

**ATTITUDES OF HEALTH SCIENCE STUDENTS TOWARDS PEOPLE WITH  
DISABILITIES AT KILIMANJARO CHRISTIAN MEDICAL CENTRE (KCMC) IN  
TANZANIA.**

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**A mini thesis submitted in partial fulfilment of the requirements for the degree of  
Master of Science (Physiotherapy) in the Department of Physiotherapy,  
University of the Western Cape.**

The logo of the University of the Western Cape, featuring a stylized building with columns and the text "UNIVERSITY of the WESTERN CAPE" below it.

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**May 2011**

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**KEYWORDS**

ATTITUDES

DISABILITY

HEALTH SCIENCE STUDENTS

HEALTH PROFESSIONALS

INTERACTION

PEOPLE WITH DISABILITY

PHYSIOTHERAPY

MEDICINE

NURSING

OCCUPATIONAL THERAPY

OPTOMETRY



## **ABBREVIATIONS**

ATDP- Attitudes Towards Disabled Persons Scale

DOH- Department Of Health

GSF- Good Samaritan Foundation

ICF- International Classification Of Function

KCMC- Kilimanjaro Christian Medical Centre

PWD- People with Disability

PWDD- People with Developmental Disability

SPSS- Statistical Package for Social Sciences

UN- United Nations

USA- United States of America

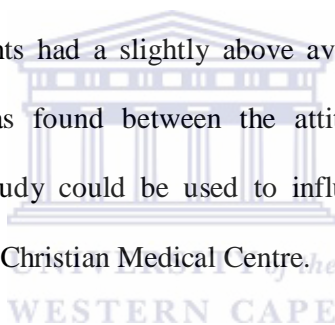
WHO- World Health Organisation



## **ABSTRACT**

The effects of disability on the individual not only include physical, psychological and emotional adjustments but also negative attitudes of able bodied people towards persons with disabilities. The attitudes of healthcare professionals towards persons with disabilities could affect rehabilitation outcomes as well as the reintegration of these people into society. The aim of the study was to investigate the attitudes of health science students towards persons with disabilities at Kilimanjaro Christian Medical Centre (KCMC), in Tanzania. An explorative quantitative research design using a cross-sectional survey was used. The study sample (182) included all Physiotherapy, Occupational Therapy, Nursing, Medical and Optometry students. Data was collected using the Attitudes Towards Disabled Persons Scale, consisting of 20 items rated on a six-point Likert Type Scale. A demographic questionnaire which included questions relating to the contact of the students with persons with disabilities was also administered. Descriptive and Inferential statistical analysis was conducted using the Statistical Package for the Social Sciences version 15.0. Permission to conduct the study was obtained from the Higher Degrees Committee and the Senate Research Grant and Study Leave Committee of the University of the Western Cape. Further permission was requested from Ministry of Education, Research and Ethics Department in Tanzania and the authorities of the respective Health Sciences programmes to include students in the study. Information obtained was handled with confidentiality and anonymity, and the students had the right to withdraw from the study at anytime.

The results revealed that the sample consisted of more females (58%) than males (41.2%). The majority of the participants were between the ages of 20-29 years. The highest response rate was from the medical students (29.1%) followed by the physiotherapy students (27.5%). The Optometry and physiotherapy students had more positive attitudes than the rest of the health science students who participated. The mean score on the ATDP scale was 59.01 (12.3) with scores ranging from 18 to 90. The results therefore revealed that overall the students had a neutral to negative attitude towards persons with disabilities. With regards to the contact of the students with persons with disabilities 26.9% of the participants responded that they had had a long talk with a person with a disability while only 17.6% of the students responded that persons with disabilities visited their homes. The mean contact score was 22.72 indicating that the students had a slightly above average contact with persons with disabilities. No association was found between the attitude and contact mean scores. Information obtained in this study could be used to influence the curriculum of Health Science Students at Kilimanjaro Christian Medical Centre.



**DECLARATION**

I hereby declare that “**ATTITUDES OF HEALTH SCIENCE STUDENTS TOWARDS PEOPLE WITH DISABILITY AT KILIMANJARO CHRISTIAN MEDICAL CENTRE (KCMC) IN TANZANIA**” is my own work that it has not been submitted, or part of it, for any degree of examination at any other university, and that all the sources I have used or quoted have been indicated and acknowledged by means of complete references.

Insiyya Djamil Sheriff

Signature..... 2011



Witness

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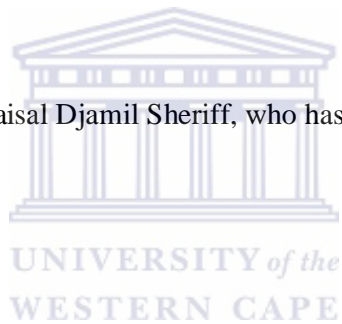
Prof. Anthea Rhoda

## **DEDICATION**

This work is dedicated to Almighty God, whose presence while doing my thesis kept me going, and giving me hope when I felt that I could not go on.

For my parents, whose unconditional love and trust in me has never ever failed. They mean the world to me!

My beloved God sent brother, Faisal Djamil Sheriff, who has always been an inspiration in my life.



## **ACKNOWLEDGEMENT**

To the most loving God, for his amazing unconditional love and faith in me, he sees me as a winner in all that i do! Because he loves me and that i am special to him. Who i am is a Gift from God, who i become is my Gift to God!

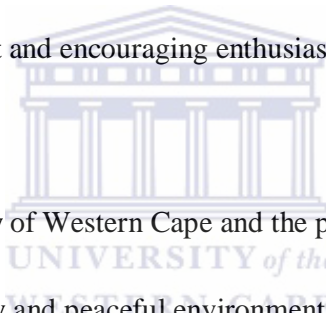
To my loving parents Mr. Djamil and Mrs. Farha Sheriff who have been my rock, for their unconditional love, support and encouragement. Mom for being my best friend, my angel and letting me talk my ear off through all the rough spots. Thank you mom for also being so insanely creative and intelligent, and bequeathing a small portion of both into my genetic make up and Dad, no one has ever been given more support and a great advice than i have been given by you. I am here where I am now because of you! I love you unconditionally.

To my little brother Faisal Djamil Sheriff whose confidence and faith in me has never ceased and who continues to inspire me. I love you baby brother! Thank you, this work would never have been done without you believing in me and making me believe in myself.



I can't believe how lucky i was to discover my awesome supervisor Mrs. Anthea Rhoda who manages to be both the fastest and the most meticulous reader at the same time. I am so thrilled to have a friend and a mentor who is so insightful, talented and patient with my whining. Thank you for your continued understanding and sacrifice in support of my writing and polishing my work till it shines. Anthea, you are loved so much!

Many Thanks to my lecturers in Physiotherapy department at University of Western Cape (UWC) for their invaluable input and encouraging enthusiasm.



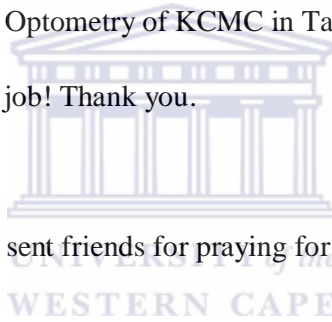
I am so grateful to the University of Western Cape and the people there for making me feel at home, and providing a friendly and peaceful environment. This University has been a second home to me and its memories will be cherished forever!

To Mr. E. Mkoba, the principal of Physiotherapy Department at Kilimanjaro Christian Medical Centre (KCMC) in Tanzania, for his great help and time during my data collection.

This work would never have been complete if you were not around. Thank you!

I would like to thank the Principals of school of Medicine, Occupational Therapy, Physiotherapy, Nursing and Optometry at KCMC in Tanzania for giving me the permission to hand out the questionnaires to the student's, without your permission, this work would never have been done.

To the wonderful Health Science Students of Physiotherapy, Occupational Therapy, Medicine, Nursing and Optometry of KCMC in Tanzania for participating in this study. I must say you did a great job! Thank you.



I would like to thank all my God sent friends for praying for me and being there to encourage me and have faith in me. I can tell it is a true labour of love for you all!

Above all I Praise God for it is his desire to be at the centre of who I am and all that I do.

Where would I be without him!

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## CHAPTER ONE

### INTRODUCTION

#### 1. BACKGROUND OF THE STUDY

##### 1.1 Introduction to Disability.

Disability has been defined within the International Classification of Functioning, Disability and Health as “an umbrella term for impairments, activity limitations or participation restrictions” resulting from the interaction of the individual with the health condition with the environment in which the individual finds him or herself (WHO, 2001:3). The United Nations Convention on the Rights of Persons with Disabilities also “acknowledges that disability is an evolving concept”...”emphasising the significant impact that attitudinal and environmental barriers in society may have on the enjoyment of the human rights of persons with disability” (UNCRPD, 2007:13). From the above definitions it’s clear that the environment which includes the attitudes of others is significant when considering disability.

According to the estimates by the World Health Organization (WHO, 1999), approximately 10% of the world’s population has a disability. Within developing countries, this population numbers at least 400 million people and they are among poorest of the poor. It is further estimated that seven percent (7 %) of the world’s population suffers from mental and physical disabilities of various types (Mitchell, 1999a). According to International Labour Organization,



more than three million women and men in Tanzania, or approximately 9 % of the population have a disability, (ILO, 2009).

More than ninety percent (90%) of persons with disabilities are not receiving any rehabilitation services (Helander, 1993). Life of persons with disabilities in developing countries is more difficult due to the lack of adequate services coupled with the absence of an accessible environment (Hosain & Chatterjee, 1998). According to Murray and Lopez (1997), the prevalence of disabilities rises with low socio-economic status. These authors further affirm that disability prevalence is highest in Sub-Saharan Africa and lowest in the established market economy. Poverty, lack of service and technical aids, unemployment and societies attitudes are the social major problems with persons with disabilities (Hurst, 2000). Life of persons with disabilities in developing countries is even more difficult due to the lack of adequate services coupled with the absence of an accessible environment (Hosain & Chatterjee, 1998). Persons with disabilities have experienced poverty because of institutional, environmental and attitudinal discrimination from birth or from the moment they were disabled (Disability, 2008). They often experience suffocation, overprotection and exclusion from challenges of everyday life. The broader society often has a low regard and expectation for the person with the disability. Persons with disabilities are seen as objects of pity and a burden on others. Socially and culturally they are devalued and so face stigmatizing attitudes that results in segregation and discrimination even from well-meaning others who often create social distances (Parashar, Chan & Leierer, 2008).

## **1.2 Models of disability.**

There are several models in which the concept of disability is viewed these include, the religious, medical and social model of disability. The religious model which may view disability as either a punishment for past sins or poor choices, or as an act of fate that was meant to happen for positive reasons (Disability, 2008). The most common models of disability are however the medical and social model of disability. According to the medical model disability is viewed from a medical perspective. In this model medical professionals, view disability as an impairment caused by sickness or disease that limits people from engaging in life in the same way as others. Treating the impairment is the main focus of medical professionals' management which aims at curing the disability by eliminating the flaws (Disability, 2008). The social model approach defines disability as the loss or limitation of opportunities to take part in the everyday life of the community on an equal level with others due to physical and social barriers (Disability, 2008). Within the medical model of disability individuals are viewed as being helpless and are dependent on others to do things for them. Within the social model of disability however persons with disability are recognised as having equal opportunities as non-disabled people making decisions for themselves and are not dependent on others (Office of Deputy President, 1997). The attitudes towards persons with disabilities would be influenced therefore by the model in which disability is viewed. The bio-psycho-social model on the other hand aims at a multidimensional, holistic and multidisciplinary understanding of health and health related conditions. This model is applied increasingly in health care systems all over the world, especially in rehabilitation medicine. In a bio-psychosocial, the ability of the individual to engage in activities and to participate in society determine the daily functioning of the individual, as well as a possible disability. (WHO, 2003)

### **1.3 Attitudes towards people with Disability**

The negative effects of disability include emotional adjustments, social issues, and negative attitudes of able bodied people towards persons with disabilities (UNICEF, 2007).

Attitudes are a combination of beliefs and feelings, whereby a person is predisposed to behave a certain way (Noe, 2002). According to Antonak and Livneh, (2000), attitudes are regarded as latent or inferred psychosocial processes that lie dormant within a person unless evoked by specific referents. Attitudes towards persons with disabilities are predispositions which are learnt and influenced by emotions. These attitudes are often based on a misconception and being afraid of the unknown (Brillhart, Jay & Wyers, 1990). Because of the differences in physical appearance or mental capacity people with disability are often perceived by the public as childish, dangerous, crippled, useless and abnormal. These persons with disabilities have problems receiving equal access to education, healthcare, employment and social activities in the communities (Brostran, 2006; Gordon, Feldman, Tantillo & Perrone, 2004; Hernandez, keys & Balcazar, 2000; Tsang, Chan & Chan, 2004). Roush (1986) reported that negative attitudes towards persons with disabilities are common in society, but are not directly voiced. They are expressed in different ways and serve as barriers to the full realisation of human potential.

Antonak and Livneh, (2000), stated that, the attitudes of societies and its implications to the rehabilitation of people with disability have been one of the research foci in the field of rehabilitation. Furthermore, Smart (2001), states that studying the attitudes of society toward persons with disabilities is important to the field of rehabilitation because individuals with

disabilities incorporate society's perceptions of disabilities in structuring their self-identity, which in turn influences their psychological well-being. In addition negative attitudes of the society toward people with disability can form invisible barriers to their successful rehabilitation, hence leading to or supporting expectations that are negative that might result in their isolation, victimization and marginalization (American Psychological Association, 1998, McMahon, West, Lewis, Armstrong & Conway, 2004; Tervo, Palmer, & Redinius, 2004). However, it is affirmed by Chan, Lee, Yuen and Chan (2002), and Lueng (1990, 1993) that studying attitudes toward persons with disabilities is imperative given that such attitudes have been a significant factor defining life experiences, opportunities and help seeking behaviour of persons with disabilities. Dadkah, Harizuka, & Mandal, (1999), Groce, (1990), Triandis, (1996) have suggested that, societies develop coping patterns with disability incumbent on their cultural beliefs, affective meanings, shared values and social cognitive processes. Hence these attitudes towards persons with disabilities have continued to be for the past several years an important research area in the field of rehabilitation counselling (Brodwin et al, 2002; Wang, Thomas, Chan & Cheing, 2003; Wong, Chan, Cardoso, Lam & Miller, 2004).

### **1.3. 1 Attitudes of health professional students towards individuals with disabilities**

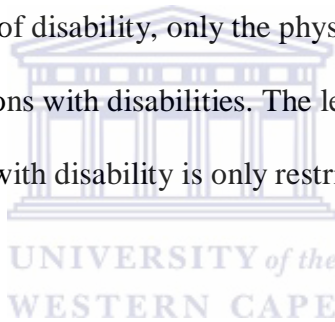
A concept that has been researched previously in the field of rehabilitation and attitudes towards disabled individuals relates to the attitudes of students towards disabled people. It is assumed that according to focused areas of study the students enrolled in programmes related to rehabilitation would hold more positive attitudes towards persons with disabilities. Several studies have compared the attitudes of health care professional students to those students not enrolled in a health professional discipline (McDougall et al., 2004; Nabors and Lehmkuhl,

2005; Nabors and Lehmkuhl, 2005). In a study conducted by Estes et al. (1991), the authors found that Occupational Therapy students held significantly more positive attitudes toward persons with disabilities than Medical Technology students. Furthermore Chan et al (2002) compared attitudes of Occupational Therapy students and Business students in Hong Kong and found that Occupational Therapy students' attitudes were more positive than the Business students.

The attitudes of health care profession students towards persons with disabilities can have an impact on their rehabilitation (Stachura & Garven, 2003). Health care profession students' negative attitudes may influence successful rehabilitation outcomes and reintegration into the community. In addition negative attitudes towards persons with disabilities held by health professionals can impact on the range and quality of rehabilitation services offered as well as influencing the relationship between the health professional and the patient (Estes, Deyer, Hansen, & Russell, 1991; Gething, 1992; Miller, 1996). Negative attitudes when formed to a particular group of people they will likely be treated poorly, discriminated against, rejected and devalued within the society (Eagly & Chaiken, 1993; Lyons, 1991).

Education about and interaction with persons with disabilities can positively affect the attitude of students towards persons with disabilities (Thompson, Emrich & Moore, 2003). It is therefore important that during the training of especially health science students who are being prepared to work with persons with disabilities efforts are made to foster a positive attitude towards persons with disabilities. This is however not evident in the curriculum of Health Sciences students trained at KCMC in Tanzania. According to the researchers' experience the

interaction of the students trained at this institution is limited and only starts in their second or third year. At this stage the students are placed in different wards such as Paediatric, Orthopaedic, Medical and Surgical as part of a clinical rotation. This is the only interaction the students might have with persons with disabilities. The researchers' motivation for conducting the study arose from the minimal interaction with disabled people while being a student at the Kilimanjaro Christian Medical Centre (KCMC) in Tanzania. The KCMC physiotherapy students' contact with persons with disabilities in their training is restricted mainly of visiting these people with their lecturers. The students do not have many opportunities to interact with these people on a long-term basis providing treatment or developing programmes with disabled people. In the lectures on the topic of disability, only the physiotherapy students go for visits in the village, to the homes of persons with disabilities. The lecturers and students discuss the visits thus the contact with people with disability is only restricted.



#### **1.4 PROBLEM STATEMENT**

A lack of contact with disabled people as students could result in a negative attitude which may impact on the provision of services once qualified (Stachura and Garven, 2003). Harbouring negative attitudes towards PWDs implies that health sciences students could have difficulties in future when working with persons with disabilities if negative attitudes are developed. In addition to the above there is also no documented information regarding the attitudes of health sciences students towards persons with disabilities in Tanzania.

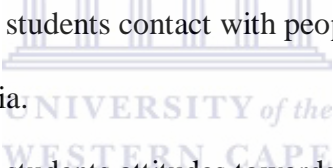
## **1.5 RESEARCH QUESTION**

What are the attitudes of the health science students at KCMC in Tanzania towards persons with disabilities?

## **1.6 AIM OF THE STUDY**

The aim of the study is to investigate the attitudes of health science students (Physiotherapy, Occupational Therapy, Medicine, Nursing and Optometry) at KCMC towards persons with disabilities in Tanzania.

## **1.7 OBJECTIVES OF THE STUDY**

- 
- To determine the health science students contact with people with disabilities at KCMC in Tanzania.
  - To determine the health science students attitudes towards people with disabilities KCMC in Tanzania. .
  - To determine the relationship between attitudes and socio-demographic information of Health Science students at KCMC in Tanzania.

## **1.8 SIGNIFICANCE OF THE STUDY**

The results of the study would be important to educators of health science students. Where the attitudes of students need to change the educators could incorporate more information relating to disability in the theoretical curriculum. In the clinical setting an increase in the contact of the students with PWDs could be facilitated to improve the attitudes of the students.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 INTRODUCTION**

This chapter contains the literature review. The researcher reviewed literature relating to the concept and impact of disability. The researcher further reviewed the literature relating to the attitudes towards persons with disabilities.

#### **2.2 Introduction to Disability**

Disability in broad terms is “a function of the person within the environment” (Brandt & Pope, 1997, *The American Psychologist*, 1997). More specifically in a social context, it is the gap between a person’s capabilities and the demands of the environment and the expression of a physical or mental limitation, (Pope & Tarlov, 1991,). The individual’s performance is emphasized in this particular social perspective, roles, functional status, expectations, and environmental context. Invariably, the individual is at the core, when disability is defined. However, contemporary (new paradigm) definitions presuppose that the environment is a major determinant of individual functioning.

This approach alludes to what is known as the disability experience and implies that disability is not inherent but is experienced at the intersection of the person and environment (Brandt & Pope,



1997; Pope & Tarlov, 1991; Nagi, (1976). The International Classification of Functioning, Disability and Health (World Health Organization, 2001), mentioned in chapter one of this thesis similarly defines disability by examining components of functioning and disability, including contextual and environmental factors as well as body systems and structures. This classification system takes into account physical, social, attitudinal, and personal factors. In addition to the ICF there are other conceptual frameworks of disability. Nagi (1976) established a clear connection between the individual's functional limitations and the role of the environment. The Nagi model of disability posits that pathology should not be viewed as the singular determinant of individual functioning but that functional limitation is an expression of the extent to which the environment restricts or is able to accommodate disability characteristics. Consistent with Nagi's model Bronfenbrenner's (1977, 1979) socioecological model, Engel's (1977) biopsychosocial model, and Trieschmann's (1987) description of the factors that influence functioning and health are critical developments that have contributed to better understanding of disability. These conceptual frameworks are precursors to the Institute of Medicine's Model of disability (IOM) model of disability (Pope & Tarlov, 1991).

This work provided the foundation for better understanding of the pathway for disablement and later influenced the development of the (IOM) (Brandt & Pope, 1997; Pope & Tarlov, 1991). The IOM asserts that disability is not inherent; although a disability condition may be evident, risk factors, rather than the condition, are the true determinants of disability. This philosophical perspective espouses the belief that biological, environmental, social, cultural, and behavioral factors interact and often serve as the precursor to disability.

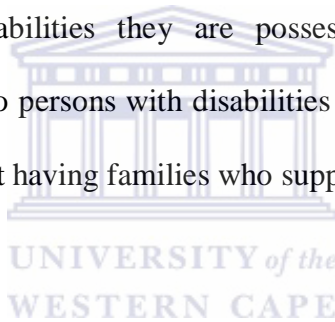
One premise of this conceptualization is that it is possible to prevent the progression of disease and movement toward disability by modifying environmental conditions and can be used as an alternative to the old paradigm (medical model) of disability. The old paradigm model of disability is reductive to the medical condition and oriented to pathology. Similar to some of the definitions provided earlier disability in this approach characterizes as a deficit within the individual, a condition that prevents functioning or participation in activities, or disadvantage. In contrast to the new-paradigm framework, the old paradigm does not account for environmental context or the potential impact of external factors on individual functioning. Instead, the extent to which the individual is able to perform certain roles and activities serves as the sole determinant or measure of disability (Jette & Badley, 2000). In contrast to the old paradigm of disability, the new paradigm conceptual framework, similar to the Nagi (1976) and IOM models (Brandt & Pope, 1997; Pope & Tarlov, 1991) of disability, examines the relational nature of the disabling condition and the environment. A major thrust of this construct is that external factors (i.e., those beyond the body structures and functions) have the potential to contribute to and shape the disability experience. “This disability paradigm maintains that disability is a product of the intersection of individual characteristics (e.g., conditions or impairments, functional status, or personal and socioeconomic qualities) and characteristics of the natural, built, cultural, and social environments” (U.S. Department of Education, Office of Special Education and Rehabilitative Services, NIDRR, 2000). This person–environment approach to understanding disability is an integrative, holistic approach that assists with elucidating the disability experience.

### **2.2.1 Impact of Disability:**

According to Moss and Turner (1996), persons with disabilities often face many challenges which are imposed upon them by society or societal norms. The challenges the majority of persons with disabilities face in developing countries are to leading poor life styles of persons with disabilities. Some of them are homeless, unemployed and seen in the cities as beggars (Kassah, 1998; Inthirat & Thonglith, 1999; May-Teerink, 1999). According to Hosain and Chatterjee (1998), persons with disabilities are regarded as burdens to their families which in turn force them to lead lives of dependence and hopelessness. It was reported in a study conducted by Concha and Lorenzo (1993) that, most persons with disabilities lived within an extended family in a rural village in South Africa. A similar finding was reported by Inthirat and Thonglith (1999) in Lao's Republic where persons with disabilities needed assistance from their families. In Ghana persons with disabilities especially in rural areas are victims of stigma, which forces some of them to migrate to main cities (Kassah, 1998). May-Teerink (1999) conducted a study in Uganda the results of this study revealed that persons with disabilities were homeless and relying upon begging for their economic survival. In addition It has been reported that there is inadequate provision of health services for people with physical disabilities in health service staffs and their unwillingness to treat these patients Mencap, (1998).

In most cases the physical environment excludes persons with disabilities a phenomenon that has been referred to "apartheid by design" (Imrie, 1996). Narrow entrances and buildings with steps, inaccessible public transport, education and health facilities all serve to keep people with disability out (Moore & Yeo, 2003). In many parts of the world beliefs still persist that disability

is associated with witch craft, bad omens, infidelity and evil (Lwanga, Ndaziboneye & Nalugo, 2002). Russell and Malhotra (2002) has criticised the approaches that focus exclusively on attitudinal change towards disability. The authors argue that equality cannot be lead on attitudinal change alone. They see disability as “a product of exploitative economic structure of capitalist society, one which creates and then oppresses the so called “disabled” body as one of the conditions that allow capitalist class to accumulate wealth”. The limited opportunities with persons with disabilities may partly be determined by negative familial and societal values and attitudes (Shaar & McCarthy, 1994). According to UN (1994), it is alleged that persons with disabilities are facing social segregation based on the beliefs and fears from religious and cultural convictions that, by having disabilities they are possessed or being divinely punished. Furthermore this stigma attached to persons with disabilities maybe the reason for most of them not marrying, being divorced or not having families who support them (Kassah, 1998).



### **2.3 Introduction to Attitudes**

Attitudes are referred to as beliefs and feelings that are related to a person (Sable, 1995). A person who believes that individuals who are disabled are incompetent may dislike them. These feelings may then lead the person to act in a discriminatory manner (Sable, 1995). There are three components of Attitudes namely; affect, cognition and behaviours.

The way one feels towards a person is reinforced through prior learning experiences. One of the examples of the component of affect is when an individual fears someone with a certain characteristic based on the previous experience with the same characteristic such as being scared

irrationally by someone with physical disability as a child (Bodur, Brinberg, & Coupey, 2000; Bohlander, 1985–1986; Lee & Rodda, 1994). Cognitions are thoughts one has about another person such as thinking that all individuals who have Down Syndrome are contagious and should not be touched. How one acts towards a person which can be as subtle as not shaking the hand of a person when introduced or verbal teasing and ridicule (Gething, 1994). It was originally introduced by Leon Festinger (1957) the notion that behaviour can be altered through changing attitudes through his theory of cognitive dissonance. Festinger (1957) believed that individuals move towards stability within themselves through consistency between behaviours and attitudes. The inconsistencies between behaviours and attitudes are not usually noticed by the individual holding them, they are either resolved through behavioural change or rationalization. For instance an individual without a disability may see himself or herself as a caring, loving and tolerant person of all differences while they may behave in a different manner towards individuals with disabilities. In turn they may rationalize their behaviour by thinking that somehow these people with disability deserve their disability and therefore it's ok to make an exception.

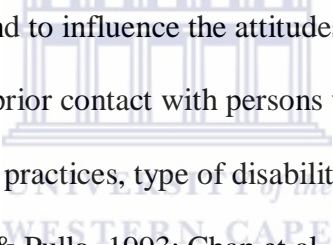
### **2.3.1 Attitudes towards individuals with disabilities**

According to Sable (1995) attitudes can be changed however. Most literature on attitudes towards individuals with physical disabilities suggests that the majority of attitudes are negative. One reason for negative attitude of an individual maybe that individuals without disabilities perceive a difference between themselves and the individual with a disability because of lack of knowledge about the individual's disability (Ibrahim & Herr, 1982). Similarly it was stated by Yucker (1988) that individuals who “focus on the disability and not the person” tend to have more

negative attitudes. Non-disabled individuals often view persons with disabilities as not being able to participate in activities. (Morgan & Wisely, 1996). They also perceive failures as a result of lack of ability rather than lack of effort or bad luck (Cassidy and Sims, 1991). Those individuals who hold these negative attitudes tend to perceive persons with disabilities as different and incompetent. (Millington, Strohmer, Reid, and Spengler, 1996). Individuals without disability are influenced by social norms whereby the emphasis are placed on outward appearances and often harbour attitudes that are negative towards individuals with disabilities without ever being conscious of these attitudes (Livneh, 1982). It was indicated in the previous research on Attitudes toward people with developmental disabilities in Chinese and American students that personal contact, knowledge and type of disabilities and ethnic background might influence a person's view of people with disability. It was stated that individuals who had more contact with persons with disabilities were more positive about them than those who had less contact. (Chan et.al, 1988; Chan, Lee, Yuen & Chan, 2002; Chen, Brodwin, Cardoso & Chan, 2002, Gething, 1992).

According to Eagly and Chaiken, (1993) and Lyons (1991), guiding new behaviors or helping individuals' are often associated with functions of attitudes in order to gain a greater understanding of the world around them. The authors further stated that when negative attitudes are formed about a particular group of people, it is likely that they will be treated poorly, rejected, discriminated against, and devalued within society. Furthermore, negative attitudes are often associated with persons with disabilities, leading the individual to experience limited lifestyle, educational and vocational opportunities, a decline in community participation and a decrease in overall quality of life (Gething, 1992, (Miller, 1996) and (Siller, 1984). In a study

conducted by Fichten and Amsel (1986) college students viewed persons with disabilities as being, unsociable, insecure, helpless, and undemanding (Goldstein & Johnson, 1997). Further research showed that people who were more knowledgeable about disabilities through university training and professional practices held a more favorable attitude than those who had less knowledge. (Chen et.al, 2002; Gething, 1992; Hunt & Hunt 2000). With wide ranging effects students with negative biases may behave inappropriately, these negative effects include the impact on opinions of the intervention team and the public who may limit disability service and redirect resources. The consequences which are dire for people with disability include eroded self esteem and feelings of hopelessness and pessimisms (Tervo, 2004).



A number of factors have been found to influence the attitudes of non-disabled people towards persons with disabilities; these are prior contact with persons with disabilities, ethnic background and university training professional practices, type of disability and gender (Anthony, 1969; Asmus & Galloway, 1985; Barrett & Pullo, 1993; Chan et al., 1988; Eberhardt & Mayberry, 1994; Gething, 1992; Lee, Paterson, & Chan, 1994). In these studies it was shown that people who had prior contact with persons with disabilities gained information which was accurate about the disability itself and thus seemed to be more positive toward persons with disabilities. Boys tend to have more negative attitudes than do girls (Woodard, 1995). They tend to vary with age, although attitudes of non-disabled children toward individuals with disability improve from early childhood through early adolescence. Researchers have also concluded that attitudes vary according to the nature of the disability. They tend to be more favorable towards those who appear normal than towards those who appear abnormal (Beck and Dennis, 1996; Colella, DeNisi, and Varma, 1998).

Research has also shown that these negative attitudes can affect the way that an individual reacts to and works with individuals with disabilities and that attitude can be changed given proper education (Yuker, 1994). It was found by Tucker (1980) on spinal cord injuries that rehabilitation staff attitudes toward the individual with disability were related to outcome. Furthermore the researcher stated that, the literature revealed that staff attitudes may be more crucial in determining the response of an individual to rehabilitation than any other single force. Katz, Hass and Bailey, (1998), have noted that negative attitudes towards persons with disabilities tend to be un verbalized and that reduction of tension and anxiety strategies may take extreme behaviour form such as overt acts of prejudice. Holding these attitudes could be detrimental to an individual with a newly acquired disability. The researcher further stated that levels of anxiety associated in interactions are involved in part of negative attitude formation towards persons with disabilities. For a variety of reasons interacting with people with disability is anxiety provoking for those without disabilities. One of these reasons is that individuals without disabilities are anxious when interacting with a person with disability because of lack of knowledge regarding social outcomes. For instance someone who has never interacted with a person, who is blind, may not be sure as to social cues such as how to shake hands with them, where to walk when walking with them and how to introduce them to others. In this example from the person the anxiety stems without disability not wanting to make a mistake and appearing awkward, emphasizing the role that social expectations and attitudes play (Katz, Hass and Bailey, 1998).

In one of the research done in United States and China on , Attitudes toward people with developmental disabilities in Chinese and American students: the role of cultural values, contact, and knowledge, it was indicated that in general the public held more positive attitudes towards people with physical disabilities than towards people with developmental disabilities (PWDD)



and Psychiatric disabilities. (Chan et.al, 1988; Chan et.al, 2002; Gilfoyle & Gliner, 1985; Gottlieb & Gottlieb, 1977; Voeltz, 1980). It was reported by several researchers that American college students majoring in special education had a more favourable attitudes towards people with developmental disabilities (PWDD) than those with Physical and Psychiatric disabilities. (Wang, Thomas, Chan & Chieng, 2003). There was an inconsistent finding about the gender influences; however some researchers found that women tended to hold a more favourable attitude toward persons with disabilities than men did. (Chen et.al, 2002; Yuker and Block, 1986). Other studies reported that there was no significant difference in attitudes between men and women toward persons with disabilities. (Chan et.al, 1988; Yang, Leung, Wang & Shim, 1996). Interm of influence of ethnic background on attitudes towards persons with disabilities, it was revealed form previous findings that Chinese in Australia, HongKong, Taiwan and U.S where more likely to stigmatize persons with disabilities and to distance themselves was a great desire from those with disabilities compared to other ethnic groups. (Chan et.al, 1988; Chan et.al, 2002; Chen et.al, 2002; Wang et.al; 2003; Westbrook & Legge, 1993; Westbrook, Legge & Pennay, 1993).

### **2.3.2 Attitudes of health profession students towards individuals with disabilities**

Health care professionals' negative attitudes towards persons with disabilities can impact on the quality and range of rehabilitation services offered, and also hinders the development of the therapeutic relationship (Estes et al., 1991, Gething, 1992, & Miller, 1996).

A study was conducted by Estes et al., (1999) which compared the attitudes of American female occupational therapy and medical technology students, to identify the influence that the occupational therapy curriculum had on students' attitudes towards people with a disability. It was indicated in the results that occupational therapy students in their fourth semester of study held significantly more positive attitudes towards persons with disabilities than students studying medical technology (Estes et al., 1991). Stachura and Garven (2003, 2007) in their research studies have also compared the attitudes of occupational therapy students and physiotherapy students, with findings indicating that occupational therapy students held significantly more positive attitudes towards persons with disabilities. The results of these studies suggest that occupational therapy students hold more positive attitudes towards persons with disabilities than students enrolled in non-rehabilitation focused education as well as some health professional students. The reason for this finding could be that the occupational therapy students were taught about disability in the first year of their curriculum, which resulted in positive attitudes towards persons with disabilities (Estes et al., 1991 & Chan et al., 2002).

White and Olsen (1998) also reported that nurses and physiotherapists have a less positive attitude compared to occupational therapists. When investigating the reasons for a negative attitude among first year physiotherapy students, it was found that guilt and discomfort when interacting with persons with disabilities were contributing factors. The nurses had the lowest

mean scores on the ATDP, possibly due to the type of contact they have with individuals with disabilities. The authors posited that educational level could have been linked to the more positive attitudes of the occupational therapists, in that occupational therapists have an increased interaction with PWDs, than the other groups. One theory provided for the negative attitude displayed by nurses towards individuals with disabilities is the absence of training and education (Paris 1993; Shanley and Guest 1995). The aforementioned authors argue that in the absence of training and education it is likely that the nurses retain negative attitudes towards PWDs that are similar to those of the general public. Furthermore, Paris (1993) makes a similar point in relation to doctors' treatment of PWDs.

In contrast, to the findings above regarding Occupational therapy students attitudes, Lyons (1991) compared the attitudes of occupational therapy students and business students from Queensland, Australia, and found that in the scores obtained, there was no significant difference between these two groups of students. However Chan et al (2002) compared the attitudes of occupational therapy students and business students in Hong Kong, and found that occupational therapy students held more positive attitudes than the business students in their first semester and third year of study, the significance of these results were not reported. Although there are some conflicting results it appears from the literature that occupational therapy students tends to have a more positive attitude towards persons with disabilities than other students.

When considering contact with persons with disabilities, students who had previous contact with persons with disabilities and who had received clinical training were found to have more positive attitudes than those who did not have the same opportunities (Biordi & Oermann, 1993; Estes, Deyer, Hansen, & Russell, 1990; Hunt & Hunt, 2000; Lee & Rodda, 1994; Nosse & Gavin,

1991; Oermann & Lindgren, 1995). Another purpose of Lyons (1991) study was to investigate whether students who had contact with persons with disabilities had different attitudes to those who have not had previous contact. The ATDP-A scores for the students who participated in his study were grouped into two categories, depending on whether the student had a “valued social role contact” (such as a close relative) or “other contact” (such as a patient or distant relative). The highly significant results found between the two groups indicate that social role contact leads to more positive attitudes towards people with a disability (Lyons, 1991). It was however suggested that to have a positive impact on students’ attitudes, the contact with persons with disabilities needs to be direct and of an extended duration (Bergman and Hanson, 2000).

## **2.4 Conclusion**

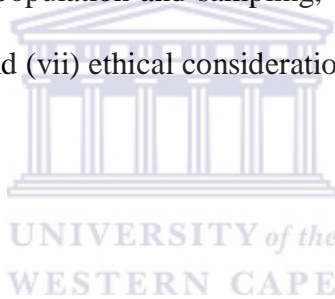
In conclusion studying societal attitudes towards people with disability is important to the field of rehabilitation because individuals with disability incorporate society’s perceptions of disabilities in structuring their self identity which in turn influences their psychological well being (Smart, 2001). Additionally negative societal attitude toward persons with disabilities can form invisible barriers to their successful rehabilitation, thereby leading to or supporting negative expectations that might result in their marginalization, isolation and victimization (American Psychological Association, 1998; McMahon, West, Lewis, Armstrong and Conway, 2004; Teruo, Palmer and Redinius, 2004). Research has pointed to the subtle transmission of negative attitudes towards individuals with disabilities through interactions and how these attitudes could influence rehabilitation outcomes, interpersonal relationships and school success (Brillhart, Jay, & Wyers, 1990; Durlak, Rose, & Bursuck, 1994; Gething, LaCour, & Wheeler, 1994; Liberty, 1992; Merchant & Gajar, 1997; Tucker, 1980; White & Olson, 1998).

## **CHAPTER THREE**

### **METHODOLOGY**

#### **3.1 INTRODUCTION**

In this chapter the researcher discusses the research setting as well as the methodology used in this study. The presentation follows the subheadings which are: (i) the research settings, (ii) the research design, (iii) the research population and sampling, (iv) study instruments, followed by (v) procedure, (vi) data analysis, and (vii) ethical consideration.



#### **3.2 RESEARCH SETTING**

The study was conducted in the United Republic of Tanzania, a country in the eastern part of Africa. The estimated population of Tanzania is approximately 38,329,000 with an estimated growth rate of 2% as in 2006. The Tanzania Disability Survey (2008) showed that prevalence of disability was 7.8%. Some 25% of the entire population is directly or indirectly affected by disability (UN and World Bank 1994). The study was conducted at the Kilimanjaro Christian Medical Centre (KCMC); this is a referral and consultant hospital, which was established in 1971 by the Good Samaritan Foundation (GSF) under the Evangelical Lutheran Church of Tanzania. The hospital has a bed capacity of 450. The hospital serves as a national teaching hospital for a variety of medical and paramedical professions. Students come from various

countries within Africa, Asia, America and Europe. The Institute of Allied Health Sciences has different programmes, namely Physiotherapy, Occupational Therapy, Medical records, Nursing, Optometry, Medicine, Anesthesia, Dermatology, Orthopedic Technologies (TATCOT), Assistant Medical officers and Radiology. Students come from various countries within Africa, Asia, America and Europe. The interaction of the students with persons with disabilities is limited or nonexistent during their training, with only the physiotherapy students visiting the persons with disabilities in the communities on an adhoc basis. There are 1,400 staff members working there.

### **3.3 RESEARCH DESIGN**

A descriptive, explorative quantitative research design was used to collect data in the study. This study design assists with exploring a new area, about which little is known in the local context. In an exploratory survey one sets out with a few preconceptions in order to examine the phenomenon from many points of view, looking for the insights and new ideas that will not only explain what is happening, but also what is hindering the acceptance of the new technique (Peil, Mitchell and Rimmer 1982). The phenomenon that was investigated in the study was the attitudes of health science students toward persons with disabilities. The design was also cross sectional. A cross-sectional study design is used to describe the status of phenomena at a fixed point in time and is economical and easy to manage within a limited time frame (Polit, Beck and Hungler, 2001). This research design was appropriate for this study, as it explored the attitudes of health science students towards people with physical disabilities at KCMC in Tanzania at a given time, a phenomenon that has not been explored previously.

### **3.4. STUDY SUBJECTS**

#### **3.4.1. Study population**

The study population included all 450 students of Allied health sciences at KCMC.

#### **3.4.2 Sampling**

A convenient sampling method was applied to select the sample for the study (De Vos, Strydom, Fouché & Delpont, 2005). Convenience sampling is a type of nonprobability sampling which involves the sample being drawn from that part of the population which is close to hand. That is, a sample population selected because it is readily available and convenient. A disadvantage of this sampling method is that it cannot be generalised to the total population. All physiotherapy, occupational therapy, nursing, medical and optometry students were recruited to partake in the study. The study sample was therefore envisaged to be 287 students (physiotherapy 50, nursing 99, optometry 37, occupational therapy 45 and medicine 60). A convenient sampling was specifically used for this study in tune with what was used in previous studies to assess attitudes of exercise science students (Chambliss et al., 2004), dietetics students (Berryman et al., 2006) and nutrition students (McArthur, 1995).

### 3.5 INSTRUMENTATION

The Attitude Toward Disabled Persons Scale (Appendix E) was used to collect the data. The Attitude Towards Disabled Persons Scale (ATDP); was designed as a measure of attitudes towards individuals with disabilities (Yuker, Block, & Campbell, 1960). Three versions of the Attitudes Toward Disabled Persons Scale (ATDP, form O, form A, and form B) have been developed (Yuker & Block, 1986). Form O is the original form and contains 20 items (Yuker, Block, & Campbell, 1960). Forms A and B contain 30 items each (Yuker, Block, & Young, 1970). All three versions (Forms O, A, and B), according to the test manual, are comparable to each other and can be utilized interchangeably (Yuker & Block, 1986). The Attitude Towards Disabled Persons scale was developed to measure attitudes held by both disabled and able bodied persons (Yuker & Block, 1986), furthermore the scale was designed to measure the attitudes of able bodied people towards disabled people and the attitudes of disabled people towards other disabled people, or themselves. Research participants respond to test items by indicating their agreement or disagreement with statements on the instrument according to the six item Likert scale that ranges from -3 I “Disagree Very Much” to +3 “I Agree Very Much”. The ATDP-O was used in this study, this scale was selected for the study because of its ease of administration and it had been carefully studied as an instrument measuring generalized attitude toward persons with disabilities (Antonak & Livneh, 1988). The ATDP-O has been widely used to measure attitudes (Yuker, Block & Young, 1966; Antonak, 1980; Antonak, 1981; Hafer, Wright, & Godley, 1983; Cannon & Szuhay, 1986; Hagler, Yuker & Block, 1986; Vargo & Semple, 1987; Yuker & Hurley, 1987). Although this scale was developed many years ago it is still used to



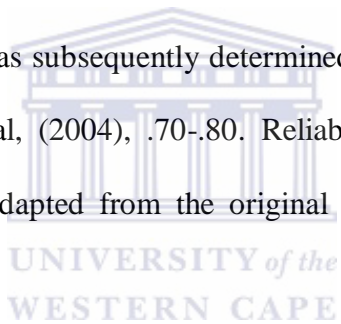
assess the attitudes of especially students towards persons with disabilities (Mantziou et al., 2002; Ogiwara and Yoneyama, 2006). The scale is scored in the following manner (Haba & Ogiwara, 2001): the signs of items 2, 5, 6, 11 and 12 are changed. The sum of the items for the individual participants is determined. Following this, the sign of the sum is reversed with total scores which could range from -60 to +60. To get rid of the negative values, a constant of 60 is added to all the scores. The total scores ranged from 0, indicative of a very negative attitude, to 120, indicative of a very favourable attitude. The scale takes approximately 15 minutes to complete.

In addition to administering the ATDP scale the participants were also requested to complete a questionnaire (Appendix F), adapted from a questionnaire designed by Reynol, (2002), who assessed the ability of an online training programme's ability to change attitudes towards students with disabilities. The questionnaire used by Reynol, (2002), contained demographic questions and 8 questions from the Contact With Disabled Persons Scale (CDP) which was originally developed by Yurker and Hurley, (1987). Reynol, (2002) adapted the original CDP scale and only included 8 questions out of the original 20 as the other questions were found redundant and the remaining 8 were sufficient to determine contact with disabled persons. In the current study the questionnaire used by Reynol (2002), was adapted as the demographic questions differed but the 8 interaction questions stayed the same. When completing the CDP scale participants were requested to indicate their level of contact with disabled people on a Likert scale. Responses were scored from 1 "never", 2 "once or twice", 3 "a few times", 4 "often" or 5 "very often". The scores ranged between 20 and 100. Scores between 20 and 60

indicated low contact, while scores between 61 and 100 indicated high contact. Therefore higher scores reflected greater contact while lower scores reflected less contact.

### **3.5.1 Reliability of the Attitude Towards Disabled People Scale**

Scores on the ATDP have shown acceptable split half reliabilities ranging from 0.78 - 0.81 and *alpha* estimates ranging from 0.79 - 0.89. Antonak (1980) found a stable, two-factor structure on scores on the ATDP that explained 77% of the variance in scores. Stability has been shown to be good in studies over a five week period, with scores exhibiting a test–retest reliability of .84; however, this estimate drops to .68 in studies of over four months (Yuker & Hurley, 1987). The internal consistency of the scale was subsequently determined by (Lee et al.,1994), .90, Chan et al, (2002) .78-.86 and Tervo et al, (2004), .70-.80. Reliability estimates were computed by Reynol, (2002) for the 8 items adapted from the original CDP scale. These reliability tests yielded a Cronbach's *alpha* of .87.



### **3.5.2 Validity of the Attitude Towards Disabled People Scale**

Using a sample of 326 undergraduate and graduate students, Yuker and Hurley's (1987) reported evidence of the validity of the ATDP illustrates that scores on the ATDP show moderate to high correlations with other measures of attitudes towards individuals with disabilities (such as the Interaction with Disabled Person Scale; IDP; Gething, 1994) ranging from .54 to .98. There is evidence of correlations with measures of mental hygiene ideology and attitudes towards mainstreaming individuals with disabilities. Furthermore, the ATDP correlates negatively (-.40) with a measure of prejudice and social restrictiveness (Yuker & Hurley, 1987). The adaptation of

the CDP scale was done by a group of experts which included a PhD student and supervisors (Reynol, 2002) which provides an indication of the face and content validity of the scale.

### **3.6 PROCEDURE**

Permission to conduct the study was obtained from the necessary parties see 3.8. An appointment was made with the heads of the departments of Physiotherapy, Medical, Occupational Therapy, Optometry and Nursing, in order for the researcher to explain the aim and objectives of the study to them. At this meeting an appropriate time for the researcher to conduct the study with the respective students was decided. At the appointed time the researcher visited each department and collected the data. Data was collected over a four week period. The researcher explained the aim of the study to the students and invited them to partake. The students who were willing to partake in the study signed the consent form (Appendix D) and completed the questionnaire. The students took at least 15 minutes to half an hour to complete the questionnaire. Once the questionnaires were completed the students placed them in one box and the informed consent in another box (Appendix C). The researcher kept a record of the departments and year of study of the students who completed the questionnaires, to ensure that students from all departments and all levels had the opportunity to complete the questionnaire.

### **3.7 DATA ANALYSIS**

The Statistical Package for the Social Sciences (SPSS) version 15.0 was used for capturing and analysis of the data. Descriptive statistics was used to summarise the data. The descriptive data was presented using frequency tables and was expressed as percentages, means and standard

deviation, or medians and quartiles depending on the distribution of the data. The t-test and ANOVA was used to determine the relationship between various socio demographic characteristics such as programme, year of study and gender, and attitudes. For statistical analysis, categories with two groups were analysed with Student's t-test, while categories with three or more subgroups were analysed using one-way ANOVA with Tukey's post hoc test. Normality of the data was verified using the Kolmogorov-Smirnov test. Significance is achieved when  $p < 0.05$ .

### **3.8 ETHICAL CONSIDERATION**

Permission to conduct the study was obtained from the Higher Degrees Committee and the Senate Research Grants and Study Leave Committee at the University of the Western Cape (Appendix B). Permission was granted from Ministry of Education, Research and Ethics Department in Tanzania (Appendix A). The aim of the study was explained to the participants and written informed consent was obtained from them. Participation was voluntary and the participants were allowed the opportunity to withdraw from the study at any time. Information obtained was handled with confidentiality and anonymity. No names were included on the questionnaires therefore data could not be linked back to a specific person. The results of the study will be made available to the necessary stakeholders.

### **3.9 SUMMARY**

This chapter describes the research setting, study population, study design and sampling procedures. Furthermore this chapter describes and outlines relevant methodological issues such as methods of data collection, reliability and validity of the instrument and data analysis. The results of this analysis were tabulated and are presented in chapter four.



## **CHAPTER FOUR**

### **RESULTS**

#### **4.1 INTRODUCTION**

The results of the study are presented in this chapter under the headings “description of participants”, “attitudes of health science students towards persons with disabilities” and “the interaction of health science students towards persons with disabilities”. Two hundred and fifty (250) questionnaires were distributed to health science students (physiotherapy, occupational therapy, medicine, nursing and optometry), from which a total of only one hundred and eighty-two (182) were returned, yielding a response rate of 72.8%. Certain questionnaires had missing information which was taken into consideration in the presentation of the results.

#### **4.2 DESCRIPTION OF PARTICIPANTS**

##### **4.2.1 Demographic characteristics of the participants**

Table 4.1 illustrates the socio-demographic characteristics of the participants. The study results indicate that there are a few more females (58.2%) than males (41.2%), with the majority of the participants falling between the age range of 20 to 29 years. The highest percentage (39.0%) of the students who responded were in their second year of study. The highest response rate to the

questionnaire was from the medicine students (29.1%), followed by the physiotherapy students (27.5%).

**Table 4.1: Demographic characteristics of pre-professional health students**

<b>Category</b>	<b>Number of Participants</b>	<b>Percentage (%)</b>
<b>a) Sex</b>		
Male	75	41.2
Female	106	58.2
No response	1	0.5
<b>TOTAL</b>	<b>182</b>	<b>99.9</b>
<b>b) Age</b>		
10–19	3	1.6
20–29	164	90.1
30–39	8	4.4
40–49	3	1.6
No response	4	2.2
<b>TOTAL</b>	<b>182</b>	<b>99.9</b>

**c) Ethnicity**

Indian	3	1.6
Black	172	94.5
Asian	3	1.6
White	2	1.1
No response	2	1.1
<b>TOTAL</b>	<b>182</b>	<b>99.9</b>

**d) Programme**

Physiotherapy	50	27.5
Occ. Therapy	11	6.0
Medicine	53	29.1
Nursing	35	19.2
Optometry	30	16.5
Not specified	3	1.6
<b>TOTAL</b>	<b>182</b>	<b>99.9</b>



**e) Year of Study**

1 <sup>st</sup>	52	28.6
2 <sup>nd</sup>	71	39.0
3 <sup>rd</sup>	43	23.6
4 <sup>th</sup>	11	6.0
No response	5	2.7
<b>TOTAL</b>	<b>182</b>	<b>99.9</b>



**f) Number of respondents with a Disability**

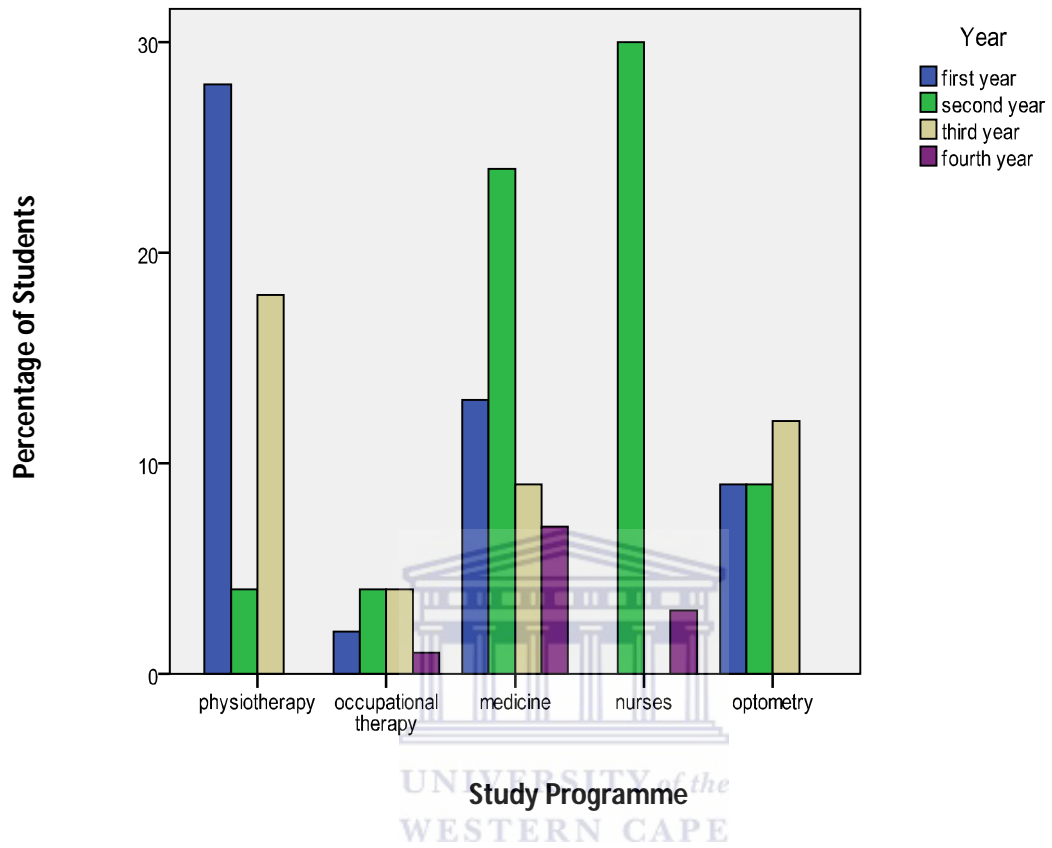
Yes	4	2.2
No	175	96.2
No response	3	1.6
<b>TOTAL</b>	182	100

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**4.2.2 Distribution of participants according to year and programme**

Figure 4.1 illustrates the distribution of the participants according to programme and year of study distribution. With regards to nursing only students in the second year of study responded. The physiotherapy students, were mainly in their first year and the medical students in their second year of study .

**Figure 4.1: Distribution of participants per programme and year of study**



### **4.3 ATTITUDES OF HEALTH SCIENCE STUDENTS TOWARDS PEOPLE WITH DISABILITY**

Table 4.2 illustrates the attitudes of the health science student towards people with disability. The majority (92.9%) of the participants felt that you have to be careful what you say when you are with people with a disability. Furthermore (83%) of the participants felt that the people who have disabilities feel sorry for themselves, that these persons with disabilities worry a great deal (73.1%) and that they tend to keep to themselves much of the time (62.6%). The students perceived that the persons with disabilities feel that they are not as good as other people (77%). A lower percentage (42.3%) of the students perceived that severely disabled people are not harder to get along with than the individuals with minor disabilities, and 58.2% of the students perceived that persons with disabilities are as happy as the non-disabled people. While a greater percentage of participants perceived that people with disability (PWDs) feel sorry for themselves and therefore exhibit a tendency to stay aloof, a similar proportion of them also agreed that PWDs are as happy as non-disabled people.

In addition, 83% and 90.1% of the participants perceived that physically disabled people are as intelligent as non-disabled people, and that disabled people are the same as anyone else, respectively. In addition 64.9% agreed that there should be special schools for children with disabilities and 58.8% felt that PWDs should live and work in special communities.

**Table 4.2 Attitudes of health science students towards people with disability (n=182)**

Questions	Characteristics	Frequency	%
Parents of disabled children should be less strict than other parents?	Disagree	94	51.7
	Agree	87	47.8
	No response	1	0.5
Physical disabled people are as intelligent as non disabled people?	Disagree	31	17.0
	Agree	151	83
Persons with disabilities are easier to get along with than non disabled ones?	Disagree	76	41.8
	Agree	105	57.7
	No response	1	0.5
Most disabled people feel sorry for themselves?	Disagree	31	17
	Agree	151	83
Disabled people are the same as anyone else?	Disagree	18	9.9
	Agree	164	90.1
There should not be special schools for children with disability?	Disagree	118	64.9
	Agree	64	35.1
It would be best for disabled person to live and work in special communities?	Disagree	75	41.2
	Agree	107	58.8
It is up to the government to take care of people with disability?	Disagree	86	47.3
	Agree	96	52.7
Most disabled people worry a	Disagree	48	26.4

great deal?	Agree	133	73.1
No response		1	0.5
People with disability should not be expected to meet the same standard as non disabled people?	Disagree	127	69.8
	Agree	54	29.7
No response		1	0.5
Persons with disabilities are as happy as the non disabled people?	Disagree	76	41.8
	Agree	106	58.2
Severely disabled people are not harder to get along than those with minor disabilities?	Disagree	104	57.1
	Agree	77	42.3
No response		1	0.6
It is almost impossible for a disabled person to lead a normal life?	Disagree	123	67.6
	Agree	59	32.4
You should not expect too much from persons with disabilities?	Disagree	120	66
	Agree	62	34
Persons with disabilities tend to keep to themselves much of the time?	Disagree	68	37.4
	Agree	114	62.6
Persons with disabilities are more easily upset than non disabled people?	Disagree	61	33.5
	Agree	119	65.4
No response		2	1.1
Persons with disabilities cannot have a normal social life?	Disagree	135	74.2

	Agree	47	25.8
Most people with disability feel that they are not good as other people?	Disagree	42	23.1
	Agree	140	76.9
You have to be careful what you say when you are with people with disability?	Disagree	12	6.6
	Agree	169	92.9
No response		1	0.5
Disabled people are often grouchy?	Disagree	58	31.9
	Agree	115	63.2
No response		9	4.9



#### **4.4 OVERALL MEAN ADPT SCORES FOR THE STUDY SAMPLE**

The mean (SD) score on the ATDP scale was 59.01 (12.3), with scores ranging from 18 to 90 (out of a possible maximum of 120).

#### **4.5 RELATIONSHIP BETWEEN STUDENT ATTITUDES AND DEMOGRAPHIC CHARACTERISTICS**

The mean scores for each of the groups are shown below in Table 4.3. Errors represent standard errors of the mean unless otherwise stated. In terms of gender, males scored statistically significantly higher than females ( $p < 0.05$ ). Within the category of programmes, however, the physical therapy and optometry students scored statistically significantly higher than the medical

or nursing students. Furthermore, first-year and third-year students of all programmes scored statistically significantly higher than fourth-year students. However the age, ethnicity, and having a disability do not appear to play a role in attitudes.

**Table 4.3 Mean total scores for pre-professional health students**

Category	Mean Score	p-value
<b>a) Sex</b>		
Male	61.67 ± 1.35	< 0.05*
Female	57.19 ± 1.18	
<b>b) Age</b>		
10-19	55.67 ± 1.67	> 0.5
20-29	59.33 ± 0.97	
30-39	61.88 ± 4.13	
40-49	53.33 ± 5.33	
<b>c) Ethnicity</b>		
Indian	66.33 ± 3.18	> 0.2
Black	58.83 ± 0.95	
Asian	68.33 ± 5.24	
White	N/A	
Other	N/A	
<b>d) Programme</b>		
Physiotherapy <sup>a</sup>	63.24 ± 1.67	< 0.001*
Occ. Therapy <sup>b</sup>	61.30 ± 2.22	
Medicine	55.75 ± 1.70	
Nursing	53.34 ± 2.10	

Optometry 64.57 ± 1.71

**e) Year of Study**

1 <sup>st</sup>	60.15 ± 1.48	< 0.01*
2 <sup>nd</sup>	57.77 ± 1.57	
3 <sup>rd</sup>	63.14 ± 1.69	
4 <sup>th</sup> <sup>c</sup>	49.55 ± 3.30	

**f) Disability**

Yes	58.25 ± 3.57	> 0.2
No	59.23 ± 0.92	

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\* Statistically significant

<sup>a</sup> Significant compared to medicine (p < 0.01) and nursing (p < 0.001)

<sup>b</sup> Significant compared to medicine (p < 0.01) and nursing (p < 0.001)

<sup>c</sup> Significant compared to 1st Year (p < 0.05) and 3rd Year (p < 0.01)

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#### **4.6 CONTACT OF PARTICIPANTS WITH PEOPLE WITH DISABILITY**

The results revealed that 26.9% of the students reported that they very often had had a long talk with a person with a disability (PWD), and 15.9% of the students reported that they “very often” had eaten a meal with a person with a disability. Furthermore, 17.6% of the students responded that PWDs visited their home only a few times and 22.5% of the students stated that they met a



person with a disability whom they liked only a few times. In terms of how often the students felt that the behaviour of PWDs was quite annoying and disturbing, 2.7% responded “few times”. Approximately twenty five percent of the participants responded that they often had a pleasant experience when interacting with a person with a disability while 14.8% responded that they often had an unpleasant experience when interacting with a person with a disability. These results are presented in Table 4.4. Only 177 students’ responses were included in the analysis as five of the questionnaires had more than 10% of the responses missing.

**Table 4.4 Frequency of the time student spent around people with disability (n= 177).**



	Number(%)
<b>How often have you had a long talk with a person with disability?</b>	
never	11(6.2)
once or twice	22(12.4)
few times	48(27.1)
often	47(26.6)
very often	49(27.7)
<b>How often have you eaten a meal with a person with disability?</b>	
never	23(13.0)
once or twice	28(15.8)
few times	60(33.9)
often	37(20.9)
very often	29(16.4)
<b>How often have you discussed your life or problems with a person with disability?</b>	
never	41(23.2)

once or twice	36(20.3)
few times	39(22.0)
often	32(18.1)
very often	29(16.4)

**How often has a person with disability visited your home?**

never	21(11.5)
once or twice	42(23.1)
often	42(23.1)
very often	40(22.0)
few times	32(17.6)

**How often have you met a person with disability that you like?**

never	33(18.6)
once or twice	20(11.3)
often	41(23.2)
very often	41(23.2)
few times	42(23.7)



**How often have you been annoyed or disturbed by the behaviour of a person with disability?**

never	102(57.7)
once or twice	25(14.1)
often	34(19.2)
very often	11(6.2)
few times	5(2.8)

**How often have you had a pleasant experiences interacting with a person with disability?**

never	27(15.3)
once or twice	33(18.6)
often	46(26.0)
very often	41(23.2)

few times 30(16.9)

**How often have you had unpleasant experiences with person with disability?**

never 96(54.2)

once or twice 26(14.7)

often 27(15.3)

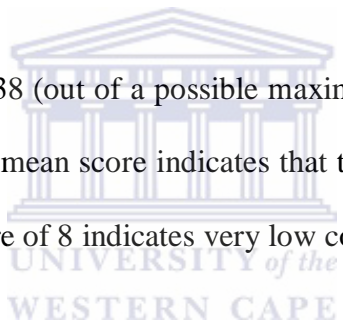
very often 19(10.7)

few times 9(5.1)

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**4.7 OVERALL MEAN CONTACT SCORES FOR THE STUDY SAMPLE**

The total scores ranged from 8 to 38 (out of a possible maximum of 40). The mean score of the participants was 22.72 (6.38). The mean score indicates that the participants have slightly above average contact with PWD. A score of 8 indicates very low contact, while 38 indicates very high contact.



**4.7 RELATIONSHIP BETWEEN MEAN CONTACT SCORES AND ATTITUDE SCORE AND DEMOGRAPHIC CHARACTERISTICS.**

No association was found between the mean attitude and contact scores ( $r=0.04$ ). The mean scores for each of the demographic characteristics are shown in table 4.5. Errors are standard errors of the mean unless otherwise stated. The highest score possible was 40, with 20 being a neutral score. Other ethnicities scored significantly higher, and whites scored significantly lower than other groups ( $p < 0.005$ ). However, the low number of students in these two population

groups should be taken into account when considering these results. Students with disability had a significantly better contact experience than students without disabilities ( $p < 0.05$ ).

**TABLE 4.5 Mean contact scores of the participants**

Category	Mean Score	<i>p</i> -value
<b>a) Sex</b>		
Male	21.99 ± 0.73	> 0.2
Female	23.22 ± 0.64	
<b>b) Age</b>		
10-19	25.00 ± 1.00	> 0.3
20-29	22.48 ± 0.51	
30-39	25.50 ± 2.22	
40-49	26.67 ± 0.67	
<b>c) Ethnicity<sup>a</sup></b>		
Indian	17.33 ± 3.33	< 0.005*
Black	22.90 ± 0.48	
Asian	24.67 ± 3.71	
White	8.00 ± 0.00	
Other	31.00	
<b>d) Programme</b>		
Physiotherapy	22.90 ± 0.82	> 0.5
Occupational Therapy	20.27 ± 2.27	
Medicine	23.09 ± 0.86	

Nursing	22.82 ± 1.09
Optometry	22.52 ± 1.38

**e) Year of Study**

1 <sup>st</sup>	22.79 ± 0.88	> 0.5
2 <sup>nd</sup>	22.06 ± 0.82	
3 <sup>rd</sup>	23.16 ± 0.89	
4 <sup>th</sup> <sup>c</sup>	24.55 ± 1.56	

**f) Disability**

Yes	34.75 ± 2.93	< 0.05*
No	22.44 ± 0.47	

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\* Statistically significant



**4.8 SUMMARY OF RESULTS**

This study aimed to look at the attitudes of health science students towards PWDs. The results highlighted that there were more female health science students than males, the majority of whom were in their second year of the nursing programme. The study found that the relationship between attitudes and gender, and the year of study and programme of study, had a moderate to strong correlation. No association was found between attitude and contact mean scores.

## CHAPTER 5

### DISCUSSION

#### 5.1 Introduction

This chapter discusses the findings of the study, and compares the results with results of similar studies. The attitudes of students towards PWDs are firstly discussed, together with the influence of demographic variables on their attitudes. This is followed by a discussion of the interaction of students with PWDs.



#### 5.2 Attitudes towards PWDs

The Attitude toward Disabled Persons (ATDP) scale was used to measure the attitudes of the health science students who were part of the current study. The mean score for the total population was 59. The study results revealed that overall, the students at KCMC had neutral to negative attitudes towards PWDs. This is based on the fact that the scores of the ATPD range from 0-120, the mean score for this study falls below the average of 60. In addition, the mean score reported in the current study was slightly lower than what was recorded in previous studies. In a study conducted by Tervo et al (2004) the authors reported mean ATPD scores of 78.37 for nursing students, 77.77 for medical students and 80.98 for allied health professional students. The differences in the ATDP scores when comparing the results of the current with those of Tervo et al (2004) could not relate to gender or age as the results for these demographic variables

were similar. Both studies included more females than males. In the current study the majority of the students were in the age group 20-29 years while the mean age of the students who were part of the study conducted by Tervo et al (2004), were 27.57. Gender and age have been reported to affect attitudes towards disabled people. The lower ATDP scores found in the current study could however be as a result of cultural differences of the students. It has been previously reported that Caucasians demonstrated a more positive attitude towards disabled people than other population groups (Paris, 1994). The study conducted by Tervo et al (2004) had a much greater number of Caucasian students than the current study. It has also been reported by the Ministry of Labour Youth and Sports (2008), that PWDs in Tanzania are viewed as worthy of pity. The prejudice and negative attitude towards them is mostly culturally motivated for example; the birth of a child with a disability is often associated with superstitious deeds or a multitude of misfortunes. The neutral to negative attitudes reported among the students in the current study could have been influenced by the views of the society regarding PWDs. In a study conducted in Zambia (Sekala, 2010), PWDs also expressed experiencing negative attitudes from community members who thought that their disabilities were a result of evil spirits.

The negative attitudes found in the present study could be due to a lack of sensitivity and/or insufficient exposure in the area of disability and rehabilitation. This could be quantified by various curricula of different training programmes at KCMC where in Occupational and Physiotherapy programmes rehabilitation starts to be taught in first and second years of training respectively. Thus one would expect students of these programmes to have a relatively good knowledge, and therefore, positive attitudes towards PWDs. On the other hand, students in Medicine and Nursing programmes appeared to have a relatively negative attitude towards PWDs probably due to the absence of subjects that covers rehabilitation of PWDs in their

training curricula. Surprisingly Optometry students appeared to have positive attitude towards PWDs whilst their curriculum covers only visual impairment. Although the curricula of the Optometry students does not specifically cover rehabilitation it could be that their interaction with people who are visually impairment or are completely blind as part of their training could have resulted in this positive attitude.

In the present study the majority (90.1%) of the respondents felt as though physically disabled people are as intelligent as non-disabled people and that disabled people are the same as anyone else, respectively, approximately one-half of these respondents also agreed that there should be special schools for children with disabilities and that PWDs should live and work in special communities. From the researcher's perspective, it appears as though the participants are not ready to integrate PWDs into society despite the fact that a greater percentage agrees to PWDs being able to lead a normal life. Such an attitude amongst the KCMC student participants warrants extra disability training and education in the curricula, so that they can be more accepting and tolerant of PWDs. While a greater percentage of respondents felt as though PWDs felt sorry for themselves and therefore exhibited a tendency to stay aloof, a similar proportion of them also surprisingly agreed that PWDs are as happy as non-disabled people. This would represent a contradiction to the former statements, which could possibly warrant further investigation in other research papers.

This study additionally investigated the influence of demographic factors of the participants on their attitudes towards disabled people. The factors that are discussed below include gender, age, field of study, and year of study.



### **5.2.1 Gender and Age**

In the current study the mean score for males (61.67) was statistically significantly greater than that of females (57.19). This is different to what was previously reported. Studies have found either no impact of gender or a slight effect of gender showing that women have more positive attitudes towards PWDs (Yuker & Block, 1986). The results of the current study should however be taken with care as the result could be due to the unequal number of males and females (Budish, 2004).

Findings from a study conducted by Yuker & Block (1986) revealed that age did not have a significant impact on attitudes towards PWDs. However, the authors postulated that this finding may have actually been attributed to the small age range of the participants. The participants' age range was still not a determining factor that affected attitudes in the present study, despite having widened the age range. The participants aged 30–39 had a more positive attitude than the rest of the group. It is difficult to explain why although one can deduce that older students have relatively “long” exposure in living with PWDs; or else, with maturity, they develop compassion with PWDs, thus their attitudes becomes positive. It could also be that mature students had previous work experience where they could have interacted with PWD thus resulting in a more positive attitude.

### **5.2.2 Field of study**

The present study showed that students of Optometry and Physiotherapy had more positive attitudes towards PWDs as compared to students from other health sciences programmes. The

below-mentioned numbers therefore revealed a strong correlation between student attitudes and type of health programme as explained in the following paragraphs.

Tervo, Palmer and Redinius (2003) revealed that overall, health science students held less positive attitudes than the Scale of Attitudes towards Disabled Persons (SADP) norms, and that this was found especially with the nursing students. This finding is still in keeping with the current study, given that students of Optometry (64.57) and Physiotherapy (63.24) scored significantly higher on the ATPD scale in comparison to those of Occupational Therapy (61.3), Nursing (53.34) and Medicine (55.75), in descending order of mean scores.

On the other hand, a cross-sectional study by Stachura and Garven (2003) concluded that in comparison with Physiotherapy students, Occupational Therapy students had the most positive attitudes towards PWDs at the start and finish of their courses. While this finding may seem to contradict the high ATDP score for physiotherapy students in the current study, it should be noted that firstly the number of occupational therapy student participants was the least in comparison (27.5% vs. 6%) and secondly there was still a statistically significant mean score for positive attitudes amongst the occupational therapy students which was very close to that of the physiotherapy students (63.24 vs. 61.3). While the reason for the above inclination is unknown, the present study researchers caution the reader to a higher number of Physiotherapy student participants as compared to other professions. This should henceforth be taken as a limitation of the present study methods and findings. Tervo, Palmer and Redinius (2003) postulate that the nursing curriculum may not be conducive to an accepting and tolerant attitude towards PWDs, as compared to curricula concerned mainly with rehabilitation which include but are not limited to physiotherapy and occupational therapy.

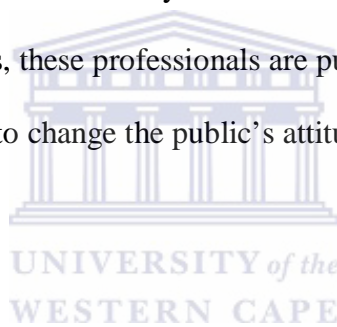
#### 5.2.4 Year of study

Attitudes towards PWDs are reported to be improved with increased knowledge and education regarding disability issues (Gething, 1984, and Kirchman, 1987). While negative attitudes are based on the lack of knowledge (Westbrook, 1993), Al-Abdulwahab and Al-Gain (2003) explain that whether or not a person harbours a negative or positive attitude towards PWDs depends on the perceptions held by the person and the behaviour he or she expresses relating to these perceptions. Anderson and Antonak (1992) further state that persons who have less frequent and less intimate contact with PWDs are more likely to develop stereotypical negative attitudes. Similarly, Stachura and Garven (2003) also tracked physiotherapy and occupational therapy students throughout their programme, and concluded that the more contact the students had with disabled people, the more positive their attitudes.

It therefore appears that health science students in their third year are more aware of PWDs from the knowledge that they have gained and the contact they have made with them in clinical practice. The students in their second year are in the awareness stage, such that while their curriculum familiarizes them of the issues surrounding PWDs, they still do not have much contact with the same due to absence of clinical practice. The fourth year students who were found to have the least positive attitudes towards PWDs are likely trying to cope with the behaviours of PWDs in that they are exposed to challenging situations during clinical practise and have not yet mastered any coping strategies. The first year students, on the other hand, have not had any meaningful exposure to PWDs and the writer thereby postulates that since they have just begun the health sciences program, and have likely chosen it due to their positive attitude

towards PWDs, they are in a stage whereby there is more sensitivity training and less exposure to real clinical challenges.

The idea of having a cadre of mainstream nurses and therapists with expertise and special interest in working with patients who have a learning disability, for example, flows from the findings above. They can act as mentors and advisers to their colleagues and the students (Eastern Health and Social Service Board, 1998). The social cognitive model warns that individuals without disabilities prefer to work and have better attitudes towards people with physical rather than emotional or social disabilities (Corrigan et al, 2000). Therefore, advocating for the rights of PWDs early in the curricula may avoid unnecessary negative attitudes. This is especially important if as graduates, these professionals are put in charge of working with various community policy makers to change the public's attitudes, beliefs and behaviours towards PWDs.

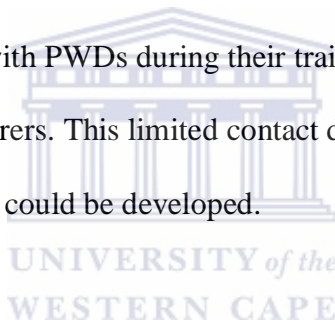


### **5.3 Contact of participants with persons with disabilities**

It has been previously reported that previous contact with PWDs resulted in a more positive attitude (Hunt & Hunt, 2000). In the current study the mean score of the participants was 22.72 indicating a slightly above average contact. This result could be linked to the low attitude score found in the current study. The present study showed that healthcare professional students at KCMC in Tanzania had an overall negative attitude towards PWDs. No association was however found between contact and attitude scores ( $r=0.04$ ). In the current study students with

disability had a significantly better contact experience than students without disabilities ( $p < 0.05$ ). Those who have no concept of what disability entails, and have not made any previous contact or attempt to learn, are more subject to form a negative perception concerning beliefs about persons with disability. Anderson and Antonak (1992) stated that persons who have less frequent and less intimate contact with PWDs are more likely to develop stereotypical negative attitudes. The participants with disabilities could have had more contact with others with a disability which could have resulted in a more positive attitude towards them.

Besides having a disability none of the other variables were significantly associated with contact. This finding could once again be linked to the fact that the students at KCMC do not have sufficient opportunity for contact with PWDs during their training. Students at KCMC only visit PWDs once a week with their lecturers. This limited contact does not allow for sufficient interaction where positive attitudes could be developed.



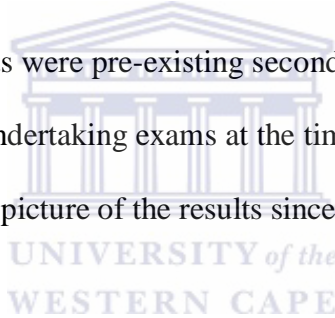
Although previous contact with PWDs results in a more positive attitude it was surprising to note that students in their fourth year of study showed a less positive attitudes towards PWDs than third and first year students. The exact cause is unknown, however; the researcher postulates that the fourth year students of the selected health sciences may have been exposed to challenging situations in their previous placements. Knowledge and skills obtained in the classroom curriculum may not have prepared the students for these situations and emphasized appropriate coping strategies. It should be noted that the type of contact to which students are exposed, may also impact on their attitudes (Gething, 1993). The findings of this study warrant further research on the effects of nature and type of contact with PWDs, and exposure to challenging situations, on the attitudes of health science students toward PWDs.

Limitations of this study should be taken into consideration such that future

## **STUDY LIMITATIONS**

The present study has several limitations:

- A conveniently selected sample was used in this study. The sample included health science students from one institution only. As a result generalization to other health science students is limited.
- The expected number of students was 200-250 but only 182 health science students responded. Time constraints were pre-existing secondary to students being away on fieldwork practice and/or undertaking exams at the time. The students who were away for fieldwork distorted the true picture of the results since they could have had influence to the obtained picture.
- It is possible that the participants gave socially desirable responses. For example, optometry students seemed to have more positive attitude towards PWDs whilst one would have expected physiotherapy and occupational therapy students to have more positive attitude with PWDs. This study did not control for the social desirability response, thereby setting a bias for spurious effect.
- The study design and analyses of data was done cross-sectionally. This limits the ability to make causal inferences. Participants who indicated a negative attitude will not necessarily continue to do so. Caution should be exercised when interpreting the results of this cross sectional study in the absence of follow-up data.



Future studies should therefore be conducted to address these concerns.

## **SUMMARY**

This chapter discusses the findings of the study as it pertains to a thorough literature review and the researchers' reasoning for attitudinal differences among health science students towards PWDs. Limitations of the study are also presented, thereby warranting further research on the same. The findings of this study are consistent with prior research which concludes the positive effects of education, supported contact and background experiences, on health science students' attitudes towards PWDs.



## **CHAPTER SIX**

### **SUMMARY, CONCLUSION AND RECOMMENDATION**

#### **6.1 INTRODUCTION**

The author summarizes major issues raised in the study in this chapter. The conclusion arrived at and the recommendations from the outcomes of this study are also presented.

#### **6.2 SUMMARY**

The aim of the study was to investigate the attitudes of health science students at KCMC's attitudes towards persons with disabilities in Tanzania. The cross sectional descriptive study was conducted at the Kilimanjaro Christian Medical Centre in Tanzania. A convenient sample of 182 students participated in the study. The Attitude Towards Disabled Peoples Scale and a demographic questionnaire containing contact with disabled people questions was used to collect the data. Descriptive and inferential statistics was used to collect the data.

The majority of the participants were between 20 and 29 years old. Furthermore, the majority of the participants who responded were in the second year of their studies. The highest response rate to the questionnaire was from the medical students followed by the physiotherapy students. The mean overall attitude score was low (59.1) with the mean contact score being slightly above average (22.72). No association was found between the attitude and contact scores. A significant difference was found between gender, programme and year of study.



### **6.3 CONCLUSION**

The present study showed that healthcare professional students at KCMC in Tanzania had an overall negative attitude towards PWDs. This negative attitude could be linked to the fact that the students reported slightly above average contact with PWDs scores. The results of the study highlights the need to increase the contact with PWDs by students following health sciences degrees at KCMC. Specific educational experiences could promote more positive attitudes. This understanding could provide insights for developing effective strategies for changing negative attitudes towards people with disability.



### **6.4 RECOMMENDATIONS**

Based on the results of the study, the researcher would like to make the following recommendations.

The Health Sciences Curriculum at KCMC must be adapted to increase the contact that students have with persons with disabilities as part of the training.

The type and duration of the contact should however be structured in a specific manner in order to facilitate positive attitudes of students towards persons with disabilities.

Future studies should target a larger sample size and should have a longitudinal design to determine whether students' attitudes change as they progress through the programme.

Other studies could explore the effects of different kinds of information about PWDs such as clinical versus basic science topics and abnormal versus normal behaviour, on attitudes of students towards PWDs.



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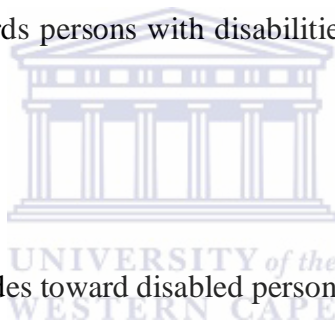
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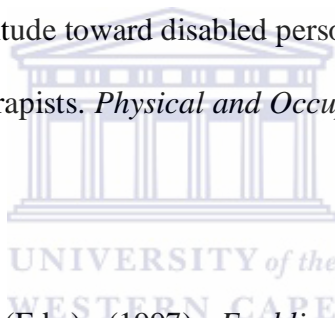
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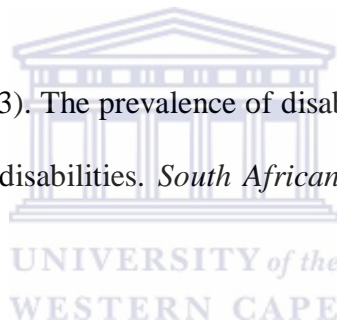


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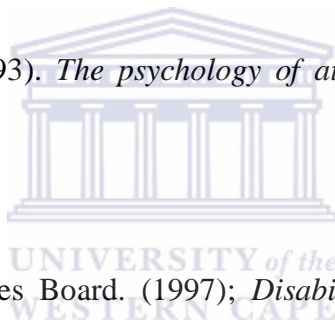
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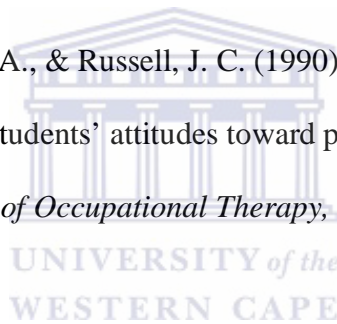
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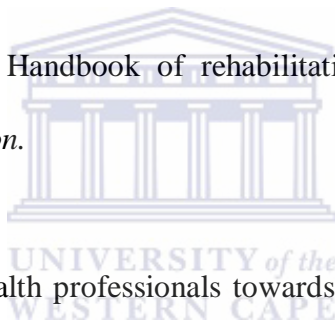
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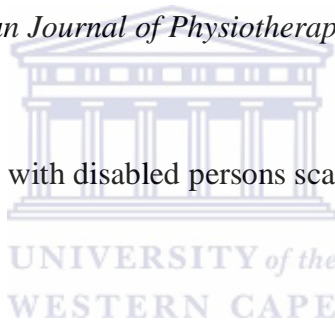
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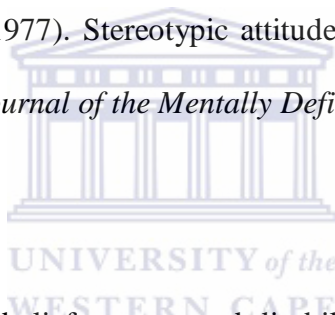
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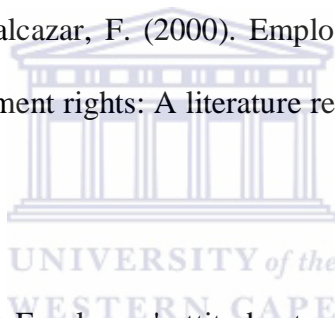
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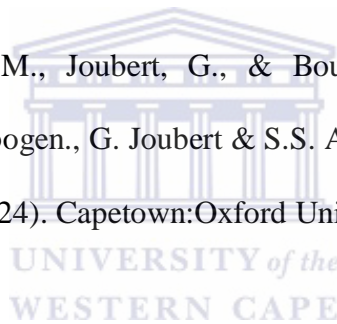
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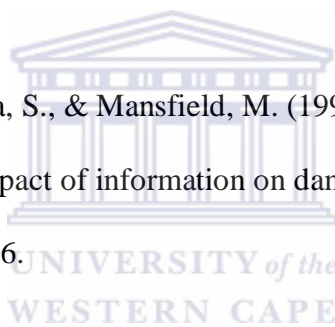
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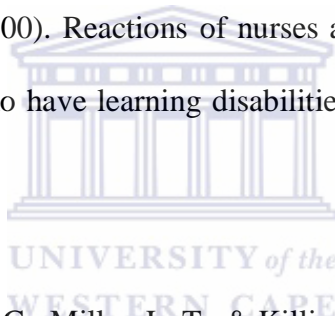
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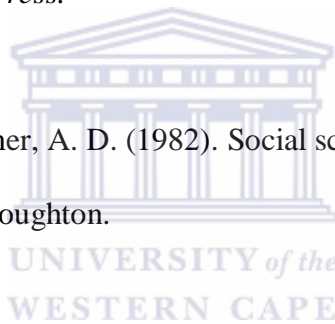
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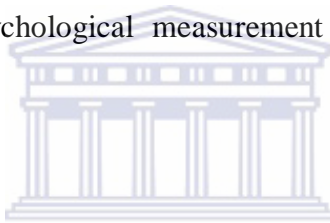
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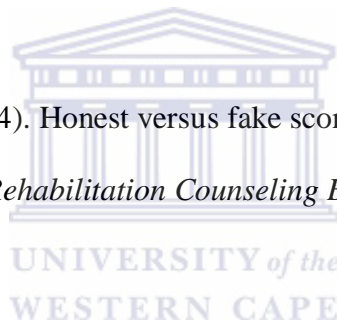
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# Appendix A

THE UNITED REPUBLIC OF  
TANZANIA



National Institute for Medical Research  
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NIMR/HQ/R.8a/Vol. IX/783

Ministry of Health and Social Welfare  
P.O. Box 9083  
Dar es Salaam  
Tel: 255 22 2120262-7  
Fax: 255 22 2110986

05<sup>th</sup> February 2009

Insiyya D Sheriff  
C/o Mr Egfrid Michael  
Physiotherapy Department  
KCMC  
P O Box 3010  
MOSHI

## CLEARANCE CERTIFICATE FOR CONDUCTING MEDICAL RESEARCH IN TANZANIA

This is to certify that the research entitled: Attitudes of health science student towards people with disability at Kilimanjaro Christian Medical Centre, Moshi, Tanzania, (Sheriff I D et al), has been granted ethics clearance to be conducted in Tanzania.

The Principal Investigator of the study must ensure that the following conditions are fulfilled:

1. Progress report is made available to the Ministry of Health and the National Institute for Medical Research, Regional and District Medical Officers after every six months.
2. Permission to publish the results is obtained from National Institute for Medical Research.
3. Copies of final publications are made available to the Ministry of Health and the National Institute for Medical Research.
4. Any researcher, who contravenes or fails to comply with these conditions, shall be guilty of an offence and shall be liable on conviction to a fine.
5. Approval is for one year 5<sup>th</sup> February 2009 to 4<sup>th</sup> February 2010.

Name: Dr Andrew Y Kitua

Signature

CHAIRMAN  
MEDICAL RESEARCH  
COORDINATING COMMITTEE

CC: RMO  
DMO

Name: Dr Deo M Mtasiwa

Signature

CHIEF MEDICAL OFFICER  
MINISTRY OF HEALTH, SOCIAL  
WELFARE

## Appendix B

### Higher Degrees Committee Faculty of Community and Health Sciences

Private Bag X17, Belville, 7535  
South Africa  
Tel: +27 (0) 21 959 2163/2852  
Fax: +27 (0) 21 959 2755  
E-mail: csjohnson@uwc.ac.za  
Website: www.uwc.ac.za

17<sup>th</sup> November 2008

The Permanent Secretary  
Ministry of health  
P.O Box 9083  
Dar-es-salaam,  
Tanzania.

Dear Sir

**Re: Research project of *Insiyya D. Sheriff*: Student Number: 2852439**

This letter confirms that Ms. Sheriff (student number: 2852439) is a postgraduate student in the Community and Health Sciences Faculty at UWC. Her proposed research entitled, "*Attitudes of Health Science Students towards people with disabilities at KCMC in Tanzania*" submitted in fulfilment of the requirements for Masters in Physiotherapy has been examined by the Higher Degrees Committee and found to be of high scientific value, methodologically sound and ethical. We fully support the research and urge you to allow her access to your organisation.

Yours sincerely



.....  
**Dr G. Reagon**  
Chairperson Higher Degrees Committee



UNIVERSITY of the  
WESTERN CAPE

A place of quality, a place to grow, from hope to action through knowledge

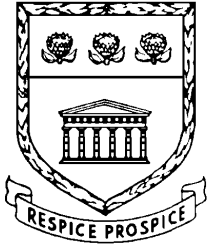
## Appendix C

### UNIVERSITY OF THE WESTERN CAPE

*Private Bag X 17, Bellville 7535, South Africa*

*Tel: +27 21-959, Fax: 27 21-959 2543*

**E-mail: [jphillips@uwc.ac.za](mailto:jphillips@uwc.ac.za)**



### INFORMATION SHEET

**Project Title:** Attitudes of Health Science Students Towards People with Disability at Kilimanjaro Christian Medical Centre in Tanzania.

#### **What is this study about?**

This is a research project being conducted by Insiyya Djamil Sheriff at the University of the Western Cape. We are inviting you to participate in this research project because you will be working with the people with disability in the near future. The purpose of this research project is to investigate the attitudes of health science students at Kilimanjaro Christian Medical Centre towards people with disability.

#### **What will I be asked to do if I agree to participate?**

You will be asked to fill in a questionnaire that will determine your attitude towards persons with disabilities.

#### **Would my participation in this study be kept confidential?**

We will do our best to keep your personal information confidential. To help protect your confidentiality, the questionnaire will be kept confidential and your identity will not be revealed. Your name will not appear anywhere on the questionnaire.

If we write a report or article about this research project, your identity will be protected to the maximum extent possible.

### **What are the risks of this research?**

There are no known risks associated with participating in this research project.

### **What are the benefits of this research?**

This research is not designed to help you personally, but the results may help the investigator learn more about the attitudes of Health Science Students towards people with disability. We hope that, in the future, other people might benefit from this study through improved understanding of students attitudes towards persons with disabilities. This information will be used to influence the curriculum of the Health Science students at Kilimanjaro Christian Medical Centre.

### **Do I have to be in this research and may I stop participating at any time?**

Your participation in this research is completely voluntary. You may choose not to take part at all. If you decide to participate in this research, you may stop participating at any time. If you decide not to participate in this study or if you stop participating at any time, you will not be penalized or lose any benefits to which you otherwise qualify.

### **What if I have questions?**

This research is being conducted by *Insiyya Djamil Sheriff* Department of Physiotherapy at the University of the Western Cape. If you have any questions about the research study itself, please contact Insiyya D. Sheriff at [insiyvas@lycos.com](mailto:insiyvas@lycos.com)

Should you have any questions regarding this study and your rights as a research participant or if you wish to report any problems you have experienced related to the study, please contact:

Head of Department: Professor Patricia Struthers

Email: [pstruthers@uwc.ac.za](mailto:pstruthers@uwc.ac.za)

Dean of the Faculty of Community and Health Sciences: Professor R. Mpofu

Email: [rmpofu@uwc.ac.za](mailto:rmpofu@uwc.ac.za)

University of the Western Cape

Private Bag X17

Bellville 7535

This research has been approved by the University of the Western Cape's Senate Research Committee and Ethics Committee.





**Appendix D**

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**E-mail: [jphillips@uwc.ac.za](mailto:jphillips@uwc.ac.za)**

**CONSENT FORM**

**Title of Research Project: ATTITUDES OF HEALTH SCIENCE STUDENTS  
TOWARDS PEOPLE WITH PHYSICAL DISABILITY AT KCMC IN TANZANIA.**

The study has been described to me in language that I understand and I freely and voluntarily agree to participate. My questions about the study have been answered. I understand that my identity will not be disclosed and that I may withdraw from the study without giving a reason at any time and this will not negatively affect me in any way.

***Participant's name*.....**

***Witness***

***name*.....**

***Participant's signature*.....**

***Researcher*.....**

***Date*.....**



Should you have any questions regarding this study or wish to report any problems you have experienced related to the study, please contact the study coordinator:

**Study Coordinator's Name: A.J. Rhoda**

**University of the Western Cape**

**Private Bag X17, Belville 7535**

**Telephone: (021) 959 254**

**Email: [arhoda@uwc.ac.za](mailto:arhoda@uwc.ac.za)**

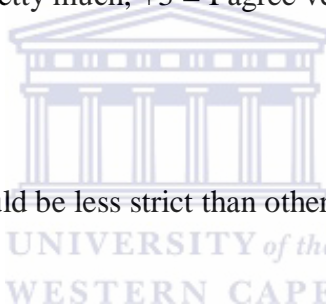


## Appendix E

### ATTITUDES TOWARDS DISABLED PERSONS SCALE

Directions: Please rate these twenty statements by indicating how strongly you agree or disagree with each one by using the following scale:

-3 = I disagree very much, -2 = I disagree pretty much, -1 = I disagree a little,  
+1 = I agree a little, +2 = I agree pretty much, +3 = I agree very much



1. Parents of disabled children should be less strict than other parents.

2. Physically disabled persons are just as intelligent as nondisabled ones.

3. Disabled people are usually easier to get along with than other people.

4. Most disabled people feel sorry for themselves.

5. Disabled people are the same as anyone else.

6. There should not be special schools for disabled children.

7. It would be best for disabled persons to live and work in special communities.

8. It is up to the government to take care of disabled persons.

9. Most disabled people worry a great deal.

10 Disabled people should not be expected to meet the same standards as nondisabled people.

11. Disabled people are as happy as nondisabled people.

12 Severely disabled people are not harder to get along with than those with minor disabilities.

13. It is almost impossible for a disabled person to lead a normal life.

14. You should not expect too much from disabled people.



15. Disabled people tend to keep to themselves much of the time.

16. Disabled people are more easily upset than nondisabled people.

17. Disabled persons cannot have a normal social life.

18. Most disabled people feel that they are not as good as other people.

19. You have to be careful what you say when you are with disabled people.

20. Disabled people are often grouchy.

Continue



## Appendix F

### DEMOGRAPHICS QUESTIONNAIRE

Please answer the following questions. All responses will remain confidential.

1. Sex:

Male

Female

2. Age:



3. Ethnicity:

Indian

Black

Asian or Pacific-Islander

White (non-Hispanic)

Other, please specify:

Please tick field and year of study.

4. Programme:

year: 1 2 3 4 5

Physiotherapy

Occupational therapy

Medicine

Nurses

Optometry

5. Do you have a disability? Yes

No

6. Please select a number to the right of each statement indicating your answer to each question. Use a number from 1 to 5 to indicate the following: 1 = never; 2 = once or twice; 3 = a few times; 4 = often; 5 = very often.

1. How often have you had a long talk with a person with a disability?

2. How often have you eaten a meal with a person with a disability?

3. How often have you discussed your life or problems with a person with a disability?

4. How often has a person with a disability visited in your home?

5. How often have you met a person with a disability that you like?

6. How often have you been annoyed or disturbed by the behavior of a person with a disability?

7. How often have you had pleasant experiences interacting with a person with a disability?

8. How often have you had unpleasant experiences interacting with a person with disability?

