (volleying), which is in constant flight, over the net in order to ground it on the opponent's court and to prevent the same effort by the opponent. The team has three hits for returning the ball (Fédération Internationale De Volleyball (FIVB), 2012:7).

The playing area is 18 X 9m with a net at a height of 2.43m (for men) or 2.24m (for women) dividing the court vertically. The ball is made of leather and its circumference is 65-67 cm and it weighs 260-280g with its inside pressure of 0.30 to 0.325kg/cm². There are six players in a team. The ball is put in play with a service hit by the server over the net to the opponents. The rally continues until the ball is grounded on the court, goes out of the borders or a team fails to return it properly. When the receiving

team has gained the right to serve, its players rotate one position clock-wise. A player may not hit the ball twice consecutively. A set is won by the team which first scores 25 points with a minimum lead of two points and a match is won by the team that wins three sets (FIVB, 2012:12-27).

If adaptations provide the opportunity for players to become familiar with the game and to develop the skills required to master the game, the use of these adaptations can be limited as the fitness level of the players improves and their motor skills develop. The type of disability also has an impact on the adaptation of activities.

Some athletes wish to take part in physical activity and sport only for recreational purposes. They enjoy the camaraderie, the physical exercise and the outdoors. Other athletes are more competitive and are driven to the ultimate performance. Developing a sense of competence with regard to an athlete's skills and abilities is an important aspect of identity development. Blinde and McClung (1997:333) stated that recreational activities influence the self-perception of an athlete as they provide an environment in which athletes get the feeling of the different activities. It also enhances their beliefs regarding their physical abilities and increases their confidence to try new activities. It is against this background that the role of adaptive sport has become more prominent and the phenomenon of adaptive sport is therefore investigated in the next section.

3.5 INTRODUCING ADAPTIVE SPORT

When athletes with a disability first entered the sport world, various terms were used to indicate their participation. The predominant terms used included handicapped sport, sport for the disabled and wheelchair sport (DePauw & Gavron, 2005:7). It is however not a separate kind of sport, but it mostly consists of the adaptation of existing sport in which athletes without a disability take part.

Adaptive sport, also referred to as **para-sport**, is sport in which athletes with a disability participate (DePauw & Gavron, 2005:7). It is parallel to sport for able-bodied athletes, with adapted equipment and rules to make sport fun and accessible for everyone. Not all sport for people with a disability is adapted; several sports have been specifically developed for athletes with a disability which have no equivalent in able-bodied sport.

Adaptive sport has been made accessible for athletes with a disability in the following ways (Australian Sports Commission, 2015):

- existing sport in which individuals with a disability can participate with no modification (for example, swimming)
- existing sport with minor modifications (adaptions) to accommodate athletes with a disability (for example, a strap used in powerlifting to strap the athlete to the bench)
- existing sport that has major modification (adaptions) to accommodate athletes with a disability (for example, wheelchair tennis where the rules are also changed)
- sport that has been specially developed to accommodate athletes with a disability (for example, boccia and goalball) (Australian Sports Commission, 2015).

To be able to understand the need for adaptive sport, it is necessary to investigate the background and the establishment of the Paralympic Movement, which aims to provide athletes with a disability with the opportunity to enjoy and excel in their sport. The history of the Paralympic Movement, as well as the criteria for participation in the Paralympic Movement and the classification for participation in Paralympic sport are investigated next.

3.5.1 Paralympic sport

3.5.1.1 *History of the Paralympic Movement*

Sport for athletes with an impairment has existed for more than 120 years, and the first sport clubs for the deaf (hearing impaired) were already in existence in 1888 in Berlin (Gold & Gold, 2007:134). It was not until after the Second World War however that sport for the disabled was widely introduced. Its purpose at that time was to assist the large number of war veterans and civilians who had been injured during wartime (Gold & Gold, 2007:133). In 1944, at the request of the British Government, Dr Ludwig Guttman (a

prominent neurosurgeon) opened a spinal injuries unit at the Stoke Mandeville Hospital in Great Britain. The program focused on total care of paralyzed patients where sport was the natural form of remedial exercise to restore physical fitness, strength, coordination, speed and endurance (Thomas & Smith, 2009:1). Sport also had the psychological impact of restoring pleasure in life and contributing to social reintegration (Gold & Gold, 2007:134), and in time, rehabilitation sport evolved to recreational sport and then to competitive sport (Howe, 2008:17-18; Thomas & Smith, 2009:1).

On 29 July 1948, the day of the Opening Ceremony of the London 1948 Olympic Games, Guttman organized the first competition for wheelchair athletes which he named the Stoke Mandeville Games, a milestone in Paralympic history (The Paralympic Movement, 2014). The Games involved 16 injured servicemen and women who took part in an archery competition on the front lawn of the hospital. In 1952, Dutch ex-servicemen joined the Movement and the International Stoke Mandeville Games were founded. These games were originally for paraplegics but other groups pressed for participation in internationally organized sports festivals. Thereafter, other countries with athletes with different disabilities joined the games. As the games grew, demands for greater professionalism regarding the organization, funding and management of international sport for the disabled saw the establishment of the International Stoke Mandeville Games Committee in 1959 (Gold & Gold, 2007:135). These Games later became the Paralympic Games which first took place in Rome in 1960 featuring 400 athletes from 23 countries.

The expanding scope of disability sport quickly generated numerous new international disability organizations and finally, on 22 September 1989, the International Paralympic Committee [IPC] was founded as an international non-profit organization to act as the global governing body of the Paralympic Movement (The Paralympic Movement, 2014). It served as the umbrella organization for 162 National Paralympic Committees, five regional bodies and four international disability specific sports federations (Gold & Gold, 2007:138).

The word *paralympic* derives from the Greek preposition *para* (beside or alongside) and the word *Olympic*. Its meaning is that Paralympics are the parallel games to the Olympics and it illustrates how the two movements exist side-by-side (The Paralympic

Movement, 2014). Originally the term was a paronomasia which combined *paraplegic* and *Olympic* with the intention of confronting the Olympian traditions of celebrating excellence and the perfectly formed body with the realities of disability (Gold & Gold, 2007:134).

3.5.1.2 Criteria for participation in the Paralympic Movement

The purpose of the Paralympic Movement is to organize the summer and winter Paralympic Games, to act as the International Federation for nine sports and to supervise and coordinate World Championships and other competitions. The vision of the IPC, run by 200 members, is to enable Paralympic athletes to achieve sporting excellence and inspire and excite the world.

The Paralympic Movement offers sport opportunities for athletes who have a primary impairment that belongs to one of the following ten 'eligible' **impairment types** (IPC, 2014):

- **Impaired muscle power:** *Impairments in this category have in common reduced force generated by the contraction of a muscle or muscle groups (e.g. muscles of one limb, one side of the body, the lower half of the body). Examples of conditions included in this category are para and quadriplegia, muscular dystrophy, post poliomyelitis and spina bifida.*
- **Impaired passive range of movement:** *Range of movement in one or more joint is reduced in systematic way. Note that hypermobility of joints, joint instability (e.g. shoulder dislocation), and acute conditions of reduced range of movement (e.g. arthritis types of impairment) typically will be excluded as 'eligible impairment'.*
- **Limb deficiency:** *There is a total or partial absence of the bones or joints as a consequence of trauma (e.g. traumatic amputation), illness (e.g. bone cancer) or congenital limb deficiency (e.g. dysmelia).*

- **Leg length difference:** Owing to congenital deficiency or trauma, bone shortening occurs in one of the s.
- **Short stature:** Standing height is reduced owing to aberrant dimensions of bones of upper and lower limbs or trunk (e.g. achondroplasia).
- **Hypertonia:** A condition marked by an abnormal increase in muscle tension and a reduced ability of a muscle to stretch. Hypertonia may result from injury, disease, or conditions that involve damage to the central nervous system. When the injury occurs in children under the age of 2, the term cerebral palsy is often used, but it also can be due to brain injury (e.g. stroke, trauma) or multiple sclerosis.
- **Ataxia:** Ataxia is a neurological sign and symptom that consists of a lack of coordination of muscle movements. When the injury occurs in children under the age of two, the term cerebral palsy is often used, but it also can be due to brain injury (e.g. stroke, trauma) or multiple sclerosis.
- **Athetosis:** Athetosis can vary from mild to severe motor dysfunction. It is generally characterized by unbalanced, involuntary movements of muscle tone and a difficulty maintaining a symmetrical posture. When the injury occurs in children under the age of two, the term cerebral palsy is often used, but it also can be due to brain injury (e.g. stroke, trauma).
- **Vision impairment:** Vision is impacted by either an impairment of the eye structure, optical nerves or optical pathways, or visual cortex of the central brain.
- **Intellectual impairment:** The Paralympic Movement identifies intellectual impairment as “a disability characterized by significant limitation both in intellectual functioning and in adaptive behavior as expressed in conceptual, social and practical adaptive skills. This disability originates before the age of 18. The diagnostics of intellectual functioning and adaptive behavior must be made using internationally recognized and professionally administered measures as recognized by International Federation for sport for para-athletes with an intellectual disability (INAS).

The Paralympic Movement adopted the definitions for the eligible impairment types as described in the World Health Organization International Classification of Functioning, Disability and Health (WHO, 2001).

Each Paralympic sport should define clearly for which impairment groups sports opportunities are provided. This is described in the classification rules of each sport. While some sports include athletes of all impairment types (e.g. athletics and swimming), other sports are limited to one impairment type (e.g. goalball and boccia) or a selection of impairment types (e.g. equestrian and cycling).

The presence of an applicable eligible impairment is a prerequisite but not the sole criterion of entry into a particular Paralympic sport.

3.5.1.3 *Classification for participation in Paralympic sport*

Classification is a central characteristic of competitive disability sport. To ensure that competition is fair and equal, all Paralympic sports have a system in place which ensures that winning is determined by skill, fitness, power, endurance, tactical ability and mental focus; the same factors that account for success in sport for able bodied athletes. Classification is the process in which a single group of entities is ordered into a number of smaller groups (or classes) based on observable properties that they have in common; taxonomy is the science of how to classify (Tweedy & Vanlandewijck, 2011:259). The purpose of classification is to minimize the impact of impairments on the activity (sport discipline). Having the impairment thus is not sufficient. The impact on the sport must be proven, and in each of the Paralympic sports, the criteria of grouping athletes by the degree of activity limitation resulting from the impairment are called 'classes'. Through classification, it is determined which athletes are eligible to compete in a sport and how athletes are grouped together for competition (The Paralympic Movement, 2014).

Classification is sport-specific because an impairment affects the ability to perform in different sports to a different extent. As a consequence, an athlete may meet the criteria in one sport, but may not meet the criteria in another sport. Impairments therefore do

not affect activity in different sports to the same extent (The Paralympic Movement, 2014).

3.5.1.3.1 *Athlete evaluation*

When an athlete with a disability first starts competing, he/she undergoes a process to verify whether the above criteria are met. This process is conducted by a classification panel, a group of individuals authorized and certified by a Sport Federation to determine the sport class of an athlete. Classifiers are trained officials who are able to apply the guidelines and processes of classification. They should either have medical experience, for example, doctors or physiotherapists, or they should be technical experts within their sport, for example, coaches (Australian Sports Commission, sa:1).

The process includes:

- the verification of the presence of an eligible impairment for that sport
- physical and technical assessment to examine the degree of activity limitation
- the allocation of a sport class
- the observation in competition (The Paralympic Movement, 2014).

The athlete assessment includes the following assessments (IPC, 2007):

- physical assessment: conducting a physical examination of physique, muscle tone, coordination, range of movement, endurance, sensory or intellectual abilities
- technical assessment: evaluation in a non-competitive environment of the specific tasks and activities that are part of the sport or observation under simulated sport conditions
- observation assessment: observing the athlete during practice or an event or by making use of video footage and photography

Once a classification certificate is issued, the athlete is eligible to compete in that particular sport on a national and international level.

A complete list of the summer and winter sports which are acknowledged by the IPC (IPC, 2016) and which were hosted at the 2016 Paralympic Games, is presented in Annexure A. An image of each sport is provided, as well as a short description of the specific sport. The list indicates which of the sports are not open to athletes with a mobility impairment.

3.5.2 Non-Paralympic sport

For athletes with a disability the highest level of participation is participation at the Paralympic Games. Unfortunately, not all sports can be included in the Paralympic Games as this is just not manageable. The IPC follows strict criteria for evaluating potential sports. Only recently (7 October 2014) was the decision taken to include badminton in the 2020 Paralympic Games (IPC, 2015). Paralympic sports do not make provision for all forms of impairment and therefore not all athletes with a disability are eligible to compete in Paralympic sports owing to the nature of their disability (cf the criteria in paragraph 3.5.1.2). These are however not the only sports available for participation by athletes with a disability. Various sport federations, for example, sport for the deaf, sport for the intellectually impaired, and sport for the visually impaired, were established to support their athletes.

The South Africa Sports Association for Physically Disabled [SASAPD] is the macro body catering for the needs of people with a physical disability and visual impairment. The mission of SASAPD is to provide individuals with a disability a chance for a dignified life as an athlete. This organization is responsible for providing sport at a mass participation and development level to all athletes with a disability and to assist high performance (elite) athletes to represent South Africa at the highest level. The critique against this association is that it develops and promotes the sporting codes offered at Paralympic level for athletes with a physical disability and visual impairments only (SASAPD, 2015).

Not every athlete with a mobility impairment is interested in or comfortable with participating in one or more of the official 29 Paralympic sports. According to the World Sports Encyclopedia (Lipoński, 2003), information on more than 8000 indigenous sports and sporting games has already been accumulated. Consequently there is a wide variety of sports for the individual with a mobility impairment to participate in.

In 2003 the government established an organization called Disability Sports South Africa [DISSA] under the umbrella agency of Sports and Recreation. DISSA's vision is to implement the following:

- that sport in schools will be mandatory
- that all individuals with a disability will be participating in competitive and recreational sport
- ensure that coaches and trainers familiarize themselves with the needs of individuals with a disability
- that all sports facilities will be accessible for individuals with a disability (DISSA, 2015).

Unfortunately, DISSA was dissolved after the South African Sports Confederation and Olympic Committee [SASCOC] was established in 2004 and SASCOC assumed the function of DISSA (SASCOC, 2015). SASCOC is currently the controlling body for all high performance sport in South Africa with the main objective of promoting and developing high performance sport in South Africa (SASCOC, 2015). It is not SASCOC's mission to promote sport for people with a disability, other than the Paralympic sport.

The Department of Sport and Recreation South Africa [SRSA] is the national government department responsible for sport in South Africa. The primary foci are providing opportunities for all South Africans to participate in sport, managing the regulatory framework thereof and providing funding for different codes of sport (SRSA, 2012). The Department of Sport and Recreation (2005) undertook a survey to determine participation patterns in sport and recreation activities in South Africa. The sports

identified were soccer (the most popular sport), cricket, rugby, tennis, hockey, netball, athletics, running, gymnastics, swimming, golf, cycling and shooting (Department of Sport and Recreation, 2005:14). Eighty-three percent of the participants were aware that individuals with a disability take part in sport and two-fifths of the respondents thought that not enough was done for individuals with a disability. With the current involvement of athletes in professional sports, this scenario has since changed. Despite the increasing number of athletes and spectators with a disability, and the publicity which elite South African athletes with a disability have already received (e.g., the swimmer, Natalie du Toit; the tennis player, Lucas Sithole; and the athlete, Oscar Pistorius), the strategic plan for 2012-2016 of SRSA (2012) does not make provision for athletes with a disability.

The ideal is to expose children and youth from an early age to physical activity and sport. School Sport is a South African programme which functions in close cooperation with the Department of Basic Education to ensure that sport programmes are offered to school children in an effort to encourage life-long participation in sport (South Africa School Sports, 2014). The following sports are currently being promoted in schools (South Africa School Sports, 2014): athletics, basketball, cricket, golf, hockey, mountain-biking, netball, rugby, soccer, swimming, tennis and water-polo. The program recently included surf ski, surfing, surf lifesaving, rowing, canoeing, water skiing, baseball, motorcycling, show jumping, gymnastics and squash. There is however no indication of sport participation for athletes with a disability in this programme; nor are there any guidelines on how to accommodate learners who experience barriers to learning in general in school sport.

Against this background, it is clear that sport for athletes with a mobility impairment outside the Paralympic sport is not a priority for any of the official sports bodies mentioned in the above paragraphs. The athlete with a mobility impairment is thus often expected to make his or her own choice about the prospective sport he or she wants to participate in and the adaptations which would be required for participation in the specific sport.

The following are examples to illustrate how equipment can be adapted to enable athletes to participate in their preferred sport:

- Clip on handcycles provide wheelchair users with the opportunity of a healthy aerobic exercise. The connection system fits on any wheelchair and once it is attached, the two small front wheels are lifted off the ground. It is almost the same as pedalling a bicycle, but just with your arms instead of your legs.
- Polocrosse is an exciting fast-paced team sport played on horseback by people of all ages. It is a combination of polo and lacrosse. The game is played with a soft rubber ball and each player is equipped with a racquet (Polocrosse Association of South Africa, 2015). Once the rider's limitations are evaluated, the saddle and reins can be adapted to support the specific rider where necessary. Mounting ramps can be provided to ensure easy mounting for wheelchair users.
- Skateboarding for an athlete with a leg amputation would however not require any adaption to the equipment. While many skateboarders with two biological legs control the board through feeling, the athlete with a prosthesis relies more on instinct and visual checks of his footing and body positioning.

In Annexure B examples are provided of how some of the sports, which are not part of the Paralympic sports, can be adapted to include athletes with a mobility impairment from an early age. The list in Annexure B includes some of the indoor and outdoor sports which are popular in South Africa. Images of the various identified sports, as well as a short description of the adaptation to accommodate athletes with a mobility impairment, are included. From the content in Annexure B it is clear that athletes with a mobility impairment have the same opportunities as athletes without a mobility impairment to excel in their chosen sport.

Adaptive sport creates opportunities for all athletes with a disability to share in the love of sport, either as a spectator or as a participant. The emphasis however is on encouraging children with a disability to participate in the sport of their choice.

The following section focuses on how athletes with a disability experience their sport participation. Research conducted to determine the impact of participation in sport on athletes with a disability is reviewed.

3.6 RESEARCH CONDUCTED ON THE IMPACT OF PARTICIPATION IN SPORT BY ATHLETES WITH A DISABILITY

The 2012 London Paralympics revealed a few important aspects of sport for athletes with a disability (Skučas, 2013:82-83): sport for athletes with a disability is becoming more and more professional; it is becoming more popular all over the world; it is becoming an important event for the global society; it is changing the attitudes towards athletes with a disability; and it promotes social integration and socialization of people with a disability, improving their psychosocial health and physical condition. But what are the views of the athletes who take part in physical activities and sport?

Fitzgerald (2005:42-47) gathered information from young learners with a disability to gain a better understanding of their experiences during physical education and school sport. A general feeling from the learners was that their participation in activities was not perceived in the same or equal manner as activities undertaken by learners without a disability. The learners ascribed this to teachers' attitudes towards them which also influenced their peers. The dilemma was that a certain standard seemed to be imposed on all in physical education. This had a negative effect on the pupils who failed to match up to these standards (Fitzgerald, 2005:51). The learners compared themselves against an ideal that would be impossible for them to attain (Fitzgerald, 2005:55).

Children who experience fun in sport are more likely to remain committed. Martin (2006) identified two important findings from his investigation: First, youth athletes with a disability reported that their sport experience on a motivational, affective, cognitive and social level was a positive one. Second, sport enjoyment was strongly predictive of sport commitment indicating its potentially valuable role in helping youth with a disability maintain their desire to remain in sport.

Groff and Kleiber (2001:324-326) interviewed 11 adolescent athletes who participated in an adapted sports program to determine, among others, whether their experiences in sport had influenced their self-perceptions and their thoughts about having a disability. For most of the athletes, sport provided an avenue through which they could develop an overall sense of competence in skills not necessarily associated with sport. They also reported that they were able to express a great deal of emotion through sports

participation. Through sport they were able to interact with other athletes with a disability which provided them with a sense of connectedness and equality with others.

In a research study with middle school learners, Collins (2012:142-143) wanted to establish to what extent, if any, the attitudes of learners with and without a disability differed regarding enjoyment of physical education. The analysis revealed that there was no difference in levels of enjoyment toward physical education. One possible explanation for this could be related to the presentation of the curricular content. Physical educators teaching learners involved in this study may have been skilled in delivering a curriculum that is differentiated in such a way that a wide range of learner skills and abilities is appropriately addressed and accommodated. A second probable explanation may be that the curriculum adequately provides for a variety of activities in which learners are engaged and having fun.

Machida et al. (2013:1061) found sport to be part of the resilience process for competitive athletes with spinal cord injuries. The social support and social interactions with teammates and coaches assisted them in dealing with challenges and adapting to their disability. These athletes indicated that sport participation provided them with achievement experiences that increased their confidence. These achievements and accomplishments were transferred to life outside sports. Sport provided these athletes with opportunities to learn and practice coping skills. Sport helped them to have a more positive attitude about life. One participant acknowledged that through sport he learned discipline, ways to set goals and focus on what was necessary. This helped him to adapt to his disability.

Hargreaves (2010:93-94) conducted research to determine how college wheelchair athletes with a physical disability experienced physical education when they attended elementary, middle and high school. It was clear that the participants did not experience physical education as fully and meaningfully as athletes without a disability would experience it. However, nine of the ten participants genuinely enjoyed their physical education experiences. There may have been activities that the participants did not participate in, or things they would change, but for the most part these nine participants were pleased with the physical education they received. One of the reasons the participants seemed to enjoy their physical education experiences was that they felt the

teachers and learners responded positively to their disability. The athletes mentioned that they felt completely comfortable in physical education because they had good relationships with their physical education teachers and peers. Another reason the participants enjoyed their physical education experiences was that they were part of their school's sports teams.

Scarpa (2011:46-47) investigated the role of physical activity and sports participation on the physical self-concept and self-esteem of adolescents and young adults with and without physical disability. Athletes with a physical impairment who participated in sport perceived themselves to be stronger than those without a disability who participated in sport. Athletes with a physical disability who did not participate in sport viewed themselves as *'less active, with lower endurance, strength, flexibility, coordination and sport performance, less attractive and possessing a worse physical concept. They had a lower self-esteem in comparison with participants with physical disability who practiced sport'*.

Brittain (2004:429, 438-439) focused his research on athletes who were in the athletic squad for the 2000 Sydney Paralympic Games. These athletes reflected on the views that other people close to them had regarding sport participation before they excelled in their sport:

- The idea that someone with a disability can achieve great things in a sport is totally at odds.
- Physical activity, particularly strenuous physical activity, is not something that people with a disability are capable of taking part in.
- Parents are hesitant to allow children to take part in physical activity for fear that they may get hurt or they may be incapable of doing the activity.

Brittain (2004:449) blamed the perception of disability, embedded in the medical model, as a factor which could negatively impact on the self-perception and self-image of prospective athletes with a disability. However, these athletes were committed and they reached the highest level of sport participation.

Elisabeth Walker (four-time Paralympian) joined a swimming club at the age of 11. She was born with dysmelia (two shortened arms). She praises her coaches for making her feel comfortable with the able-bodied swimmers. Doing the exercises with the other swimmers provided her with a measuring stick and gave her confidence. *'If coaches know their athletes, they will be able to challenge them. For an athlete with a disability, a small improvement in the playing field can potentially make a big difference in overall life skills'* (Coaching Association of Canada, 2011:11).

Baćanac et al. (2014:68) studied 24 elite athletes with and without a physical disability. It was evident that the participation of athletes with a disability on the elite level contributed to their psychological wellbeing. Participation of athletes in sport helped the athletes to build positive attitudes about themselves and they became more skilful in overcoming stress in sport. Valuable life skills were developed which helped them to cope successfully with different everyday challenges, pressures and demands, not only in sport but in other life situations.

Huang (2005:223-225, 230), by conducting 21 interviews with elite athletes with a disability, explored the experiences of elite sportsmen and sportswomen with a disability. These athletes experienced self-empowerment in sport on a physical and mental level. They considered it an advantage to be physically fit and energetic as it helped their daily movement in life which further facilitated their mental strength to take charge of their own lives. One of the participants indicated that sport success gave him confidence to do what he was interested in and to develop an active and optimistic personality which made him determined to pursue his ambition and to take his life seriously. The feeling of self-actualization gained from elite sports provided participants with a sense of self-worth. These participants also developed a different self-understanding to replace their negative identifications with impairment. *'While many people with an impairment are negatively labelled and identify themselves as disabled people, disability sport provides a way out of the traps of negative identification in the collective context by offering potential for positive subjectivity and a changed self-understanding and increased sense of personal empowerment'* (Huang, 2005:223-225, 230).

Groff et al. (2009:320, 324-325) referred to research studies which indicate that athletes with a disability in general exhibit higher levels of positive mood, increased wheelchair

mobility skills, lower levels of tension and depression, and an improved state of health and wellbeing. Based on these results, they explored the effect of adaptive sports participation on the quality of life for individuals with cerebral palsy participating in the World Games. A total of 73 elite athletes with cerebral palsy were asked to complete a survey. The overall findings suggested that these athletes placed a great deal of importance on sport and competition in their lives. The majority of athletes indicated that their participation in adaptive sport had a positive influence on their quality of life which included their health, family life and social life.

Sørensen (2003) interviewed five athletes with many years of participation in sport. These athletes participated in recreational activities as well as competitive sport. The importance of sport for two of these athletes was seen as follows:

You increase your self confidence by experiencing that you can accomplish things, so you get stronger beliefs that you can do other things too. It gives you a strength in everyday life, too, that makes you dare to push yourself a little more forward' and 'In sport I learned a lot of practical things that are very important for arranging your life as a person with a disability – it has been important physically, too, but also later when I worked more as a representative and in the administration, I learned a lot that I use in my job today.

Two of the five athletes indicated the value of their sport participation in the following manner:

Because you get the focus away from your weaknesses, you get the focus changed toward what you can do and that you can develop what is good ... and one gains a little more confidence in oneself. That can increase your self-esteem, give you a better self image' and 'It gave me an activity that was more equal to what the other boys had – they could play football; I could not, The alternatives for disabled were mostly handicraft type activities. But sport had another status as a leisure time activity ... I believe that has been important – that I too could say I was going to training, see? Sport, training, table tennis. It was as good as football, right? And that I could come home

... with a prize. I think it has been important – it gives respect and that does something for your self-esteem. You get a little more normal, a little more ordinary; you are engaged in something that is an ordinary activity.

Turnnidge et al. (2012:1134-1135) interviewed eight athletes with a disability who were part of a swimming program. The responses of these athletes regarding the outcomes derived from this program revealed four general benefits.

- **Redefined capabilities**

The athletes had an opportunity to discover new skills and they could re-evaluate the limits of their abilities. They expressed how developing new skills had enabled them to experience a sense of accomplishment and they developed a pride in their abilities. Their sport experience fostered the development of responsibility, time management and work ethic.

- **Affirmed sense of self**

The athletes developed a stronger self-concept and an enhanced sense of confidence. Sport participation also encouraged them to set goals for themselves and to develop higher self-expectations.

- **Strengthened social connection**

The social benefits gained were also important to the athletes. Making new friends and meeting with them outside the sport environment, such as going to the movies, was a positive experience. They also learned to work as a team which enhanced their interpersonal skills and confidence in relating to peers and adults.

- **Enhanced acceptance**

The athletes learned to become more accepting of their own disabilities and those of others. They saw themselves in a more positive light.

From the research results mentioned above, the benefits of sport participation (such as physical improvement and an overall healthier body), are often visible during the developmental phase of adolescence with a disability, but the more far-reaching effects such as the effects of self-esteem, social growth and confidence are not always visible at first glance. However, it is evident that the impact of sport participation can extend to the following:

- an overall sense of competence in skills not necessarily associated with sport
- the ability to express emotions through sport
- interaction with other athletes with a disability provides a sense of connectedness and equality with others instead of comparing oneself to an ideal and failing to meet the requirements
- enjoyment and fun which lead to a feeling of achievement which in turn increases confidence
- social interaction and social support contribute to positive dealing with and adapting to the disability
- accomplishments in sport to be transferred to life outside sport
- building a positive attitude about life, discipline and goal setting
- improvement of self-esteem
- improvement in general wellbeing
- the development of life skills
- building of confidence
- improvement in the quality of life
- personal empowerment: although every athlete with a disability may have different experiences from sport participation, it is evident from the research reviews that the impact of sport participation has an overall positive influence on athletes. *It seems that sport has the potential to be an arena for empowerment for individuals*

with a disability by contributing to a positive identity formation, increasing self esteem through skill development and being a learning arena for goal directed work (Sørensen, 2003).

3.7 CONCLUSION

The participation in physical activities for a young child is of the utmost importance to ensure that certain cognitive, motor and perceptual skills are developed. Without these skills children cannot develop to their full potential. A combination of various factors, including social isolation from peers and their own physical limitations, results in children with a disability becoming observers of sports rather than participants. Children with a disability are already confronted with a number of internal and external barriers to sport participation. What aggravates matters is that children with a disability often have limited opportunities to engage in recreational and sport activities.

Despite the recent emphasis on increased levels of inclusion of students with a disability in the general education academic environment, the opportunities for many of these children to participate in physical activities and sports remains limited. Even the sports organizations for people with a disability do not provide sufficient opportunity and variety for the athletes with a disability to participate in sport. There is a need to increase sport participation opportunities for youth with a disability and one way of addressing this is to introduce the concept of adaptive sport. Adaptive sports programs are designed particularly to provide athletes with a disability the opportunity to participate in and enjoy sport to enhance their emotional, physical and social development. The Paralympic Movement identified 28 sports which they support for participation by athletes with a disability but not all athletes with a disability can participate in these events. Certain criteria determine which athletes are eligible for participation. However, not all athletes with a mobility impairment are interested in participation in these events. The possibility of adapting other sports to accommodate athletes with a mobility impairment was investigated and alternative options for athletes were mentioned. Sixteen randomly selected sports which are popular in South Africa were identified to serve as examples of how these sports can be adapted.

Participation in sport and other physical activities cannot be labeled exclusively negative or positive but from the literature study it is evident that sport participation provides athletes with a mobility impairment with opportunities to express themselves and create who they believe themselves to be. Acquiring and developing sporting skills can be important for establishing a positive self-concept and identity.

The sport context constitutes an important background where individuals with physical disability find opportunities to test their capacities, highlighting ability rather than disability. The sport arena also creates opportunities to experience exposure to social assessment in integrated environments and can contribute to formulate stronger views of their bodies in people with physical disability. Sports and adapted physical activities can be considered for people with disabilities, as fundamental opportunities for inclusion, helping to improve the perception they have of their corporeality and, furthermore, contributing to improving their self-esteem (Scarpa, 2011:47).

Against this background it is important to investigate a possible link between sport participation and the adolescent's identity formation. The process of identity formation is a dynamic process and it requires opportunities for self-expression and social feedback and ample room for revision. Identity formation has been identified as a psychosocial stage during adolescence in which adolescents are trying to establish who they are and what they want to become (Erikson, 1959). Adolescents with a mobility impairment must repeatedly negotiate the relationship between their body, socially constructed disability, and their identity. *'Sport is one of the arenas in which the social struggle for control of the physical body occurs, processes of individual identity testing and formation are conducted, and multiple notions of identity are embodied'* (Huang & Brittain, 2006:353). Adaptive sport is thus an ideal environment in which the identity of an adolescent with a mobility impairment can develop.

To undertake such an investigation, it is first of all important to understand the development of identity formation. The next chapter deals with the phenomenon of identity and identity formation in depth.



CHAPTER 4

ANALYSIS OF THE PHENOMENON IDENTITY

4.1 INTRODUCTION

In all the history of the world there was never anyone else exactly like you, and in all the infinity of time to come, there will never be another (Scheinfeld, 1966:3).

Young people differ in a number of ways: appearance, temperament, honesty, intelligence, learning styles, modes of thinking, rate of development, conformity, values and interests. The one thing they all have in common is that identity formation is a fundamental psychosocial task for them. From the beginning, in their early teens, adolescents start to ask questions such as ‘Who am I?’, ‘What am I going to do in my life?’, ‘What kind of relationships do I want?’ and ‘What are my moral values?’ These questions indicate that a struggle to form an identity is present.

The word identity has been used in many different contexts and for many different purposes. The origin of the word identity is from the late Latin word *identitās* (quality of being identical), and the Latin word *idem* (same), and refers to a set of characteristics by which a person is definitively recognizable or known. It also refers to a state of having unique characteristics held by no other person or object (Collins English Dictionary, 2014). To establish such a unique identity requires an active involvement of the individual in the process which develops over time. Because an identity is established over time, it necessarily implies certain changes as events, or the individual changes. Certain core aspects of an identity however are fixed, for example gender, race, ethnicity and physical appearance.

Identity development does not take place in a vacuum and it can be greatly influenced by the social environment in which individuals find themselves. In the case of a child with a mobility impairment, it is important to gain an understanding of the context in which his or her identity development takes place. The process of identity formation normally involves choices and freedom to explore possible identities such as that of a musician or an athlete. Adolescents with a mobility impairment may experience

constraints to identity formation because their opportunities to explore alternative identities are limited. These adolescents may also develop an identity around their specific impairment, which may cause devalued identity characteristics. This could result in adolescents withdrawing from social engagements.

Dumont (2013) stated the presence of a disability and the impact thereof on identity formation in the following way:

Being born different or with disabilities will influence the development of identity. Children may find [it] more difficult to reach adulthood, to stay dependent on their parents, which will lead them to follow different stages of identity development as compared to others. They will necessarily have different life experiences – occupations social relationships and others – that will tailor their identity. During adolescence for example some of them will experience more difficulty in asserting themselves or identifying themselves with peer groups. Rehabilitation interventions may provide them with opportunities to build their identity through various life experiences.

Adolescents with a mobility impairment find themselves as individuals in an environment where they are actively involved in the formation of an own identity. This identity will have a direct impact on the rest of the adolescent's life. How can parents, caregivers, teachers, coaches and significant others contribute to his or her successful identity formation? To be able to answer questions such as the one above, it is necessary to have an understanding of the phenomenon of identity.

The aim of this chapter is then to explore the phenomenon of identity by understanding concepts and structures of identity, such as the self and the self-concept. The main contributions towards understanding the self are James's theory of the self, the symbolic interaction approach of Cooley and Mead, and the phenomenological approach of Rogers. These theoretical contributions are briefly explored. The second construct which is also related to identity, namely the self-concept, is then investigated.

To explore the construct of identity, the psychosocial theory of Erik Erikson is analyzed. Erikson is one of the earliest psychologists to take an interest in identity and his theory

has the potential to offer significant insight into understanding how an identity is formed. Erikson provides a valuable conceptual framework for the understanding of human personality development through personal identity formation. The specific theory falls within the conflict model which describes individuals as being caught between two opposing forces, either within themselves, or between themselves and society. The outcome can either be positive or negative, depending upon resolutions in prior life stages. Erikson's approach is unique in that he aims to investigate the process of identity formation across a lifespan. The eight stages of this psychosocial theory are explored.

Finally, approaches to measure identity are discussed. How does one know if and when an identity is formed? Is it possible to measure to what extent an identity has been formed? The identity status approach of Marcia, as well as the epigenetic approach of Erikson is discussed to determine which approach is appropriate to measure the identity of the adolescent with a mobility impairment.

4.2 BACKGROUND CONCERNING THE SELF AND IDENTITY

Questions about the self go as far back as the Greeks, particularly Aristotle (Strauss & Goethals, 1991:1). Aristotle's distinction between the physical and the non-physical aspects of human functioning led to other philosophers speculating on the nature of consciousness, thought and knowledge. The concept of identity has become both a contested and a fertile field of research and theory in recent years. According to Abend (1974:614), terminology from the early literature on the phenomenon identity can be divided into two groups, namely terminology around the self and terminology relating to identity. Bourne (1978a:228) noted a lack of a clear, theoretical distinction between the terms identity and self. Ferguson (2009:18) supported this view by stating that the concept of the self is closely related to identity.

Loevinger and Blasi (1991:150) use the term self as follows:

The subject, the actor, the knower; its salient characteristics are:

- *a sense of agency – that I am the author of my actions, manifest, among other ways, by control of my actions and by self-mastery*
- *distancing, the ability to reflect on oneself, something like being aware of being aware, something like ‘inner space*
- *individuality, differentiation, and separateness from other agents*
- *self-appropriation, unity, and ownership of all my thoughts and actions, though not necessarily their mutual consistency (Loevinger & Blasi, 1991:150).*

Kralik (2005:1) was of the opinion that self and identity are linked but they are not the same:

Self is considered to be who we are in terms of personality, character, mind and soul. Self is experienced as a core inner presence. To some extent it is constant, but some aspects may also be changeable, according to our situation. Others may or may not have an awareness of the self. We can present our self to others in ways that disguise it, according to what we want others to know or think about us. Sometimes there is a difference between what we present to the world and how we perceive ourselves. This can be experienced as pressure between inner feelings and the image we portray. The image that we present to others partly informs their judgements and attitudes toward us.

Our identity is developed and maintained through the social relationships we have with others. The way others perceive us is our identity. It is our public image. We are sensitive to the stereotypes others have about people with illness or disability and we may act to present a different image.

Non-disclosure of information about illness, disability or impairment may be a way of developing an identity. The reactions of others can impact on the self and identity, so

it is understandable that individuals with an impairment would act to present an image of themselves which fits with community values as far as possible (Kralik, 2005:1). It is apparent that different meanings are attached to the concepts self and identity and in many cases the concepts are confused. Since identity formation is significant for this study, it is necessary to analyze not only the phenomenon of identity, but also the construct of the self.

4.3 AN ANALYSIS OF THE CONSTRUCT SELF

Over the years many philosophers and psychologists have attempted to demarcate the self. The terminology used often comprises words such as self-esteem, self-efficacy, self-confidence, self-determination and self-concept and they were associated, positively or negatively, with other qualities of life.

The 'self' is not an easy concept. It is hard to define, it has no easily observable properties, and it can be difficult to measure. Even when one has measures of 'it,' it is often difficult to know exactly what the measure means. To make matters more challenging, the self is believed to have a vast array of features and characteristics and to be implicated in a wide variety of processes and experiences. Although there is little agreement about exactly what and where the self is, there is nearly universal agreement that the self is real and that it exists within each of us (Harter, 2012:ix).

Loevinger and Blasi (1991:151-164) gathered data to describe the development of the self. From the data, various levels of development of the self were identified. The levels start at the very first stage and continues to the highest level of the self as a person matures:

- **The impulsive level:** children or adolescents have no awareness of self as such. They understand their bodily, physical self, but they do not recognize the psychological self.
- **The self-protective level:** a sufficient distance from impulses emerges to allow some control.

- **The conformist level:** the self is considered not much different from others in the group, whatever the group may be.
- **The self-aware level:** this is the point at which the person becomes aware of the self as a self. It implies a capacity for reflection, introspection and distancing from the self and the group.
- **The conscientious level:** this is the first truly post-conformist level. The person on this level has a rich inner life and a vocabulary to describe both it and individual differences in traits.
- **The individualistic level:** this level suggests that the person now shows not only recognition of, but genuine appreciation for individuality.
- **The autonomous level:** the person acknowledges the right to autonomy of others, especially those such as his or her own children, for whom he or she has a legitimate responsibility.
- **The higher level:** people at a higher level are so rare, that it is difficult to describe them on an empirical basis.

Since the theory of the self is complex, the historical development of the self-theory is outlined to enhance understanding. According to Burns (1982:15) and Choudhry (2010:9), the main contributions are as follows:

- the pioneering work of James
- the symbolic interaction approach of Cooley and Mead
- the phenomenological approach of Rogers
- the contribution of Erikson on identity formation.

(In order to distinguish between the concepts of self and identity, the contribution of Erikson is not discussed here, but it will be addressed in paragraph 4.5.1.)

4.3.1 James's theory of the self

William James (1842-1910) wrote *The Principles of Psychology*, originally published in 1890 (James, 1890¹; Russell, 2017:William James), as a blend of physiology, psychology, philosophy and personal reflection. James's view of the self (James, 1950:292) is that the self is not a unitary phenomenon but the self could be divided into three aspects:

- the constituents of the self
- the feelings and emotions they arouse
- the actions which they prompt.

The constituents of the self can further be divided into categories: the material self, the social self, the spiritual self, and the pure ego (James, 1950:292-297, 329). The material self involves our bodies as the innermost part, our clothing, our immediate family and our home. The social self is the recognition which we get from our friends, family and other people. The spiritual self refers to a person's inner or subjective being, with religion as one expression. The self as known is influenced by the feelings and emotions which arise from the abovementioned three categories, as well as the actions which are taken accordingly. The pure ego is seen as the metaphysical self (Bamikole, 2014:271) which provides the thread of continuity between our past, present and future selves.

Much of James's theory regarding the concept of the self tries to explain people's personal experiences in relation to the rest of the world around them. A distinction is made between the self as knower (the 'I') and the self as known (the 'me') (James, 1890:Chapter X; 1968:41). Every person's self is partly objective (the self as known) and partly subjective (the self as knower). James (1968:41) articulated this as follows:

Whatever I may be thinking of, I am always at the same time more or less aware of myself, or my personal existence. At the same time it is I who am aware; so that the total self of me, being as it were duplex, partly known and

¹ The original primary sources by James (1890, 1892, 1920, 1950, 1968) have been consulted in paragraph 4.3.1; therefore the obsolete sources.

partly knower, partly object and partly subject, must have two aspects in it, of which for shortness we may call one the 'me' and the other the 'I'. I call these 'discriminated aspects' and not separate things, because the identity of I with me, even in the very act of their discrimination, is perhaps the most ineradicable dictum of commonsense, and must not be undermined by our terminology here at the outset, whatever we may come to think of its validity at our inquiry's end.

According to James (1920:195-196), the 'I' is the pure ego which provides the thread of continuity between our past, present and future selves. The pure ego's perception of an identity arises from a continual stream of consciousness. It is believed that the pure ego is similar to what we think of as the soul or the mind. The 'I' is the self who is aware of one's own actions (Newman & Newman, 2012:288). This can be characterized by four fundamental features:

- a sense of initiation of behaviors - the self that experiences a sense of voluntary action or free will
- a sense of uniqueness
- a sense of continuity from moment to moment and from day to day
- an awareness of one's own awareness.

The 'I' includes the feeling that the self is a stable, coherent and bounded entity, distinct from other individuals (Smetana, 2011:71).

James identified the second part of the self as the known (the 'me'). Although we generally think of the 'me' in a singular sense, there are in fact, many different 'me's'. At any given moment, depending on our immediate situation and regarding the social context we are in, one of the 'me's' is summoned and the others are suppressed. When James refers to the hierarchy of the 'me's' or the rivalry and conflict of the different 'me's', he is, in a way, referring to the dynamics of personality and the maladaptive behaviors they produce (James, 1950:309-310).

The 'me' is the self that one can describe. This includes the physical characteristics, personality traits, social roles and relationships, thoughts and feelings (Newman & Newman, 2012:288).

As far as identity is concerned, no two people share the same thoughts. Humans change on a daily basis, but certain aspects stay the same (James, 1950:331-342). James (1968:41) explains:

The consciousness of Self involves a stream of thought, each part of which as 'I' can remember those which went before, know the things they knew, and care paramountly for certain ones among them as 'Me,' and appropriate to these the rest. This Me is an empirical aggregate of things objectively known. The I which knows them cannot itself be an aggregate; neither for psychological purposes need it be an unchanging metaphysical entity like the Soul, or a principle like the transcendental Ego, viewed as 'out of time.' It is a thought, at each moment different from the last moment, but appropriative of the latter, together with all that the latter called its own.

All facets of ourselves (the known and the unknown) can either support each other or contradict each other. These contradictions can be solved by rejecting one facet or by focusing on the more important one at that specific stage (Watzlawik, 2014:408).

In its widest possible sense, however, a man's Self is the sum total of all that he can call his, not only his body and psychic powers, but his clothes and his house, his wife and children, his ancestors and friends, his reputation and works, his land and horses, and yacht and bank-account (James, 1950:291).

According to Burkley, Curtis, Burkley and Hatvany (2015:349), when James stated that the self is the sum total of all that he can call his, he was suggesting that the self is comprised of all the constructs that have been integrated or fused within it.

The implications of James's theory for adolescents with a mobility impairment is that the 'I' and the 'me' are always influenced by the specific impairment. The way adolescents experience their body, as well as the reaction and feedback receive from

people, forms the adolescents' inner being. The specific impairment, as well as the severity of the impairment, could have an influence on the self. Certain feelings and emotions would emanate from this and specific actions would be taken by adolescents. The development of the self may vary depending on the group or situation in which adolescents find themselves.

Choudhry (2010:119) referred to this change as the *chameleon identity* where adolescents choose not to limit themselves to a fixed identity, but instead they adopt a situational identity to benefit their social context. It is thus possible that several *selves* will emerge within the global self of the adolescent with specific behavior patterns linked to the specific self.

4.3.2 The symbolic interaction approach

The symbolic interaction approach or symbolic interactionism is a framework that addresses how society is created and maintained through repeated interactions among individuals (Carter & Fuller, 2015:1; Aksan, Kisac, Aydin & Demirbukan, 2009:209). The contributions of Cooley and Mead are discussed in the following paragraphs.

4.3.2.1 C.H. Cooley's theory of the self

Charles Horton Cooley was one of first researchers to define the exact importance that society plays in forming the individual or the self. The 'looking-glass self' was a concept created by Cooley in 1902 (Cooley, Angell & Carr, 1933:121²; Cooley, 1983:184) stating that a person's self develops from society's interpersonal interactions and the perceptions of others. '*Each to each a looking-glass reflects the other that doth pass*' (Cooley, 1983:184). The self is formed in the reflected images of an interactive mirror.

As we see our face, figure, and dress in the glass, and are interested in them because they are ours, and pleased or otherwise with them according as

² The original primary sources by Cooley (1933, 1983) have been consulted in paragraph 4.3.2.1; therefore the obsolete sources.

they do or do not answer to what we should like them to be; so in imagination we perceive in another's mind some thought of our appearance, manners, aims, deeds, character, friends, and so on, and are variously affected by it (Cooley, 1983:184).

Cooley (1983:168-169) defines the self as *'that which is designated in common speech by the pronouns of the first person singular, 'I', 'me', 'my', 'mine', and 'myself'.* A person's aspects which are labeled by these pronouns generate stronger emotional feelings than those aspects which are not labeled by these pronouns.

According to Cooley's concept, three principal elements can be identified:

- **We imagine how we must appear to others.**

We, to the best of our abilities, put ourselves in the head of others and try to evaluate our appearance from an external perspective.

- **We imagine and react to what we feel their judgment of that appearance must be.**

We imagine what other individuals think about what we imagine they have concluded.

- **We develop our self through the judgments of others.**

We experience some sort of feeling such as pride or humiliation (Cooley et al., 1933:121; Cooley, 1983:184; Yeung & Martin, 2003:845). Cooley (1983:397) explained that our ideal self is predominantly constructed of ideas about us, which other people attributed to.

We can hardly get any distinct view of ourselves except in this way, that is by placing ourselves at the standpoint of some one else. The impressions thus gained are worked over and over, like other mental material, and, according to the imaginative vigor of the mind, more or less re-organized, and projected as an ideal (Cooley, 1983:397).

According to Rahim (2010:9) the concept of the 'looking glass-self' refers to the process in which individuals are predominately influenced by what they believe society perceives them to be. Consequently they often change their behavior based on how they perceive other people's reaction. This continues throughout an individual's life. '*The thing that moves us to pride or shame is not the mere mechanical reflections of ourselves, but an imputed sentiment, the imagined effect of this reflection upon another's mind*' (Garner, 2010:188).

Cooley stressed the importance of feedback received by another person as a major source of knowledge about the self. This feedback can be direct, for example, when one directly states to another person what one thinks of that person's behavior, but it could also be indirect, for example through a frown, or a look of amusement. With feedback, a person comes to certain conclusions about him or herself in terms of others' behavior towards him or her.

Adolescents with a mobility impairment might therefore see themselves as less important, because they believe this is what others think of them based on others' behavior towards them. This conclusion may be correct, but the possibility also exists that such a conclusion might be unrealistic and inaccurate.

4.3.2.2 G.H. Mead's theory of the self

George Herbert Mead (Mead, 1934:135)³, a follower of Cooley stated that

the self is something which has a development; it is not initially there, at birth, but arises in the process of social experience and activity, that is, develops in the given individual as a result of his relations to that process as a whole and to other individuals within that process.

Rieber (2012:670) pointed out that Mead is perhaps most famous for his proposal that the self must be viewed as a kind of polar entity comprised of the 'I' and the 'me'. The

³ The original primary sources by Mead (1934, 1982) have been consulted in paragraph 4.3.2.2; therefore the obsolete sources.

'I' involves the active appraisal and response to the 'me' by the individual. The 'me' consists of the comments, judgments and conduct directed towards the individual by others. Consequently the 'me' represents a kind of socially constructed identity. According to Mead (1982:72):

The ability of a person to put himself in another's place, and to get his reflection of himself, constitutes sophisticatedly the view of the self which answers to the other person's view of us, the self with which we work. The attitude which we take in introspection is simply an extension of this view. The individual self is referred to as secondary. The relation between the two is a good point of view from which to approach metaphysics and logic. We, however, are interested in the relation of others to the self.

Mead (1934:154-156) was of the opinion that a person's self develops from social interaction with others. This interaction enables the person to predict response and adjust his or her behavior accordingly. Mead promoted the concept of the 'generalised other' which is essentially a summary of the social norms in a given community or environment (Rahim, 2010:11). The way in which the 'generalised other' acts will be an internal regulator of a person's behavior.

According to Mead (1934:152-155), the process of forming the self occurs in three distinct stages:

- **Imitation**

In this stage children merely copy behavior of adults without understanding the behavior, for example, a boy might 'help' his mother to vacuum the floor by pushing a stick around the room.

- **Play stage**

Children play by pretending they are teachers or policemen. At this stage their responses are not organized, but they internalize the attitudes of others who are significant to them through imitating the roles of others.

- **Game stage**

As children mature, they also learn to respond to 'generalized others'. They do not just identify the roles of their significant others, but they also determine other roles.

Individuals may thus also put themselves in the place of others. By doing this, they are able to evaluate themselves as others evaluate them. When individuals put themselves in the place of others, they think similarly about themselves as others would think about them. The self is, according to Mead (Morrish, 1972:182), a collection of the roles in which a person places him or herself.

The extent to which people influence the self of a person is determined by the importance of their place in the person's life. The 'significant others' signifies persons who have a significant place in an individual's life. The role of significant others during participation in sport and recreational activities will thus also influence the development of the self of the adolescent with a mobility impairment. The significant others might include parents, coaches (teachers) and peers (Raubenheimer, 2006; Weigand, Carr, Petherick & Taylor, 2001; Carr & Weigand, 2001; Green, 2010). They can either directly or indirectly influence the development of children and adolescents.

The influence of **parents** on their children during sport participation can either be negative or positive according to parenting styles and their own approaches to sport participation and performance (Raubenheimer, 2006:20-24). Parents create a climate that influences their children's development (Weigand et al., 2001:3-4).

In addition to parental influence, children and adolescents are subjected to a motivational climate exhibited by **coaches**. Raubenheimer (2006:26) explained that coaches (teachers) may have different influences on the development of children. Coaches can take complete control of the relationship and with that control of the children's lives through which a dependency within the relationship develops and the coach can rule as a dictator. The influence of coaches can also be such that they are role models for the children, helping them to make their own choices. Coaches can also act as advisors in the lives and careers of children to assist them to handle success and failures in their lives.

According to Carr and Weigand (2001:24) the **peer group** of young children has the strongest impact on their development of the self. It is important for young children to be part of a group and to belong somewhere. Children invest a great deal of energy in group socialization to evaluate their attitudes and practices on the basis of their friends' responses (Green, 2010:73). One of the main motives for engaging in sport is the opportunity which sport provides for establishing and maintaining friendships (Green, 2010:76).

Criticism against Mead, according to Puddephatt and Prus (2007:277), is that Mead's conception of the self seems to be lacking pleasure or emotional experience. We are thus left with a problem-solving social organism that is relatively free from affective concerns or bodily desires.

4.3.3 The phenomenological approach of Rogers

Carl Rogers (1902-1987) is associated with the phenomenological approach to personality. Phenomenology can be defined as a '*theory that our knowledge should be based on immediate experience; the process of experiencing in full the events (phenomenon) going on around us*' (Basavanna, 2000).

In 1959, Carl Rogers published his theory of personality in which he described the self as a social product, developing out of interpersonal relationships (Knutzen & Kennedy, 2012:272). As a result of interactions with the environment and others, an individual forms a structure of the self. This structure is a pattern of concepts and values related to the self, which changes continuously.

Every person perceives the world in a unique way and their perceptions make up the phenomenal field. The phenomenal field is seen as '*the field of awareness or consciousness; the totality of one's own experience, which makes up a person's unique frame of reference*' (Basavanna, 2000). Colman (2009) summarized the phenomenal field as '*the sum total of consciousness at a given moment*'. Individuals, therefore, react to the environment as they perceive it (Freydenberg, 1997:4).

Thorne and Sanders (2013:26) indicated that Rogers claimed that there is one single, basic human motive which he called 'the actualizing tendency'. Rogers believed that every person can achieve their goals, wishes and desires in life. When this happens, self-actualization is taking place: '*The organism has one basic tendency and striving – to actualize, maintain, and enhance the experiencing organism*' (Rogers, 1951:487)⁴. Rogers believed that all organisms, not just people, have this tendency from the moment of birth.

Rogers's view of human behavior was that it is '*exquisitely rational*' (Rogers, 1961:194) within the inherent positive and trustworthy nature of an individual. Rogers (1977:7) alleged that people are fundamentally positive in nature and when they act irrationally or in a negative way, they are not functioning properly. Those who accurately experience the self, with all its abilities and disabilities, are on the road to self-actualization.

Rogers also developed the concept of personality congruence, where the self-concept as perceived within, and the social evaluations from without, closely entwines and thus lead to an internal consistency. Because of previous experiences and their present perceptions, individuals may perceive themselves in ways significantly different from the ways others see them (Knutzen & Kennedy, 2012:272). This incongruence can be described as the difference between the actual or the real self (I am) and the ideal self (I should be). The bigger this difference is, the less likely an individual will reach his or her potential. As a result of this incongruence, people often feel anxious or find themselves in situations where they may feel uncomfortable or vulnerable (Thorne & Sanders, 2013:31).

It is possible that there could be incongruence between adolescents' self and their experiences of their impairment. Because everybody strives towards positive recognition, an adolescent with an impairment might try to 'hide' the disability if possible, because it is a threat to his or her self. An example would be the adolescent who doesn't make use of a cane to walk with although it can be of assistance. Adolescents may also

⁴ The original primary sources by Rogers (1951, 1961, 1977) have been consulted in paragraph 4.3.3, therefore the obsolete sources.

avoid physical activities not to display their lack of mobility skills. When there is congruence between the self and the impairment, the adolescents consider themselves to be of value. They evaluate themselves realistically and open themselves up to new experiences. The adolescent will then, as Rogers put it, act as a fully functioning person in the environment, including a sport environment.

4.4 AN ANALYSIS OF THE CONSTRUCT SELF-CONCEPT

The self-concept of an individual is the perception or image of his or her abilities and his or her uniqueness. At first the individual's self-concept is very general and tentative. As he or she grows older, the self-perception becomes more organized, detailed and specific (Pastorino & Doyle-Portillo, 2013:482).

The self-concept construct is a well-known construct in psychology (Marsh, 1990:77). Epstein (1973:404-414) summarized the characteristics of self-concept after investigating the views of historical founders such as Cooley (1902), James (1910), Mead (1934), Lecky (1945), Snygg and Combs (1949), Hilgard (1949), Rogers (1951), Sarbin (1952), Sullivan (1953) and Allport (1955), as follows:

- It is a subsystem of internally consistent, hierarchically organized concepts contained within a broader conceptual system.
- It contains different empirical selves, such as a physique self, a cognitive self and a social self.
- It is a dynamic organization that changes with experience. It appears to seek out change and exhibits a tendency to assimilate increasing amounts of information.
- It develops from experience, particularly from social interaction with significant others.
- It is essential for the functioning of the individual that the organization of the self-concept be maintained.

- There is a basic need for self-concept which relates to all aspects of the self-system.
- The self-concept has at least two basic functions. First, it organizes the data from experiences, particularly experiences involving social interaction, into predictable sequences of action and reaction. Second, the self-concept facilitates attempts to fulfil needs while avoiding disapproval and anxiety.

Bracken (1992) developed the Multidimensional Self Concept Scale (MSCS) in which he considered six domains central to the measurement of self-concept (Hamm, 2010:15):

- the social domain – the ability to interact with others
- the competence domain – the ability to meet basic needs
- the affect domain – awareness of emotional states
- the physical domain – feelings about looks, health, physical condition, and overall appearance
- the academic domain – success or failure in school
- the family domain – how well one functions within the family unit.

The experiences in all of the above domains influence the holistic self-concept of a person. Rochat (2001:191) simplified these experiences in the following manner: All individuals have some ideas of who they are and what it is that distinguishes them from others. All individuals know what they look like and what their strengths and weaknesses are. All individuals have some sense of the personality they project to the outside world. *'In short, we all have some explicit conceptions of ourselves, a so-called explicit self-concept'* (Rochat, 2001:191).

Ferro, Ferro and Boyle (2012:945) described self-concept as a '*multidimensional psychological construct that describes individuals' internal depiction of their social acceptance, athletic and scholastic capabilities, behaviour, and physical appearance. It comprises individuals' perceived identity and evaluation of their characteristics relative to others*'. An individual may, for example, have a high concept of his or her scholastic abilities, a neutral feeling about his or her social popularity and a low concept of his or her physical abilities. During adolescence, children experience many physical, mental and emotional changes. Hadley, Elizabeth, Hair and Moore (2008:1) identified the following eight domains that relate to an adolescent's self-concept: scholastic competence, athletic competence, physical appearance, peer acceptance, close friendship, romantic relationships, job competence and conduct (morality).

The self-concept is an important element in the growth and development of every individual. A good self-concept enables a child to accept responsibility, to achieve success in school and to grow into a productive member of society. If a child does not have a good self-concept, he or she is dissatisfied with life and this may lead to difficulty in accepting responsibility, fear, apathy, anxiety and a lack of success in school. It might even lead to juvenile delinquency. The impact of a disability on a child's self-concept might influence the self-concept of the child in a negative way.

Physical attributes such as beauty, strength, energy and endurance also become major contributors to the self-concept (Carraro, Scarpa & Ventura, 2010:522). The adolescent with a mobility impairment has the same physical attributes which may have an impact on his or her self-concept. However, a general assumption exists that adolescents with a mobility impairment have poor or negative self-concepts and they do not feel good about themselves, specifically because of their disability.

Participation in sport is positively associated with adjustments to the self-esteem as it provides adolescents with opportunities to build sport competencies. In turn, sport competencies can build adolescents' self-concept of their abilities (Slutsky & Simpkins, 2009:381). Sport participation forms an important platform where adolescents with a mobility impairment can be supported during their self-evaluation in various physical activities. During sport participation, adolescents experience success if they perform better than another athlete, whom they perceive as competent. The opposite might

happen when they lose against an athlete whom they perceive as less competent. This might result in a negative experience. The feedback of other players, athletes, team members and coaches whom the adolescents regards as important figures, also influence the self-concept of adolescents with a mobility impairment (see paragraph 4.3.2.2).

By setting realistic and achievable goals the adolescent with a mobility impairment is able to experience success and this will contribute to a positive self-concept. The influence of a mobility impairment on forming a poor or strong, positive or negative self-concept in adolescence is further investigated in Chapter 6.

In the next section the focus is on identity and the formation of an identity, with specific reference to the psychosocial approach of Erik Erikson.

4.5 AN ANALYSIS OF THE CONSTRUCT IDENTITY

According to De Levita (1965:152)⁵, an individual identity refers to a person's sense of uniqueness. A person is unique in two ways: identity (the roles that are played in society and the unique combination of roles) and individuality (the manner in which roles are fulfilled). Identity formation becomes essential as a person finds his or her uniqueness in his or her identity (the roles played) and not in his or her individuality.

Two issues arise with regard to the word identity, namely, uniqueness and continuity. These two aspects also emerge in the identity of a person. Erikson (1968b:208)⁶ stated as follows: '*At one time it [identity] seemed to refer to a conscious sense of individual uniqueness, at another to an unconscious striving for a continuity of experience...*'.

Kilpatrick (1975:3)⁷ asserted that identity is that link between a child at seven years old and that same person at 17, and later at 70 years old. Identity is therefore '*a sense of personal history*' (Kilpatrick, 1975:3). An identity is formed by strengthening ties with

⁵ The original primary source by De Levita (1965) has been consulted; therefore the obsolete source.

⁶ The original primary sources by Erikson (1963, 1968, 1980) have been consulted; therefore the obsolete sources.

⁷ The original primary source by Kilpatrick (1975) has been consulted; therefore the obsolete source.

the past. Not only the past, but also future expectations, are essential in the formation of an identity. Future expectations make the present circumstances more meaningful for a person. The way in which we engage with the future will depend on our current identity, which in turn relates to our past. Only when a person continuously feels that he or she is the same person, can he or she take a solid place in society.

Identity is experienced as a core or center that gives meaning and significance to one's world. This core may be conferred or constructed. Those with conferred identities experience their future as the fulfilment of expectations; those who have constructed identities experience their futures as the creation of self-relevant forms (Marcia, Waterman, Matteson, Archer & Orlofsky, 1993:8).

The contemporary view of identity has not changed much. According to Ferraro, Giannone and Verso (2014:380) our identity develops starting '*from transpersonal matrices that we can metaphorically consider as the 'places' where all the aspects composing our identity have consolidated, from the most biological to the most cultural, from the most aware to the most unconscious*'.

A medical dictionary (Stedman, 2012:837) defines identity as follows:

The sum of characteristics by which a person is recognised (by self and others). A composite definition of the self that includes an interpersonal aspect (e.g., roles, relationships); and aspect of possibility or potential (i.e., who one might become) and a values-oriented aspect that provides a basis for choices and decision, including self-esteem and self-concept, both in reflecting and being influenced by the society in which one functions.

The way in which an individual perceives the self is influenced by the uniqueness and the strength of the identity. If, for example, sport takes a central place in the individual's life, the perception of the identity as a sportsman will be different from that of an academic identity. Because the adolescent constantly redefines and rediscovers him or herself, certain self-images are clear while other self-images may fade or disappear.

The work of Erik Erikson is particularly useful in discussing the concept identity and the process of identity formation and his theory is explored in the next paragraph.

4.5.1 Erikson's theory of identity formation

Erikson was a pioneer in ego psychology and psychoanalysis with a major contribution to psychosocial development. The concept of identity formation, including concepts such as uniqueness, continuity, and exercising choice and commitment, clearly emerge in his work.

According to Greene, Graham and Morano (2010:490-491), Erikson is the most widely known theorist to describe a life stage approach to human development. Erikson was influenced by Freud's psychoanalytical theory of personality in his formulation of the theory of personality development. Significant differences between the theoretical viewpoints of Erikson and Freud (Avan & Kirkwood, 2010:388-393; Welchman, 2000:41-43) exist. Erikson highlighted the role of cultural and social contexts in development in contrast to Freud's emphasis on biology and sexuality.

For Erikson, it is not the **id**, but the **ego** which is the driving force in a person's life. The id, as Freud defined it originally, means a reservoir of instincts of which a person is not always conscious. It is the primary source of instincts and impulses (Newman & Newman, 2012:53). An instinct, for example, hunger, thirst, sex and aggression, is psychic energy that originates in the body and is the motivation for a person's actions. The id expresses its demand according to the pleasure principle (Newman & Newman, 2012:54). The ego is the mediator of biological drives within cultural constraints and thus controls the expressions of the id to be socially and culturally acceptable. The ego decides which instincts must be satisfied and how it should be done. The ego thus reconciles the instincts of an individual with the external world. The ego protects the person by waiting to gratify id impulses until a socially acceptable form of expression can be found (Newman & Newman, 2012:54). For Erikson the basis of behavior is located in the ego. The fact that Erikson puts more emphasis on the ego does not mean that he disregards the unconscious motivation. Erikson suggested that a person's behavior is rather consciously determined by him or herself rather than by instincts of which he or she is not always aware. Erikson did not agree with Freud that a person's

personality is 'set in stone' during the first five years of an individual's life (Sigelman & Rider, 2012:53), but that it continues over the entire lifespan ('cradle to grave') (Steinberg, Bornstein, Vandell & Rook, 2011:12).

To be able to define Erikson's psychosocial model, it is necessary to discuss concepts underlying this model. According to Erikson (1968b:92) the development of the personality takes place in different stages in which a certain portion of the personality is formed. Erikson calls this the epigenetic principle, which he explains as follows: '*... this principle states that anything that grows has a ground plan, and that out of this ground plan the parts arise, each part having its time of special ascendancy, until all parts have arisen to form a functioning whole*'. Erikson proposed thus that the various stages of an individual's development follow the epigenetic principle - the biological plan for growth which allows each stage to emerge systematically until the fully functioning organism has developed (Newman & Newman, 2012:86).

The epigenetic principle is a step-by-step growth of each organ in accordance with genetic processes (Demirezen, 2010:31). Central to the concept of epigenesis is the activity of the organism itself in influencing its own development (Bjorklund, Ellis & Rosenberg, 2007:10). Steinberg and others' (2011:42) view is that the epigenesis approach indicates a gradual process of increasing complexity caused by the interaction between heredity (genes) and the environment. As babies mature, their brains develop and their senses become more finely tuned. Their motor skills become more coordinated and their intelligence begins to develop (Steinberg et al., 2011:42). Erikson proposed the concept 'epigenesis' to indicate that human development unfolds from part to whole, with elements of the chronologically appropriate ability or personality feature gradually emerging in a prescribed sequence until the functional whole is achieved (Smith-Osborne, 2009:155).

Certain aspects of personality development manifest at certain stages and these moments or stages are of a sequential nature. Although these aspects manifest at various moments, these aspects are always present in some form (Erikson, 1968b:95). There is a particular time or stage for each of the aspects when they come to their full exposure.

Each of the stages revolves around an emotional polarity that the person is faced with during a certain time in development (Graves & Larkin, 2006:63) and consists of a unique developmental task that presents the developing individual with a crisis that must be resolved. Each of these stages becomes a crisis because '*incipient growth and awareness in a significant part function goes together with a shift in instinctual energy and yet causes specific vulnerability in that part*' (Erikson, 1980:56). It is during this time that a crisis or turning point is experienced. The way in which this crisis is handled and solved, determines the healthy development of the personality (Erikson, 1968b:96; Sigelman & Rider, 2012:52).

The term crisis is not used in the usual undesirable sense. Rather, it refers to a time that fosters development by expanding the interconnections between self and the environment. The result is an '*ever new configuration that is the growing personality*' (Erikson, 1963:57). Erikson claimed that an individual's personality is a result of the outcome of these crises, falling in a range from less successful to very successful. As each crisis is met, a transformation of the person's personality structure takes place (Erikson, 1963:57).

Each of these crises has a positive and a negative component and a crisis is satisfactorily resolved when the positive component, to a greater extent than the negative component, is included in the personality structure. The degree of success or failure in resolving each conflict is likely to affect future adjustment and may help or hinder the resolution of future conflicts associated with successive phases to come (Crocetti, Fermani, Pojaghi & Meeus, 2011:8). According to Erikson (Graves & Larkin, 2006:63), each crisis does not have to be disastrous, but it provides one with increased vulnerability as well as enhanced potential. The more success one has resolving each developmental crisis, the healthier the developing person will be. The healthy personality is a pattern of relatively successful outcomes, with each stage building on the next (Greene et al., 2010:491).

The crisis in one phase must first be resolved before the next crisis can be handled. This does, however, not imply that a crisis that has already been resolved will never arise again (Newman & Newman, 2012:89). The resolution of the crisis is not final and can be modified positively or negatively throughout the life span (Greene et al.,

2010:491). There is no going back to an earlier stage, because experience makes retreat impossible. The individual can, however, review and reinterpret previous stages in the light of new insight or new experiences (Newman & Newman, 2012:89).

Individuals exhibit only later in childhood and adulthood behaviors of success that exemplify how well they have resolved earlier stages. That is, the outcome of each stage is manifested in adult behaviors that can be assessed for their favorable or unfavorable outcomes (Greene et al., 2010:491).

Erikson contended that as people resolve the challenges of each stage of life, they achieve a greater sense of mastering their environment. According to Erikson (1963:57), development takes place through eight psychosocial crises, or specific time frames during which a person must make specific efforts to meet a new set of societal expectations or demands. This development takes place within a social context in which the individual has an expanding number of significant relationships throughout life (Greene et al., 2010:491).

Erikson (1963:222-242) distinguished eight stages in the psychosocial development of an individual during which a particular aspect of the personality is actualized.

4.5.1.1 Stage 1: Basic trust versus basic mistrust

For Erikson basic trust is the cornerstone of a healthy personality development which is established in the first stage (Erikson, 1968a:97). A general attitude towards the self and the world is established in this stage (Erikson, 1968a:55-56). Erikson (1968b:103) saw trust as *'the earliest and most undifferentiated 'sense of identity' which '... forms the very basis in the child for a component of the sense of being 'all right', of being oneself, and of becoming what other people trust one will become'*.

The basic psychosocial attitude to be learned at this stage is that you can trust the world represented by your mother. You can trust her to feed you the appropriate food at the appropriate time and she will keep you comfortable and safe (Evans, 1981:15)⁸. When

⁸ The original primary source by Evans (1981): Dialogue with Erik Erikson, has been consulted; therefore the obsolete source.

a mother is consistently responsive to her baby's needs in her care, the child experiences comfort, predictability, and a feeling of inner security. Erikson believed these responsive interactions place the child in a general state of trust, ready to explore the world (Graves & Larkin, 2006:63). Erikson (1963:222) stated that the first demonstration of social trust is displayed in the ease of the baby's feeding, the depth of sleep and the relaxation of the bowels. The child's first social achievement is the willingness to let the mother out of sight without anxiety because he or she trusts him or herself as inner certainty, as well as an outer predictability (Erikson, 1963:222). A sense of confidence develops when your needs within your living environment are met: '*That there is some correspondence between your needs and your world, this is what I mean by basic trust*' (Evans, 1981:15).

The central issue during this stage is: *Can I trust others?* (Sigelman & Rider, 2012:382). Children who mistrust themselves and the situation they find themselves in, necessarily experiences anxiety. This happens because they are unsure about what can be expected and what is expected of them. Mistrust arises from sources such as infant wariness, lack of confidence in the caregiver and doubt in one's own 'lovableness' (Newman & Newman, 2012:203).

Mistrust, however, is necessary to protect the child from danger and an anticipation of discomfort (Evans, 1981:15). For example, a child must learn to mistrust dangerous or harmful situations to prevent physical injury. A certain ratio of trust and mistrust is, therefore, necessary - the child must be able to differentiate how much he or she can trust and how much he or she must mistrust. Between the polar extremes of trust and mistrust most people find a balance: neither complete trust, nor complete mistrust of the world is ultimately beneficial (Kroger, 2004:25).

At the crisis trust versus mistrust, the experience of continuity plays an important role (Erikson, 1974:102). A sense of confidence manifests itself if a person experiences continuity between the past, current circumstances and future expectations. The experience of continuity ensures that a person, to a certain degree, will know what can be expected and that will provide the necessary confidence.

Precisely because of this uncertainty factor, the future for many people is a source of anxiety. Erikson (1968b:102) asserted, however, that if the trust versus mistrust crisis is successfully resolved, hope will be realized and the future will not be filled with anxiety.

When the trust versus mistrust crisis is successfully resolved, the person comes to realize: *'I am what I am given'* (Erikson, 1968a:82). People are in the first instance that which was given to them. Race, gender and intelligence cannot be changed. What is important is that people have confidence in what has been entrusted to them.

An important condition in Erikson's theory is that the crisis trust versus mistrust will never be finally resolved during the first phase. Trust versus mistrust can become a crisis in later life when a person, for example finds him or herself for the first time in a new situation. *'But in man, because of his lifelong struggles between trust and mistrust in changing states and conditions, it has to be developed firmly, and then be confirmed and reaffirmed throughout life'* (Evans, 1981:18).

What is important is that the crisis trust versus mistrust must first be resolved before the child is ready to deal with the next crisis, namely autonomy versus shame and doubt.

4.5.1.2 Stage 2: Autonomy versus shame and doubt

When a sense of trust is gained, a person must handle the next crisis, that of autonomy versus shame and doubt (Erikson, 1963:226). The child's growing awareness of his or her uniqueness leads to a need that arises to live out this uniqueness as an autonomous person (Erikson, 1968a:71). In this stage the emphasis is on a person as an autonomous being who can act independently and has control over his or her own life. He or she is not entirely extradited to different people or cultural circumstances. This stages takes place during toddlerhood and it is the foundation for the development of *'I can do it by myself'* (Greene et al., 2010:491).

According to Kroger (2004:25):

Holding on or letting go of body wastes is one of the child's earliest opportunities to exercise complete control over the outcome of events,

regardless of parental desire. Such auspicious occasions as toilet training episodes provide toddlers with an experience of will... With trust in order, it is now possible to risk one's own will against the response that such self-expression may bring.

If a child learns to hold on to the right thing at the right time, and let go of the right things at the right time, a sense of autonomy will be achieved. This willpower and autonomy will form a lifelong value (Erikson, 1968a:66). If the child is punished for failures during this stage, or he or she is ashamed of his or her actions, he or she will experience self-doubt. Graves and Larkin (2006:64-66) viewed muscular maturation as the foundation for experimentation with two sets of social modalities: holding on and letting go. It is at this stage that a child begins to explore and move away from the trusting environment of his or her mother.

The feedback of significant others can either strengthen autonomy or result in shame and doubt. As significant others in the environment encourage the child to be independent, they must also protect the child from experiencing excessive shame and doubt (Graves & Larkin, 2006:64-66). It is the knowledge that the child has that he or she is imperfect and capable of arousing negative social responses, that tempers absolute autonomy and serves as regulating measure that places the self in a social order (Kroger, 2004:26). The child also learns the pattern of limitation (Erikson, 1980:72). For the child, the goal is to allow curiosity to blossom without crossing the boundaries of physical safety or social values (Graves & Larkin, 2006:64-66).

Erikson stated that autonomy, shame and doubts are all necessary in the development of the child, but the ratio is important. The identity aspect to be formed during this phase is: *'I am what I will'* (Erikson, 1968a:82). The right to have a will and to make choices must be realized during this phase. The decisive ratio between autonomy and doubt determines whether there is a *'lasting sense of goodwill and pride'* or *'from a sense of loss of self-control ... a lasting propensity to doubt and shame'* (Welchman, 2000:53). This is the stage when the boundaries are established between those things that children have to do and those things that they must not do.

For the child, the need for autonomy has important educational implications. If the child wants to be autonomous he or she must act autonomously but he or she may not be left entirely to him or herself. Erikson (1968a:68) stated as follows: '*Firmness must protect him against the potential anarchy of his as yet untrained sense of discrimination, his inability to hold on and let go with circumspection*'. Autonomy does not imply absolute freedom. In the same way that teachers allow children to do certain things, they also limit the children's autonomy.

If expectations are too great and possibilities for exploration too vast, children might try but fail and this could contribute to a feeling of shame (Slater & Bremner, 2011:256). '*If the significant adults in a young child's life provide a sense of dignity, appropriate independence and good will, then it is likely that the child will develop autonomy*' (Graves & Larkin, 2006:64-66). A solid foundation of autonomy will then prevent undue shame or doubt in later life.

A further issue is that autonomy for the child should not always be done on the instruction of the adult. This could lead to a lack of real autonomy. True autonomy implies that the child will initiate autonomous action. The central issue during this stage is: *Can I act on my own?* (Sigelman & Rider, 2012:382).

The child must show initiative alongside autonomy. This forms the core of Erikson's third psychosocial stage.

4.5.1.3 Stage 3: Initiative versus guilt

'There is in every child at every stage a new miracle of vigorous unfolding, which constitutes a new hope and a new responsibility for all. Such is the sense and the pervading quality of initiative' (Erikson, 1963:229). The child is in possession of a lot of energy which enables him or her to forget failures quickly and continue to be active in performing tasks.

During this stage a child begins to engage in playful exploration, actively investigating his or her environment. This begins the process of finding out what kind of a person he

or she is going to be and what activities are undertaken that result in a sense of purpose (Greene et al., 2010:492).

Throughout this stage children are moving into the unknown as they follow their curiosity. The mastering of new skills is now of importance and children want to do things for themselves. The response of adults to these changes is of importance. Children are now able to use language to get what they want and they are capable of thought, planning and fantasy. Erikson observed that children whose parents accept and encourage their efforts, without being insistent or meddling, eagerly try new activities. They develop a sense of themselves as capable of initiative. Children whose parents repeatedly restrict, scorn, or criticize their children's efforts, give up more quickly and they blame themselves for failing. These children develop a sense of themselves as failures who are unworthy and who feels guilty (Steinberg et al., 2011:228). Excessive punishment during this stage may lead to feelings of guilt and the belief that it is wrong to be curious about the world.

At this stage children do not only compare themselves with their peers and what they can do. It is their interactions with adults which are now important. It is not just the interactions with their parents, but also the interaction with grandparents, caregivers and other family members (Steinberg et al., 2011:228).

Erikson saw initiative as a *'necessary part of every act, and man needs a sense of initiative for whatever he or she learns and does'* (Erikson, 1963:229) and not only as an industrial connotation. Once children are aware that they have a will, they must figure out how to use the will and this requires entrepreneurial spirit and initiative. At this stage a child's conscience is established (Erikson, 1980:84, 87). The danger of this stage lies in the sense of guilt about the goals that the child has planned (Erikson, 1963:230).

Erikson (Welchman, 2000:53) distinguished initiative from autonomy by stating that initiative adds to autonomy: *'the quality of understanding, planning and attacking a task for the sake of being active and on the move'*. The alternative is a sense of guilt over the actions that are considered. The child begins to think of becoming an adult and starts to identify with people whom he or she can understand and appreciate.

The way in which a person reveals initiative is unique. Initiative is lost if uniqueness does not appear in it. The way in which a person displays initiative establishes the unique identity. The identity aspect formed during this stage is formulated by Erikson (1968a:82) as '*I am what I can imagine I will be.*'

A person with initiative is actively engaged in the planning and development of his or her own life. Initiative adds entrepreneurial spirit and planning to autonomy. Those with initiative take advantage of opportunities in life to achieve something or to bring forth something. They forget past failures and focus on what they want to achieve. They enjoy competition, aim to master things in the world and are goal-orientated (Erikson, 1968b:118). The emphasis is not on autonomy for the sake of autonomous actions, but on autonomy for the sake of achieving an initiated objective. There is thus a close relationship between initiative and ambition.

An inadequate disclosure of initiative results in guilt. Such a person feels guilty when he or she moves outside the boundaries that traditionally exist. Consequently he or she limits initiative by applying rules to him or herself. This guilt finally culminates in a passive behavior pattern. A passive person shows a lack of ambition and is not oriented to accomplish things. This crisis highlights the close tie between intellectual curiosity and emotional development (Newman & Newman, 2012:300).

The interaction with parents, grandparents, other family members and child-care providers and their response determine the behavior of the child as he sees himself through the eyes of these adults (Steinberg et al., 2011:228). The central issue during this stage is thus: '*Can I carry out my plans successfully?*' (Sigelman & Rider, 2012:382).

This ability to accomplish something is the central principle in Erikson's next stage.

4.5.1.4 Stage 4: Industry versus inferiority

This stage is seen as the final stage of childhood. The stage revolves around being decisive in that '*industry involves doing things beside and with others, a first sense of division of labor and of differential opportunity, that is, a sense of technological ethos of*

a culture, develops at this time' (Erikson, 1980:93). The child must now *'adjust himself to the inorganic laws of the tool world. He can become an eager and absorbed unit of a productive situation'* (Erikson, 1963:233).

In most communities children are given systematic instruction to produce things. In today's society children go to school to learn how to read, write and gain numerical skills. They get separated from their mothers and they have to expand their social boundaries to accommodate other children and adults (Viljoen, 2002:20). Although children still have to play during this stage, they sometimes need to produce things and to feel that they mean something. This behavior is an indication of their needs and readiness to be part of a productive society (Viljoen, 2002:20).

Children are striving for recognition for their accomplishments and thus perform tasks and develop skills which society would value. Through these efforts they come to appreciate and enjoy diligence and hard work that leads to their success and recognition (Steinberg et al., 2011:299).

Bosman (2009:33) described this stage as a training phase of skills, roles and tasks to be completed in the adult world. The abundant energy and imagination of the child should now be channeled in the direction of dealing with tasks in a formal situation. *'Industry is an eagerness to acquire skills and perform meaningful work'* (Newman & Newman, 2012:346). It is important that children be given opportunities to experience what activities they enjoy and what successes they can achieve. They also learn to share and work as a team (Viljoen, 2002:21).

When the child enjoys success in solving tasks, diligence develops (Bosman, 2009:34). The identification of special skills and talents at this stage may have sustained beneficial implications for the establishment of a professional identity. Feelings of competence and performance are the optimal outcome of due diligence. Industry involves a person displaying enthusiasm and self-motivation and an enthusiasm to perform meaningful work (Greene et al., 2010:492).

A person's involvement in the environment adds to the formation of identity. The identity aspect which unfolds during this phase as seen by Erikson (1968a:82) is: *'I am what I*

learn'. What one learns, what one does and what one is engaged with forms an important part of one's identity. When the child often experiences failure, or receives feedback from significant others that he or she is not coping, inferiority may be experienced (Bosman, 2009:34). Welchman (2000:54) mentioned two warnings that Erikson issued regarding this stage:

- If children despair of their tools and skills, or they are discouraged from identification with their 'tool partners', they may consider themselves 'doomed to mediocrity or inadequacy'.
- Children may identify too completely with the world of skills and work and so become 'thoughtless slaves' of technology (Erikson, 1950:251-252).

Inferiority is feelings of worthlessness and inadequacy which is in the self and in the social environment (Newman & Newman, 2012:288). Physical or mental limitations might prevent the acquisition of certain skills which lead to a feeling of inferiority. The central issue during this stage is: *Am I competent compared with others?* (Sigelman & Rider, 2012:382). Inferiority may develop if children feel that their physical limitations are inhibiting their potential to master certain skills.

In the next stage of Erikson's model, it is precisely this identity of a person that experiences a crisis moment.

4.5.1.5 Stage 5: Identity versus role confusion

The fifth psychosocial stage, the formation of identity, is most prevalent in adolescence or puberty which is reached between the ages of 12 and 22. It is also dependent on an individual's specific roles during childhood (Greene et al., 2010:493).

Adolescents at this stage have the mental and emotion capacity to make decisions as to what they are and what they want to be (Steinberg et al., 2011:228). Now is the time for the formation of a lasting identity which is more than a mere sum of all the childhood identifications. An ego identity must now be established (Erikson, 1963:235; Welchman, 2000:54).

Steinberg et al. (2011:374) compared the child's identity period before adolescence to a jigsaw puzzle with many pieces that have not been connected as yet. But when the crisis in this stage is successfully resolved, all the pieces are joined to form a coherent picture that is unique to the adolescent.

Erikson (1968b:118) defined the identity of a person as '*... a feeling of being at home in one's body, a sense of 'knowing where one is going', and an inner assuredness of anticipated recognition from those who count*'. Identity implies uniqueness (Erikson, 1974:208). A person only knows him or herself if he or she is aware of his or her uniqueness and individuality as a person. This uniqueness must be able to stand firm in different situations. Therefore, Erikson (1974:208) emphasizes continuity in addition to uniqueness.

Erikson (1980:94) explained ego identity as '*the accrued confidence that ones' ability to maintain inner sameness and continuity is matched by the sameness and continuity of one's meaning for others*'. Failure to develop such identity leads to an identity crisis and role confusion and the child struggles to act out the various roles that society expects from him or her.

Identity formation and answers to the question: 'Who am I?' are closely related to the choices individuals make and the way they commit themselves to these choices.

It is difficult to be tolerant if deep down you are not quite sure that you are a man (or a woman), that you will ever grow together again and be attractive, that you will be able to master your drives, that you really know who you are, that you know what you want to be, that you know what you look like to others, and that you will know how to make the right decisions without, once for all, committing yourself to the wrong friend, sexual partner, leader, or career (Erikson, 1968a:93).

The crisis to be solved during the fifth stage is identity versus identity confusion. With identity confusion Erikson (1968a:91) meant an inability to get a grip on life. A confused person experiences a discrepancy between what he or she presents as him or herself

as and what he or she really is. He or she avoids the exercise of options and with that involvement in major facets of life.

A psychosocial moratorium on identity formation is often created as a result of responsibilities and obligations which restrict the adolescent's self-discovery (Steinberg et al., 2011:375). Not all adolescents have the luxury of this 'time-out' period to experiment with different roles and identities in a context that permits and encourages this sort of exploration.

When the crisis of identity versus identity confusion is resolved, adolescents are able to integrate all the images about themselves into a personal identity and they will be able to consolidate the various roles they have to play (Sandhu, Singh, Tung & Kundra, 2012:89). For Sandhu et al. (2012:89), the content of identity can be divided into two domains. The first domain is the ideological domain which consists of choices regarding politics, religion, and career or occupation. The second domain is the interpersonal domain which consists of choices regarding family, sex roles, friendship, and romantic relationships. The importance of identity options in these two domains depends on the culture in which adolescents find themselves in (Phinney & Baldelomar, 2011:162).

The central issue during this stage is: *Who am I?* (Sigelman & Rider, 2012:382).

According to Steinberg et al. (2011:375), the rapid rate of changes in today's world raises new challenges and questions about adolescents' values, lifestyle and their relationships and '*... the likelihood of going through a prolonged and difficult identity crisis is probably greater today than it has ever been before*' (Steinberg et al., 2011:375).

The crisis of intimacy versus isolation follows in Erikson's sixth phase.

4.5.1.6 Stage 6: Intimacy versus isolation

A person cannot make him or herself available to someone else or to a cause, before he or she gets a grip on his or her own self; in other words, an identity must have been formed. Presumably that is why Erikson places identity before intimacy in the development toward maturity (Beyers, 2010:387). Individuals without a firm sense of

identity are frightened by the thought of intimacy or commitment. They must find themselves before they can afford to lose themselves in love. The forming of an identity paves the way for resolving the early adulthood conflict of intimacy versus isolation (Sigelman & Rider, 2012:53).

According to Erikson (1963:237), the young adult is now ready for intimacy, '*the capacity to commit himself to concrete affiliations and partnerships and to develop the ethical strength to abide by such commitments, even though they may call for significant sacrifices and compromises*'.

Erikson emphasized three elements of the capacity for intimacy: willingness to make a commitment to another person; ability to share at a deep personal level; and capacity to communicate inner thoughts and feelings. Individuals who favorably resolve the crisis are then high on these three components (Weinberger, Hofstein & Whitbourne, 2008:551-552). Intimacy will follow as individuals become surer about themselves (Erikson, 1968a:95). They will seek intimacy in the form of friendship, combat, leadership, love and inspiration (Erikson, 1968a:95).

The capacity to be involved in an intimate, loving relationship requires an appropriate sense of the self and adequate trust to be willing to reveal oneself truthfully to another person. It also requires having honest concern for the other person's needs and being willing to set aside one's own needs at times (Steinberg et al., 2011:438). Intimacy implies that a person would be willing to make an emotional commitment, to stick to it and to accept the responsibilities that come with that. The avoidance of such closeness may lead to a deep sense of isolation and consequent self-absorption (Van Wormer, 2010:206).

For Erikson isolation is the opposite of intimacy (Erikson, 1963:237). When isolation occurs, relationships tend to lack in spontaneity, warmth and real exchange of fellowships. Individuals might be afraid that they will lose something of themselves if they get involved in a cause. They avoid making choices as they are not sure of themselves and they want to keep all possibilities open. When adolescents do not accomplish such intimate relations with other, they are either isolated from others or they must seek this in repeated attempts and repeated failures (Erikson, 1968a:95-96).

It is the readiness to isolate and destroy the forces and people whose essence seems dangerous to one's own (Erikson, 1968a:95-96). Isolation is characterized by an inability to commit, share deep feelings and communicate (Weinberger et al., 2008:551-552).

Intimacy tests the firmness of the identity established because deep involvement with another demands the strength to put one's own individual identity at risk. The growth of identity is based on the formula: 'We are what we love' (Erikson, 1968b:138).

The central issue during this stage is: *Am I ready for a relationship?* (Sigelman & Rider, 2012:382).

The danger of continuous isolation is that it might lead to stagnation which is the next stage in Erikson's cycle.

4.5.1.7 Stage 7: Generativity versus stagnation

Erikson's seventh stage involves the person in middle adulthood. This stage includes teaching younger generations as well as learning from them. This stage involves a shift in focus from concern for one's own life toward the lives of children and grandchildren or younger protégés. The mature person needs to be needed. They can provide guidance as well as encouragement to others. Generativity is the concern for creating and guiding the next generation (Greene et al., 2010:493). In contrast to the young child who pushes to gain independence, the older adult holds on to maintain independence within the context of family and familiar friends. The older adult often seeks to stay connected with peers and relies on interdependent relationships with family and friends (Graves & Larkin, 2006:66).

Generativity is critical to the survival of any society. Adult members of the society feel an obligation to contribute their resources, skills and creativity to improving the quality of life for the young (Newman & Newman, 2012:536). Generativity is formed as a result of experiences of maintaining the world, nurturing and being concerned, and caring (Newman & Newman, 2012:536).

Welchman (2000:55) maintained that Erikson regarded this stage as central to the life cycle as it is the link between the generations. Erikson (1963:240) saw generativity as the concern for establishing and guiding the next generation. It is, however, not only having and raising children, but it includes creative contributions to society of all kinds (Welchman, 2000:55). *'Failure to develop such an enrichment of interests may lead to a pervading sense of stagnation and personal impoverishment'* (Welchman, 2000:55).

Erikson (in Evans 1981:51) explains his use of the word generativity as follows:

... it means to generate in the most inclusive sense. If I would call this strength creativity, I would put too much emphasis on the particular creativity which we ascribe to particular people. I use the word 'generativity' because I mean everything that is generated from generation to generation: children, products, ideas, and works of art.

During this stage caring must be realized. A person who is generative, cares about other people and selflessly tries to do things for them within his or her potential capacity. Erikson (in Evans, 1981:53) defined this concern as follows: *'I use 'care' in a sense which includes 'to care to do' something, to 'care for' somebody or something, to 'take care of' that which needs protection and attention, and 'to take care not to' do something destructive'*.

A person who is generative is a person who is an active member of society and somehow would like to bring forth or transfer something to others. This bringing forth and transferring must be seen in a wider context: an artist painting on a canvas and a teacher transferring knowledge are both trying to 'generate' to produce. A person who has successfully resolved this crisis wants to share what is present in his or her identity with other people. Generativity is conceived as an adult's concern for and commitment to promoting the well-being of future generations (Cox, Wilt, Olson & McAdams, 2010:1185). Generativity implies a capacity to give without expectation of return.

In contrast, the person in whom generativity is weak shows signs of stagnation. Such a person is only interested in his or her own needs and is not interested in sharing with others. Such a self-centered existence lacks personal and cultural compassion and,

therefore, there arises a sense of meaninglessness and inadequacy. The sense of stagnation is the alternative to the positive sense of generativity (Welchman, 2000:55). When stagnation overbalances generativity, instead of caring, a cruel and harshness towards children and rejection of outsiders might occur.

According to Erik Erikson's lifespan developmental framework, generativity is the positive pole of adaptation during midlife. It represents an orientation toward care and concern for future generations as a way of leaving a legacy of the self. Yet not everyone is generative, either in earlier or later adulthood. Fostering generativity may be an important goal that we can readily pursue with appropriately designed programs across adulthood (Pratt, 2013:97). Stagnation suggests a lack of psychological movement or growth. Individuals may become entangled in a process of self-protection and withdrawal that results in permanent stagnation (Newman & Newman, 2012:536).

The central issue during this stage is: *Have I left my mark?* (Sigelman & Rider, 2012:382).

As in all previous life stages, the person should favor the positive pole for healthy development to proceed. This has an impact on the final stage which is integrity versus despair.

4.5.1.8 Stage 8: Ego integrity versus despair

The eighth and final psychosocial crisis takes place during old age, which starts approximately at the age of 60 and lasts until death. The issue of this psychosocial crisis is '*how to grow old with integrity in the face of death*' (Greene et al., 2010:494). During this stage, we reflect on the kind of person we have been and how our lives have been spent (Graves & Larkin, 2006:66).

This stage revolves around an evaluation of the results of the previous crises.

Who has taken care of things and people and has adapted himself to the triumphs and disappointments of being, by necessity, the originator of others and the generator of things and ideas – only in him the fruit of the

*seven stages gradually ripens. I know no better word for it than **integrity***
(Erikson, 1968b:139).

Erikson (1963:242) saw ego integrity as an emotional integration which permits participation by followership as well as acceptance of the responsibility of leadership. With integrity Erikson (1968a:98) meant an acceptance of the course of events in your life and accepting that your life is your own responsibility. A person with integrity possesses wisdom which includes knowledge, understanding and mature judgment.

Ego integrity, therefore, implies an emotional integration which permits participation by followership as well as acceptance of the responsibility of leadership: both must be learned and practiced in religion and in politics, in the economic order and in technology, in aristocratic living, and in the arts and sciences (Erikson, 1980:105).

Ego identity entails the ability to reflect on one's life with satisfaction. Integrity is recognized in individuals who express few regrets, believe they have lived fruitful lives, and demonstrate that they have coped as well with their failures as with their successes. Individuals who have successfully achieved a sense of integrity appreciate the continuity of past, present, and future experiences (Greene et al., 2010:494). These individuals feel that life has been spent in worthwhile activities and accomplishments (Graves & Larkin, 2006:66).

Given the declines and losses that accumulate in life, older adults could easily surrender to despair. The challenge in this life stage is to maintain a sense of dignity and integrity by accepting one's past and current life, including the declines and losses experienced as well as mistakes made along the way (Steinberg et al., 2011:573). Accepting one's life as it has unfolded helps people feel a sense of completion and makes it easier for them to face the prospect of death. Older adults who are discontented with their lives and bitter about lost opportunities or mistakes are vulnerable to despair (Steinberg et al., 2011:573).

Despair refers to regret over missed and unfulfilled opportunities at a time when it is too late to begin again. A person without integrity is in a state of despair. When evaluating

his or her life, he or she is faced with untapped opportunities which are irrevocably over. Time is too short to start from scratch to make alternative choices. This feeling of hopelessness is often accompanied by a negative attitude in general. Such a person is constantly dissatisfied with institutions or persons in his or her life and continuously disapproves of what happens in the community. This reflects in reality his or her dissatisfaction with him or herself (Graves & Larkin, 2006:66).

A person will have to face a new edition of an identity crisis towards the end of life: '*I am what survives of me*' (Erikson, 1968b:141). This final stage is the culmination of the conflicts and challenges of a life of triumph and disillusionment.

The central issue during this stage is: *Has my life been meaningful?* (Sigelman & Rider, 2012:383-384).

To summarize Erikson's eight psychosocial stages, Kroger (2004:33) states:

Identity is thus an ingredient of all stages of the human life cycle. Having roots in infant trust, identity is also present in the integrity versus despair conflict of old age. Identity formation during adolescence thus reflects developmental resolutions to all preceding stages and serves as base for personality developments that lie ahead. In adolescence, however, identity assumes a change in form; through a process different from the introjections and identifications of earlier psychosocial stages, its configuration now evolves into a new structure, different from (but related to) the sum of its parts. Through the synthesis and resynthesis of all earlier childhood identifications, the 'I', like Siddhartha's sense of self, is now ready to move forward, no longer homewards ... no longer looking backwards.

4.5.1.9 The implication of Erikson's theory for the personality development of an individual with a disability

Erikson's model could be seen as very linear and prescriptive. For Erikson the European male is the norm and he describes the development of a male whose "*normally*' functioning body progresses in an inferred uninterrupted and graceful

manner into old age' (Weeber, 2004:24). It may sketch out the issues we deal with, or try to deal with as we grow older, but it does not allow sufficiently for the many different routes that we may take (Beckett & Taylor, 2010:36). As identity formation does not always happen the way it is supposed to happen, it is possible that there could be other factors that have an impact on the identity formation. One of these disturbances can be childhood disability, or the onset of disability later in life.

A disability at any age brings about profound changes to lifestyle and attitudes. A disability may be visible or hidden, it may be temporary or permanent and it may have a minimal or substantial impact on a person's abilities. Some children are born with a disabling health condition or impairment, while others may experience disability as a result of illness, injury or poor nutrition. It requires a number of adjustments on a physical, cognitive, social, emotional, moral and spiritual level (Visser, 2013:60). The presence of a disability affects not only the individual with the disability, but also family and friends as well (Breen et al., 2011:137-138).

Adolescents with a disability experience the same developmental changes as their peers without a disability during their intellectual development, physical development, emotional/psychological development, social development, and moral/ethical development (Smith et al., 2012:3). But, children with a disability face even more than the usual range of challenges (Berger, 2013:113-114). They need to deal with issues which their peers without a disability are mostly not confronted with, for example, treatment of health conditions, possible restrictions on their lifestyle, the effect of their disability on other family members, and the uncertainty about their future (Boyd & MacMillan, 2005:337). They often want to challenge their parents, but they depend on their parents for personal care which affects the desire for independence (Berger, 2013:113-114).

Children born with a disability experience their development differently from children without a disability. The medical professionals might be so absorbed in 'correcting' the problem of the child, that the basic needs of the individuals are ignored. The child with a disability is often viewed as a condition to be treated, and not as an individual.

Trust is built through providing caregiving strategies, for example, feeding a hungry child, cuddling and soothing a fearful baby and allowing the tired child to sleep. Children who don't experience the above because of chronic pain or discomfort might become fearful, withdrawn and lacking in curiosity. Caregivers who are inconsistent, emotionally unavailable or rejecting, contribute to the child's feelings of mistrust. This can result in fear and a belief that the world is inconsistent and unpredictable. Children with a mobility impairment who resolve this crisis in a negative way, lack trust and this impacts on their identity formation.

During the second stage of Erikson's theory, autonomy has to be developed which also implies physical autonomy. That is not always possible for children with a disability who may never have such a degree of muscular control. They are not in 'control over' their bodies and depending on the severity of the impairment, their lives might require a lifelong process of active collaboration and interdependency with other people in their social environment (Weeber, 2004:26). Learning to control one's body functions leads to a feeling of control and a sense of independence. To be seen as sick, to be viewed as defective, or to be judged as helpless can be experienced as shameful, which impedes the autonomy of the child (Onken & Slaten, 2000:102). Parents of children with a disability are often overprotective of their children and do not allow them to explore their environment. This may cause them to doubt themselves and their possibilities which could lead to depending on others, feelings of frustration, lack of confidence, negative self-esteem and poor social skills.

In Erikson's third stage, the resolution of purpose (Kivnick & Wells, 2014:42), is grounded in the assumption of a child being '*vigorous, active and into everything*'. The psychosocial development of a person with a disability evolves around the disability. It is not always possible to change or control the disability; therefore, an active exploration of other abilities is necessary (Weeber, 2004:27). Purposefulness is then the result of an active support structure, rather than controlled initiative. This is the stage when children are gaining a sense of initiative by being able to make decisions, plan activities and events and carry them through. If they are continually prevented from doing so, for example, if parents are afraid that their children will be hurt, they will not be eager to learn and achieve goals. If all their plans are rejected by the parents, without allowing them to follow through, a lack of confidence in their behaviour might occur.

Erikson's next stage, 'industry', demands the accomplishment of goals in the larger world. Children may become aware of being judged on their performance in comparison with their peers and a feeling of inadequacy can lead to a sense of inferiority. A feeling of inferiority will prevent the child from experimenting and testing his or her own abilities. When the focus is on the normal way of reaching certain goals, no alternative means of accomplishing the goals are being investigated or discovered. The child with a disability, attempting to reach the goals set by society, should focus on the long-term goals rather than on a feeling of inferiority in the immediate situation. Alternative measures, such as assistive devices or equipment, enable him or her to achieve these goals (Weeber, 2004:27).

Children in this stage are often in a routine at school. If they are absent from school for long periods caused by operations and the recovery thereof, they may fall behind in their academic work and may feel inferior to those around them.

The identity formation of the adolescent is greatly influenced by their environment. The developmental task of the adolescents is combining *who they are* with *who they will be*. They are confronted by the need to re-establish boundaries for themselves. Society, however, presents children with a disability with a very different developmental crisis. Children with a mobility impairment are easily excluded because of their 'different' appearance. Society associates disability with 'unable', 'sick' and 'defective' and this has a negative effect on the roles they are thought capable of fulfilling (Weeber, 2004:27-28). When persons with a disability are dependent on people in their environment for opportunities to participate in all aspects of life, others' belief in their potential ability is as essential for exploring role options as believing in themselves (Weeber, 2004:28). The developmental risk is not that of role diffusion, but rather one of role deprivation.

During the intimacy versus isolation stage, intimacy may take many forms but for Erikson sexual relations is the supreme example (Kivnick & Wells, 2014:42). Erikson's definition of 'intimacy' in this stage is primarily limited to genital intimacy, ignoring the social or emotional intimacy which is highly valued by women and people of other cultures (Weeber, 2004:28). This becomes an issue for individuals with a disability, because living with a disability requires a capacity for interdependent relationships skills throughout the entire lifespan and not just at a particular stage (Weeber, 2004:28).

The stage, generativity versus stagnation, with the resolution of care (Kivnick & Wells, 2014:42), is again a developmental milestone which does not make provision for individuals with a disability, particularly the role of parenting. Within the medical model framework, the belief is that people with a disability are recipients of care, rather than caregivers. Parents with a disability must often defend their right in courts and social networks which do not acknowledge their abilities or right to care for their children (Weeber, 2004:29).

From the above it is clear that Erikson's psychosocial stages of human development create a valuable framework for understanding identity formation in adolescents. However, the experiences of adolescents with a disability, specifically adolescents with a mobility impairment, must be acknowledged as additional factors which might influence the normal identity formation process. Specific affective emotions and social relationships can lead to a deviation of the normal identity formation process.

How does one know if and when an identity is formed? Is it possible to measure to what extent an identity has been formed? In the following section the challenge of measuring identity is reviewed.

4.6 THE MEASUREMENT OF IDENTITY

Since the late 1950s several attempts have been made to develop a useful measure of ego identity (Tan, Kendis, Porac & Fine, 1977:279). The majority of measuring instruments which have been developed and implemented to determine identity formation are linked to Erikson's model. Researchers, however, differ in the way they interpret and apply Erikson's model.

The increase of identity-based research has generated lots of interest, but also many different ways of studying and measuring identity (Abdelal, Herrera, Johnston & Martin, 2001:6). As researchers set out to measure identity, they are confronted with two major problems: identity is relational and situational (Abdelal et al., 2001:12-14). Identity involves recognition by different individuals and, therefore, a certain form of relation has to be established. The situational aspect of identity implies that individuals might have

multiple identity varieties which manifest differently according to the situation individuals find themselves in (Abdelal et al., 2001:12-14).

Over the years researchers have developed a number of measurement instruments to index personal identity development. Perhaps the most popular of these instruments are the Extended Objective Measure of Ego Identity Status (EOM-EIS-II: Bennion & Adams, 1986) and the Ego Identity Process Questionnaire (EIPQ: Balistreri, Busch-Rosnagel & Geisinger, 1995), both grounded in Marcia's identity status model (Schwartz, Zamboanga, Wang & Olthuis, 2009:144).

The most commonly used instrument grounded in Erikson's model is the Erikson Psychosocial Stage Inventory (EPSI). The EPSI was designed by Rosenthal, Gurney and Moore (1981) to assess Erikson's first six stages of life cycle development (Rosenthal, Gurney & Moore, 1981:525; Darling-Fisher & Leidy, 1988:747). It is a useful measure for researchers interested in the development of the child and in mapping changes as a function of life events (Rosenthal et al., 1981:525).

The Modified Erikson Psychosocial Stage Inventory (MEPSI) was designed to assess the strength of psychosocial attributes that arise from progression through Erikson's stages (Darling-Fisher & Leidy, 1988:747). This modified version builds on the EPSI, with new scales created to measure the last two of Erikson's stages.

Instruments assessing different dimensions of Erikson's identity concepts and the identity formation process include *inter alia* *The Inventory of Psychosocial Balance* (IPB) (Domino & Affonso, 1990:576; Beaumont & Pratt, 2011:176) and the *Identity Distress Survey* (IDS) (Berman, Montgomery & Kurtines, 2004:1-8).

From research conducted, two distinct approaches can be distinguished regarding the measurement of an identity: the identity status approach (Marcia) and the epigenetic approach (Erikson). It is necessary to investigate these approaches in order to determine which approach would be the most appropriate when assessing the identity formation of the adolescent with a mobility impairment.

The identity status approach is discussed in the next paragraph.

4.6.1 The identity status approach

In their attempts to understand human identity, researchers have taken different approaches. The identity status paradigm of Marcia is the best-known approach to study identity (Côté & Schwartz, 2002:571; Klimstra, Hale, Raaijmakers, Branje & Meeus, 2010:150). Marcia's identity status model is one of the earliest and most enduring approaches used to examine selected dimensions of identity formation (Luyckx, Klimstra, Duriez, Van Petegem & Beyers, 2013:702; Schwartz et al., 2009). Marcia suggested this approach towards a better understanding of the '*concomitants, precursors and correlates of identity*' (Sandhu et al., 2012:89).

Marcia posited that the adolescent stage consists neither of identity resolution nor identity confusion, but rather the degree to which one has explored and committed to an identity in a variety of life domains, for example, religion, gender roles and relational choices. A 'crisis' point for Marcia (1966:551)⁹ is the stage when one has to make certain choices. This is the time when one's values and choices are being re-evaluated. The final outcome of a crisis leads to a 'commitment' of a person to a cause, the personal investment that he or she is willing to make, based on his or her choices. The term 'crisis' was later redefined by Marcia (Schwartz, Luyckx & Vignoles, 2011a:33) as *exploration* and *commitment*, with exploration referring to a period of sorting out and re-thinking of roles and life plans. Commitment indicates the degree of personal involvement expressed in a course of action or belief.

When Marcia referred to exploration and commitment, exploration indicated the problem-solving attitude that individuals have when trying to maintain their sense of identity, and commitment indicated forms of loyalty or continuity over time (Boulou-Reshaf, 2015:6).

Marcia (1966:553, 555) made the statement that identity formation can be placed in one of the following four categories or statuses:

⁹ The original primary source by Marcia (1966) has been consulted; therefore the obsolete source.

- **Identity diffusion:** The identity diffused person does not necessarily go through a crisis period, but typical is that that he or she will not make any commitments. He or she has never made important choices in his or her life and does not seem to be worried at all.

Identity diffused persons are extremely flexible and infinitely adaptable and shape into any current environment. On the other hand, they can also be lost and isolated with feelings of meaninglessness (Kroger & Marcia in Schwartz et al., 2011a:35).

The stereotypically 'difficult' adolescent who lies in bed, watches TV and refuses to think about or discuss the future is an example of the state of identity diffusion (Beckett & Taylor, 2010:98).

- **Identity foreclosure:** The person in a state of identity foreclosure does not necessarily experience a crisis, although he or she seems willing to commit to some relevant roles, values or goals for the future. Persons in an identity foreclosure state might appear as strong and self-directed but they are fragile. Because they cannot consider options seriously, they must maintain their stances defensively and deny or alter disconfirming information (Kroger & Marcia in Schwartz et al., 2011a:35).

Individuals tend to conform to the expectations of others regarding their future. The adolescents in this state become what others want them to become, without really deciding for themselves. They are not able to distinguish between their own goals and the ones their parents, for example, plan for them (Beckett & Taylor, 2010:98). An example is the boy who wants to become an attorney because his father is an attorney.

- **Identity moratorium:** This person finds him or herself in a crisis period in his or her life and is exploring various commitments and is ready to make certain choices, but has not made a commitment to these choices yet.

Individuals in this identity moratorium state are battling to define themselves. They can either make self-relevant choices and move on to the commitments of identity

achievement, or they become paralyzed in their indecisions (Kroger & Marcia in Schwartz et al., 2011a:35).

An adolescent at this stage is deliberately avoiding making a commitment. The adolescent is actively considering all the options before making a final decision (Beckett & Taylor, 2010:98).

- **Identity achievement:** A person who has passed through a crisis period, who weighed alternative options, who independently made a final choice and who is willing to make a commitment, is a person who has formed an identity.

These persons are firm about important focuses in life. They are flexible but will not be pressured in other directions than the chosen ones. New options will be considered calmly and reflectively (Kroger & Marcia in Schwartz et al., 2011a:35).

An adolescent at this stage makes firm commitments to ideals and plans based on his or her own thinking and not simply on ideas imposed by or uncritically accepted from others (Beckett & Taylor, 2010:98).

Meeus (2011:75) and Duriez, Luyckx, Soenens and Berzonsky (2012:136-137) summarized the activity in the above statuses as follows:

- identity diffusion: low levels of exploration, low levels of commitment
- foreclosure: low levels of exploration, high levels of commitment
- moratorium: high levels of exploration, low levels of commitment
- identity achievement: high levels of exploration, high levels of commitment.

It is important to note that the above statuses are not stages as in Erikson's theory and should not be regarded as a sequential process.

Marcia (Kroger, Martinussen & Marcia, 2010:683-684) indicated that most individuals entering adolescence fall within the identity diffused status and the identity foreclosed status. They are satisfied to live day by day and their commitments have been

internalized from parents or significant others. It is easy for adolescents to move between these two statuses and they can move from either of these two statuses to the moratorium status.

When adolescents reach the moratorium status, they question the commitments they have made, they consider alternative possibilities, and they seek new commitments. The moratorium status is seen as an unstable state in which adolescent resolve their identity crisis, either in a positive manner (making commitments leading to the identity achievement status) or in a negative manner (giving up the search for identity and thus becoming identity diffused) (Kroger et al., 2010:684).

Since Marcia's investigation in 1966, this approach has become popular among researchers (e.g., Waterman & Waterman, 1974:1-6; Leadbeater & Dionne, 1981:111-121; Berzonsky & Adams, 1999:557-590; Waterman, 1999:591-621). The general pattern followed in most of the investigations, was the placement of respondents into one of four statuses based on their commitment with regard to their professional and ideological choices. Once this was completed, an attempt was made to determine whether the statuses differed significantly with respect to one or more variables (e.g., intelligence, fear and disability).

Gullotta, Adams and Markstrom (2000:92-93) as well as Beckett and Taylor (2010:99) found that patterns of identity diffusion tend to be characteristic of young people from rejected, detached families. Identity foreclosure tends to be a pattern with child-centred families in which there is pressure to conform to the values and beliefs of the parents. Identity moratorium is characteristic of active families which encourage autonomy, self-expression and individual differences. Gullotta et al. (2000:93) associated identity achievement in adolescence with homes with high praise, minimal parental control and secure attachments.

Berzonsky's conceptualization of identity styles is an expansion of Marcia's status paradigm, but focused on constructivist and information processing aspects of identity formation (Berzonsky, 1990). In this model, Berzonsky emphasized identity exploration as a self-construction of alternatives. Individual differences occur in the different approaches taken while exploring identity alternatives. Berzonsky explained these

individual differences by referring to identity styles (Soenens, Berzonsky, Vansteenkiste, Beyers & Goossens, 2005:430-431). An identity style, therefore, represents an individual's orientation in making identity decisions. Berzonsky (2004:305-306) defined three styles based on the level and nature of identity exploration efforts.

- *An informational style* entails active exploration, elaboration and evaluation of relevant information before making identity decisions. Information-oriented adolescents assume a critical attitude towards their self-conception, are open to new information, and they are willing to revise aspects of their identity when faced with discrepant information about themselves, which should result in a well differentiated and integrated sense of personal identity. Adolescents with an informational identity style have been found to display high levels of cognitive complexity, decisional vigilance, need for cognition, problem-focus coping, autonomy, and cognitive persistence (Soenens et al., 2005:430).
- *A normative style* involves reliance on standards and expectations of significant others. This style is typical of adolescents who rely on the prescriptions and expectations held by significant others when confronted with identity-relevant problems. Research indicates that adolescents with a normative identity style are firmly committed, and they possess a well- defined sense of educational purpose (Soenens et al., 2005:431).
- *A diffuse-avoidant style* represents reluctance to deal with identity issues and lack of exploration efforts. These individuals continually accommodate their behaviors and views to current social demands and consequences, without making long-term revisions in their identity structure (Soenens et al., 2005:431). Diffuse-avoidant individuals tend to define themselves in terms of social attributes such as reputation and popularity (Berzonsky, Macek & Nurmi, 2003:130).

Identity styles are assumed to be stable, especially after adolescence. Individuals might change how much exploration they do at a certain point in time, which alternative they select, and how confident they are with their choices at that time, however, they are expected to show consistency in the way they act, the alternatives they explore and the decisions they make. According to Berzonsky et al. (2003:113), all adolescents are

capable of using all three styles, however, they tend to choose one and start to use it dominantly by late adolescence. Style preferences can thus be predicted by cognitive structures individuals hold for themselves and their personality characteristics (Eryigit, 2010:26).

Luyckx and colleagues (Luyckx, Goossens, Soenens, Beyers & Vansteenkiste, 2005; Luyckx, Goossens & Soenens, 2006; Luyckx, Schwartz, Berzonsky, Soenens, Vansteenkiste, Smits & Goossens, 2008) extended and refined Marcia's paradigm to derive identity statuses on four identity dimensions: commitment making; identification with commitment; exploration in depth; and exploration in breadth. This model integrates exploration and commitment on both levels. The exploration-in-breadth dimension refers to gathering information about different identity alternatives to guide the initial choices and the exploration-in-depth dimension means seeking in-depth information about current choices to guide maintenance and evaluations of these choices.

The main distinction between the two kinds of exploration is the role they play in the process of identity formation. The primary role of exploration-in-breadth is to facilitate decision-making and choosing some alternatives; whereas the primary role of exploration-in-depth is learning about and maintaining one's current identity choices. In terms of commitment, this model suggests that the presence of commitments might not always imply identification with these choices. Therefore, the commitment-making dimension indicates making tentative choices, whereas the identification with commitments dimension reflects the degree to which one identifies with and feels certain about one's current choices (Eryigit, 2010:20).

Many studies have interpreted Marcia's theory to determine different aspects of identity development, such as male versus female, adolescents with divorced parents, spiritual experiences and the presence of a disability. It still remains a popular approach used by researchers, for example Lugasi, Achille, Blydt-Hansen, Clermont, Geoffroy, Legault, Phan and Bell (2013:364), who used *The Extended Objective Measure of Ego Identity Status* (EOMEIS-2) and Lillevoll, Kroger and Marthinussen (2013:219) who used the Schilling *Ego Identity Questionnaire* (EIQ), the *Ego Identity Process Questionnaire* (EIPQ) and the *Dellas Identity Status Inventory* (DISI).

4.6.2 Conclusion regarding the identity status approach

The neo-Eriksonian research using Marcia's model has contributed to a better understanding of identity statuses and their consequences (Kumru & Thompson, 2003:2).

The vast majority of neo-Eriksonian identity research has relied on the identity status model compared with the few studies that have attempted to operationalize Erikson's identity dimensions directly (Schwartz et al., 2009:143). This could be attributed to the figurative and clinical terms used by Erikson which resulted in difficulty in extracting clear operationalization.

The focus of the identity status approach falls mainly on the crisis in the fifth stage of Erikson's model, while the successful resolution of the previous crises is ignored. The identity statuses appear to be an indication of character types rather than developmental stages (Schwartz, 2001:12) where each status is associated with a specific set of personality characteristics.

Criticism of the identity status approach includes its narrowness and lack of attention to broader social-contextual factors affecting identity development (Côté & Schwartz, 2002:571). Van Hoof's critique against the status paradigm is that researchers are not able to study continuity of identity, but merely the statuses wherein the adolescents find themselves (Meeus, 2011:89).

A further criticism of the identity status perspective is that it is too simplistic to capture the nuances of identity development (Schwartz, Zamboanga, Luyckx, Meca & Ritchie, 2013:98). Erikson viewed identity as something that is created through transactions between individuals and their social contexts, but the identity status approach pays little attention to context.

Schwartz et al. (2013:107) made the following comment:

As Marcia (2001) noted some years ago, the identity status model has remained useful for much longer than he had expected, and it has inspired a

number of other models that have furthered the understanding of what identity is and how it functions. However, much remains to be done. The potential with which Erikson (1950) imbued the construct of identity is only beginning to be realized.

The identity status approach contributes little towards a better understanding of the identity formation process. For the educator, the process of formation is of more importance than the final product because the influence and guidance of the educator is primarily situated in the formation of an identity. An epigenetic approach for the measurement of an identity might be of greater assistance to the educator guiding the learner.

4.6.3 The epigenetic approach

Unlike the identity status approach which mainly focuses on the fifth stage of Erikson's model, the emphasis of the epigenetic approach is on the formation of an identity. The epigenetic approach is based on Erikson's statement that the crisis between identity and identity confusion is determined by the successful resolution of the previous crises. To gain knowledge of the identity of a person, one must investigate the aspects contributing to an identity, namely, trust, autonomy, initiative and industry. Early investigations that used the epigenetic approach as a starting point were, for example, the research of Rasmussen (1964:815-825) and Constantinople (1969:357-372).

Researchers have developed a number of measurement instruments to index personal identity development but few of them have attempted to operationalize Erikson's identity dimensions directly (Schwartz et al., 2009:143). It is difficult to extract clear guidelines from Erikson's work (Schwartz et al., 2009:144). It was never Erikson's intention to turn his psychosocial model into mechanical instruments that would measure the achievement in each stage (Bell, 2009:117). A possible explanation for the lack of the measurement of identity stages could be the highly abstract language Erikson used. The most commonly used instrument grounded in Erikson's model is the Erikson Psychosocial Stage Inventory (EPSI) (Rosenthal et al., 1981:525-537). The EPSI contains subscales assessing Erikson's psychosocial stages, including identity (Schwartz et al., 2009:144).

Rosenthal et al. (1981:525-537) designed an inventory called The Erikson Psychosocial Stage Inventory (EPSI) for examining the first six stages of Erikson's stages of psychosocial development. A self-report questionnaire was designed and tested on 622 adolescents. The Erikson Psychosocial Stage Inventory (EPSI) was established as a useful measure for researchers interested in the development from early adolescence. The inventory consists of six subscales based on Erikson's first six stages. Each subscale consists of twelve items: six which reflect successful and six which reflect unsuccessful resolution of the 'crisis' of the stage. Key words and phrases were used from Erikson's statements. The EPSI measures respondents' resolution of the conflicts in the first six stages.

According to Speisman, White, Costos, Houlihan and Imbasciati (1983:2), an effort was made to develop a scale that is objective and that will provide a developmental index of identity. The construction of the measure follows Erikson's description of the derivatives (conflicts) of the psychosocial stages that precede identity development as well as the stages that are the precursors of the psychosocial stages of adulthood. The one hundred and twenty eight items were developed to reflect the seven conflicts and were labelled as follows (Speisman et al., 1983:5-6):

1. Temporal perspective versus time confusion (trust versus mistrust)
2. Self-certainty versus self-consciousness (autonomy versus shame and doubt)
3. Role experimentation versus role fixation (initiative versus guilt)
4. Apprenticeship versus work paralysis (industry versus inferiority)
5. Sexual polarization versus bisexual confusion (intimacy versus isolation)
6. Leader and followership versus authority confusion (generativity versus stagnation)
7. Ideological commitment versus confusion of values (integrity versus despair).

(Unfortunately, researchers working on the three major completed studies using this instrument, have not reported on the results.)

Darling-Fisher and Leidy (1988:747) designed the Modified Erikson Psychological Stage Inventory (MEPSI) to measure the strength of psychosocial attributes that arise from progression through Erikson's stages of development. The comprehensive 80-item measure was designed to measure the strength of psychosocial attributes in the adult population that arise from progression through the stages. Five positive and five negative items are used to describe attributes derived from successful resolution and unsuccessful resolution of each stage. It is an easy-to-administer survey instrument to measure psychosocial attributes in the adult population. Morrissey (2004) identified 23 academic sources using the MEPSI as a measure of psychosocial development over the 16 years.

The Measures of Psychosocial Development (MPD) (Hawley, 1988) is an Eriksonian-based instrument with an epigenetic nature which consists of 27 scales. The purpose is to measure the positive and negative attitudes associated with each of the eight developmental stages, the status of conflict resolution and an index of overall psychosocial health. The MPD appears to provide a statistically solid measurement of Erikson's eight positive and negative scales for assessing psychosocial development (Haight, 2006:105). The MPD is a tool that can be widely utilized in assessing progress along life's continuum (Haight, 2006:101). The Inventory of Psychosocial Balance (IPB) is a personality measure also designed to assess all eight of Erikson's stages (Domino & Affonso, 1990:576). A pool of 208 items survived the clinical analysis which correlates significantly with the California Psychological Inventory (CPI) Social Maturity Index.

More recently Goth, Foelsch, Schlüter-Müller, Birkhölzer, Jung, Pick and Schmeck (2012:1-16) began to develop the Assessment of Identity Development in Adolescence questionnaire (AIDA) to assess identity development based on Erikson's groundwork on identity. AIDA was designed to overcome psychometric shortcomings of the Inventory for Personality Organization for children and adolescents (IPO-CH) questionnaire, an adaption of the Inventory for Personality Organization (IPO) for children and adolescents.

AIDA has since been successfully translated into 15 different languages with thorough cultural adaption (Schlüter-Müller et al., 2015:64; Kassin, De Castro, Arango & Goth, 2013:25). The 58-item self-report questionnaire for adolescents and young adults assesses identity development in the two dimensions of continuity and coherence (Schlüter-Müller et al., 2015:64). The questionnaire can be used as a screening tool to detect emerging personality pathology in adolescence and an outcome measure to assess changes in identity disturbance from diffusion towards health identity integration (Schlüter-Müller et al., 2015:69). Researchers such as Feenstra, Hutsebaut, Verheul and Van Limbeek (2014:101) implemented AIDA to broaden the knowledge of the construct of identity in children and adolescents.

Erikson's theory is also absorbed in the latest technological environment. Boyum (2016) designed an online inventory, based on Erikson's psychosocial developmental tasks, that allows any person to evaluate the degree to which he or she has successfully mastered development tasks in the various stages. Ten statements are formulated for each stage to be answered on a scale from +10 to -10. By completing the inventory a person can determine which developmental tasks are his or her strong points and which are the weak points.

4.6.4 Conclusion regarding the epigenetic approach

Research indicates that the epigenetic approach was mainly used in developing measuring instruments in 1960 to 1980. Thereafter came a period in which this approach was no longer popular amongst researchers. The focus then shifted to research following the identity status approach, rather than the identity formation process. A possible reason for this shift is that Erikson's theory could be experienced as vague and difficult to test. That might be why researchers have rejected the psychoanalytic perspective in favor of theories that are more precise and testable (Sigelman & Rider, 2012:53).

However, Erikson's developmental perspective has a depth and breadth that has withstood the test of time (Kivnick & Wells, 2014:42). It seems that the value of Erikson's approach was recently rediscovered and researchers are keen to use the epigenetic

approach again (Goth et al., 2012:14; Schlüter-Müller et al., 2015:64). A number of instruments based on Erikson's theory have been implemented and used with success.

To determine the identity status of the adolescent with a mobility impairment is not the desired outcome of this research. The investigation of an unfolding identity, as designed in the epigenetic approach, will result in a thorough understanding of the identity formation of the adolescent. This is the desired outcome of this research.

For parents, teachers and coaches to be in a better position to understand the needs of the learner with a mobility impairment, they must possess knowledge about the identity of the learner and how the identity is formed. To gain knowledge about the formation of an identity of the adolescent with a mobility impairment, it seems that the epigenetic approach is more relevant than the identity status approach.

4.7 CONCLUSION

Adolescents are confronted with numerous demands and challenges. One of the central tasks of the adolescent, according to Erikson, is the forming of an own identity. If an identity is not formed, the adolescent will find him or herself in a state of role confusion and identity diffusion. The crisis in the fifth stage (i.e. identity versus role confusion - as identified by Erikson) is preceded by four stages during which specific crises have to be resolved successfully. These stages involve trust versus mistrust; autonomy versus shame and doubt; initiative versus guilt; and industry versus inferiority.

For the adolescent who is not born with a disability, an unexpected disability caused by an illness or an accident can be traumatic. A devastating consequence of an acquired disability is the challenge that it poses to an adolescent's sense of personal identity. Adolescents who have already built their sense of self on their academic success, athletic abilities, popularity and attractiveness may now find their sense of self to be lost. They are faced with the necessity of redefining their role and place in society and thus developing a new identity.

A newly acquired disability does not change a person per se. He or she remains the same person but the new situatedness forces the issue of 'finding one's self again'. This

entails that the person has to experience the crises of the psychosocial stages all over again in order for a new identity to be formed.

During the crisis in the first stage, trust versus mistrust, adolescents with a mobility impairment have to trust themselves, but they should also be able to trust others. Through the parents' responses, adolescents learn to trust their own bodies and the biological urges that accompany them. They have to trust that their parents will support them in dealing with the new challenges. Other individuals, such as therapists, also need to be trusted in order for adolescents to deal with the impairment. If parents and family members are unreliable, adolescents may be apprehensive with a mistrust in the world around them.

As soon as the first crisis is successfully resolved, the adolescent with a mobility impairment is confronted with the following crisis. Erikson's second stage involves autonomy versus shame and doubt. If adolescents are given reasonable responsibilities and if they are praised for their actions, rather than shamed when they are unsuccessful, they will be able to manage their own problems. On the other hand, if adolescents are given too many responsibilities or if they are ridiculed when they fail in their attempts, they will doubt themselves and their self-sufficiency.

As children develop, they learn to roll, sit, crawl, walk and explore. Adolescents with some form of mobility impairment might have to reach these developmental milestones all over again. They seek the freedom to explore their surroundings unhampered and uninhibited, even if they have a mobility challenge. They develop a desire to control their environment. By providing children with devices or equipment, their mobility can be enhanced. When adolescents are not successful in reaching autonomy, they will experience a sense of shame and doubt in their own ability.

Adolescents with a mobility impairment also have to resolve Erikson's third stage (initiative versus guilt) successfully. Such children have to acquire a sense of their maneuverability and have to explore their environment. They explore safe as well as unsafe territory as they are learning to balance risk-taking with self-limits. Adolescents with a mobility impairment may not be as mobile but they still require opportunities to explore, learn, share, and gain preferences, interests and desires. Opportunities should

be provided to develop a sense of some control over their environment, self-sufficiency, and the ability to make choices. Adolescents should emerge through this stage with initiative and a sense of accomplishment by being able to start and finish a task on their own. If adolescents with a mobility impairment are deprived of opportunities to perform tasks which they are capable of, or if they are discouraged by reprimands while trying to show initiative, they are vulnerable to feelings of frustration and aggressive behavior.

When adolescents enter the fourth stage of industry versus inferiority, they have emerged through the previous stages with initiative, autonomy and trust. Adolescents with a mobility impairment use their sense of accomplishment and self-confidence to interact with others in a more structured environment filled with rules and demands. This stage can be difficult for parents of children with a mobility impairment. Parents may be tempted to shelter the child from others in order to protect them from being teased or ridiculed by others, or even bullied. These adolescents have to establish their place in the world. They also have to discover their own values and talents.

When the adolescent with a mobility impairment can successfully resolve the crises in these four stages, there is a good possibility that the identity crisis will be successfully averted and that the adolescent with a mobility impairment will be able to form an own identity.

It is possible that the identity formation of the adolescent with a mobility impairment (the first four stages of Erikson's theory) may be influenced by participation in sport. During the first stage of Erikson's psychosocial development the crisis between trust and mistrust must be resolved. Through participation in sport, the adolescent with a mobility impairment may experience that the physical environment and the other players or athletes are trustworthy and they respond to his or her needs in largely positive and predictable ways. This environment is created by specific rules of the sport and the role of each team member. Trust can be established through establishing relationships with individual athletes as well as the entire team. Being part of a team and communicating with others may build trust and confidence which is necessary for adolescents to maintain future relations. Participation in sport can create opportunity for self-reflection, allowing adolescents to evaluate their own performances and to adjust the manner in which they interact with other adolescents.

Once trust is established, the adolescent with a mobility impairment has to gain autonomy. When adolescents are given reasonable responsibilities in the sport environment, which they are able to execute successfully, they may begin to develop a sense of control over their environment. It may seem out of context to expect an adolescent with a mobility impairment to act autonomously in a sporting context, but the adaptive sport environment creates the opportunity to promote autonomy. Adaptive sport provides all adolescents with a mobility impairment with the opportunity to participate in a sport of their preference. Adolescents have the liberty to explore their sport environment unhampered and uninhibited.

Through participation in sport, initiative is strengthened when adolescents are confronted with new tasks, finding solutions for problems, and when they join in activities with peers. They are in a position to discover new challenges that they can accomplish with the supervision of the coach. Their sense of initiative is strengthened if they are in a position to test new skills with little risk of disapproval and disappointment. Participation in sport may thus create a social group in which adolescents can learn to engage and cooperate with others to achieve mutual goals. These adolescents can assert themselves more frequently, and they may now reach a new level of purposefulness. Participating in sport may raise adolescents' awareness of situations, allowing them to recognize when it is appropriate to take initiative and when it is more appropriate to let others take the initiative.

To successfully resolve the crisis of industry versus inferiority, adolescents must be able to find their unique place in the world. They can discover their talents and worth through the pursuit of their sport interest. Adolescents with a mobility impairment may also become acquainted with their own unique abilities as well as the abilities of others. They can develop a sense of moral commitment and responsibility towards the team. These adolescents can develop competence and they may view themselves as being able to master sport skills and keep on practicing and participating. They will most possibly feel the need to gain approval by validating their competences, and become proud when they accomplish aims that they have set for themselves.

Adolescents with a mobility impairment may also have the desire to excel in their sport skills and to become competitive. Through competition, adolescents not only develop

physically and enjoy feeling part of the group, but they also gain an appreciation of physical activity, responsibility, and sportsmanship. Interaction with others while participating can be beneficial for the development of normal social behaviour and communication. During competitive sport, adolescents are in a position to apprehend patterns of social cooperation without exceeding certain limits of aggression. Participating with other adolescents in a sport environment can be an excellent opportunity to learn social skills.

In the fifth developmental stage, adolescents with a mobility impairment define themselves as unique and different from others (identity versus role confusion). They may participate in various sports, either individual or in a team, and their participation may play a prominent role in their identity formation. Through trial and error in play and the constant repetition of practice for sport competition, adolescents can increase their confidence. The forming of an own, unique identity will thus be possible.

With regard to the measurement of identity, Marcia's identity status approach contributes little towards the understanding of the identity formation process. It only focuses on the identity of a person and not so much on the developmental process. This approach classifies identity into one of four statuses: identity diffusion, identity foreclosure, identity moratorium, and identity achievement. Since the emphasis is on the identity which is already formed, rather than on the process of the formation of an identity, it is therefore not suitable for this study. To address the research problem in the study, the process of identity formation of the adolescent with a mobility impairment is just as important as the final identity. To obtain knowledge about the formation of an identity of the adolescent with a mobility impairment, it appears that Erikson's epigenetic approach is the more appropriate approach. To gain knowledge of the identity of a person, every stage contributing to an identity namely, trust, autonomy, initiative and industry should be investigated.

The empirical research, which is discussed in the next chapter, addresses the measuring of the identity formation of the adolescent with a mobility impairment in more detail.



CHAPTER 5

EMPIRICAL INVESTIGATION

5.1 INTRODUCTION

In this chapter the course of the empirical investigation is described. As stated in Chapter 1 (cf paragraph 1.4), one of the purposes of the empirical study was to investigate the relationship between certain variables and the identity formation of adolescents with a mobility impairment. In order to achieve this, a number of hypotheses can be formulated. These hypotheses and their underlying rationales are provided in this chapter.

In the light of the purpose of the investigation a valid and reliable instrument to measure the identity formation of adolescents with a mobility impairment had to be used. Other variables, such as the social relations of adolescents can influence the identity formation of the adolescent with a mobility impairment. Affective experiences, such as depression, also influence the identity formation of the adolescent with a mobility impairment. Therefore, both social and affective variables need to be measured and consequently appropriate questionnaires have to be used to measure these variables. The way in which the instrument has been designed, and the procedure to ensure a high level of psychometric quality, is delineated in this chapter. The items for the final questionnaire, the structure of the questionnaire, and the instructions for the completion of the questionnaire are discussed in detail.

A representative sample of adolescents with a mobility impairment was selected. Information regarding the manner in which the sample was selected, as well as information about the final sample, is discussed in this chapter. Finally, the procedure followed in the investigation is explained.

5.2 HYPOTHESES

The literature review in the previous chapters, established that identity formation is a socio-affective construct which emphasizes the importance of social relationships and other affective constructs related to identity formation. Social relationships such as the parent-child relationship and relationship with peers can influence the identity formation. Positive affective constructs such as joy and acceptance, as well as negative affective constructs such as anxiety and depression, might also influence the identity formation of adolescents.

It was uncertain whether participation in sport would have an effect on social relationships which relate to the identity formation of adolescents with a mobility impairment. It was also uncertain whether participation in sport would have an effect on the affective constructs which relate to the identity formation of adolescents with a mobility impairment. These uncertainties led to the formal problem of the investigation which was to determine the influence of adaptive sport involvement on the identity formation of the adolescent with a mobility impairment. To address the research question, certain sub-questions arose (cf. paragraphs 1.3.1 - 1.3.10). In accordance with these questions, specific hypotheses can now be formulated to serve as tentative statements in finding a solution for the research problem. The research hypotheses, with a rationale for each of them are presented in the following paragraphs (5.2.1 - 5.2.10).

5.2.1 Hypothesis 1

There is a significant difference in the identity of adolescents with a mobility impairment who participate in sport, compared with the identity of adolescents with a mobility impairment who do not participate in sport.

Rationale

The presence of a mobility impairment may impact on the identity of the adolescent. The visibility of the mobility impairment, or the extent of disfigurement, influences the dissatisfaction with one's appearance. Adolescents with a disability that is visible to

others have more problems accepting their bodies (Pinquart & Pfeiffer, 2015:251). Different physical functions and appearance can lead to a higher risk of stigmatization and physical and verbal victimization by peers. Depending on the type of the impairment such adolescents may need additional support to fulfil their potential (UNICEF, 2013b:13). Participation in sport addresses the above scenario. Through sport participation physical strength improves, the adolescent develops a mental fitness and a general psychosocial well-being is developed. All these changes can influence the identity of the adolescent. Sport provides adolescents with the opportunity '*to negotiate identity, resist disablism and forge a stronger sense of self*' (Smith et al., 2015:9).

The identity of adolescents with a mobility impairment may be affected as a result of their experiences and feelings during participation in sport. Adolescents who do not participate in sport, do not have these same experiences which may have a negative influence on their identity. It can, therefore, be expected that there will be a difference in the identity of adolescents with a mobility impairment who participate in sport, compared with the identity of adolescents with a mobility impairment who do not participate in sport.

5.2.2 Hypothesis 2

There is a significant difference in the identity formation of adolescents with a mobility impairment who participate in sport, compared with the identity formation of adolescents with a mobility impairment who do not participate in sport.

Rationale

Factors that affect the identity formation of adolescents with a mobility impairment are self-definition, self-efficacy and self-determination (Sadowski, 2008:172). The degree to which adolescents are impaired, their desire to avoid stigmatization and the consistency of the messages they receive from society and significant others, *inter alia*, influence the identity formation of the adolescent (Ridolfo & Ward, 2013:145-146).

Adolescents with a mobility impairment do not necessarily have the power or means to change their physical attributes. This implies that adolescents must be able to adapt to their situation and form a solid identity around their situatedness (see paragraph 1.2.4). According to Erikson (1968b:95), four stages preceding identity formation may be identified. These stages are trust versus mistrust; autonomy versus shame and doubt; initiative versus guilt; and industry versus inferiority. Each of the stages revolves around an emotional polarity that the child is faced with during a certain time in development (Graves & Larkin, 2006:63) and consists of a unique developmental task that presents the developing child with a crisis that must be resolved. The way in which each of these crises is handled and solved, will determine the healthy development of the personality (Erikson, 1968b:96; Sigelman & Rider, 2012:52) and will influence the identity formation (stage 5) of the adolescent. If adolescents are not able to overcome the challenges of these developmental stages, these challenges are likely to become ongoing problems in current identity development.

A sport environment may provide the adolescent with opportunities to form an identity. Sport helps children to develop physical skills, get exercise, make friends, have fun, learn to play as a member of a team, and improve their general well-being. Participation in sport can help build confidence and social skills, and can motivate children to excel academically. Sport is thus fundamental to the early development of children (see paragraph 3.2).

It can therefore be assumed that participation in sport may influence the identity formation of the adolescent with a mobility impairment. Participation in sport will thus influence trust, autonomy, initiative and industry in the adolescent.

5.2.3 Hypothesis 3

There is a significant difference between adolescent boys and girls with a mobility impairment with regard to their participation in sport and their identity formation.

Rationale

Adolescents in general adopt a gender identity early in their lives which influences their sport participation. In a study by Martinović, Ilić and Višnjić (2011:99-100), a significant difference was found between boys and girls and their respective sport involvement. Boys, for example, want to be physically strong and competitive while girls do not want to be labelled as 'tomboys'.

Adolescent boys and girls with a mobility impairment may differ in many aspects regarding their sport participation. Boys and girls may decide that they want to participate in sport or not. Factors which play a role when adolescents decide to participate in sport may include *inter alia* the specific sport in which the adolescent is interested; the coach responsible for the sport; the sport interests of other family members; the physical ability of the adolescent caused by the mobility impairment; the talent and skills of the adolescent; the socialization associated with sport; the experience of success and the dreams and goals adolescents set for themselves.

There is uncertainty about the influence of sport participation on the identity formation of boys and girls, and whether the identity formation of boys is influenced in the same manner as the identity formation of girls when they participate in sport.

Adolescents may have specific reasons for their non-participation in sport, for example ill-health or not being interested in sport. Some learners are not natural athletes. Consequently they do not like to participate. In other instances learners do not participate because they do not understand the rules and aims of the particular sport activities, or they do not wish to practice in order to improve their skills.

The identity formation of adolescents is influenced either by sport participation, or the non-participation in sport, in a unique manner. It can, therefore, be assumed that there will be a difference in the identity formation of adolescent boys and girls with a mobility impairment participating in sport, compared with the identity formation of adolescent boys and girls with a mobility impairment not participating in sport. It can further be assumed that there will be a difference in the identity formation of adolescent boys and girls with a mobility impairment participating in sport, and a difference in the identity

formation of adolescent boys and girls with a mobility impairment who do not participate in sport.

5.2.4 Hypothesis 4

The category (type) of mobility impairment has a significant influence on the sport participation of adolescents.

Rationale

The presence of any disability (for example, wearing glasses) has an influence on the sport participation of individuals. It can thus be assumed that the presence of a mobility impairment in adolescents will have an influence on the sport participation of adolescents. Participating and achieving success in sport, in spite of a mobility impairment, may be difficult but it is not impossible (see paragraph 1.1).

The type of mobility impairment, as well as the severity of the mobility impairment, may have a significant influence on the physical activities and sport participation of the adolescent (see paragraph 3.3.1). The extensiveness of the impairment determines whether the adolescent participates in sport without any modifications, or otherwise in adaptive sport (see paragraph 3.5).

5.2.5 Hypothesis 5

There is a significant difference in sport participation and identity formation of adolescents with a congenital disability, compared with adolescents who acquired the disability later in their lives.

Rationale

Not all children are born with an impairment, but they can acquire a specific impairment later in childhood as a result of injuries, accidents or medical conditions (UNICEF, 2013b:6).

For children with a congenital disability, the limitations or barriers caused by the impairment are dealt with as a given. Certain functions which their bodies cannot execute, will always be present, but they adjust to these and their abilities are strengthened in order to compensate for the disability. When they reach the adolescent phase of development, they are comfortable with whom they are. They do not have any memories of what it is like not to have a disability. Their identities are formed with the disability.

For the adolescent who is not born with a disability, the unexpected disability because of an illness or an accident can be traumatic. A devastating and challenging consequence of an acquired disability is the challenge that is posed to the adolescent's sense of personal identity. Adolescents build their sense of self on their academic success, their athletic abilities, popularity and attractiveness and they may now find that they have lost their sense of self (Ylvisaker et al., 2016:1). The adolescent is still the same person but the new experience might have an effect on the established identity (see paragraph 1.4). The adolescent will experience the crises of the psychosocial stages preceding the formation of an identity all over again. Adolescents who acquire a mobility impairment are thus faced with the necessity of redefining their role and place in society and developing a new identity (Dziura, 2015:27).

5.2.6 Hypothesis 6

There is a correlation between the social relationships and the identity formation of adolescents with a mobility impairment.

Rationale

Adolescents migrate toward peer relationships and begin to separate from their parents (Garcia, 2010:167). Belonging to a peer group or clique is of the utmost importance to adolescents. Through the socialization in the group and the feedback from the group, the identity of the adolescent is established.

Adolescents choose friendships to suit their needs for emotional support and exploration or re-affirmation of their values or aspirations (Hardman, 2012:220). They learn many

social skills from their peers that they do not learn from parents or teachers. Peers reward each other with powerful reinforces such as acceptance, popularity and status (Cobb, 2010:221).

Adolescents with a disability may lack the necessary skills to socialize as a result of limitations of activities and participation restrictions (Conzatti et al., 2009:1). They may face social rejection and experience negative societal stereotypes. Some adolescents with a mobility impairment may miss out on participation opportunities because of their parents' overprotectiveness. The feelings of adolescents with a physical disability are not necessarily that of being inferior, but of being different according to the norms of society. This may have an impact on their social relationships which in turn may affect their identity formation.

5.2.7 Hypothesis 7

The social relations of adolescents with a mobility impairment participating in sport will differ from those who do not participate in sport.

Rationale

When adolescents with a disability form relationships, they are often not able to maintain these relationships. Their friends may be concerned about them, but they are not ready to accept them in intimate relationship (Abraham, 2013:3). Kissow (2015:144) ascertained that individuals with a physical disability often find their social interactions and social network limited, with isolation affecting their effectiveness in social situations.

Research indicates that the social nature of sport is a remarkable vehicle for helping children with a disability to develop friendships (Martin, 2010:50). According to Groff et al. (2009:320, 324-325), athletes indicated that their participation in adaptive sport had a positive influence on their quality of life, their overall health, the quality of their family life and their social life.

Through participation in sport the adolescent with a mobility impairment is exposed to social relations in which he or she would otherwise not have been engaged, for example,

team members, coaches, friends of the field and referees. The values learnt which are *inter alia* enforced through these relations, are commitment, hard work, teamwork, consideration for others, time management and organizational skills.

It can be assumed that the social relations of adolescents with a mobility impairment participating in sport will be different from the social relations of adolescents with a mobility impairment who do not participate in sport.

5.2.8 Hypothesis 8

There is a correlation between certain affective variables and the identity formation of adolescents with a mobility impairment.

Rationale

Adolescents with a mobility impairment often face social exclusion in many aspects of their lives. The social isolation of an adolescent, as a result of physical limitations, may lead to depression, anger and blame (Campbell et al., 2012:328). Piek et al. (2005:453) referred to research which indicates that children with movement limitations are considered at risk of peer-victimization and low self-worth. Adolescents with a mobility impairment are often the target of name-calling insults, verbal threats as well as being purposefully excluded and ostracized by their peers (Campbell et al., 2012:335; Estell et al., 2009:136).

Adolescents with a mobility impairment may experience difficulty in making friends and possible rejection from peers leading to social isolation, a lower quality of life, and a lack of self-confidence (Marini et al., 2012:176, 199). Mundhenke et al. (2010:130) also referred to studies which indicate that children with a disability often have fewer friends, are excluded from peer groups and instead spend much of their time with adults. The loss of friends and peers could be a catalyst for sadness and anxiety (Abbott & Carpenter, 2015:74).

It is evident from the above that the presence of a mobility impairment has affective implications and therefore it can be foreseen that there may be a relationship between

certain affective variables and the identity formation of adolescents with a mobility impairment.

5.2.9 Hypothesis 9

The affective experiences of adolescents with a mobility impairment taking part in sport will differ from those of adolescents with a mobility impairment who do not participate in sport.

Rationale

Plutchik (1982) identified eight primary emotions: joy versus sadness, anger versus fear, trust versus mistrust and surprise versus anticipation. Adolescents must deal with all these basic emotions during their emotional development. Living with a mobility impairment may be an additional factor which impacts on the emotional development of the adolescent. It may seem to these adolescents that certain things exist which they will never be able to do. This may lead to high levels of psychological distress. Feelings of sadness or hopelessness about the future may even lead to depression.

Groff et al. (2009:320, 324-325) referred to research studies which indicate that athletes with a disability in general exhibit higher levels of positive mood, lower levels of tension and depression, and an improved state of health and well-being. Sport participation thus provides athletes with a mobility impairment with opportunities to express themselves and they can develop skills to establish a positive identity (see paragraph 3.7). Adaptive sport provides possibilities for every adolescent with a mobility impairment to participate in sport (DePauw & Gavron, 2005:7).

It has already been stated that certain affective variables could influence the identity formation of adolescents with a mobility impairment (see rationale for Hypothesis 8). It is thus possible that these affective experiences of adolescents with a mobility impairment taking part in sport will differ from those of adolescents with a mobility impairment who do not participate in sport.

The affective experiences of adolescents participating in sport have already been mentioned in paragraph 5.2.7 (see rationale for Hypothesis 7). Compared with this, there will be a difference in the experiences of adolescents who do participate in sport.

5.2.10 Hypothesis 10

It is possible to identify the most important variable associated with the identity formation of adolescents with a mobility impairment.

Rationale

Many variables could be associated with the identity formation of adolescents. The literature identifies gender differences, language, ethnicity, parenting styles, family and friends, the media, and the community in which adolescents find themselves as factors which can influence the identity formation process of adolescents.

As a result of a lack of research on the identity formation of adolescents with a mobility impairment, it can be assumed that the same variables which influence the identity formation of adolescents without a mobility impairment also influence the identity formation of adolescents with a mobility impairment. One can also anticipate that the adolescent with a mobility impairment will have to deal with additional variables such as the presence of a disability, discrimination and health issues.

It would be difficult to identify one specific variable as the most influential aspect associated with the identity formation of adolescents with a mobility impairment. One can assume that the presence and the severity of the impairment may be one of the most prominent variables which could influence the identity formation. It can further be anticipated that participation in sport may be beneficial for the identity formation of adolescents with a mobility impairment but variables such as gender, the type of mobility impairment, and the onset of the impairment can contribute to the formation of an identity.

5.3 RESEARCH DESIGN

The research design refers to the overall strategy of integrating the different components of the study in a clear and logical way to address the research problem effectively (Muijs, 2010:38-41; Babbie, 2010:33). The research design includes the sample, the measuring instruments and the procedure which was followed during the investigation. These aspects are discussed in the following paragraphs.

5.3.1 Sampling

The target population for this study was adolescents with a mobility impairment in all nine provinces of South Africa. Owing to logistical considerations it was not possible to study the entire population. It was therefore necessary to select respondents in such a way that they represented the population as truthfully as possible.

The following criteria were set to select eligible respondents:

- Learners had to have a mobility impairment. Every form of mobility impairment was included in the research. It could range from the most severe disability to an almost unobtrusive impairment affecting the mobility of the learner.

Mobility impairments manifest in disabilities related to *inter alia* hemiplegia, paraplegia, quadriplegia, cerebral palsy, spina bifida, amputation, multiple sclerosis, and muscular dystrophy. These adolescents could be using supportive devices such as a wheelchair or a walking device to assist in their mobility. Mobility impairments also included the 'less obvious' mobility impairments such as hip, leg and foot deformities, hemophilia, muscle weakness, and hindered growth. During the period in which the research was conducted, there might not have been a need for these adolescents to make use of any assistive devices to assist in their mobility.

- They had to be adolescent learners between the ages of 14 and 20 years. This includes early adolescence (14 years), middle adolescence (15-17 years) and late adolescence (18-20 years).

This criterion would place all the learners more or less on the same level of cognitive, social, emotional and physical development. One of the most prominent aspects of adolescence is that it is the developmental stage during which a crisis is experienced regarding identity formation.

- The language of instruction had to be English or Afrikaans.

It was possible that learners might have come from different cultural backgrounds with different home languages. The questionnaires used to gather the data, were however only available in English and Afrikaans. Therefore the learners had to be proficient in either of the two languages.

Both boys and girls who met the criteria were identified as possible respondents. Because the majority of the adolescents still attended school, a decision was made to approach the schools to identify these boys and girls.

Random sampling is typically preferred as a sampling method since it removes bias from the selection procedure. A random sample is usually drawn in such a way that each member of the population has an equal chance of being included in the sample. Random sampling could however not be implemented in this study. The schools which accommodated adolescents with a mobility impairment also accommodated adolescents who do not have a mobility impairment, which made random sampling impossible. Some of the schools which accommodated adolescents with a mobility impairment also accommodated adolescents who had other impairments as well, which again made it difficult to conduct random sampling. As the group of adolescents which complied with the criteria was relatively small in each school, an attempt was made to include all the adolescents with a mobility impairment in each of these schools. Random sampling would have complicated obtaining a suitable number of respondents.

Instead of random sampling, purposive sampling was used to identify adolescents with a mobility impairment. The aim of purposive sampling (also known as judgmental, selective, or subjective sampling) is to focus on individuals of a population who will best enable the researcher to answer the research questions.

By means of purposive sampling, schools which accommodated learners who experience barriers to learning in all nine provinces of South Africa were included in the sample. These schools were identified from the databases provided by the respective Provincial Departments of Education. A further purposive selection was made to include only schools which indicated accommodation of learners with a physical disability, which would also include learners with a mobility impairment.

Once the schools were identified, the respective Departments of Education were approached to obtain permission to conduct the research in the districts. Most of the Departments, but not all, granted permission for the research.

The school principals could only be approached after permission by the Department was granted. The majority of the principals referred the request to conduct research at their school to the School Governing Bodies. Upon invitation by principals, presentations to these governing bodies, panel discussions with teams of psychologists and therapists, and interviews with principals and vice-principals were required before principals granted permission. Only the schools in which the principals gave permission were included in the sample.

From databases provided by the schools, learners (including all the boys and all the girls) who met the criteria were identified. The parents of all the learners with a mobility impairment were then approached to give permission for their children to be included in the research. The final permission was granted by the learners themselves. One hundred and forty learners in total agreed to participate in the research.

The provinces, the number of schools and the number of learners included in the final sample are:

- Gauteng (8 schools, 74 learners)
- North West (1 school, 13 learners)
- Northern Cape (1 school, 11 learners)
- Eastern Cape (1 school, 14 learners)

- Free State (1 school, 28 learners).

The grades of the boys and girls who agreed to participate, as well as their gender, are reflected in Table 5.1 below.

TABLE 5.1: GRADE, GENDER AND NUMBER OF RESPONDENTS

GRADE	BOYS	GIRLS	TOTAL
6	2	2	4
7	11	3	14
8	10	11	21
9	15	12	27
10	12	23	35
11	11	9	20
12	17	4	21
TOTAL	78	62	140

The 78 boys (56%) and 62 girls (44%) were represented in all seven grades.

Respondents with different categories of mobility impairment were included in the sample. The most general categories or forms of mobility impairment were listed in the questionnaire. These categories were chosen by 112 respondents. An opportunity was also provided to add an additional mobility impairment which was not on the list, but which was applicable to the specific respondent. These additional mobility impairments (n = 28) were grouped together and added to two of the original, most applicable, categories for the sake of simplicity.

The categories of mobility impairment to which the respondents respectively belonged in the final sample, are indicated in the following table (Table 5.2).

TABLE 5.2: CATEGORIES OF MOBILITY IMPAIRMENT

CATEGORIES OF MOBILITY IMPAIRMENT	TOTAL
Hemiplegia	15
Paraplegia	15
Quadriplegia	6
Cerebral palsy	44
Spina bifida (+ other bone deformities)	10 +15 = 25
Amputee	5
Multiple sclerosis	8
Muscular dystrophy (+ other muscle weaknesses)	9 + 13 = 22
TOTAL	140

From the above table it is clear that cerebral palsy, caused by abnormal development of the brain, is the most common mobility impairment among the respondents in the sample.

Of the 140 respondents with mobility impairments, 45% of the boys and 27% of the girls had a congenital impairment, while 11% of boys and 17% of girls acquired the impairment later in their lives. The majority of the respondents (72%) thus had a congenital impairment compared with the 28% who acquired the mobility impairment after they were born. The causes of later onset can be attributed *inter alia* to illnesses or accidents.

5.3.2 Measuring Instruments

It was mentioned in Chapter 1 (see paragraph 1.1) that the adolescent with a mobility impairment is not always fully understood as a person. An instrument that will present a comprehensive view of the identity formation of the adolescent with a mobility impairment is thus a need.

Based on the formal problem statement in paragraph 1.3 such an instrument should specifically measure the following variables:

- the identity formation of the adolescent with a mobility impairment
- social relations of adolescents, such as relations with friends and parents, which could influence the identity formation of the adolescent with a mobility impairment
- affective (emotional) variables, such as joy or depression, which could influence the identity formation of the adolescent with a mobility impairment.

Currently such a comprehensive instrument does not exist. A deliberate decision was taken to compile an instrument that would accommodate the adolescent with a mobility impairment. First, the instrument had to be of such a nature that it could be administered and completed in a reasonable time without exhausting the adolescent. An instrument which requires long paragraph-type answers had to be avoided as these adolescents already experience physical constraints with writing. Second, the instrument had to require minimum proficiency from the learners as the adolescents varied from Grade 6 to Grade 12, and for some learners English or Afrikaans was not their home language, but a second or third language.

Various instruments were considered, but for different reasons they were found unsuitable for inclusion in the questionnaire. Most of the tests were developed in the United States of America or Europe and are not necessarily compatible with the South African situation. A new instrument had thus to be compiled. Appropriate questionnaires were chosen to measure the variables that are likely to affect the identity formation of the adolescent with a mobility impairment.

The structure of the instrument was designed to integrate the following sections:

- a demographic section
- the Adolescent Identity Development Questionnaire
- the Relationship with Friends Questionnaire
- the Parent-Adolescent Relationship Questionnaire (authority, knowledge and trust)
- the Mood/Depression Assessment Questionnaire
- the Emotions Profile Index (EPI).

Each of these questionnaires is discussed individually in the following paragraphs.

5.3.2.1 *Demographic section*

This section of the instrument requested respondents to provide general information and background about themselves: gender, age, school grade, home language, home environment, position in the family and the situation regarding their parents or guardians.

Questions regarding the respondents' disability were asked. They were asked to indicate to which mobility impairment category they belonged. Respondents were also asked if they had a congenital or an acquired impairment. If the impairment was acquired, they had to indicate the age when the impairment was acquired. Respondents also had to rate their current state of health.

Respondents had to provide information regarding their school and academic achievement: the type of school, boarding school accommodation, and their academic achievement in the previous examination. They also had to provide information regarding their hobbies or other activities they enjoyed.

A filter question was then asked: Do you currently participate in sport activities? If the answer was 'No', respondents proceeded to the last question to provide a main reason

for their non-participation. When the answer was 'Yes', respondents answered questions regarding their participation in sport.

Information regarding their participation in sport was required to determine the sport the respondents participated in. They were also asked to indicate where the participation mostly took place and in which environment they preferred to participate in sport. Respondents had to indicate how many hours per week they participated in sport and also how successful they viewed themselves in their sport. They had to indicate what their highest standard of participation was, and the goals they were still hoping to achieve in their sport.

The demographic section of the instrument was followed by the Adolescent Identity Development Questionnaire.

5.3.2.2 *Adolescent Identity Development Questionnaire*

In Chapter 3 (see paragraph 3.6) the positive impact of participation in sport on the overall well-being of individuals with a disability was proven by various researchers such as Virgilio (2012:5), Coakley and Dunning (2000) and Nancy et al. (2008:1057-1058). This could imply that participation in sport does have an impact on the identity formation of the adolescent with a mobility impairment.

Researchers have developed a number of measuring instruments to determine personal identity development. The majority of these measuring instruments are linked to Erikson's model. From research conducted, two different approaches can be distinguished regarding the measurement of an identity: the identity status approach of Marcia and the epigenetic approach of Erikson.

Marcia's identity status model is one of the earliest and most enduring approaches used to examine selected dimensions of identity formation (Luyckx et al., 2013:702; Schwartz et al., 2009). Marcia (1966:553, 555) stated that identity formation can be placed in one of the following four categories or statuses: identity diffusion, identity foreclosure, identity moratorium and identity achievement (see paragraph 4.6.1). Various researchers expanded on Marcia's approach (Berzonsky, 1990; Luyckx et al., 2005;

Luyckx et al., 2006; Luyckx et al., 2008) and it still remains a popular approach used by researchers, for example Lugasi et al. (2013:364), who used *The Extended Objective Measure of Ego Identity Status* (EOMEIS-2) and Lillevoll et al. (2013:219), who used the Schilling *Ego Identity Questionnaire* (EIQ), the *Ego Identity Process Questionnaire* (EIPQ) and the *Dellas Identity Status Inventory* (DISI). The most popular instruments are the *Extended Objective Measure of Ego Identity Status* (EOM-EIS-II: Bennion & Adams, 1986) and the *Ego Identity Process Questionnaire* (EIPQ: Balistreri et al., 1995), both grounded in Marcia's identity status model (Schwartz et al., 2009:144).

The focus of the identity status approach, however, falls mainly on the crisis in the fifth stage of Erikson's model, while the successful resolution of the previous crises is ignored. The identity statuses appear to be an indication of character types rather than developmental stages (Schwartz, 2001:12) where each status is associated with a specific set of personality characteristics.

Unlike the identity status approach which mainly focuses on the fifth stage of Erikson's theory, the emphasis of the epigenetic approach is on the formation of an identity. The epigenetic approach is based on Erikson's statement that the crisis between identity and identity confusion is determined by the successful resolution of the previous four crises. To gain knowledge of the identity of a person, one must investigate the aspects contributing to an identity, namely, trust, autonomy, initiative and industry. Early investigations that used the epigenetic approach as a starting point were for example, the research of Rasmussen (1964:815-825) and Constantinople (1969:357-372). The most commonly used instrument grounded in Erikson's model is the Erikson Psychosocial Stage Inventory (*EPSI*) (Rosenthal et al., 1981:525-537). The *EPSI* contains subscales assessing Erikson's psychosocial stages, including identity (Schwartz et al., 2009:144).

Various researchers expanded on Erikson's theory. Speisman et al. (1983:2) made an effort to develop a scale that was objective and that would provide a developmental index of identity. Darling-Fisher and Leidy (1988:747) designed the Modified Erikson Psychological Stage Inventory (*MEPSI*) to measure the strength of psychosocial attributes that arise from progression through Erikson's stages of development. The Measures of Psychosocial Development (*MPD*) (Hawley, 1988) is an Eriksonian-based

instrument with an epigenetic nature which consists of 27 scales. The purpose is to measure the positive and negative attitudes associated with each of the eight developmental stages, the status of conflict resolution and an index of overall psychosocial health. More recently Goth et al. (2012:1-16) began to develop the Assessment of Identity Development in Adolescence questionnaire (*AIDA*) to assess identity development based on Erikson's groundwork on identity. *AIDA* was designed to overcome psychometric shortcomings of the Inventory for Personality Organization for children/adolescents (*IPO-CH*) questionnaire, an adaption of the Inventory for Personality Organization (*IPO*) for children and adolescents.

For parents, teachers and coaches to be in a better position to understand the needs of the learner with a mobility impairment, they must possess knowledge about the identity of the learner and how the identity has developed. To gain knowledge about the formation of an identity of the adolescent with a mobility impairment, the epigenetic approach is more appropriate than the identity status approach. The investigation of an unfolding identity, as designed in the epigenetic approach, will result in a thorough understanding of the identity formation of the adolescent with a mobility impairment.

As mentioned in Chapter 1 (see paragraph 1.2), Erikson's epigenetic approach to the formation of an identity involved five stages. In each stage a crisis needs to be resolved before the individual can move on to the second stage. The successful resolution of a crisis determines to what extent subsequent crises will be successfully dealt with. The first of these crises is between trust and mistrust. If this crisis is successfully resolved, the individual should be better equipped to successfully resolve the next crisis which is between autonomy and shame and doubt. If autonomy is realized during the second crisis, it strengthens the possibility of initiative rather than guilt in the following crisis. The third crisis contributes to the successful resolution of the fourth crisis, between industry and inferiority. The resolution of the fourth crisis prescribes the manner in which the individual will resolve the crises between identity and role confusion in the fifth stage.

A questionnaire which was developed by Bester (1990:91-96) and recently implemented by Marais (2012:183-185), was used to measure adolescent identity development. This Adolescent Identity Development Questionnaire was identified as the most appropriate questionnaire as it was comprehensive in capturing the identity formation of the

adolescent as it developed and it was compiled within the South African environment. The Adolescent Identity Development Questionnaire consisted of 75 items which were designed to measure the successful or unsuccessful resolutions in each of the first five stages of Erikson's model:

- trust versus mistrust (15 items)
- autonomy versus shame and doubt (15 items)
- initiative versus guilt (15 items)
- industry versus inferiority (15 items)
- identity formation versus role confusion (15 items).

Each item consisted of two statements. The respondent answered the items by choosing the number of the statement that he or she felt best described him or her. For example:

I am continually unsure about myself.	1	<input type="text"/>
I feel fairly sure about myself.	2	

The respondents answered all 75 questions by writing the applicable number in a corresponding block.

The following are examples of items that tested the five stages of identity formation.

Stage 1: Trust versus mistrust

Items relating to this stage aimed to determine the following:

- To what extent do adolescents with a mobility impairment reveal confidence in themselves? Do they believe in themselves? Are they satisfied with themselves? Are they certain that they can do what others expect of them?

- To what extent do adolescents with a mobility impairment trust others? Are they convinced that others are willing to help them?
- Do adolescent with a mobility impairment trust their situatedness? Are their needs for safety, performance and recognition satisfied?

Example 1: I am a hopeful person.
I am not a hopeful person.

Stage 2: Autonomy versus shame and doubt

Items intended for this stage sought to establish whether autonomous action is realized by adolescents with a mobility impairment. Are they willing to act independently? Do they feel that they are in control of their situation?

Example 1: I am an independent person.
I rely heavily on others.

Example 2: Other people influence me easily.
I am not easily influenced by others.

Stage 3: Initiative versus guilt

The items in this stage aimed to determine with what initiative adolescents with a mobility impairment approach their situation and challenges. Are they working purposefully and systematically? Do they only follow what is prescribed to them or are they initiating certain goals for themselves?

Example 1: I have no initiative.
I am a person who has initiative.

Example 2: I am a person who steadfastly pursues an aim.
I am often aimless.

Stage 4: Industry versus inferiority

Items for this stage tried to establish to what extent adolescents with a mobility impairment show signs of productivity, dedication and a sense of duty. Are the adolescents prepared to do what they must do, to the best of their ability?

Example 1: I am a lazy person.
I am a diligent person.

Example 2: I always put off doing things.
I finish things promptly.

Stage 5: Identity formation versus role confusion

Items in this phase attempted to establish the following:

- To what extent do adolescents with a mobility impairment know themselves and are they aware of their own unique situation?
- Do adolescents with a mobility impairment experience continuity in their situation? Do unsuccessful experiences upset them, or do they realize that current problems can be overcome with time?
- Are adolescents with a mobility impairment committed to do what is expected of them? Are they willing to make sacrifices for their choices?
- Do adolescents with a mobility impairment know where they are heading?

Example 1: I am confused about the future.
I look forward to the future.

Example 2: I sometimes feel that I do not fit in.
I have a place in life.

The questionnaire was initially standardized with a sample of 334 secondary school learners. The reliability coefficients were obtained using the Kuder-Richardson formula (Bester, 1990:94). The reliability coefficients were obtained for each of Erikson's first five stages: trust versus mistrust (0.74); autonomy versus shame and doubt (0.64); initiative versus guilt (0.74); industry versus inferiority (0.75); and identity formation versus role confusion (0.72). The total of the reliability coefficient for the first five stages of the Identity Development Questionnaire was 0.91. These reliability coefficients indicate that the Identity Development Questionnaire is reliable for the measurement of the adolescent identity development.

5.3.2.3 *Relationship with Friends Questionnaire*

It was mentioned in Chapter 2 (see paragraph 2.7.1) that the psychosocial experiences of children with a disability may differ from those of children without a disability. Researchers found that adolescents with a disability are at substantially greater risk of exhibiting social, behavioral and emotional problems, than their typically developing non-disabled peers. The two most important relationships in the lives of all adolescents are their relationships with their friends and their relationships with their parents.

The adolescent's relationship with friends was measured using the Adolescent Relationship with Friends Questionnaire designed by Fourie (2001:Appendix B). Fourie (2001:154) compiled specific items to determine to what extent the adolescent is comfortable with his or her friends, how big the circle of friends is and to what extent the adolescent prefers to be alone.

This questionnaire consists of 25 items. Each of the items in the questionnaire was answered by allocating a number on a scale between 1 and 6. A six point Likert scale was used, as it provided more variability, which had a positive effect on the reliability of the questionnaire. Even-numbered Likert scales have no neutral point and therefore force the respondent to commit to a certain position (Croasmun & Ostrom, 2011:20).

It is exactly how I experience it 6 5 4 3 2 1 **It is definitely not how I experience it**

The questionnaire consists of items such as:

Example 1: I don't need friends.

Example 2: I do my bit to keep friendships alive.

The questionnaire was initially standardized with a sample of 453 secondary school learners. A reliability coefficient of 0.779 was obtained using the Cronbach Coefficient Alpha formula. The reliability coefficient indicates that Fourie's questionnaire measuring adolescents' relationships with friends is a reliable questionnaire (Fourie, 2001:178).

5.3.2.4 *Parent-Adolescent Relationship Questionnaire*

During adolescence parent-child relationships change, but remain important as they provide adolescents with the confidence to explore new relationships (paragraph 1.1). Emotional development in adolescence is often associated with conflict with parents. These conflicts frequently occur because adolescents are striving to make independent choices and they do not agree with parents' requests and opinions as readily as they did when they were younger.

Fourie (2001:Appendix B) compiled a Parent-Adolescent Relationship questionnaire to obtain information from adolescents regarding their relationships with their parents. Specific items were included to obtain information from adolescents regarding their relationships of authority, knowledge and trust with their parents. These items, 43 in all, were developed to obtain an indication of the quality of parent-adolescent relationships from the viewpoint of the adolescent.

Each of the items in the questionnaire was answered by allocating a number on a scale between 1 and 6.

It is exactly how I experience it 6 5 4 3 2 1 It is definitely not how I experience it

Relationship of Authority (13 items)

In this section an attempt was made to establish to what extent adolescents experienced their parents' authority as unfair and to determine whether parents explained to adolescents the rules which they lay down.

The questionnaire consisted of items such as:

Example 1: My parents explain the rules that they set down.

Example 2: I have opportunities to take decisions but my parents always have the last say.

Relationship of Knowledge (15 items)

Items in this section sought to determine whether a relationship of knowledge existed between adolescents and their parents. Two relevant issues which were addressed were to what extent the parents were interested in their adolescents and whether parents understood their adolescents.

The questionnaire consisted of items such as:

Example 1: My parents know my abilities as well as my limitations.

Example 2: My parents know the things I approve and disapprove of.

Relationship of Trust (15 items)

In this section two issues were addressed: Do parents trust their adolescents and can adolescents take their parents into their confidence?

The questionnaire consisted of items such as:

Example 1: I can discuss my problems with my parents.

Example 2: I can take my parents into my confidence.

The questionnaire was initially standardized with a sample of 455 secondary school learners. The reliability coefficients were obtained using the Cronbach Coefficient Alpha formula and were obtained for each of the three sections: relationship of authority (0.76), relationship of knowledge (0.88) and relationship of trust (0.91). The reliability coefficient indicates that Fourie's questionnaire measuring parent-adolescents relationships is acceptable (Fourie, 2001:178).

5.3.2.5 Mood/Depression Assessment Questionnaire

Depression is an emotional state that involves feelings of sadness, worthlessness, and guilt. Depression is very common in adolescence and if not treated properly it can produce long-term negative consequences, such as alcohol and drug abuse, criminal behavior, and even suicide. Symptoms of depression in adolescents involve changes in mood (anger, sadness, irritability); behaviors (sleeping or eating more or less than usual, taking drugs or alcohol, acting out; withdrawing from friends and family); feelings (loneliness, insecurity, apathy); thoughts (hopelessness, worthlessness; thoughts of suicide); and perceptual disturbances (pain, hallucinations) (MacDonald, 2017:1).

The Beck Depression Inventory (BDI) is a multiple-choice self-report inventory that measures characteristic attitudes and symptoms of depression (Beck, Ward, Mendelson, Mock & Erbaugh, 1961:561-571). Beck's questionnaire consists of 21 groups of statements. The respondent had to choose one of the four statements in each category which describe the way he or she has been feeling during the previous two weeks. For example:

Irritability (category 17)

- 0 I am no more irritable than usual.
- 1 I am more irritable than usual.
- 2 I am much more irritable than usual.
- 3 I am irritable all the time.

The values of the choices of the respondents were calculated to determine the presence of attitudes and symptoms of depression.

Based on Beck's inventory, Bester (1994:1-20) designed an assessment questionnaire in which the four statements were taken up into one specific question. The example of Beck above (Irritability) was condensed by Bester (1994) in a specific question: *How regularly do you become irritated?* (Item 1.)

Twenty items in total were designed to assess the state of mood. Each of the items in the questionnaire was answered by allocating a number on the scale between 1 and 6.

Regularly **6** **5** **4** **3** **2** **1** **Seldom**

The following two examples from this questionnaire are provided:

Example 1: How regularly do you worry about your health?

Example 2: How regularly do you feel isolated from other people?

Bester's Mood/Depression Assessment Questionnaire (1994:1-20) was identified as the most appropriate questionnaire as it determined whether adolescents showed signs of depression as this specific questionnaire included items on changes in mood, behavior, feelings and thoughts, and perceptual disturbances.

The questionnaire was initially standardized with a sample of 286 secondary school learners. A reliability coefficient of 0.92 was obtained using the Cronbach Coefficient

Alpha formula. The reliability coefficient indicates that Bester's questionnaire measuring mood and depression is a reliable questionnaire (Bester 1994:1-20).

5.3.2.6 *Emotions Profile Index (EPI)*

No two adolescents with a mobility impairment experience exactly the same emotions. Each adolescent displays a unique emotional profile which relates to his or her identity in a unique way as well. To understand the adolescent in the identify formation stage, it is important to have a clear graphical representation of the emotions profile of the adolescent with a mobility impairment.

The *Emotions Profile Index* is a measuring instrument developed from the theory of Plutchik and Kellerman (1974). The theory postulates that personality traits are generated by a mixture of two or more primary emotions (Kline, 2000:339). Plutchik (1960:161) identified eight primary emotions which he coordinated in pairs of opposites or bipolar factors: joy versus sadness; acceptance versus disgust; fear versus anger and expectancy versus surprise. Although the *Emotions Profile Index* (EPI) was developed by Plutchik and Kellerman in the US, Jacobs adapted the index to suit the South African environment (Jones, 2003:58).

This index was selected as the most appropriate instrument for this study as it is a comprehensive data-collection procedure with a clear graphical representation of the emotions profile of the adolescent with a mobility impairment. The measuring instrument provides information with regard to the emotions and conflicts that affect a respondent. It reveals problem areas and the nature of these problems. Conflict areas on the *Emotions Profile Index* can indicate the insecurities and emotions that may prevent the formation of a successful identity (De Beer, 2006:135).

The index consists of 12 traits, which are paired in all possible permutations, through a 62-item forced choice questionnaire. The 12 traits are adventurous, affectionate, brooding, cautious, gloomy, impulsive, obedient, quarrelsome, resentful, self-conscious, shy and sociable (Kellerman & Plutchik, 1968:1109-1110). A definition for each trait is provided. The respondent is asked to indicate his or her preference for one of two traits. Each time a trait is chosen, the score on one or more of the eight basic emotional

dimensions is increased (Kline, 2000:339). These dimensions are joy, acceptance, surprise, fear, sadness, disgust, expectation and anger. The test measures all these dimensions which are arranged as a circumplex in terms of similarities and bipolarities (Kline, 2000:339).

From the 12 traits, eight basic bipolar emotional dimensions are derived (Louw, 2004:69):

- timid (protection) versus aggressive (destruction)
- trustful (incorporation) versus distrustful (rejection)
- controlled (exploration) versus dyscontrolled (orientation)
- gregarious (reproduction) versus depressed (reintegration).
-

The reliability of the EPI was initially estimated when it was administered to 40 female patients in a mental institution, as well as to 20 matched control subjects (Plutchik & Kellerman, 1974). Test-re-test reliability was determined three days later. A reliability coefficient of 0.9 was obtained (Louw, 2004:75; Louw, 2015:34).

The split half reliability of the EPI was based on a random sample of 50 test scores obtained from the test records of a group of 200 college freshman (Plutchik & Kellerman, 1974). The split half reliabilities of the different dimensions are reflected as follows: timid (0.80); dyscontrolled (0.75); trustful (0.89); depressed (0.71); aggressive (0.77); controlled (0.78); distrustful (0.61); gregarious (0.90); and biased (0.85).

Respondents completed this part of the instrument by circling their choices. The respondents progressed without much difficulty. Although definitions for all the words were available in the instrument, the meaning of certain words had to be explained to some respondents, for example, *Gloomy: Someone who mopes around and feels in a sad and dark kind of mood; Impulsive: Someone who usually acts on the spur of the moment because of an urge, without thinking of the consequences.*

The responses were interpreted and calculated to determine the values for each of the nine categories.

5.4 PROCEDURES OF THE INVESTIGATION

The procedures of this investigation involved two phases. First, approval for the research to be conducted had to be obtained. Approval was obtained from the Research Ethics Committee (College of Education) at the University of South Africa. Only then could the respective National Departments of Education be approached to provide permission to conduct research in certain schools in the districts.

Specific school principals were approached after permission by the Department was granted. Only the principals who gave permission for the research to be conducted at their schools were included in the sample. All the boys and all the girls who met the criteria at each of these schools were identified. The parents of these learners were then approached for permission for their children to be included in the research. The final permission was granted by the learners themselves.

Once the approval, permission and consent were granted, arrangements were made to administer the questionnaire.

5.4.1 Approval, permission and consent

The Research Ethics Committee (REC) of the College of Education (University of South Africa) approved the research to be undertaken and provided an ethical clearance certificate to continue with the research (Appendix C).

Formal requests to conduct the research in the provinces were submitted to several Provincial Departments of Education. Official applications were submitted to be reviewed by research panels. An additional presentation was required by one of the Departments. Permission was then granted by the respective Departments of Education to conduct research in specific schools in the corresponding districts (Appendix D).

A formal written request (Appendix E) was sent to all the school principals in the sample, explaining the nature of the research and asking for their willingness to participate in the study. The correspondence was followed-up by a telephone conversation with the principals. Some principals rejected the request with specific reasons: prior

commitments to research projects; the structure of the school year plan; celebrations and competitions which demanded extra time from learners; and the decisions of school governing bodies not to accommodate postgraduate students.

Upon invitation by the principals, presentations to school governing bodies, panel discussions with teams of psychologists and therapists, and interviews with principals and vice-principals were required before principals granted permission.

Fifteen principals gave written or oral permission to participate in the study. The principal of each school identified a contact person (a teacher, psychologist, physiotherapist or occupational therapist) with whom the researcher was to interact throughout the study. The contact persons were then asked to provide a list of all eligible participants in the school. The contact person identified the learners, boys and girls, with a mobility impairment, between the ages of 14 and 20 years. These name lists, together with the contact details of the parents or guardians, were made available to the researcher.

A formal letter to request the permission of the parents or guardians to include the learner in the research was sent to all the parents or guardians (Appendix F). Most parents or guardians gave informed consent but some rejected the request and these learners were therefore not included. The learners who had permission from their parents or guardians were contacted to request their informed assent for inclusion in the research (Appendix G). Thereafter appointments were made and the questionnaires were distributed for completion by the respondents.

Throughout the study ethical measures were taken into consideration such as protecting the respondents from harm and honouring the respondents' right to privacy. No known risks were associated with participation in the study other than the inconvenience of completing the questionnaire. The survey was similar to a typical questionnaire that any learner might encounter in school. No individual was disadvantaged by being excluded from participation in the research.

Confidentiality was ensured and maintained throughout the study. The raw data and information on individual provinces, schools, or learners was not released publicly or identified in any way in the published research findings.

The second phase of the investigation involved the actual fieldwork during which the respondents had to complete the questionnaires.

5.4.2 Administering of the questionnaire

The researcher visited all the respondents at their respective schools. Arrangements had to be made in such a manner that the visits did not interfere with the academic program of the school. Other factors which had to be kept in mind were the fixed transport arrangements for the children, the daily routine of the parents, the extra-curricular activities of the children and the house rules of the boarding school.

Only at two schools were the questionnaires completed during school periods. At all the other schools the questionnaires were completed in the afternoon after the official school hours. It was possible to administer the questionnaire to the respondents in a group at four of the schools, but at the remaining eight schools individual sessions with respondents were necessary.

Most respondents were able to complete the questionnaire during one session, but at three of the schools the respondents completed the questionnaire in two or more sessions. Fixed arrangements were made with the schools for these respondents. One school for example set aside an hour every Monday afternoon for *unforeseen activities*, and the researcher was granted permission to use Monday afternoons from 13:00 for half an hour until completion of the questionnaires. Other respondents were accommodated in boarding schools and the afternoon study time was utilized to complete the questionnaires. The nature of the mobility impairment, as well as instances where English or Afrikaans was not the first or second language, could be possible reasons for respondents needing more time to complete the questionnaire.

Verbal instructions were given to the respondents for the completion of the questionnaire. The exact same instructions were also provided on the questionnaire. Any ambiguities that arose were explained to the respondents. The respondents were

asked to indicate their answers on the questionnaire. The researcher was available to clear unforeseen uncertainties or questions raised by the respondents before, during and after the process of completion.

The questionnaire was deliberately designed in a manner that the physical writing of extensive answers was avoided. The respondents included learners who experienced difficulty with muscle control and coordination, which could influence their writing. Paragraph type answers could have resulted in obtaining only the minimum information or no information at all.

Neatness was not a requirement and there was no time restriction for completing the questionnaire. Some respondents took longer to complete the questionnaire. In some cases the researcher, teacher, occupational therapists and physiotherapists assisted the respondents who experienced difficulties in fine motor skills which impacted on their writing.

Certain words had to be explained to some of the respondents. Explanations were provided for words such as *expectations*, *joyful*, *inferior* and '*clique*', *diligent*, *initiative*, *optimistic* and *pursue*.

The questionnaires were carefully checked to ensure that they were fully completed and coded in order for the information to be captured correctly. The data obtained from these questionnaires could then be analyzed.

5.4.3 Data analysis

After the information was captured for computer use, the data were analyzed using the SAS computer program. The results are presented in the next chapter.



CHAPTER 6

RESULTS OF THE EMPIRICAL INVESTIGATION

6.1 INTRODUCTION

As stated in Chapter 1 (cf paragraph 1.4), the main aim of the research was to determine the influence of adaptive sport on the identity formation of adolescents with a mobility impairment.

Identity formation, according to Erikson, is a socio-affective construct. It emphasizes the importance of social relationships and other affective constructs related to identity formation such as the parent-child relationship, relationship with peers, anxiety and depression. There is however uncertainty as to whether participation in adaptive sport affects these constructs. It is also possible that the influence of participation in sport may be different for boys and girls. Even the age and gender of adolescents, as well as the type and severity of the impairment, may influence participation in sport and consequently the identity formation of the adolescent.

These uncertainties necessitated further research. An empirical investigation was carried out to investigate the relationship between variables such as social relationships and affective constructs and the identity formation of adolescents with a mobility impairment. Several hypotheses were stated with reference to the variables and their relationship to the identity formation of adolescents with a mobility impairment. These hypotheses included a comparison between the identity formation of adolescents with a mobility impairment who participated in sport and those adolescents with a mobility impairment who did not participate in sport. Hypotheses were also stated to determine the correlation between social relations and identity formation, as well as the correlation between affective constructs and the identity formation of adolescents with a mobility impairment.

The influence of other variables including gender, the type of mobility impairment and the onset of the impairment on the identity formation were also taken into account.

Appropriate measuring instruments were selected to obtain data from 140 respondents who were all adolescents with a mobility impairment. The data were coded and captured for analysis using the SAS program.

In this chapter an explanation is provided of how the hypotheses stated in Chapter 5 (cf paragraphs 5.2.1 – 5.2.10) were tested.

6.2 TESTING OF THE HYPOTHESES

6.2.1 Hypothesis 1

With reference to hypothesis 1 in paragraph 5.2.1 the following null hypothesis was stated:

There is no significant difference in the identity of adolescents with a mobility impairment who participate in sport, compared with those who do not participate in sport.

To specifically explore the identity of adolescents, only the fifth stage of the epigenetic approach of Erikson's theory, namely identity versus role confusion, was taken into consideration.

To test this null hypothesis, the means of the identity of adolescents with a mobility impairment who participated in sport were determined. The same was done for the identity of adolescents with a mobility impairment who did not participate in sport. The t-test was used to determine whether the means differed significantly.

The arithmetic mean (\bar{X}), standard deviation (S) and the value of the t-test (t) appear in Table 6.1.

TABLE 6.1: IDENTITY OF ADOLESCENTS WITH A MOBILITY IMPAIRMENT

	SPORT PARTICIPATION	N	\bar{X}	S	t	p
Identity of adolescents	Sport participation	89	11.10	2.97	0.72	p > 0.05
	No sport participation	51	10.71	3.34		

From the information in Table 6.1 the null hypothesis cannot be rejected. There is no significant difference in the identity of adolescents with a mobility impairment who participate in sport, compared with the identity of adolescents with a mobility impairment who do not participate in sport.

Since several studies indicated that sport participation has a positive influence on the identity of adolescents in general (MacPherson, 2013; Anderson, Mâsse, Zhang, Coleman & Chang, 2009; Miller, Melnick, Barnes, Sabo & Farrell, 2007), it was assumed that this would also be the case with adolescents with a mobility impairment (see paragraph 3.6). However, this could not be confirmed in this investigation.

A few studies in the literature (Hargreaves, 2010; Martin, 2010; Smith et al., 2015; Fitzgerald, 2005) indicated that not all learners with a disability experience sport in a positive way. Fitzgerald (2005:42-47) gathered information from young learners with a disability to gain a better understanding of their experiences during physical education and school sport. A general feeling from the learners is that their participation in activities is not perceived in the same or equal manner as activities undertaken by learners without a disability. The learners ascribe this to teachers' attitudes which also influence their peers. The dilemma is that a certain standard seems to be imposed on all learners regarding their achievement in sport. This has a negative effect on the learners who fail to match up to these standards (Fitzgerald, 2005:55).

Hargreaves (2010:93-94) found that athletes in wheelchairs do not experience physical education as fully and meaningfully as athletes without a disability would. Martin (2010:58-59) also established that there are certain negative outcomes to sport participation. Some individuals with a disability perceive that their participation in sport

is trivialized and their physical abilities are often doubted. Other learners have negative experiences, such as being excluded from physical education classes and being considered not good enough to be selected for teams (Smith et al., 2015:2).

Collins (2012:142-143) wanted to establish to what extent, if any, the attitudes of learners - with and without a disability - differ regarding enjoyment of physical education. The analysis revealed that there is no difference in levels of enjoyment toward physical education. A probable explanation may be that the curriculum adequately provides for a variety of activities in which learners are engaged and having fun.

Sport participation can thus not be labeled as an exclusively positive or negative variable which influences the identity of adolescents with a mobility impairment. The results of this hypothesis thus refuted the assumption that participation in adaptive sport creates an ideal environment in which the successful identity of an adolescent with a mobility impairment can be established (paragraph 3.7).

Although 64% of the adolescents in this study were participating in sport, the remaining 36% were not. It would appear that other factors, besides participation in sport, might have an influence on the identity of adolescents with a mobility impairment.

6.2.2 Hypothesis 2

With reference to hypothesis 2 in paragraph 5.2.2, the following null hypothesis was stated:

There is no significant difference in the identity formation of adolescents with a mobility impairment who participate in sport, compared with those who do not participate in sport.

The null hypothesis was applicable to each stage of the identity formation as identified by Erikson (1963:222-236). These four stages entail trust versus mistrust; autonomy versus shame and doubt; initiative versus guilt; and industry versus inferiority.

To test the null hypothesis, two groups of adolescents with a mobility impairment were compiled. The adolescents in one group participated in sport while the adolescents in the other group did not participate in sport. The means for each stage of the identity formation for both groups were calculated. The t-test was used to determine whether the means differed significantly.

The arithmetic mean (\bar{X}), standard deviation (S) and the value of the t-test (t) appear in Table 6.2.

TABLE 6.2: IDENTITY FORMATION OF ADOLESCENTS WITH A MOBILITY IMPAIRMENT

STAGES OF IDENTITY FORMATION	SPORT PARTICIPATION	N	\bar{X}	S	t	p
Trust versus mistrust	Sport participation	89	11.03	3.11	0.91	p > 0.05
	No sport participation	51	10.51	3.54		
Autonomy versus shame and doubt	Sport participation	89	10.54	2.80	0.26	p > 0.05
	No sport participation	51	10.41	2.81		
Initiative versus guilt	Sport participation	89	11.12	2.99	0.97	p > 0.05
	No sport participation	51	10.59	3.41		
Industry versus inferiority	Sport participation	89	11.11	2.73	1.59	p > 0.05
	No sport participation	51	10.31	3.10		

From the information in Table 6.2 the null hypothesis cannot be rejected for all four stages (trust versus mistrust; autonomy versus shame and doubt; initiative versus guilt; and industry versus inferiority). This implies that there is no significant difference in the identity formation of adolescents with a mobility impairment who participate in sport

compared with the identity formation of adolescents with a mobility impairment who do not.

There are an abundant number of influences on the identity formation of the adolescent with a mobility impairment. Some influences have a greater impact than others. Living with a disability can be challenging for an adolescent, from dealing with staring, teasing and bullying to the frustrations of being unable to take part in an activity or being part of a social group (Otto, 2013; Piek et al., 2005:453; Berger, 2013:114). The visibility of the disability, or the extent of disfigurement, influences the dissatisfaction with one's appearance (Pinquart & Pfeiffer, 2015:251).

According to Tasiemski and Brewer (2011:233-250) learners with spinal cord injuries are associated with a loss of physical functioning that can compromise involvement in sport activities. Such learners might not be able to participate in their favourite sport and consequently their athletic identity may be at risk. For some individuals this can have an adverse impact on their self-identity and psychological adjustment. However, Tasiemski and Brewer (2011:245) indicated that individuals with a spinal cord injury who do participate in sport, may experience a stronger athletic identity and enhanced psychological adjustment.

Scarpa (2011:38-53) investigated the role of sport participation in persons with a physical disability. It was affirmed that individuals with a physical disability who participate in sport, present a positive physical self-concept and a good self-esteem. It was also found that being physically active seems to influence physical self-formation positively. However, similar results could not be shown in the current investigation. The results of the current investigation were more consistent with the findings of Pot, Schenk and Van Hilvoorde (2014:484-91). Pot et al. (2014:484-91) investigated whether participation in school sport brought about changes in the formation of a sport identity and the learner identity of adolescents. Their study revealed that participation in sport was not related to changes in the sport identity or the learner identity of the adolescents. Their investigation was conducted among children without disabilities. According to the results of the current investigation, the findings are also applicable for the identity formation of adolescents with a mobility impairment.

Martin (2010:58-62) determined that participation in sport has negative, as well as positive outcomes for adolescents with a mobility impairment. On the negative side some individuals with a physical disability may perceive that their participation in sport as trivialized and may often doubt their physical abilities. Furthermore, adolescents' self-esteem may be threatened when they perceive the help that they receive as a consequence of a negative assessment of their ability. Some adolescents may also have negative experiences such as being excluded from practices, and not being selected for teams. However, on the positive side, when adolescents participate in sport, various forms of social support are offered by parents, coaches, team members and friends, which influence the self-efficacy of the individual with a physical disability.

The fact that participation in sport may not have an influence on the identity of the adolescent with a mobility impairment should not be interpreted as negative. Not all adolescents with a mobility impairment have the opportunity or desire to participate in sport. Furthermore, some children with a mobility impairment miss out on participation opportunities due to their parents' over-protectiveness (Behle & Pinqart, 2015:774). If participation in sport had a strong influence on identity formation, it would imply that many adolescents with a mobility impairment, who do not participate in sport, would experience identity problems.

6.2.3 Hypothesis 3

With reference to hypothesis 3 in paragraph 5.2.3, which states that there is a significant difference between adolescent boys and girls with a mobility impairment with regard to their participation in sport and their identity formation, the following two null hypotheses were stated:

(A) H_0 *There is no significant difference between adolescent boys and girls with a mobility impairment with regard to their participation in sport.*

(B) H_0 *There is no significant difference between adolescent boys and girls with a mobility impairment with regard to their identity formation.*

To test the first null hypothesis (A), adolescents with a mobility impairment were divided into two groups: boys in the one group and girls in the other. The boys' group was further divided into two groups: boys who participated in sport and boys who did not participate in sport. The same was done for the group of girls.

To determine whether the frequencies of sport participation differed significantly between these groups, a chi-square test was used.

TABLE 6.3: ADOLESCENT BOYS AND GIRLS WITH A MOBILITY IMPAIRMENT PARTICIPATING IN SPORT

	SPORT PARTICIPATION	NO SPORT PARTICIPATION	TOTAL
Boys	58	20	78
Girls	31	31	62
Total	89	51	140

$$\chi^2(1) = 8.85$$

$$p < 0.01$$

From the information in Table 6.3, null hypothesis A can be rejected. This implies a significant difference between adolescent boys and adolescent girls with a mobility impairment with regard to their participation in sport. The number of boys with a mobility impairment who participated in sport ($\frac{58}{78} = 74\%$) was higher than the 50% ($\frac{31}{62}$) of girls with a mobility impairment who participated in sport. Sport participation is thus more popular among boys with a mobility impairment than with girls with a mobility impairment.

Adolescent boys and girls develop at different rates and a combination of genes, hormones and environmental factors determines the timing and the rate of growth and puberty (Sigelman & Rider, 2012:167, 182). Girls often experience these changes more on the negative side, whereas boys tend to have a more positive reaction to growth and puberty (Sigelman & Rider, 2012:182). This may have an influence on their sport participation.

According to Vilhjalmsón and Kristjansdóttir (2003:370), studies have repeatedly shown that boys outnumber girls in competitive team sport such as soccer and basketball, whereas girls outnumber boys in non-competitive individual and medium to low intensity sport such as gymnastics and swimming. More girls than boys engage in physical activity for appearance, health and fitness related reasons, and more boys for the sake of competition, demonstration of ability, and the pursuit of victory (Vilhjalmsón & Kristjansdóttir, 2003:370).

Slater and Tiggemann (2010:619-626) noticed declines in levels of physical activity among adolescent girls and they attempted to gain a deeper understanding of the reasons why girls ceased participation in sport and other physical activities. A number of reasons were provided by the girls, inter alia a loss of interest in the activity; sport interfering with social activities; competence; non-availability of sport; the school; injury; practical reasons such as transport arrangements; poor team relationships; conflict with other boys and girls; the coach; and the influence of friends and family.

The difference in sport participation of boys and girls without a mobility impairment, as indicated by Slater and Tiggemann (2011); Eime, Payne, Casey and Harvey (2008); and Patnode, Lytle, Erickson, Sirard, Barr-Anderson and Story (2010), is thus also applicable to adolescents with a mobility impairment.

The second null hypothesis (B) with regard to hypothesis 3 was then stated and tested.

(B) H₀. *There is no significant difference between adolescent boys and girls with a mobility impairment with regard to their identity formation.*

To test this null hypothesis, the means of the identity of adolescent boys with a mobility impairment and the means of the identity of adolescent girls with a mobility impairment were determined. In order to establish whether the means differed significantly, the t-test was used.

The arithmetic mean (\bar{X}), standard deviation (S) and the value of the t-test (t) appear in Table 6.4.

TABLE 6.4: IDENTITY FORMATION OF ADOLESCENT BOYS AND GIRLS WITH A MOBILITY IMPAIRMENT

STAGES OF IDENTITY FORMATION	GENDER	N	\bar{X}	S	t	p
Trust versus mistrust	Boys	78	11.37	2.60	2.18	p < 0.05
	Girls	62	10.18	3.87		
Autonomy versus shame and doubt	Boys	78	10.44	2.91	0.27	p > 0.05
	Girls	62	10.56	2.65		
Initiative versus guilt	Boys	78	10.67	3.35	1.11	p > 0.05
	Girls	62	11.26	2.86		
Industry versus inferiority	Boys	78	10.86	2.82	0.17	p > 0.05
	Girls	62	10.77	2.98		
Identity versus role confusion	Boys	78	11.08	0.32	0.51	p > 0.05
	Girls	62	10.81	0.44		

From the information in Table 6.4 null hypothesis (B) can be rejected in the case of trust versus mistrust. For the other four phases (autonomy versus shame and doubt; initiative versus guilt; industry versus inferiority; and identity versus role confusion) the null hypothesis (B) cannot be rejected. A significant difference is evident between the trust of boys and girls. The average for boys is higher than the average for girls. This is the only stage in the identity formation where a significant difference between adolescent boys and girls in respect of their identity formation can be shown. There is no significant difference between adolescent boys with a mobility impairment and adolescent girls with a mobility impairment in respect of their overall identity formation.

The establishment of trust has an impact on all the remaining stages of identity formation (Faris & McCarroll, 2010:14-16). Although there is stronger trust among boys, it is not strong enough to affect their autonomy, initiative, industry or identity.

Rani and Devi (2016) investigated the pattern of identity development among adolescents. The identity development of adolescents was divided into four categories of identity such as a personal, a relational, a social and a collective identity. The results of their study indicated that almost an equal percent of both boys (63%) and girls (67%) had an average personal identity. In their sample, 53% of the girls but only 23% of the boys had a high relational identity. Social identity was higher among the boys (85%) than the girls (62%). With regard to a collective identity, 50% of the boys' sample and 25% of the girls' sample had high and average collective identity respectively.

Sandhu and Tung (2006:29-40) studied gender differences in adolescents without a mobility impairment regarding the identity formation process. The scores of the four identity statuses, that is, of identity achievement, moratorium, foreclosure, and diffusion (cf. paragraph 4.6.1) were compared to study gender differences. Data analysis revealed that girls are stronger than boys on identity achievement and moratorium, and are not as strong as boys on diffusion.

The focus of Raburu (2015:98) on gender identity indicated that gender differences in terms of roles and choices of identity may begin emerging in the early stages of children's development. Gender identity may be attributed to family socialization, cultural impact, the media effects, and role models. Gender differences are noticeable in the possible choices of careers such as a footballer, driver and pilot for boys compared to a mum or nurse for girls (Raburu, 2015:98-99).

Klimstra et al. (2010:150) found that girls were overall more mature with regard to identity formation in early adolescence, but boys had caught up with them by late adolescence. From the data in the current research, it is also evident that there is no significant difference between the identity formation of adolescent boys and girls with a mobility impairment.

6.2.4 Hypothesis 4

With reference to hypothesis 4 in paragraph 5.2.4 the following null hypothesis was stated:

The category (type) of mobility impairment has no significant influence on the sport participation of adolescents.

To test the null hypothesis, adolescents with a mobility impairment were divided into groups according to the category or type of the specific mobility impairment. Responses regarding the main categories of mobility impairment (hemiplegia, paraplegia, quadriplegia, cerebral palsy, spina bifida, amputee, multiple sclerosis and muscular dystrophy) and any additional mobility impairment which was mentioned, were categorized into four main groups. The first group included adolescents with a spinal cord injury (n = 43). The second group consisted of adolescents with cerebral palsy (n = 44). The third group accommodated adolescents with spina bifida and bone deformities (n = 25). The fourth group included adolescents with muscular dystrophy and other muscle related impairments (n = 21). The remaining seven adolescents were not included in a specific group as these impairments were too diverse to fall into one of the four main categories. All four groups were then further divided into two groups: adolescents who participated in sport in one group and adolescents who did not participate in sport in the other group.

To determine whether the category (type) of mobility impairment influences the frequencies of sport participation, a chi-square test was used.

TABLE 6.5: CATEGORIES OF MOBILITY IMPAIRMENT AND THE SPORT PARTICIPATION OF ADOLESCENTS WITH A MOBILITY IMPAIRMENT

CATEGORIES OF MOBILITY IMPAIRMENT	SPORT PARTICIPATION	NO SPORT PARTICIPATION	TOTAL (N = 133)
Spinal cord injury	24	19	43
Cerebral palsy	31	13	44
Spina bifida and bone deformity	17	8	25
Muscular dystrophy and other muscle related impairment	14	7	21

$$\chi^2(3) = 2.28$$

$$p > 0.05$$

From the information in Table 6.5 the null hypothesis cannot be rejected. There is no significant difference in the sport participation of adolescents with different types of mobility impairment.

The participation rate in sport (56% = spinal cord injury; 70% = cerebral palsy; 68% = spina bifida and bone deformity; and 67% = muscular dystrophy and other muscle related impairment) was thus more or less the same for the four categories of mobility impairment. The participation rate of adolescents with a spinal cord injury was however lower than that of the other three categories. It is evident that the category (type) of mobility impairment does not significantly influence the participation in sport of adolescents with a mobility impairment.

According to Wilson and Clayton (2010:S46-S65), limited information is available on sport for individuals with a very severe disability. Historically, these individuals may

have been excluded from available activities owing to a lack of resources and the ignorance of educators. Today, swimming, boccia and power soccer are ideal sports for athletes with severe mobility impairment. They are the ideal sports for athletes with cerebral palsy, high spinal cord injuries, muscle disease and those on ventilators. Power soccer is a sport specifically developed as an opportunity for a team sport for athletes who use power wheelchairs. Participation in these sports is possible on both a recreational and competitive basis.

More than a decade ago the American Academy of Orthopaedic Surgeons developed a 'Participation Possibility Chart' which outlined sporting options for individuals with physical disabilities (Wind, Schwend & Larson, 2004:126-137). Each sport was classified into specific categories, ranging from recommended for athletes with a mobility impairment to not recommended for athletes with a mobility impairment at all. With the introduction of adaptive sport, this distinction is no longer required. Through adaptive sport, there are no more restrictions on the participation in any preferred sport of adolescents with a mobility impairment. Adaptive sport has been made accessible for athletes with a disability by adapting either the equipment or rules where needed. Existing sport with minor modifications (adaptions) to accommodate athletes with a disability is for example where a strap is used in powerlifting to strap the athlete to the bench. Major modifications (adaptions) to accommodate athletes with a disability are for example in wheelchair tennis where the rules are also changed that the ball can bounce twice before returning the shot. Adaptive sport also includes sport that has been specially developed to accommodate athletes with a mobility impairment, for example boccia and goalball. There are however existing sports in which individuals with a mobility impairment can participate without any modifications, for example, swimming (Australian Sports Commission, 2015).

6.2.5 Hypothesis 5

With reference to hypothesis 5 in paragraph 5.2.5, which states that there is a significant difference in sport participation and identity formation of adolescents with a congenital disability compared with adolescents who acquired the disability later in their lives, the following two null hypotheses were stated:

(A) H₀. There is no significant difference in the sport participation of adolescents with a congenital disability compared with the sport participation of adolescents who acquired the disability later in their lives.

(B) H₀. There is no significant difference in the identity formation of adolescents with a congenital disability compared with the identity formation of adolescents who acquired the disability later in their lives.

To test the first null hypothesis (A), adolescents with a mobility impairment who participated in sport were divided into two groups: adolescents with a congenital disability formed one group, and adolescents who acquired the disability later in their lives formed the second one. To determine whether the frequencies of sport participation differ significantly between these two groups, the chi-square test was used.

TABLE 6.6: SPORT PARTICIPATION OF ADOLESCENT BOYS AND GIRLS WITH A CONGENITAL DISABILITY OR WHO ACQUIRED THE DISABILITY LATER IN THEIR LIVES

N = 140	PARTICIPATION	NON-PARTICIPATION	TOTAL
Congenital disability	67	34	101
Acquired disability	22	17	39
TOTAL	89	51	140

$$\chi^2(1) = 1.20$$

$$p > 0.05$$

From the information in Table 6.6 null hypothesis A cannot be rejected. No significant difference in the frequencies of sport participation between the two groups could be shown. Whether the impairment was congenital or acquired, it did not influence the sport participation of the adolescents.

The information also indicated that 25% of adolescents participating in sport acquired the mobility impairment later in their lives, compared with the 75% of adolescents with a mobility impairment who were born with the mobility impairment. This phenomenon is similar regarding the non-participation of adolescents with a mobility impairment. The results also revealed that 33% of adolescents not participating in sport acquired the mobility impairment later in their lives, compared with the 67% of adolescents with a mobility impairment who were born with the mobility impairment.

Given the variability of injury onset, adolescents with a congenital impairment may have had opportunities to participate in sport at an earlier age than adolescents who acquired an impairment. It is not certain whether adolescents with a congenital impairment have an advantage by being exposed to a certain exercise earlier in their lives. Adolescents with an acquired impairment may be able to transfer general skills acquired in mainstream sports to assist them in skill acquisition and adapting to the demands of a new sport (Dehghansai, Lemez, Wattie & Baker, 2017:511).

The second null hypothesis (B) was stated as follows:

(B) H₀. *There is no significant difference in the identity formation of adolescents with a congenital disability compared with the identity formation of adolescents who acquired the disability later in their lives.*

To test this null hypothesis (B), the means of the identity of adolescents with a congenital disability, and the means of the identity of adolescents who acquired the disability later in their lives were calculated. This was done for each of the stages in the identity formation (trust versus mistrust; autonomy versus shame and doubt; initiative versus guilt; and industry versus inferiority) as well as for the fifth stage (identity versus role confusion). In order to establish whether the means differed significantly, the t-test was used.

The arithmetic mean (\bar{X}), standard deviation (S) and the value of the t-test (t) appear in Table 6.7.

TABLE 6.7: IDENTITY FORMATION OF ADOLESCENTS WITH A CONGENITAL DISABILITY AND ADOLESCENTS WHO ACQUIRED THE DISABILITY LATER IN THEIR LIVES

STAGES OF IDENTITY FORMATION	CONGENITAL vs ACQUIRED	N	\bar{X}	S	t	p
Trust versus mistrust	Congenital	101	11.09	3.23	1.44	p > 0.05
	Acquired	39	10.21	3.33		
Autonomy versus shame and doubt	Congenital	101	10.63	2.64	0.96	p > 0.05
	Acquired	39	10.13	3.16		
Initiative versus guilt	Congenital	101	10.91	2.94	0.11	p > 0.05
	Acquired	39	10.97	3.67		
Industry versus inferiority	Congenital	101	10.91	2.88	0.59	p > 0.05
	Acquired	39	10.59	2.90		
Identity versus role confusion	Congenital	101	11.17	2.97	1.30	p > 0.05
	Acquired	39	10.41	3.40		

From the information in Table 6.7 null hypothesis B cannot be rejected. This implies that the presence of the disability, whether congenital or acquired later in life, has no significant influence on the identity formation of the adolescent with a mobility impairment. This is applicable to all five stages of identity formation (trust versus mistrust; autonomy versus shame and doubt; initiative versus guilt; industry versus inferiority; and identity versus role confusion).

In their changing world, adolescents with a mobility impairment need to develop an identity that enables them to negotiate their own pathways. A mobility impairment

may be congenital or it may be acquired. It is difficult to predict which has a stronger impact on the identity formation of the adolescent with a mobility impairment. Individuals with a congenital disability are born with their disability and live with the mobility impairment every day of their lives. They are unfamiliar with a life without their mobility impairment. This causes many to believe that their life as a person with a mobility impairment is easier compared with that of individuals who acquire the mobility impairment later in their lives. Although individuals with congenital disabilities are generally assumed to be better adapted than individuals with acquired disabilities, few studies have tested this (Bogart, Tickle-Degnen & Ambady, 2012:43-51), and even fewer have attempted to explain the mechanisms behind these differences (Bogart, 2014:107-115).

The onset of a mobility impairment forces adolescents to redefine themselves. Adolescents are in the process of forming their own identity and are therefore uncertain about many aspects. When adolescents are suddenly exposed to the confusing effect of a mobility impairment, they may find it problematic to form a successful identity around the mobility impairment. What was 'normal' before the mobility impairment was acquired is not 'normal' anymore. Adolescents may no longer be healthy, independent, active, or physically attractive to others. The entire identity of the adolescent with a mobility impairment is now in question (Kurawa, 2010:1804-1810).

According to Psarra and Kleftaras (2013:79-99), the onset of an individual's mobility impairment causes great changes in all aspects of the individual's life, including the identity of the individual. More specifically, individuals with an acquired physical disability experience the loss of many components of their identity: loss of independence; body integrity and mobility; loss of pre-existent roles and often a loss of social relationships. Therefore, individuals with a mobility impairment are often confronted with a new, threatening and stressful reality, possibly leading to a psychosocial crisis in their lives (Psarra & Kleftaras, 2013:79-99).

From the data obtained in the current research, and in contradiction with general assumptions and the results of the previous research, no difference in the identity formation of adolescents with a congenital disability, and the identity formation of adolescents who acquired the disability later in their lives, could be shown.

6.2.6 Hypothesis 6

With reference to hypothesis 6 in paragraph 5.2.6 the following null hypothesis was stated:

There is no correlation between the social relationships and the identity formation of adolescents with a mobility impairment.

In order to test the null hypothesis, the correlation coefficients between each stage of identity formation (trust, autonomy, initiative, industry, and identity) and the social relationships were calculated. The social relationships included the relationship with friends and the relationship with parents. The relationship with parents consisted of a relationship of authority, a relationship of knowledge and a relationship of trust.

TABLE 6.8: SOCIAL RELATIONSHIPS AND IDENTITY FORMATION OF ADOLESCENTS WITH A MOBILITY IMPAIRMENT

STAGES OF IDENTITY FORMATION	RELATIONSHIP WITH FRIENDS	RELATIONSHIP WITH PARENTS			
		Relationship of authority	Relationship of knowledge	Relationship of trust	Total
Trust	0.46	0.35	0.45	0.41	0.43
Autonomy	0.29	0.11**	0.19*	0.09**	0.14**
Initiative	0.39	0.40	0.39	0.34	0.39
Industry	0.30	0.43	0.45	0.42	0.46
Identity formation	0.51	0.36	0.41	0.39	0.41

* $p < 0.05$

** $p > 0.05$

For all the other correlation coefficients $p < 0.01$

From the information in Table 6.8 the null hypothesis can be rejected, except for the correlation between autonomy and the relationship with parents. With regard to the other social relationships, there are significant correlations between the social relationships (relationship with friends, as well as relationship with parents) of adolescents with a mobility impairment and their identity formation.

It is specifically the final stage of the identity formation process which correlates highly with the relationship with friends ($r = 0.51$). It is also the final stage of the identity formation process which correlates highly with the combined relationships with parents (authority, knowledge and trust) ($r = 0.41$).

Adolescents move toward peer relationships and begin to separate themselves from their parents (Garcia, 2010:167). During this period adolescents spend more time with their friends and their relationships with friends become more mature and significant. Adolescents choose friendships to suit their needs for emotional support and exploration or re-affirmation of their values or aspirations (Hardman, 2012:220). From the literature it appears that relationships with friends are the most important and most influential relationships during the adolescent phase (Oberle, Schonert-Reichl & Thomson, 2010:1330; Kiuru, Burk, Laursen, Salmela-Aro & Nurmi, 2010:801-812). This is also reflected in the data obtained in the current study.

The first stage of the identity formation (trust) correlates highly with the relationship with friends ($r = 0.46$), as well as the relationship with parents ($r = 0.43$). The realization of trust is the first stage and the cornerstone for the formation of an identity. Adolescents learn about trust in their relationships with their friends when they negotiate aspects such as being fair, loyal, true to one's word and accountable for one's actions (Flanagan & Stout, 2010:748-773). It is implied in the literature that adolescents with a mobility impairment may have fewer friends and will thus have lower levels of trust. Adolescents with a mobility impairment may be subjected to a smaller number of friends owing to victimization by peers compared with adolescents without a mobility impairment (Forgeron, King, Stinson, McGrath, MacDonald & Chambers, 2010:39; Otto, 2013:1; Berger, 2013:114). This could not be shown in the data.

Trust is an important aspect which also emerges during the relationships of the adolescents with their parents. The relationship with parents included the relationship of authority, the relationship of knowledge and the relationship of trust. It is important that parents understand their child's differences and respect them. In cases when parents are uninvolved or absent, or when they are not serious about the psychological needs of the adolescent, uncertainty is caused. The extent to which parents know their adolescents' activities, friends, and whereabouts has an influence on the relationship between parents and the adolescent (Metzger, Ice & Cottrell, 2012:1). This may also be true for adolescents with a mobility impairment.

The extent to which parents allow adolescents to act autonomously, relates to the trust of the parents in the child. Parents who are convinced that their children with a mobility impairment cannot act autonomously will doubt their children and the choices they make. They may therefore create less opportunity for adolescents to make their own decisions and to act independently. When a sense of mistrust is gained by the adolescent, the process of identity formation will be vulnerable.

Parents know their children best. They know their strengths and weaknesses and what they are capable of. Parental knowledge about their children should not only come from parental efforts such as demands and control, but also from adolescents' voluntary disclosure of information. This knowledge may be a powerful predictor of the adjustment of the adolescent with a mobility impairment (Frijns, Keijsers, Branje & Meeus, 2010:261).

From the data in the current study it is evident that the social relationship with friends, as well as the relationships with parents, can strongly be associated with the identity formation of the adolescent with a mobility impairment.

6.2.7 Hypothesis 7

With reference to hypothesis 7 in paragraph 5.2.7 the following null hypothesis was stated:

The social relations of adolescents with a mobility impairment participating in sport do not differ from those who do not participate in sport.

To test the null hypothesis, adolescents' relationships with friends and with parents were taken into account.

In order to test this null hypothesis, the means of the relationships of adolescents with a mobility impairment who participate in sport were determined. The means of the relationships of adolescents with a mobility impairment who do not participate in sport were also determined. To determine whether the means differed significantly, the t-test was used.

The arithmetic mean (\bar{X}), standard deviation (S) and the value of the t-test (t) appear in Table 6.9.

TABLE 6.9: SOCIAL RELATIONS OF ADOLESCENTS WITH A MOBILITY IMPAIRMENT

RELATIONSHIP	SPORT PARTICIPATION / NO PARTICIPATION	N	\bar{X}	S	t	p
Friends	Sport participation	89	84.20	15.28	1.00	p > 0.05
	No sport participation	51	81.45	16.21		
Parent-child (authority)	Sport participation	89	59.24	10.93	0.17	p > 0.05
	No sport participation	51	58.92	10.36		
Parent-child (knowledge)	Sport participation	89	71.89	14.69	0.43	p > 0.05
	No sport participation	51	72.96	13.21		
Parent-child (trust)	Sport participation	89	73.83	15.34	0.07	p > 0.05
	No sport participation	51	74.02	13.12		

From the information in Table 6.9 the null hypothesis cannot be rejected. This implies that sport participation, or the absence thereof, has no significant influence on the social relationships of the adolescent with a mobility impairment. There were no significant differences between the means of friendships of adolescents, whether they participated in sport or not (a mean of 84.20 compared with a mean of 81.45). There were also no significant differences between the means of the relationships with their parents (authority, knowledge or trust), whether adolescents participated in sport or not.

Many investigations have been conducted to explore the influence of parents and friends on sport participation in general (Keegan, Harwood, Spray & Lavalley, 2009:361; Keegan, Spray, Harwood & Aberystwyth, 2010:87-105; Ommundsen, Roberts, Lemyre & Miller, 2005:977-989). One such study was undertaken by Cheng, Mendonça and De Farias Júnior (2014:35-41). The results of this study demonstrated that parents and friends have an influence on the physical activity of adolescents. Adolescents are

influenced through the mechanism of behavior modeling and through social support, mediated by self-efficacy.

Sukys, Lisinskiene and Tilindiene (2015:1513-1514) examined the relationship between adolescents' participation in sport and their relations with parents and friends in general. The results indicated that adolescents participating in sport, compared with non-participating adolescents, display stronger parental attachment. However they did not find a significant correlation between adolescent involvement in sport and their attachment to their friends. Skär (2003:635-649) specifically investigated the relationships of adolescents with a disability with their friends. With regard to relationships with friends, Skär (2003:635-649) found that adolescents recognize that their disability restricts them in forming social relations with friends. Several adolescents reported that in order to acquire relationships with friends, they chose to play with both younger and older children who do not make the same demands as their peers. According to the adolescents' descriptions of their relationships with their friends, it appeared that they feel largely excluded from the peer group and that they have few experiences of peer contact outside regular school hours. Adolescents also experience that their relationships with friends are not always mutual, as they are the ones that have to take the initiative if they want to participate in some activity or social event.

According to Matheson, Olsen and Weisner (2007:324), the most important aspect related to friendships among adolescents with a disability was to '*do something together*'. Companionship is thus frequently mentioned as adolescents' idea of friendships. De la Haye, Robins, Mohr and Wilson (2011:720) referred to a study which indicated that friends tend to participate in similar sport and training, but De la Haye et al. (2011:720) indicated that adolescents prefer friends with different sport interests.

Regarding the relationships with parents (Skär, 2003:635-649), adolescents with a disability described their relationship with their parents as ambivalent. The relationships were often described as close and mutual, but yet at the same time as neither close nor mutual. This was caused by the feeling that their parents controlled their adolescents as they needed help in planning their daily activities, such as scheduling travel to and from school and setting up appointments. The relationship with parents was also asymmetric when the parents were always in control and making all the decisions.

According to the adolescents, the parents were obstacles to their attainment of independence. Adolescents did not feel that they were on equal terms with friends because their parents restricted their possibilities of becoming self-reliant.

There is no previous research to indicate that participation in sport of adolescents with a mobility impairment influences their relationships with their friends and parents. From the data of the current investigation it is however clear that the relationships with friends, as well the relationships with parents, are of significant importance to all adolescents with a mobility impairment, whether they participate in sport or not.

6.2.8 Hypothesis 8

With reference to hypothesis 8 in paragraph 5.2.8 the following null hypothesis was stated:

There is no correlation between certain affective variables and the identity formation of adolescents with a mobility impairment.

In order to test the null hypothesis, the correlation coefficients between each stage of identity formation (trust, autonomy, initiative, industry, and identity) and affective variables were calculated. The affective variables (emotional dimensions in the *EPI Index*) included trust, dyscontrol, timidity, depression, distrust, control, aggression and gregariousness.

TABLE 6.10: AFFECTIVE VARIABLES AND IDENTITY FORMATION OF ADOLESCENTS WITH A MOBILITY IMPAIRMENT

N = 140	Affective variables in the Emotional Profile Index (EPI)							
	Trust	Dyscontrol	Timidity	Depression	Distrust	Control	Aggression	Gregariousness
Trust	0.37*	0.18**	-0.016	-0.37*	-0.20**	-0.09	-0.25*	0.38*
Autonomy	0.09	0.25*	-0.17**	-0.05	-0.16	-0.18**	0.02	0.15
Initiative	0.33*	0.15**	0.06	-0.26*	-0.28*	-0.05	-0.25*	0.31*
Industry	0.37*	0.11	0.09	-0.31*	-0.22*	-0.04	-0.28*	0.31*
Identity	0.36*	0.20**	-0.00	-0.31*	-0.24*	-0.09	-0.23*	0.35*

* $p < 0.01$

** $p < 0.05$

For all the other correlation coefficients $p > 0.05$

From the information in Table 6.10 the null hypothesis can be rejected, except in the case of two constructs, namely timidity and being in control. There were mainly low, insignificant correlations between these two affective constructs and the identity formation of the adolescent with a mobility impairment.

It is also evident from the information in Table 6.10 that autonomy does not correlate with the most affective constructs. The other stages of identity formation, namely trust, initiative, and industry, showed significant correlations with the identity formation of adolescents with a mobility impairment.

The affective variables originated from the following eight primary emotions: trust (acceptance); dyscontrol (surprise); timidity (fear); depression (sadness); distrust (disgust); control (expectancy); aggression (anger); and gregariousness (joy) (Plutchik, 1982:540).

It is evident that not all stages of the identity formation are influenced by the same affective variables in the same manner. From the data in Table 6.10, the stages of the identity formation of adolescents with a mobility impairment correlate with the affective variables in the following ways.

In the first stage of the identity formation, trust versus mistrust, there is a high correlation with the trust (0.37), depression (-0.37) and gregariousness (0.38) dimensions. The strongest correlation in the second stage of the identity formation, autonomy versus shame and doubt, is the dimension dyscontrol (0.25). The aggression dimension has the weakest correlation (0.02). The data indicated that the third stage of the identity formation, initiative versus guilt, has the strongest correlation with the trust dimension (0.33) and the gregariousness dimension (0.31). The weakest correlations are timidity (0.06) and the control dimensions (-0.05). The fourth stage of the identity formation, industry, has the strongest correlation with the dimensions of trust (0.37), depression (0.31) and gregariousness (0.31). The identity versus role confusion stage indicated the strongest correlations with the dimensions of trust (0.36), depression (0.31) and gregariousness (0.35). The dimension timidity (-0.00) has no correlation with identity. The weakest correlations with all the affective variables were found in the case of the stage autonomy versus shame and guilt.

The affective variables which do not have such a significant correlation with the identity formation of the adolescent with a mobility impairment, are dyscontrol (surprise), distrust (disgust), control (expectancy) and aggression (anger) (cf. Table 6.10).

Affective variables with a high correlation with all the stages of identity formation are trust (0.37), depression (-0.37) and gregariousness (0.38). These constructs can be identified as the strongest variables relating to the identity formation and identity of adolescents with a mobility impairment.

There is a significant, positive correlation between the dimensions trust and gregariousness and identity formation. Adolescents who had a high score on the trust dimension were inclined towards being accepting, obedient and gullible. These adolescents would probably choose not to complicate things in their life. They are often dependent and impressionable (Louw, 2004:72).

A high score on the gregariousness dimension is indicative of adolescents who are sociable, friendly, affectionate and fairly extroverted. These adolescents enjoy being in the company of others and having affectionate relationships (Louw, 2004:72).

The three negative affective constructs which correlate significantly with the identity formation are depression, distrust and aggression. Depression showed the highest correlation with the identity formation. Depression is indicative of sad, depressed and miserable adolescents who may be dissatisfied with some aspects of their life. Adolescents may be pessimistic about life in general, and often feel deprived. An extremely high score may be suggestive of suicidal tendencies (Louw, 2004:72-73). Depression is one of the most frequent psychological symptoms in people with physical disabilities, as the acquisition of a physical disability is a stressful situation, demanding an individual's adjustment to a new distressing reality (Psarra & Kleftaras, 2013:79-99). While some individuals manage to adapt to their physical disability's implications, others fail to accept this new situation, which manifests in depression (The Iris Center, 2016; Falvo, 2014:14-15; Marini et al., 2012:176; Mazzucchelli & Sanders, 2011:2148).

Children with a disability face significant physical barriers owing to a lack of physical activity and participation levels which are lower than for typically developing children. This results in children being overweight, physically weaker and less fit than their typically developing peers (O'Brien et al., 2015:431). Children with a disability have shown to be at higher risk of obesity and associated secondary conditions which can hinder independence and social participation (McPherson & Lindsay, 2012:201; Kuper et al., 2014:10). Social isolation caused by physical limitations may lead to depression (Campbell et al., 2012:328). Depression in turn may lead to other medical conditions or illnesses (Hooper, 2010:339).

Plutchik (1960) believed that there are no bad or good emotions but all emotions serve a valuable purpose in our relations with others. The way in which a person deals with these emotions however plays an important role in living life to the full. The exact impact of a disability on the emotions of a child varies according to a number of factors such as the specific nature and severity of the disability; the child's strength, stamina and age; the child's ability to cope; and the physical, social and economic environment within which the child is living (National People with Disabilities and Carer Council, 2009). Children with a disability are simply children and they go through the same experiences as their peers without a disability (Jemtå, 2008:9; Smith et al., 2012:3). Living with any type of disability complicates life. The most expressed feelings when learning about the diagnosis of a disability are feelings of being scared, sad or confused (Boyd & MacMillan, 2005:335). Self-pity often occurs when the person questions why it had to happen to him or her. On the positive side the person feels relieved when there is an explanation for the symptoms he or she experiences (Boyd & MacMillan, 2005:336). Both Weisleder (2011:1052) and Mazzucchelli and Sanders (2011:2148) state that in addition to the challenges inherent in physical impairments, children with a disability are at substantially greater risk of exhibiting emotional problems than their typically developing non-disabled peers.

6.2.9 Hypothesis 9

With reference to hypothesis 9 in paragraph 5.2.9 the following null hypothesis was stated:

The affective experiences of adolescents with a mobility impairment taking part in sport do not differ from those of adolescents with a mobility impairment who do not participate in sport.

The null hypothesis is applicable to affective variables measured by the *EPI index* which include dyscontrol, timidity, depression, distrust, control, aggression and gregariousness.

To test this null hypothesis, the means of affective variables of adolescents with a mobility impairment who participate in sport were determined, and the means of affective

experiences of adolescents with a mobility impairment who do not participate in sport were determined. In order to determine whether the means differed significantly, the t-test was used.

The arithmetic mean (\bar{X}), standard deviation (S) and the value of the t-test (t) appear in Table 6.11.

TABLE 6.11: AFFECTIVE (EMOTIONAL) EXPERIENCES OF ADOLESCENTS WITH A MOBILITY IMPAIRMENT

AFFECTIVE (EMOTIONAL) EXPERIENCES	SPORT PARTICIPATION / NO PARTICIPATION	N	\bar{X}	S	t	p
Trust	Sport participation	89	19.34	5.53	2.96	p < 0.01
	No sport participation	51	16.31	6.27		
Dyscontrol	Sport participation	89	11.08	4.55	0.38	p > 0.05
	No sport participation	51	10.78	4.11		
Timidity	Sport participation	89	16.78	4.29	1.33	p > 0.05
	No sport participation	51	15.57	6.43		
Depression	Sport participation	89	5.76	4.59	0.66	p > 0.05
	No sport participation	51	6.31	4.92		
Distrust	Sport participation	89	8.73	4.17	3.44	p < 0.01
	No sport participation	51	11.27	4.28		
Control	Sport participation	89	19.83	4.26	0.43	p > 0.05
	No sport participation	51	20.22	6.25		
Aggression	Sport participation	89	7.48	6.47	1.91	p < 0.01
	No sport participation	51	10.04	9.34		
Gregariousness	Sport participation	89	14.53	4.21	2.07	p < 0.05
	No sport participation	51	12.84	5.29		

From the information in Table 6.11 the null hypothesis can be rejected with regard to some of the affective experiences. For three of the variables, that is, trust, distrust and aggression, the means of adolescents with a mobility impairment who participated in sport, differed from those who did not participate in sport. The mean for adolescents participating in sport was higher for trust (19.34) than for those who did not participate in sport (16.31). For the remaining two variables, the means of adolescents participating in sport were lower. In the case of distrust the means were 8.73 compared with 11.27, and in the case of aggression the means were 7.48 compared with 10.04.

No significant differences could be obtained with regard to the remaining five affective experiences, namely dyscontrol, timidity, depression, control and gregariousness.

Trust is fundamental in any interpersonal relationship (Rotenberg, Addis, Betts, Corrigan, Fox, Hobson, Rennison, Trueman & Boulton, 2010:1086). Adolescents may not make a conscious decision to trust people, but they develop a sense of trust over time. Just as important as the ability to trust, is the feeling of being trusted (Preble, 2015:433). Adolescents can also easily come to distrust people if the trust is destroyed. Having opportunities to trust and to be trusted are therefore a crucial part of adolescents' affective experiences in a way that supports their capacity to live a meaningful life (Rooney, 2010:347).

Participation in sport constructs an environment in which adolescents with a mobility impairment can experience love, appreciation, and acceptance (Turnnidge et al. 2012:1138). During participation in sport, adolescents attempt to perform to their potential or in a team they work together to achieve a common goal (Janssen Sports Leadership Centre, 2017:1). Adolescents with a mobility impairment have the opportunity to learn how to trust themselves and their specific talents. In a team sport, trust is the 'emotional glue' that binds team members together. Adolescents with a mobility impairment learn to trust themselves and their team members during participation in sport. Through trust, they develop mutual friendships and relationships with their fellow sport participants (Sukys et al., 2015:1514).

The lack of trust in others, teammates and coaches may lead to conflict and other negative emotions. This may explain the difference that was obtained in the means of

the category of trust in which the mean of adolescents who participated in sport was higher (19.34) than that of adolescents who did not take part in sport (16.31). According to Erikson (1963:222-225), if the basic needs of adolescents are attended to in an inconsistently, unpredictably and unreliable manner, adolescents will develop a sense of mistrust.

Because trust is such a critical component of good performance, coaches and athletes must continually build and maintain trust. The type, frequency and quality of feedback to players either fosters or destroys trust. Coaches who use positive feedback, pointing out players' strengths, successes and improvements create adolescents who trust themselves (Janssen Sports Leadership Centre, 2017:1). It seems that adolescents who participate in sport and who consistently perform well, receive positive feedback from significant others. This may lead to trust being established. If adolescents' sports participation is volatile or unsuccessful and they do not have a positive experience, it may lead to distrust.

There are reasons to believe that the development of aggression is related to a lack of trust (Malti, Averdijk, Ribeaud, Rotenberg & Eisner, 2013:445). All adolescents, regardless of their participation in sport, display aggressive behavior during their development. Only when these behaviors form a pattern over time, can they be considered as problematic (Zahrt & Melzer-Lange, 2011:325). From the data in Table 6.11, it is evident that adolescents with a mobility impairment participating in sport have a lower tendency to aggressiveness than adolescents with a mobility impairment not participating in sport.

Participation in sport and physical activities are a known outlet for psychological stress (Magalhaes das Neves, Loots & Van Niekerk, 2014:104; Shachar, Ronen-Rosenbaum, Rosenbaum, Orkibi & Hamama, 2016:241). According to Park, Chiu and Won (2017:1), participation in sport activities shows a significant negative impact on the aggression of adolescents. The recommendation following on their research was to persuade school educators and school administrators to reduce adolescents' aggressive behavior through participation in various extra-curricular sport activities. This could also be applied to adolescents with a mobility impairment.

Baćanac et al. (2014:68) studied athletes with a physical disability. From their research it was evident that the participation of these athletes in sport contributed to their psychological wellbeing. Participation in sport assists the athletes to form positive attitudes towards themselves. They also become more skilful in overcoming stress and aggression. Machida et al. (2013:1061) found participation in sport to be part of the resilience process for athletes with a spinal cord injury. The social support and social interactions with teammates and coaches assist them in dealing with challenging behavior and adapting to their disability. Groff et al. (2009:320, 324-325) referred to research studies that indicate that athletes with a disability in general exhibit higher levels of positive mood, lower levels of aggression, tension and depression, and an improved state of health and wellbeing.

6.2.10 Hypothesis 10

With reference to paragraph 5.2.10, hypothesis 10 read as follows:

It is possible to identify the most important variable associated with the identity formation of adolescents with a mobility impairment.

To investigate this possibility, a stepwise regression analysis was done to determine which variables explained the largest proportion of the variance in the identity formation of adolescents with a mobility impairment.

Identity formation was used as the dependent variable and the independent variables were variables that posed a significant relationship with identity formation. The variables included the age and gender of the adolescents; the category (type) of mobility impairment; whether the mobility impairment was congenital or acquired; the type of school the adolescents attended; the accommodation in a boarding school; the adolescents' health; the specific sport they were participating in; and their relationships with their parents and their friends.

TABLE 6.12: MOST IMPORTANT VARIABLES ASSOCIATED WITH THE IDENTITY FORMATION OF ADOLESCENTS WITH A MOBILITY IMPAIRMENT

STEP	VARIABLE ENTERED	R ²	F-VALUE	df	p
1	Relationships with friends	0.26	46.49	1.129	< 0.01
2	Relationships with parents	0.34	33.51	2.128	< 0.01
3	Health	0.42	30.53	3.127	< 0.01

The first variable entered into the regression analysis model was the adolescents' relationship with their friends. The relationship with their friends explained the largest proportion of the variance in the identity formation, namely 26%. R² was significant with F (1,129) = 46.49; p < 0:01.

The second variable to enter the regression analysis was the adolescents' relationship with their parents. This relationship explained an additional 8% of the variance in identity formation that had not already been explained by the relationship with their friends. The R² of 0.34 was significant with F (2,128) = 33.51; p < 0:01.

The third variable which entered the regression analysis was the adolescents' health in general. The health of the adolescents explained an additional 8% of the variance in identity formation that had not already been explained by the relationship with friends and the relationship with parents. The R² of 0.42 is significant with F (3,127) = 30.53; p < 0:01.

The remaining independent variables did not make a significant contribution to the explanation of the variance of the identity formation of adolescents with a mobility impairment.

The importance of the first variable, the relationships with friends, has already been discussed in paragraph 6.2.6 and paragraph 6.2.7. The second variable, the importance

of the relationships with parents, has also already been discussed in paragraphs 6.2.6 and 6.2.7.

Regarding the health of adolescents with a mobility impairment, the third variable, parental support, is especially significant for adolescents with a physical disability, given that healthcare services, specifically rehabilitation services, have been transferred from institutions to homes. An increased life expectancy has been accompanied by a growing interest in how the family responds to and engages with the healthcare team to promote their child's health and wellbeing. This includes the social, emotional and physical dimensions and the minimization of the risk of secondary conditions such as skin problems; weight problems; respiratory problems; muscle and joint pain; gastrointestinal problems; low self-esteem; lack of self-confidence; and depression that may contribute to heart disease, stroke, respiratory diseases, low endurance and emotional difficulties (Antle, Mills, Steele, Kalnins & Rossen, 2008:185-187).

Having a mobility impairment does not imply that adolescents experience additional health issues. While some types of mobility impairment result in extensive health care needs, other conditions do not. However all individuals with a mobility impairment have the same general health care needs as everyone else. According to Kostanjsek, Rubinelli, Escorpizo, Cieza, Kennedy, Selb, Stucki and Ústún (2011:1475-1482), adolescents may suffer from a variety of health conditions, but a full understanding of the experience of their health condition also requires comprehensive information about the impact of the condition on the adolescent with a specific mobility impairment.

Young, Rice, Dixon-Woods, Colver and Parkinson (2007) investigated health-related quality of life amongst children with cerebral palsy. Although some of the children experienced more pain, discomfort and tiredness than others, several of these children were proud of their accomplishments despite their disability. Children were however often worried about forthcoming medical procedures or spoke about how frequent hospital visits or procedures affected their lives (Young et al., 2007:660-663).

Krahn, Walker and Correa-De-Araujo (2015:S198-S206) found that the health needs of adolescents with a mobility impairment vary according to the type of limitation and the condition underlying the impairment. For some adolescents who acquire a mobility

impairment through injury, the nature of their disability can be differentiated more readily from their health status. For other adolescents, their health status may directly lead to their disability (e.g., diabetes which can lead to the loss of a limb). Many factors (e.g. race, ethnicity, environment, age, language, gender, poverty, and low quality of education) may affect the impact of the mobility impairment and may lead to even poorer health and quality of life.

The important revelation that can be made from this hypothesis is that 42% of the identity formation of adolescents with a mobility impairment is explained by three factors. This is a significant proportion as it explains almost half of the identity formation. Two of these factors are of a social nature, while the third is a health issue. Health, and not necessarily participation in sport, influences the identity formation of adolescents with a mobility impairment. The remaining 58% of the identity formation of adolescents with a mobility impairment cannot be explained. Future research can hopefully investigate variables that may explain a larger proportion of the variance in identity formation.

6.3 CONCLUSION OF THE EMPIRICAL INVESTIGATION

In Chapter 1 (cf paragraph 1.3) ten sub-questions were formulated to address the research question which dealt with the influence of adaptive sport involvement on the identity formation of mobility impaired adolescents.

After the completion of the empirical research and the data analysis, these questions can now be answered as follows.

- There is no significant difference in the identity of adolescents with a mobility impairment who participate in sport compared with the identity of adolescents with a mobility impairment who do not participate in sport.
- There is no significant difference in the identity formation of adolescents with a mobility impairment who participate in sport compared with the identity formation of adolescents with a mobility impairment who do not participate in sport.

- There is a significant difference between adolescent boys and girls with a mobility impairment in respect of their participation in sport. There is however no significant difference between adolescent boys and girls with a mobility impairment with regard to their identity formation. The only exception is for the first stage of identity formation (trust versus mistrust) where the mean of boys is higher (11.37) than the mean of girls (10.18).
- There is no significant difference in the sport participation of adolescents with different categories (types) of mobility impairment.
- There is no significant difference in the sport participation of adolescents with a congenital disability compared with the sport participation of adolescents who acquired the disability later in their lives. There is also no significant difference in the identity formation of adolescents with a congenital disability compared with the identity formation of adolescents who acquired their disability later in their lives.
- There is a significantly positive correlation between social relationships with friends and parents, and the identity formation of adolescents with a mobility impairment.
- There is no significant difference in the means of social relationships of adolescents with a mobility impairment participating in sport compared with the means of the social relationships of adolescents with a mobility impairment who do not participate in sport.
- There is a positive correlation between affective variables and the identity formation of adolescents with a mobility impairment. The two positive affective constructs with the highest correlation are trust and gregariousness. The negative construct with the highest correlation is depression.
- There is a significant difference in three of the affective experiences of adolescents with a mobility impairment taking part in sport compared with adolescents with a mobility impairment who do not participate in sport. The means for adolescents participating in sport is higher for trust, but lower for distrust and aggression. No

significant differences could be obtained with regard to the other affective experiences.

- The relationship with friends explains the largest proportion of the variance in the identity formation of adolescents with a mobility impairment, followed by the relationship with parents and health. In total, 42% of the identity formation of adolescents with a mobility impairment is explained by these three factors.



CHAPTER 7

CONCLUSIONS AND RECOMMENDATIONS

7.1 INTRODUCTION

The primary aim of this investigation was to determine the influence of adaptive sport on the identity formation of adolescents with a mobility impairment. The existing literature was explored to gain knowledge and an understanding of the main concepts which emerged from the research question, namely disability (comprising mobility impairment), sport participation (comprising adaptive sport) and identity formation (with the focus on the psychosocial development of Erikson).

Mobility impairment is a category of disability that includes people with varying types of physical disabilities. Mobility impairment includes an inability to move about as easily as others; limited movement of arms or legs; decrease in strength or control of the muscles; and abnormal or impaired coordination. It is thus a disability which interferes with a person's ability to perform tasks that require motor control and coordination. The use of mobility aids such as canes, crutches, walkers, wheelchairs and scooters are normally an indication of the severity of the disability (Davis et al., 2011:80). The degree to which individuals are impaired, their desire to avoid stigmatization and the consistency of the messages they receive from society and significant others determine their identity (Ridolfo & Ward, 2013:145-146).

Factors that affect the identity formation of adolescents with a disability are self-definition (how they view themselves in life); self-efficacy (how they view themselves as able to act successfully in their environment); and self-determination (the degree of control over their own life and decision making) (Sadowski, 2008:172). Adolescents with a disability are often not in a position to change their physical situation. This means that adolescents must be able to adapt to their situation and form a solid identity around their disability.

Participation in sport is influenced by the mobility impairment of the adolescent. Despite the recent emphasis on increased levels of inclusion of individuals with a disability in the

general education environment, opportunities for adolescents with a mobility impairment to participate in physical activities and sport are limited. Sport participation opportunities for youth with a disability need to be expanded and one way of addressing this is the introduction of adaptive sport. Adaptive sport programs are particularly designed to provide all athletes with a disability the opportunity to participate in and enjoy sport, and to enhance their emotional, physical and social development.

Many factors influence adolescents during their formation of an identity such as gender, culture, language, family and friends. One of these factors can be the presence of a mobility impairment. The type and severity of the disability, the age of the child, the support structure of the family and educators may influence the identity formation of a particular individual. Children with a physical disability often face the challenge of having to construct an identity based on their disability, which is a given and cannot be changed (Shapiro & Martin, 2010:80). For the adolescent who was not born with a disability, the unexpected disability caused by an illness or an accident can be traumatic. A devastating and challenging consequence of an acquired disability is the challenge that it poses to children's sense of personal identity. These adolescents have already built their sense of self on their academic success, their athletic abilities, popularity and attractiveness and may now find their sense of self to be lost. An altered sense of the self is viewed as a typical process in the adjustment to the disability (Ylvisaker et al., 2016:1).

It is possible that the identity of the adolescent with a mobility impairment, who participates in sport, will be influenced in a more positive manner than the identity of the adolescent who does not participate in sport (Machida et al., 2013:1061; Scarpa, 2011:46-47). However, such a statement cannot be presented as an accurate prediction of the identity formation of all adolescents with a disability. Martin (2010:58-59) established that there are negative outcomes to sport participation as well as positive. Some individuals with a disability perceive that their participation in sport is trivialized and their physical abilities are often doubted. Some children have negative experiences, such as being excluded from physical education classes and being considered as not good enough to be selected for teams (Smith et al., 2015:2). Sport can thus not be labeled as an exclusively positive or negative factor which influences identity formation. It cannot be assumed that all adolescents with a disability, who participate in sport, have

the same positive or negative experiences during their identity formation. This statement corresponds with the results of the current investigation. No significant difference in the identity, or the identity formation, of adolescents with a mobility impairment could be shown between those adolescents who participate in sport and those who do not. Although adolescent boys with a mobility impairment participate more in sport than adolescent girls with a mobility impairment, there was no significant difference between the boys and girls with regard to their identity formation. Furthermore, the onset of a specific mobility impairment (whether it is congenital or acquired later in life) had no significant influence on the identity formation of adolescents with a mobility impairment.

Results that emerged from the data indicate a strong positive association between social variables such as relationships with friends and relationships with parents, and the identity formation of adolescents with a mobility impairment. The results also revealed strong positive, as well as a negative correlations between affective variables, such as trust, dyscontrol, timidity, depression, distrust, control, aggression, gregariousness and the identity formation of adolescents with a mobility impairment. The social and emotional variables are not significantly influenced by the adolescent's participation in sport, or the absence thereof.

A regression analysis indicated that three variables explain the largest proportion of the variance in the identity formation of the adolescent with a mobility impairment. These variables are relationships with friends, relationships with parents and the adolescent's health. As these three variables were identified as the most important variables relating to the identity formation of adolescents with a mobility impairment, the educational implications of the investigation are based primarily on these variables.

7.2 THE EDUCATIONAL IMPLICATIONS OF THE FACTORS RESPONSIBLE FOR THE LARGEST FRACTION OF THE VARIANCE IN THE IDENTITY FORMATION OF THE ADOLESCENT WITH A MOBILITY IMPAIRMENT

7.2.1 Relationships with friends

Friendship is a unique relationship that is voluntary and grows through personal investment in the relationship (Wood, 2016:283). Making friends is not always easy for all adolescents. The forming of friendships might be even more difficult in the presence of a mobility impairment. Adolescents with a mobility impairment may have less confidence in their abilities to make friends as a result of negative attitudes of others. From the results of the empirical research it is evident that the relationship with friends is the variable which explains a significant proportion (26%) of the identity formation of the adolescent with a mobility impairment.

The forming of relationships involves two stages: the initial stage of meeting someone new, and thereafter the maintaining of the friendship (Marlow & Hayden, 2013:130). If adolescents fail in one of the two stages, a friendship will probably not be formed.

Parents and educators are in the best position to guide and support adolescents in their quest for friendships.

Parents can contribute to ensure a positive relationship between their adolescents and friends by keeping the following guidelines in mind.

1. Incremental steps can be provided to guide adolescents when they are meeting someone new (Marlow & Hayden, 2013:130-131). The first step is to smile and be friendly towards the person, after which eye contact can be made. The next step is to ask a polite question and to listen when the person is talking. Adolescents with a mobility impairment must have the confidence to reach out to other people, regardless of their mobility impairment. They should not always have to wait for other people to approach them. Role play can be implemented by creating

scenarios where the parent first demonstrates the appropriate behavior and the adolescent practices these behaviors. Thereafter the roles can be switched.

2. Adolescents must realize that it is not difficult to maintain a friendship once you are interested in and committed to a relationship. It is important that adolescents must be true to themselves. They must be helpful and listen to the other person. Although adolescents themselves may have a mobility impairment, they can still provide emotional support to others (Marlow & Hayden, 2013:132).
3. Parents are the role-models setting an example for their adolescents' behavior through their own actions towards their friends. Adolescents' relationships are further affected by the quality of the relationship with their parents (Justen, 2014:18). Parents can also convey the requirements for friendships and the implications of friendships to their adolescents with a mobility impairment during their conversations. A warm trusting parent-child relationship greatly improves the adolescents' chances of developing healthy friendships (Duncan, Coatsworth & Greenberg, 2009:261).
4. Parents are able to influence the friendships of adolescents at an early age by creating opportunities for their children to strengthen relationships with friends. These friendships can be manipulated by parents in subtle ways by providing support and approval. Parents should encourage the friendships that possess positive features such as validation, caring and trust. It may often be necessary for parents to discourage certain friendships when these friendships possess more negative features such as conflict and antagonism (Mikami, 2010:182). It is important to realize that friendships of the adolescent with a mobility impairment in childhood make an incremental contribution to the adaptive functioning of adolescents during adulthood (Mikami, 2010:182, 186).
5. According to Solish, Perry and Minnes (2010:226-227) opportunities for social interaction to promote friendship development and building of social skills for adolescents with a disability are necessary. It is important that parents create opportunities for adolescents with an impairment to be part of a group, or team as it endorses a sense of inclusion and a sense of belonging. Structured activities

such as organized sport or lessons provide opportunities for socializing with peers and friends. This is especially important for adolescents with a mobility impairment as they should not be isolated as a result of their limited mobility functioning.

6. Collaboration with educators is important. The adolescent's behavior in the classroom may be different from the behavior at home. The friendship with friends may also change when adolescents are in a group. Specific skills to be worked on in the classroom, as well as at home, can jointly be identified by the parent and the educator. In terms of social development, parent-teacher collaboration may enhance adolescent's behavior at home and in the classroom as parents and teachers work together to enhance social skills and the forming of friendships of adolescents with a mobility impairment (El Nokali, Bachman & Votruba-Drzal, 2010:988-990).

The role of **educators** in the forming of friendships are equally important.

1. Guidelines for parents on the forming of friendships involving the initial stage of meeting someone new and thereafter the maintaining of the friendship can also be used by the educator.
2. Educators can have regular discussions in their classrooms about friendships and what it means to be a good friend. Educators should also have a real interest in adolescents and their forming of friendships. Sociometric techniques can assist the educator in manipulating social interactions of the adolescents. Aspects of social relationships such as the social acceptance (i.e., how much a learner is liked by peers) and the social status (i.e., child's social standing in comparison with peers) can be measured by using sociometric methods (Burns & Erdley, 2011:1408-1410). The educator can then determine who the popular learners in the class are and a learner with a mobility impairment can be placed with these learners when groups are formed to perform specific tasks.
3. Educators should be knowledgeable about the stages in the psychosocial development of adolescents as described by Erikson. The results from the empirical research indicated a positive correlation between the identity of the

adolescent with a mobility impairment and the first four stages of identity formation. Such a correlation suggests that the success of the identity formation is related to trust, autonomy, initiative and industry (cf paragraphs 4.5.1.1 - 4.5.1.5). When the educator is able to determine whether adolescents have trust in themselves and in their friendships; if they are willing to act autonomously among their friends; if they show initiative in their relationships; and if they develop diligence within their friendships, the educator will be able to predict with reasonable certainty that identity formation will be successful. It is therefore important that the educator provides adolescents with opportunities to develop trust, autonomy, initiative and industry in their friendships. Not only should the opportunities be provided, but these qualities should be enforced during the formation of every additional identity.

4. In developing trust, the educator must create an inclusive environment where adolescents with a mobility impairment are welcomed and accommodated. A sense of belonging must be established (cf paragraph 4.5.1.9). The trust of adolescents increases when they realize that they do not have to be embarrassed about their mobility impairment among their friends. They must accept themselves and be sure that others accept them as well. Adolescents must feel safe, at home, and at ease. Their confidence increases if they experience success to some extent and if they feel that they are in control of their situation.

To develop autonomy, the educator should acquire information about the specific mobility impairment of the adolescent and the limitations of the impairment on the adolescent's development. Cultivate an appreciation that everyone is unique and has his or her own unique abilities (cf paragraph 4.5.1.9). There should be a sensitivity and respect for other's limitations and skills. Autonomous action highlights the active role of adolescents in their friendships and these actions will be promoted if adolescents do not receive over excessive assistance. Adolescents should struggle with a problematic issue before assistance from others is requested or offered. They should learn to 'not just give up'.

For initiative to develop, educators must create opportunities for adolescents with a mobility impairment to have contact with a range of other adolescents. Opportunities should be created for adolescents to explore on their own and not

just follow instructions (cf paragraph 4.5.1.9). Extra-curricular opportunities can be provided for adolescents who may otherwise be excluded from those opportunities. Adolescents with a mobility impairment participating in sport have the opportunity to initiate certain actions in their sport environment. Although a possibility of failure or making mistakes exists, adolescents can experience the outcomes of their actions in a safe sport environment. Suppressing exploration and experimentation, or preventing adolescents from doing things for themselves because of their mobility impairment, constrains the development of their confidence.

In developing industry, the educator should take particular interest in adolescents who do not have the necessary diligence. Their conscientiousness may be inconsistent, and many other tasks may be performed instead of what is important. Feelings of worthlessness and inadequacy may develop when adolescents feel that their mobility impairment is inhibiting their potential to master certain skills (cf paragraph 4.5.1.9). The educator should provide opportunities for the successful performing of tasks and provide recognition for their accomplishments. Participation in group activities or in a team event with friends and team members creates opportunities for accomplishments.

7.2.2 Relationships with parents

Parent-child relationships constitute a special type of relationship in which every individual is personally involved. The parent-child relationship differs from other relationships because of its degree of intimacy (Popov & Ilesanmi, 2015:253).

From the empirical research it is evident that relationships with parents is the second most important variable explaining the variance in the identity formation of adolescents with a mobility impairment. It is within the family that the relationships of authority, knowledge and trust are established between the parent and the child. The three educative relationships remain in place through adolescence, but the emphasis within each relationship changes as the adolescent grows older. An imbalance in one relationship often affects the other relationships between parents and their children.

According to Moore (2009:1), characteristics of secure attachment between adolescents and their parents can be categorized in terms of emotional availability (parents' awareness of and response to the adolescents' emotional cues); parental responsiveness (how parents respond to and provides for their adolescents); and maternal insightfulness (parents' capacity to consider the motives underlying adolescents' behaviors and emotional experiences). Mutual respect, trust and healthy communication within the home environment are also critical aspects in strengthening family ties, effectively resolving conflict and developing children's relational skills.

To assist parents in forming positive relationships with their adolescents, the following guidelines may be considered:

1. Parents and adolescents must respect one another (Smeyers, 2010:282). Respect is a combination of appreciation, admiration and recognition of an individual's abilities, qualities or achievements. Parents must set the example that they honor and consider other people's needs, thoughts and feelings. Children imitate parents as primary role models; therefore parents must demonstrate the same respectful behavior they would expect from their adolescent children (Zmyi & Seehagen, 2013:622-641). Adolescents with a mobility impairment must always be treated with respect, regardless of their mobility impairment. Therefore, adolescents with a mobility impairment should also treat other people with respect, and not use their mobility impairment as an excuse for disrespectful behavior.
2. Mutual trust between parents and adolescents must be established (Featherstone, Broadhurst & Holt, 2011:4). The more parents demonstrate that they can be trusted, the more likely they will be trusted. Parents of adolescents with a mobility impairment must also be able to trust their children by creating freedom and opportunity in which the adolescent can act responsible - within safe limits. Adolescents should not be overprotected but they should be allowed to solve their own problems and take responsibility for their actions. Parents should let them make mistakes in order to learn from their mistakes (Shek, 2010:252).
3. Positive communication between adolescents and their parents must be established (Staples & Diliberto, 2010:60). Parents must relate to their

adolescent child in an age-appropriate way as expectations and rules change when children become adolescents. As adolescents begin to explore and experiment with their own identities, it can cause a shift in the parent-adolescent relationship. When adolescents with a mobility impairment experience their parents' communication with them as a sincere interest, and not as an interrogation, it will create an atmosphere for family members to express their differences, as well as their love and support for one another. It is also important for adolescents with a mobility impairment to be able discuss their mobility impairment, and the implications thereof, with their parents.

4. Parents can help adolescents to deal with stress in their lives (Meadon, Halle & Ebata, 2010:21-23). That they can do by providing their child with a mobility impairment with a sense of belonging and security. They can also ensure that the child gets enough sleep and that they have a healthy well-balanced diet. To reduce stress, parents can motivate adolescents with a mobility impairment to take part in physical activities and fun activities they enjoy, even if the participation is limited.
5. It is of great importance that parents create and explore opportunities for adolescents to be successful (Wong, Zimmerman & Parker, 2010:100-114). Parents should help their adolescents with a mobility impairment to identify what their strengths and weaknesses are. Some adolescents are strong in an academic environment, while others prefer to participate in performing arts or sport. When adolescents with a mobility impairment are interested in sport, parents can help them build their confidence by improving their athletic skills and abilities.

7.2.3 Health

From the literature it appears that personal health is of concern to adolescents with a disability (Young et al., 2007:663-664; Law, Hanna, Anaby, Kertoy, King & Xu, 2014:1, Livingston & Rosenbaum, 2008:696-701). The literature findings correspond with the results of the empirical study in this particular research. From the empirical research it is evident that personal health of adolescents with a mobility impairment is the third most

important variable explaining the variance in the identity formation of the adolescent with a mobility impairment. The presence of a mobility impairment, whether it is congenital or acquired, and the influence thereof on the health of adolescents is a reality that adolescents have to deal with (UNICEF, 2013b:1).

It is acknowledged that parenting and parenting practices in particular play a fundamental role in their children's health (Institute of Public Health in Ireland and the Centre for Effective Services, 2016:61). Mistry, Minkovitz, Riley, Johnson, Grason, Dubay & Guyer (2012:1691-1692) highlighted four contexts of children's health which parents should focus on: responsive caregiving; safe and secure environments; adequate and appropriate nutrition; and health promoting behaviours.

In this regard, the following guidelines should be kept in mind by parents.

1. Responsive caregiving must be applied by parents (Mistry et al., 2012:1691). Responsive parenting implies creating a warm and accepting environment to respond to children's needs and signals. In such an environment, a child experiences acceptance of his or her uniqueness, and it encourages a child to communicate his or her needs and interests. Responsive caregiving supports early childhood development across social, behavioral, cognitive, and language domains (Merz & McCall, 2010:460-461). Although emotional attachment develops in the first few years of life, it influences psychological and social-emotional functioning throughout life (Mistry et al., 2012:1691). By providing loving responses that meet the needs of adolescents with a mobility impairment, parents make the children feel secure and continued communication is stimulated which is important for their successful overall development.
2. A safe and secure environment should be created for children with a mobility impairment. A comfortable and safe house is a basic condition for any family. Parents should avoid exposure to unsafe and insecure environments which can significantly damage the physical and mental health of adolescents (Mistry et al., 2012:1691). The design and maintenance of a child's physical environment can also affect the risk of disease, further disability, and injury. Access to safe neighborhood parks and playgrounds offers children with a mobility impairment an

opportunity to play and socialize with friends and family. It also encourages physical activity and increases social ties. With regard to disability and neighborhoods, living in a supportive community is associated with better coping capability of the family. It may often be necessary for parents to organize and supervise activities for adolescents with a mobility impairment in a more secure environment (Fattore, Mason & Watson, 2009:69).

3. Adequate and appropriate nutrition must be provided (Mistry et al., 2012:1691). As adolescents' bodies are still growing, it's vital that they eat enough good quality food and the right kinds of food to meet their energy and nutrition needs. The adequate and appropriate intake of both macro-nutrients (e.g., proteins, carbohydrates, and fats) and micronutrients (e.g., vitamins and minerals) is essential in early childhood when growth and development of body systems are most rapid (Mistry et al., 2012:1691). Healthy eating habits can substantially reduce the risk of adverse conditions, such as coronary heart disease, stroke, hypertension, cancer, diabetes, dental caries and asthma. When healthy eating habits are adopted during childhood and adolescence, they are most likely to be maintained during adulthood (Kalavana, Maes & De Gucht, 2010:45). For adolescents with a mobility impairment malnutrition can lead to diminished muscle strength, which in turn leads to impairment in motor function. Malnutrition can also weaken immune functioning causing increased proneness to infections (Kuperminc & Stevenson, 2008:138).
4. Parents should enforce health promoting behaviours (Mistry et al., 2012:1692). An important foundation of health is the health-promoting behaviors that young children acquire because of the consistency, quality, and timing of daily routines. Early habits include routines regarding physical activity, television viewing, online social networking, oral hygiene, and food preferences. As biologic regulatory processes and systems are developing, the predictability and quality of everyday experiences influence the basic rhythms of life, such as sleeping and eating (Mistry et al., 2012:1692).

It is the responsibility of parents to create opportunities for their children with a mobility impairment to participate in activities which require different physical

activities, depending on the nature of the mobility impairment. Not all adolescents are interested in sport and they may prefer spending time on other interests and hobbies which they enjoy. The results of the current study found that 64% of adolescents with a mobility impairment participate in sport, but the 36% who do not participate in sport need to be accommodated in alternative activities which can contribute to the general health of adolescents. The results of the empirical study found that the most popular hobbies are music related. It includes activities such as singing, listening to music or playing musical instruments.

5. It is paramount that parents be continually informed about their child's health condition by an appropriate pediatrician, clinician or other relevant medical practitioners (Reichman, Corman & Noonan, 2008:680-682). To ensure that the best provision is made for adolescents, decisions should be made jointly by members of the health care team, the adolescent's parents, and sometimes adolescent themselves. Adolescents should be involved in decision making to an increasing degree as they develop, until they are capable of making their own decisions about their treatment (Canadian Paediatric Society, 2004:9). Parents should learn as much as they can about their children's mobility impairment from a medical perspective and from reliable sources. A broad knowledge about their child's mobility impairment will also guide them to be alert to any changes in the child's health condition, and act accordingly, to prevent secondary health conditions (Pocock, Trivedi, Wills, Bunn & Magnussen, 2010:338).

Educators, including the full team of professionals available at the schools, are also important role players in contributing towards the health of the adolescent with a mobility impairment. The following guidelines can be followed by the educators.

1. Get to know adolescents and their specific mobility impairment and the unique implications of the impairment. Become familiar with specialized equipment or assistive devices that the adolescents may be using. Ensure accurate evaluations in collaboration with the adolescents, their family and medical specialists. The educator must be familiar with any treatment the adolescent with a mobility impairment may be undergoing. If the adolescent is responsible for self-administration of medication, oversee the self-administration and assist if required.

Notify the parents of adolescents when incidents out of the ordinary occur (British Columbia Ministry of Education, sa:6, 29).

2. Mistry et al. (2012:1691-1692) highlighted four contexts of children's health which parents should focus on. These contexts were explored in the guidelines for parents. Educators should also be aware of these guidelines and should support parents in expanding the contexts of responsive caregiving, providing safe and secure environments, ensuring adequate and appropriate nutrition and promoting positive health behaviors where possible.
3. The majority of adolescents with a physical disability are not receiving adequate information on health topics including marriage, parenthood, birth control, sexually transmitted diseases, and sexual abuse. Schools are still one of the main sources of information about sexuality for adolescents with mobility impairments and, therefore, important to reach them (Seidel, Wienholz, Michel, Luppa & Rieder-Heller, 2013:439-440). Regardless of the mobility impairment they live with, adolescents have feelings, sexual desires, and a need for intimacy and closeness. In order to behave in a sexually responsible manner, they need skills, knowledge and support (Szydowski, 2016:3). Educators should, therefore, ensure that adolescents with a mobility impairment are not excluded from health education opportunities (Maart & Jelsma, 2010:440-441).
4. Every educator should promote the participation of all adolescents, including adolescents with a mobility impairment, in sport and physical activity programs. By making use of adaptive sport, participation by all adolescents are possible. From the empirical data it is evident that the majority (53%) of adolescents with a mobility impairment prefer to participate in a sport environment where athletes and players with a mobility impairment compete against athletes and players without a disability. Some of the adolescents with a mobility impairment prefer to participate in an environment where the participants are all athletes and players with a disability. A few adolescents prefer to participate in an environment where all the players and athletes have the same mobility impairment. Through adaptive sport, all three environments of sport participation can be explored for adolescents with a mobility impairment.

5. It is important that educators build on adolescents' individual interests and strengths. There is accumulative evidence that physical activity in childhood and adolescence is associated with a number of health benefits. These benefits include greater bone density, reduced risk of obesity and reduced clustering of cardiovascular disease risk factors (O'Donovan, Blazeovich, Boreham, Cooper, Crank, Ekelund, Fox, Gately, Giles-Corti, Gill, Hamer, McDermott, Murphy, Mutrie, Reilly, Saxton & Stamatakis (2010:583). It is widely acknowledged that the health benefits of participation in physical activities are not only limited to physical health, but also incorporate mental components (Eime, Young, Harvey, Charity & Payne, 2013:1). Not all adolescents with a mobility impairment are however interested in sport participation. Although 64% of the adolescents in this study were participating in sport, the remaining 36% were not participating in sport.

A number of responsibilities regarding the participation of adolescents in sport can be directed to the School Governing Bodies. Duties and functions of School Governing Bodies include, inter alia, *'encouraging parents, learners, educators and other staff at the school to render voluntary services to the school; and establishing services and community partnerships related to social, health, recreational, nutritional and transport programs and other matters which further the objectives of the Act'* (Republic of South Africa, 2015:paragraph 47).

In accordance with the Draft School Sport Policy for Schools in South Africa (Department of Basic Education, 2009:paragraph 5.3; 5.6), School Governing Bodies should also *'foster pride, honour and patriotism in our school-going youth through properly organised, managed and coordinated school sport programmes; to build and sustain the development of all learners to participate in school sport programmes; ... [and] to build and sustain educators, coaches, and community volunteers to deliver quality school sport programmes'*.

The following suggestions can be followed.

1. Realize the importance of sport and understand the benefits of the participation of adolescents with a mobility impairment in sport and physical activities.

Opportunities for participation in school sport must be made available to all learners.

2. Address transport issues. Provide transport for athletes with a mobility impairment to enable participation in sport at sport venues.
3. Ensure the accessibility of sport venues by utilizing facilities which are accessible to all athletes.
4. Arrange open sport events. Inclusive schools should participate with mainstream schools and vice versa. Adolescents should be exposed to various sport. Do not concentrate on only the more popular sports, but also provide exposure to the other less popular sports. From the data it is evident that adolescents with a mobility impairment who participate in sport, prefer to participate in the following sport: athletics, table tennis, swimming, tennis, soccer, boccia, cycling and basketball (listed from the most popular to the least popular). The not-so-popular sport among adolescents with a mobility impairment, but in which some of the adolescents were participating, included netball, cricket, golf, powerlifting, chess, rugby, karate and hockey. As there are no limitations on the sport interest of adolescents with a mobility impairment, the preference of adolescents should be supported. Any sport can be adapted to accommodate the adolescent with a mobility impairment.
5. Form partnerships with suppliers of cushions, walkers and other assistive devices as these devices are expensive. Pursue sponsors for more expensive sport equipment, such as bicycles, to expose adolescents to a variety of sport.

7.3 EVALUATION OF THE STUDY AND SUGGESTIONS FOR FURTHER RESEARCH

7.3.1 Evaluation of the study

Adolescence is a developmental phase wherein children are in transition from childhood to adulthood. This transition is complex and involves a number of biological, cognitive

and psychosocial changes (Santrock, 2013:16). Adolescents with a mobility impairment face the same challenges as their normal developing peers (Maxey & Beckert, 2017:59). These adolescents are however prone to additional challenges regarding their physical limitation. Research into aspects of the psychosocial development of adolescents with a mobility impairment is limited (Maxey & Beckert, 2017:69).

The current investigation aimed to contribute to the research by determining the influence of adaptive sport on the identity formation of adolescents with a mobility impairment.

For the current study it was important to conduct a thorough investigation of the physical constraints experienced by adolescents with a mobility impairment. This was followed by a deeper exploration of the impact of psychosocial factors on the development of adolescents with a mobility impairment. The literature review established that identity formation is a socio-affective construct which emphasizes the importance of social relationships and other affective constructs related to identity formation. Social relationships such as the parent-child relationship and relationship with peers can influence the identity formation. Positive affective constructs such as joy and acceptance, as well as negative affective constructs such as anxiety and depression, might also influence the identity formation of adolescents.

The preceding background paved the way for the aim of the current research which is to determine the influence of adaptive sport on the identity formation of adolescents with a mobility impairment. An informed decision regarding the most appropriate approaches to measure the identity formation of adolescents with a mobility impairment had to be made. After all possibilities were considered, it was determined that the epigenetic approach of Erikson is the most reliable approach for the current study.

From the data obtained in this study, no significant difference in the identity of adolescents with a mobility impairment who participated in sport, and the identity of adolescents with a mobility impairment who did not participate in sport could be indicated. It can therefore not be claimed that participation in sport as such has an influence on the identity formation of the adolescent with a mobility impairment. However, participation in sport still remains important for the development of

adolescents with a mobility impairment. Regular physical activity is essential for the maintenance of normal muscle strength, flexibility and joint structure (Murphy & Carbone, 2008:1057-1058). Adequate levels of muscular strength and endurance are associated with increased bone mass, reduction in injury from falls, and a greater ability to complete activities of daily living. The ultimate goals for increasing physical activity in adolescents with a mobility impairment are to reverse deconditioning secondary to impaired mobility, optimize physical functioning, and enhance overall well-being (Murphy & Carbone, 2008:1057-1058). People with neurologic disabilities who participate in organized sport display increased self-concept, self-esteem, life satisfaction, and opportunity for gainful employment, as well as decreased depression and anxiety (Sahlin & Lexell, 2015:1087).

There are indications that sport promotes social relationships and social relationships create the social contexts for identity formation. Participation in sport thus indirectly relates to the identity formation of adolescents with a mobility impairment. From the data obtain in this study, two dominant variables that influence the identity formation of adolescents with a mobility impairment emerged. The adolescents' relationships with friends explained the largest proportion of the variance in the identity formation of adolescents with a mobility impairment, followed by the relationships with parents.

The social nature of sport makes it a potentially important vehicle for the development of friendships. Given that children with a mobility impairment have fewer friends than adolescents without disabilities, sport offers a tremendous opportunity to promote social connectedness while simultaneously enhancing health outcomes. A potential outcome of positive peer relations in a sport context is enhanced quality of life (Martin, 2010:55).

7.3.2 Suggestions for further research

- The focus of the research was on adolescents with a mobility impairment. Every form of mobility impairment was included in the research. The mobility impairments ranged from the most severe disability to the almost unobtrusive impairment affecting the mobility of the learner. The identity formation process of adolescents may differ for adolescents with other types of impairments, for example adolescents with a visual or an auditory impairment. Further studies can

be undertaken to determine whether differences exist between the identities of adolescents in the different categories of disabilities.

- Since the majority of the adolescents still attended school, a decision was made to approach the schools to identify these boys and girls. The investigation could be repeated to include adolescents with a mobility impairment who were not attending schools. Factors which prevent adolescent with a mobility impairment from attending schools might be, for example, poverty, lack of transport and remote and secluded living environments. The identity formation of the adolescent with a mobility impairment in the school environment can be compared with the identity formation of the adolescent with a mobility impairment who are not attending school.
- The most important variable identified in the current study, which was associated with the identity formation of adolescents with a mobility impairment, was the relationship of adolescents with their friends. It is therefore suggested that more research be carried out, for example, to determine how these relationships contribute to the intrinsic values of the adolescent, and how these relationships influence the academic self-competence of adolescents. There should also be dealt with the negative aspects in the relationships between adolescents and their friends, such as peer conflict, aggressive behavior and peer pressure.
- The relationship of adolescents with their friends and parents, together with the health of adolescents, explained 42% of the variance in the identity formation of adolescents with a mobility impairment. The remaining 58% of the variance in the identity formation could not be explained. For future research, other variables can be included to explain a greater proportion of the variance. In this regard, cognitive or moral-religious factors can be considered.



*For this is the journey that men make: to find themselves.
If they fail in this, it doesn't matter much what else they
find.*

*But if a man happens to find himself -
if he knows what he can be depended upon to do,
the limits of his courage, the positions from which he will
no longer retreat,
the degree to which he can surrender his inner life to some
woman,
the secret reservoirs of his determination, the extent of his
dedication,
the depth of his feeling for beauty, his honest and
unpostured goals -
then he has found a mansion which he can inhabit with
dignity all the days of his life.*

James A. Michener

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APPENDIX A

INTERNATIONAL PARALYMPIC COMMITTEE SPORTS





IPC sport	Image	Short description
Alpine skiing		<p>Competition accommodates male and female athletes with a physical impairment, such as spinal injury, cerebral palsy, amputation, and <i>les autres</i> conditions.</p> <p>Some athletes use equipment that is adapted to their needs including single ski, sit-ski or orthopedic aids.</p>
Archery		<p>It is comprised of individual and team events in both standing and wheelchair competitions.</p> <p>Athletes shoot from a distance at a target marked with 10 scoring zones.</p>
Athletics: Track Field	 	<p>The athletics events include:</p> <p>Track events: sprint (100m, 200m, 400m); middle distance (800m, 1,500m); long distance (5,000m, 10,000m) and relay races (4x100m, 4x400m)</p> <p>Road event: marathon</p> <p>Field events: high jump, long jump, triple jump, discus, shot put, javelin</p> <p>Combined events: pentathlon</p>



		<p>Many athletics events require specific sports equipment, for example, the discus, shot or javelin. In addition athletes may use certain assistive devices as specified in the rules.</p> <p>Wheelchairs are considered to be sports equipment in track and field events. Athletics' wheelchairs tend to be very lightweight. The dimensions and features of wheelchairs are clearly specified in the IPC Athletics rules.</p> <p>Prosthetic devices may be used by amputees. These have been specifically developed to withstand the demands of sports competition. IPC rules require the use of leg prostheses in track events; however, the use of prostheses in field events is optional.</p>
Biathlon		<p>Biathlon combines Cross-Country Skiing and Target Shooting. Athletes compete in one of three categories: sitting, standing and visually-impaired. Athletes ski three 2.5km legs (7.5km in total) and fire at five targets (located 10m from the shooter) between each leg using air guns that are mounted on stands.</p>
Boccia		<p>Boccia (pronounced 'Bot-cha') is a Paralympic sport introduced in 1984 and it has no Olympic counterpart. It is designed specifically for athletes with a disability affecting locomotor function.</p> <p>All athletes have an impairment that affects all four of their limbs. The majority of players use an electric wheelchair for mobility.</p>




		<p>It is played indoors on a court similar in size to a badminton court. Athletes throw, kick or use a ramp to propel a ball onto the court with the aim of getting closest to a 'jack' ball.</p>
<p>Canoe</p>		<p>Canoe was included in the Paralympic Games for the first time in Rio de Janeiro in 2016. There are currently eight different events. As the sport continues to grow, more events will be considered.</p> <p>The sport is exactly like canoeing for able-bodied athletes, allowing those with physical impairments at all levels to enjoy the sport.</p> <p>The classification system is based on athletes' functional ability when it comes to paddling and applying force to the foot board or seat to propel the boat.</p>
<p>Cross-country skiing</p>	 	<p>The competition is open to athletes with a physical impairment and blindness/visual impairment. Depending on functional impairment, a competitor may use a sit-ski, a chair equipped with a pair of skis.</p> <p>Male and female athletes compete in short distance, middle distance and long distance (ranging from 2.5km to 20km) or participate in a team relay using classical or free techniques.</p>

<p>Cycling</p>		<p>The sport includes athletes with cerebral palsy, amputations and other physical impairments. Athletes race on bicycles, tricycles, tandem or hand cycles based on their impairment.</p> <p>The competition program includes sprints, individual pursuits, the 1,000m time trial, road races and road time trials for both individuals and teams.</p>
<p>Equestrian</p>		<p>It is open to athletes with any type of physical or visual impairment. Events are mixed and grouped according to their functional profiles.</p> <p>Athletes can compete in dressage events, a championship test of set movements and a freestyle test to music. There is also a team test that involves three to four members.</p> <p>Riders are judged on their display of horsemanship skills and are permitted to use devices such as dressage crops, connecting rein bars, rubber bands and other aids.</p>





Football 5-a-side		Not for the mobility impaired. Only for the visually impaired.
Football 7-a-side		The sport, which is for athletes with cerebral palsy, is similar to football for able-bodied players with a few modifications. There are seven players on the field at a time rather than 11, the measurements of the playing field are smaller; there is no offside rule and throw-ins may be made with just one hand.
Goalball		Not for the mobility impaired. Only for the visually impaired.
Ice sledge hockey		<p>It follows the rules of the International Ice Hockey Federation (IIHF) with modifications. Instead of skates, players use double-blade sledges that allow the puck to pass beneath.</p> <p>Players use two sticks, which have a spike-end for pushing and a blade-end for shooting.</p>
Judo		Not for the mobility impaired. Only for the visually impaired.

<p>Power-lifting</p>		<p>Powerlifting is the ultimate test of upper body strength and can sometimes see athletes lift more than three times their own body weight. It is open to male and female athletes with the following eight (8) eligible physical impairments (impaired muscle power, impaired passive range of movement, limb deficiency, leg length difference, short stature, hypertonia, ataxia, and athetosis) with a range of physical disabilities, including (cerebral palsy, spinal cord injuries, lower limb amputation, poliomyelitis), who meet the current minimal eligibility criteria and can perform, safely and appropriately, according to the IPC powerlifting rules. All eligible athletes compete in one sport class, but in different weight categories. The bench press is the sport's single discipline.</p>
<p>Rowing</p>	 	<p>The sport is open to male and female athletes and is divided into four boat classes. In all four events, races are over 1,000m.</p> <p>Adaptive rowing implies that the equipment is adapted to the athlete rather than the sport being adapted to the athlete.</p>
<p>Sailing</p>		<p>Sailing is open to athletes with any type of physical impairment and the classification system is based on four factors: stability, hand function, mobility and vision. Athletes compete in three events, which are non-</p>

		<p>gender specified: single-person keelboats, three-person keelboats and two-person keelboats.</p>
Shooting		<p>It is open to athletes who have a physical impairment leading to reduced function in the lower and/or upper limb(s). It employs a functional classification system, where athletes compete in sport classes based on their functional ability, rather than impairment-type. Athletes compete in one of two sport classes (SH1 & SH2), depending on their impairment.</p> <p>SH1 class includes athletes with lower limb impairments. Many, but not all, athletes compete in a sitting position either from a wheelchair or chair/stool.</p> <p>SH2 class includes athletes who also have more severe upper limb impairments, which prevents the athlete from supporting the weight of the rifle themselves. SH2 athletes compete only in rifle events, and use a spring mounted stand to support the weight of the rifle. Athletes compete in events from distances of 10m, 25m and 50m in men's, women's and mixed competitions.</p>
Sitting volleyball		<p>It requires a smaller court (10m x 6m) and a lower net, and the game is considerably faster than standing volleyball. It is played in a best-of-five set format and the first to reach 25</p>

		<p>points (with at least a 2-point lead) wins the game.</p> <p>Teams consist of mixed classes in male and female events, with six on the court at a time. At all times, an athletes' pelvis must be touching the ground, and service blocks are allowed.</p>
Swimming		<p>Both male and female competitors, who are classified on their functional ability to perform each stroke, test their skills in freestyle, backstroke, butterfly, breaststroke and medley events.</p> <p>Athletes can have a physical, visual or intellectual impairment. As a result the rules of the International Swimming Federation (FINA) are modified to include optional starting platforms and in-water starts for some athletes or the use of signals or 'tappers' for those with visual impairments. No prostheses or assistive devices are permitted in the pool.</p>
Table tennis	 	<p>Athletes from all physical impairment groups, aside from the visually impaired, compete in standing or sitting classes. Intellectually impaired athletes can also compete.</p> <p>Men and women can participate in individual, doubles or team events, and matches consist of five sets of 11 points each, and are played in a best-of-five format.</p>

<p>Triathlon</p>		<p>Triathlon made its Paralympic Games debut in Rio de Janeiro in 2016.</p> <p>Athletes race in three disciplines: 750m of swimming, followed by 20km of cycling and 5km of running.</p> <p>Competition categories are based on specific physical impairments. Athletes may use a hand cycle, tandem bicycle or bicycle in the cycling portion and wheelchairs are permitted on the running portion of the course.</p>
<p>Wheelchair basketball</p>		<p>It is designed for athletes who have a physical impairment that prevents running, jumping and pivoting.</p> <p>Men and women play in teams of five players each and the measurements of the court and the height of the baskets are the same as in able-bodied basketball.</p>
<p>Wheelchair curling</p>		<p>The sport is open to male and female athletes who have a physical impairment in the lower half of their bodies, including spinal-cord injuries, cerebral palsy, multiple sclerosis and double-leg amputation.</p>
<p>Wheelchair dance sport</p>		<p>Wheelchair dance sport is an extremely elegant, graceful and stylish sport, which involves athletes with a physical impairment that affects the lower limbs.</p> <p>Participants can compete 'combi' style, dancing with an able bodied (standing)</p>




		<p>partner, or duo dance for two wheelchair users together. Group dance involves wheelchair users only or together with able-bodied partners whereas single dance sees a wheelchair user dance alone.</p> <p>Standard dances include waltz, tango, Viennese waltz, slow foxtrot and quickstep. Latin American dances include the samba, cha-cha-cha, rumba, paso doble and jive. There are also formation dances for four, six or eight couples dancing in formation.</p>
Wheelchair fencing		<p>Athletes with amputations, spinal-cord injuries and cerebral palsy are eligible to compete in foil epee (men and women) and saber (men) events. Their wheelchairs are fastened to the floor during competition.</p>
Wheelchair rugby		<p>Wheelchair rugby is developed for athletes with quadriplegia and includes men and women on the same teams.</p> <p>Two teams of at least four players each compete for four periods of eight minutes each.</p>
Wheelchair tennis		<p>The game follows able-bodied rules with one exception: the ball is allowed to bounce twice.</p> <p>To compete, athletes must have a permanent or substantial loss of function in one or both legs.</p>





Recognition for the use of the photos in the table above from the website of the Paralympic Movement (IPC Sports, 2014).











APPENDIX B






ADAPTIVE SPORT NOT PART OF THE INTERNATIONAL PARALYMPIC COMMITTEE





Sport	Images	Short description of adaption
Angling	 	<p>The equipment is mainly adapted when an angler does not have strength in his/her upper body, or has limited arm and hand movement.</p> <p>Adapted equipment includes steel adjustable clamp-on rod holders for wheelchairs and harness rod holders.</p> <p>Some of the adaptations which are made to the rod include electric reel-in devices, battery powered fishing rod and power caster which is push-button controlled.</p> <p>During competition a helper is allowed to handle the landing net.</p>
Golf		<p>The rules for golf remain the same.</p> <p>For a problematic grip there is a specially designed adaptive glove. Players can also use a gripping strap to secure their hands to the</p>





		<p>clubs. Velcro straps and specially designed splints can also be used.</p> <p>For players who play from their wheelchairs, there are four wheel adaptive golf carts and wheelchairs. There are also specialized clubs for seated golfers.</p>
<p>Horse riding</p>	 	<p>The equipment is mainly adapted when a rider does not have proper balance or has limited arm and hand movement.</p> <p>Mounting ramps provide easy mounting for wheelchair users.</p> <p>The saddles and reins are adapted according to the needs of the specific riders.</p> <p>The saddles can include chest restraints, padded seats and backrests.</p>
<p>Hiking</p>		<p>Sports prostheses cover a range of activities.</p> <p>Trans-tibial (below-the-knee) prosthetic legs or trans-femoral (above-the-knee) prosthetic legs are designed according to the needs of the athlete. Even foot and</p>





		<p>ankle prosthetics are developed to replace the action of the foot.</p> <p>Clip-on attachments are available to convert a wheelchair into a hand-powered tricycle. It allows for easier travel over rough terrain.</p>
<p>Hunting</p>	 	<p>The specific needs of the hunter determine which adaptations are necessary.</p> <p>Vehicles and hides can be adapted to accommodate mobility impaired hunters.</p> <p>Adaptive hunting equipment, for example, a wheelchair-based gun rest or a tripod-mounted gun rest, can assist the hunter to stabilize the gun.</p>
<p>Lawn bowls</p>		<p>Lawn bowls is a truly multi-disability sport where people with a physical disability can participate equally with able-bodied competitors.</p> <p>There are no changes to the rules and competitors can compete on both normal green and synthetic surfaces.</p>



		<p>The only requirement is for large tires on the wheelchairs, preferably pneumatic, to prevent possible damage to the lawn bowls green.</p>
<p>Mountain biking</p>	 	<p>Specially designed wheelchairs are used for mountain biking. There are two categories: downhill biking and cross country biking.</p> <p>Downhill biking: Downhill mountain bikes are four-wheelers with hand controlled disc brakes. Bigger tires help to absorb the bumps. The seating is similar to a mono-ski bucket.</p> <p>Cross country biking:</p> <p>Normal cross country bikes are similarly built as downhill bikes with large tires, but these are hand powered. The bikes have gears for uphill and downhill riding.</p>
<p>Paragliding</p>		<p>Most of the equipment is standard, with adaptations to the harnesses. Tandem or solo flights can be undertaken, depending on the mobility of the glider.</p>

		<p>A device called the Phoenix is a custom-made wheelchair in the place of a normal harness.</p> <p>Paragliding buggies, which enclose the legs of the glider, are also available.</p> <p>Similar adaptations can be done for parachuting, parasailing and hang gliding.</p>
<p>Pool and snooker</p>	   	<p>Pool and snooker are truly multi-disability sports where people with a physical disability can participate equally with able-bodied competitors.</p> <p>The rules of both the games remain the same.</p> <p>There is an assistive device available called the Cannonaid. It is a stainless steel device for holding the cue while playing.</p> <p>This invention is designed for a player with one arm and players who can't bend over the table.</p>

<p>Running</p>	 	<p>Sports prostheses cover a range of activities. Trans-tibial (below-the-knee) prosthetic legs or transfemoral (above-the-knee) prosthetic legs are designed according to the needs of the athlete.</p> <p>Racing wheelchairs are used for taking part in road races and marathons. These three wheel chairs are designed to travel on smooth surfaces. There are no gears and the athlete's arms are continuously pushing the chair on the smaller designed push rims.</p>
<p>Scuba diving</p>	 	<p>In most case specialized gear is not necessary.</p> <p>Special gear has been developed for divers who may have difficulty using standard dive gear, such as webbed gloves for divers who cannot swim with fins.</p>

<p>Soccer</p>	 	<p>Power soccer is played by individuals who use power wheelchairs (electric wheelchairs). There are four players in a team. Foot guards are placed on the chairs to push the ball with.</p> <p>Soccer for amputee players: The number of team members can be reduced from eleven to five.</p> <p>The playing field dimensions are reduced along with smaller goal areas.</p>
<p>Squash</p>	 	<p>Squash is a sport which has only recently begun to take root among players with a mobility impairment. The rules remain the same, but the equipment can be adapted.</p> <p>The wheelchair is faster and lighter than a normal chair. A single swivel, height adjustable anti-tip wheel prevents the player from tipping. Balance straps can also be tied around the waist and legs.</p> <p>The handle of the racquet can be shorter and the head can be bigger.</p> <p>Grip mate sport Velcro strip can be used to keep the racquet attached to the hand.</p>

<p>Surfing</p>	 	<p>The adaptations to the equipment depend on the specific needs and balance of the surfer.</p> <p>A deep-dish concave deck which holds the body and legs centered on the board helps to stabilize the surfer.</p> <p>Handles on surfboards also help if the surfer has adequate grip.</p>
<p>Tenpin bowling</p>	 	<p>The adaptations to the equipment depend on the specific needs of the bowler. Adapted equipment could include bowling ramps (gutters).</p> <p>Ramps or gutters comprise of a two-piece metal unit with one stand and one sloped piece. Bowling ramps are used when a player does not have the physical ability to roll the bowling ball with their hand.</p>

<p>Waterski</p>	 	<p>Many leg and arm amputees use the same equipment as able-bodied athletes. Adaptive devices such as sit-skis and outriggers are used to accommodate various levels of ability. The balance of the skier is the determining factor.</p> <p>Sit-skis can also be fitted with back support to assist in balance.</p> <p>Outriggers for sit-skies are two short ski tips attached to the sides of a sit-ski to increase the stability of the ski.</p>
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Recognition for the use of the photos in the table above from the following websites (2014):

<http://www.disabledsportsusa.org/>

<http://www.adaptivesportsmen.org/>

<http://www.apparelyzed.com/support/sport/xtreme>

<http://www.disabledsportsusa.org/resources/adap/>

<http://reactiveadaptations.com/>

www.adaptivesportsequipment.com/

<http://www.spokesnmotion.com/>

<http://www.disabilities-online.com/index.php?viewCat=141#>

http://disability.about.com/od/Adaptive_Sports/

<http://sarda.co.za>

<http://www.rdasa.org.au>

<http://www.freedomrider.com/>

<http://tenpin.org.au>

<http://www.flyability.org.uk/>

<https://www.hsascuba.com/>



APPENDIX C

UNISA RESEARCH ETHICS CLEARANCE CERTIFICATE



COLLEGE OF EDUCATION RESEARCH ETHICS REVIEW COMMITTEE

18 November 2015

Ref # **2015/11/18/07543840/55/MC**
Staff #: Mrs AM Moll
Staff Number #: 07543840

Dear Mrs Moll

Decision: Ethics Approval

Researcher: Mrs AM Moll
Tel: +2712 429 4434
Email: mollam@unisa.ac.za

Supervisor: Prof G Bester
College of Education
Department of Psychology of Education
Tel: +2712 429 4337
Email: besteg@unisa.ac.za

Proposal: The influence of adopted sport involvement on the identity formation of mobility impaired adolescents

Qualification: D Ed in Psychology of Education

Thank you for the application for research ethics clearance by the College of Education Research Ethics Review Committee for the above mentioned research. Final approval is granted for the duration of the research.

The application was reviewed in compliance with the Unisa Policy on Research Ethics by the College of Education Research Ethics Review Committee on 18 November 2015.

The proposed research may now commence with the proviso that:

- 1) The researcher/s will ensure that the research project adheres to the values and principles expressed in the UNISA Policy on Research Ethics.*
 - 2) Any adverse circumstance arising in the undertaking of the research project that is relevant to the ethicality of the study, as well as changes in the methodology, should be communicated in writing to the College of Education Ethics Review Committee.*
- An amended application could be requested if there are substantial changes from the*



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existing proposal, especially if those changes affect any of the study-related risks for the research participants.

- 3) The researcher will ensure that the research project adheres to any applicable national legislation, professional codes of conduct, institutional guidelines and scientific standards relevant to the specific field of study.

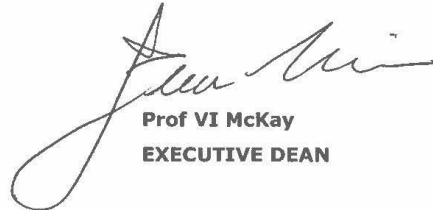
Note:

The reference number **2015/11/18/07543840/55/MC** should be clearly indicated on all forms of communication [e.g. Webmail, E-mail messages, letters] with the intended research participants, as well as with the College of Education RERC.

Kind regards,



Dr M Claassens
CHAIRPERSON: CEDU RERC



Prof VI McKay
EXECUTIVE DEAN

APPENDIX D

REQUEST AND PERMISSION OF ONE DEPARTMENT OF EDUCATION



NORTH WEST DEPARTMENT OF EDUCATION

Madibeng Area Management Team

Request for permission to conduct research atSchool (LSEN)

Good day

My name is Alet Moll and I am a postgraduate student at the University of South Africa. My research is about the influence of adaptive sport on the identity formation of the adolescent with a mobility impairment. I have already visited various schools which make provision for learners with a mobility impairment.

I request your permission to conduct research at School in your area, since this is an outstanding school accommodating learners with mobility impairments. Permission will then be requested from the principal (.....) to conduct the research at School.

Secondary school learners with a mobility impairment will be asked to complete a questionnaire. It will take the participating learners who have obtained permission from their parents/guardians about 45 minutes to complete the questionnaire. The completion of the questionnaire will be done in such a manner that it will not interfere with the academic school program of the learners. All participation is voluntary.

Confidentiality and anonymity are ensured.

The following documents are included for your convenience:



University of South Africa
Preller Street, Muckleneuk Ridge, City of Tshwane
PO Box 392 UNISA 0003 South Africa
Telephone: +27 12 429 3111 Facsimile: +27 12 429 4150
www.unisa.ac.za

- Ethical clearance certificate from the University of South Africa to conduct the research
- The research proposal
- The questionnaire to be completed by secondary school learners to the principal to request permission
- Letter to the parents/guardians to request permission and consent
- Letter to the learner to request assent

Your favourable consideration will be highly appreciated.

Kind regards

Alet Moll

Cell number: 082 562 9999

Email: mollam@unisa.ac.za



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Education and Sport Development

Department of Education and Sport Development
Departement van Onderwys en Sport Ontwikkeling
Lefapha la Thuto le Tihabololo ya Metshameko

NORTH WEST PROVINCE

6 Pendoring Street
Brits 0250
Private Bag X5082,
Brits 0250
Tel.: (012) 250-1910
Fax.: (012) 250-1904
e-mail: nmthema@nwpg.gov.za

OFFICE OF THE AREA MANAGER: MADIBENG AREA OFFICE

TO : Ms Alet Moll
Researcher
FROM : Mr NM Thema
Acting Area Manager
Madibeng Area Office
DATE : 09 May 2016
SUBJECT : RESEARCH APPROVAL

DEPARTMENT OF EDUCATION
MADIBENG AREA OFFICE
2016 -05- 09
PRIVATE BAG X5082, BRITS, 0250
TEL: 012 250 1910 FAX: 012 250 1904
NORTH WEST PROVINCE

We have received your letter requesting to conduct research in Madibeng Area Office schools. We Grant you permission to access the research sites subject to the approval of the school governing bodies of the targeted schools. The title of your research: influence of adapted sport on the identity formation of the adolescent with a mobility impairment. You are expected to adhere strictly to the conditions of Research Ethics outlined by your University of study.

Kindly communicate with the principal and / or SGB's of schools you have selected for your research regarding your schedule.

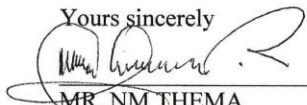
Please submit your report including findings and recommendations to the Area Office; district and Head Office, North West Education Department at least 2 two weeks after conducting your research. You may be requested to participate in the Department of Education mini-research conference to discuss your findings and recommendations with Departmental Officials and other research.

CONDITIONS

1. This programme is a support programme and may not supersede the Departmental programmes, projects and priorities. In case competition for accommodation arises, departmental programmes will take precedence.
2. The safety and wellness of learners and school staff must be prioritised at all cost.
3. Teaching and Learning time may not be interfered with.
4. The Department or schools may not be held liable for any payments incurred in this programme.
5. The programme will be self-sustaining and no cost will be charged to the Education Departmental of any level, learners and/ or their parents or the school.

Our support will be rescinded in case you contravene the terms and conditions indicated herein or any departmental regulations and laws or if at any point risk to the reputation of the district, the North West Department of Education becomes imminent.

Yours sincerely


MR. NM THEMA
ACTING AREA MANAGER

Excellence in Education and Sport Development

Open Rubric



Education and Sport Development

Department of Education and Sport Development
Departement van Onderwys en Sportontwikkeling
Lefapha la Thuto le Tlhabololo ya Metshameko
NORTH WEST PROVINCE

Quality Assurance Building
No.: 861, Modiri Molema Drive,
Mantshiwa
Private Bag X2044,
Mmabatho 2735
Tel.: (018) 397-3001/88
Fax: (018) 384-9249
e.mail: mmonoametsi@nwpg.gov.za

DIRECTORATE: INSTITUTIONAL GOVERNANCE DEVELOPMENT AND LEARNER SOCIAL SUPPORTS SERVICES

Enquiries: Ms Motshidisi Monaometsi
Tel No.: (018) 397 3016
e-mail: MMonoametsi@nwpg.gov.za

19 May 2016

**To: District Directors
Area Office Managers
Principals of sampled schools**

Re: Permission to conduct research

This communiqué serves to inform you that Mrs AM Moll who is a student at UNISA has been granted permission to conduct research on THE INFLUENCE OF ADOPTED SPORT INVOLVEMENT ON THE IDENTITY FORMATION OF MOBILITY IMPAIRED ADOLESCENTS in all districts of North West Province is granted subject to the following conditions:

- that it should not interfere with teaching and learning in schools and
- that the Department will receive a final copy of the research and summary of the research findings made available.

Your cooperation in this regard will be appreciated.

Yours sincerely

.....
Dr M.C. Teu
Director – IGD&LSSS

“Towards Excellence in Education and Sport Development”

APPENDIX E

REQUEST PERMISSION FROM SCHOOL PRINCIPALS



Dear Principal

My name is Alet Moll, and I am a D Ed student at the University of South Africa. The research I wish to conduct for my doctoral thesis involves the *influence of adaptive sport involvement on the identity formation of mobility impaired adolescents*. This study is being conducted under the supervision of Professor G Bester, a senior professor in the Department of Psychology of Education at the University of South Africa.

I am seeking permission to conduct research at your school by asking learners to complete a questionnaire. The learners who agree to participate, with the written consent of their parents or guardians, will be asked to complete a questionnaire which will take about 45 minutes to complete.

I will follow the University of South Africa's research ethics regulations and will use the information for the purposes of this study only. Your participation is voluntary and you may withdraw your participation at any stage during the research process, prior to the reporting of the findings for the project. The resulting thesis will be used to meet the requirements for the D Ed degree. The findings will be used for publication in academic journals and for presentation at academic conferences.

It is important to note that your name, the name of your school and other participants' names will be withheld in the reporting of the data. No information shared will be disclosed to members of staff at the university in a way that will allow them to identify you. As such, confidentiality and anonymity will be guaranteed. If you agree to participate in this research, please sign this letter as a declaration of your consent.



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Should you have any questions about the research and/or the contents of this letter, please do not hesitate to contact us for further information.

Yours faithfully

Alet Moll
Contact details: mollam@unisa.ac.za
Cell: 082 562 9999

Supervisor: Prof G. Bester
Contact details: besteg@unisa.ac.za
Office number: 012 429 4337

Principal: _____

Principal's signature: _____

Date: _____



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APPENDIX F

REQUEST CONSENT FROM PARENTS/GUARDIANS OF LEARNERS



Dear Parent/Guardian

Your child is invited to participate in a study entitled ***The influence of adaptive sport involvement on the identity formation of mobility impaired adolescents***. I am undertaking this study as part of my doctoral research at the University of South Africa. I request your consent to include your child in this study because he/she is now in the adolescent phase, which is the developmental stage where identity formation reaches its peak. I expect to have about 150 other children participating in the study. If you allow your child to participate, I shall request him or her to take part in a survey that asks for information about him or her and the feelings and beliefs he or she might have.

Any information that is obtained in connection with this study and can be identified with your child will remain confidential. His or her responses will not be linked to his or her name, or your name, or the school's name, in any written or verbal report based on this study.

There are no foreseeable risks to your child by participating in the study, other than the inconvenience. Your child will receive no direct benefit from participating in the study; however, the possible benefits to education are the awareness of the importance of sport participation and the creation of opportunities for other learners. Neither your child nor you will receive any type of payment for participating in this study. Your child's participation in this study is voluntary and your child may decline to participate or withdraw from participation at any time.



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In addition to your permission, your child must agree to participate in the study and you and your child will also be asked to sign the assent form which accompanies this letter. If your child does not wish to participate in the study, he or she will not be included and there will be no penalty. The information gathered from the study and your child's participation in the study will be stored securely on a password protected computer in my office.

If you have questions about this study, please ask me or my study supervisor, Prof G Bester, Department of Psychology of Education, College of Education, University of South Africa. My contact number is 082 562 9999 and my email is mollam@unisa.ac.za. The email of my supervisor is besteg@unisa.ac.za. Permission for the study has already been granted by the Department of Education, the Ethics Committee of the University of South Africa and the principal.

Your signature below indicates that you have read the information provided above and have decided to allow him or her to participate in the study.

Name of child:

Parent/guardian's name (print)

Parent/guardian's signature

Date:

Researcher's name (print)

Researcher's signature

Date:



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APPENDIX G

REQUEST ASSENT FROM SECONDARY SCHOOL LEARNERS



Dear Learner

I am doing a study on sport involvement on the identity formation of mobility impaired adolescents as part of my studies at the University of South Africa. Your principal has given me permission to do this study at your school. The reason for this study is that it will help me find ways for your teachers, coaches and parents to use sport to help you enjoy your school experience. I would like to invite you to be a very special part of my study. This will help you and many other learners of your age at different schools.

I would like you to complete a questionnaire that will take you about 45 minutes. The questions are all about you and how you feel in certain situations. This questionnaire will not count for any marks at school. I will not share your results with your teachers or parents.

I will write a report on the study but I will not use your name in the report or say anything that will let other people know who you are. You do not have to be part of this study if you don't want to be. If you choose to be in the study, you may stop taking part at any time. You may also tell me if you do not wish to answer any of the questions.

If you decide to be part of my study, you will be asked to sign a form. If you have any other questions about this study, please feel free to ask me. Do not sign the form until all your questions have been answered and you understand what I would like you to do.



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Do not sign the written assent form if you still have any questions. Ask your questions first and ensure that someone answers Them.

WRITTEN ASSENT

I have read this letter which asks me to be part of a study at my school. I understand the information about the study and know what I will be asked to do. I am willing to be in the study.

Learner's name

Learner's signature

Date

Researcher's name

Researcher's signature

Date



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