HEALTH PROFESSIONALS' PERCEPTIONS OF REHABILITATION CARE WORKERS

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Health professionals' perceptions of rehabilitation care workers

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KEYWORDS

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Community-based services

Primary health care

People with disability

Community health worker

Rehabilitation care worker

Health professionals

Participation

Inclusive development

Intermediate care

Community

ABSTRACT

People with disabilities (PWD) often come from disadvantaged communities and struggle to access health and rehabilitation, education and employment. This leads to poorer health outcomes, lower education achievements, and higher rate of unemployment in comparison to people without disabilities. Therefore there is a need to empower PWD to remove all barriers which prevent them from participating in all aspects of their communities. In South Africa, 5% of the population is disabled and in a worldwide review conducted on access to rehabilitation services, it was reported that South Africa provided 21% to 40% of the disabled population with rehabilitation services. In 2012 the Department of Health (DOH) trained a new cadre of community health worker (CHW) in the field of rehabilitation in order to improve PWDs' access to health services. As a result, health professionals in the Western Cape became concerned about the role of this new cadre of rehabilitation care worker in PHC and CBS. The aim of this study was therefore to explore health professionals' perceptions of the newly trained rehabilitation care workers (RCWs). Q methodology was selected as an appropriate research design to meet the objectives of this study as it can be used to analyse opinions, perceptions and attitudes. The study population consisted of all the health professionals who engaged with the RCWs in the clinical workplace during their clinical practice module. A convenient sample of sixteen health professionals participated in this study. Ethics approval was obtained to conduct this study and all participants gave written consent to participate in this study. The researcher gathered all the viewpoints of the health professionals regarding the new rehabilitation care workers (RCWs) by conducting focus group discussions and document analysis. Statements were then drawn up based on the health professionals' viewpoints. The participants then ranked these statements from strongly agree to strongly disagree on a Q data score grid, in a process called Q sorting. The completed Q

data score grids, called Q sorts, were then entered into PQMethod software programme for statistical and factor analysis. From the results of this Q analysis, two factors emerged which were analysed and interpreted. A factor is representative of participants with similar opinions. The participants loading onto Factor one and Factor two shared similar opinions of the RCWs. The results indicated that the participants were of the opinion that RCWs' role would be to strengthen primary health care (PHC) and community-based rehabilitation (CBR) and promote the participation of PWD in society. The results suggested that the RCWs were capable of improving the quality of life of PWD by empowering PWD to become actively involved in all aspects of community life. The participants felt that the RCWs would be included in the health system by working at intermediate care centres (facility-based) and in the community (home-based). However, the participants agreed that the RCWs must work under the direct supervision of qualified health professionals. Participants loading onto Factor one and Factor two further agreed that RCWs worked well in the structured environment of intermediate care health facilities. They felt that it would be beneficial for RCWs to be employed at these health facilities as the RCWs reduced the workload of the health professionals. From the results, it was also found that health professionals were of the opinion that the RCWs displayed positive attitudes and good professional behaviour in the clinical environment. Health professionals however identified gaps in the knowledge of the RCWs and a lack of skills to perform certain tasks. However, health professionals agreed that the RCWs' skills will develop and improve with time and exposure. This study showed that health professionals had positive perceptions of the RCWs and this could indicate that RCWs will be well accepted by health professionals as part of the PHC team. This could lead to the effective utilisation of RCWs in community-based rehabilitation. Recommendations can be made to the developers and implementers of the RCW training curriculum to make adjustments to the curriculum so as to address the lack of knowledge and skills in certain

aspects of health and disability. It can further be recommended that South Africa's National DOH capitalise on these positive perceptions and train more RCWs to extend rehabilitation and health services to more underserved communities. This will assist the South African Government in ensuring that more PWD receive rehabilitation and become included in all aspects of their communities as is envisaged in the 2020/2030 health plan.

December 2015

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DECLARATION

I declare that "**Health professionals' perceptions of rehabilitation care workers"** is my own work, that it has not been submitted before for any degree or examination in any other university, and that all the sources I have used or quoted have been indicated and acknowledged as complete references.

Signature………………….

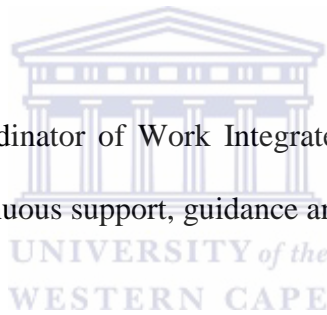Shamila Gamiet   December 2015

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ACKNOWLEDGEMENT

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ABBREVIATIONS

CBR – Community-based Rehabilitation

CBS – Community-based Services

CHW – Community Health Worker

CRPD – Convention on the Rights of Persons with Disabilities

DOH – Department of Health

DOHWC – Department of Health Western Cape

ICF – International Classification of Functioning, Disability and Health

ILO – International Labour Organisation

NGO – Non-Governmental Organisation

NPO – Non-Profit Organisation

PHC – Primary Health Care

PWD – People with Disabilities

RCW – Rehabilitation Care Worker

UCT – University of Cape Town

UNESCO – United Nations Educational, Scientific and Cultural Organisation

UWC – University of the Western Cape

WHO – World Health Organization

WIPL – Work Integrated Practice Learning

TERMS AND DEFINITIONS

Impairment: Any loss or abnormality of psychological, physiological or anatomical structure or function.

Disability: Umbrella term covering impairments, activity limitations, and participation restrictions. It is a complex phenomenon, reflecting the interaction between features of a person's body and features of the society in which he or she lives. Disability is any restriction or lack (resulting from an impairment) of ability to perform an activity in the manner or within the range considered normal for a human being; a handicap is a disadvantage for a given individual, resulting from an impairment or a disability, that prevents the fulfilment of a role that is considered normal for that individual'..

People with disability: Any person who has a physical or mental impairment that substantially limits one or more major life activities; has a record of such impairment; or is regarded as having such impairment.

Intermediate care: Refers to an in-patient, step down facility. Patients, who require a longer recovery period, can be referred to such a facility for rehabilitation before discharge to home.

CHAPTER 1: INTRODUCTION

1.1 Introduction

This chapter provides the background information to this study including relevant literature that is important to contextualise the project, how the problem statement emerged, the research questions that were addressed, the aims and objectives of the study as well as the significance of the final outcomes. This chapter will present the concepts of disability, primary health care (PHC) and community-based rehabilitation (CBR) as important background knowledge that contextualises the rationale of this research study.

1.2 Background

Approximately 15% the world's population is disabled. Disability is prevalent in developing countries and is on the rise due to global increases in chronic health conditions such as cardiovascular disease, diabetes, cancer and mental health disorders (WHO, 2011). There is a correlation between disability and poverty, in that poverty leads to increased disability and disability in turn leads to increased poverty (ILO, UNSECO, WHO Joint Position Paper, 2004). People with disabilities (PWD) often come from disadvantaged communities and experience difficulties with everyday functioning. They struggle to access health and rehabilitation, education and employment opportunities and this leads to poorer health outcomes, lower education

achievements, and higher rate of unemployment in comparison to people without disabilities (WHO, 2011). Therefore, according to the World Report on Disability, there is a need to empower PWD to remove all barriers which prevent them from participating in their communities, getting a good quality education and finding good employment (WHO, 2011).

According to the World Health Organization (WHO) every human being has the right to attain the highest standard of health without discrimination of race, religion, political belief, economic or social condition (WHO, 2006). Health has been defined by the WHO as a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity (WHO, 2006). Good health ensures that a person lives a socially and economically productive life, allowing for employment, education, and engagement in family and community activities. According to the Declaration of Alma-Ata 1978, which was adopted by the WHO, primary health care (PHC) is essential health care, with all health services, including rehabilitation being affordable, accessible, available and appropriate for all, to ensure better health outcomes (WHO, 1978). According to the World Health Report of 2008, PHC allows health problems to be addressed through health promotion, prevention, curative and rehabilitative services and plays a fundamental role in achieving health for each person (WHO, 2008).

Community-based rehabilitation (CBR) has been identified by the WHO as a comprehensive framework for addressing the needs of PWD whilst complying with the principles of PHC (Bury, 2005). The aim of CBR is to improve PWDs' access to

rehabilitation services, especially in poverty stricken countries and it is part of a global approach to achieve 'Health for All' by 2000 (WHO, 1978). Community-based rehabilitation is a multi-sectoral approach, implying that support and collaboration from various sectors is required to address the needs of PWD. These sectors include social, health, education, employment and labour, non-governmental organisations (NGO), media and community. In order for CBR programmes to enjoy success, these sectors need to work together and not in isolation (WHO, 2004). The International Labour Organisation (ILO), the United Nations Educational, Scientific and Cultural Organisation (UNESCO) and the World Health Organization (WHO) (three United Nations organisations), produced a 'Joint Position Paper' on CBR which highlights the multi-disciplinary nature of CBR (Joint Position Paper, 2004). Guidelines were also developed by the WHO, ILO and UNESCO to direct CBR programmes around the world. The objectives of the CBR guidelines are to assist countries in developing and strengthening their own CBR programmes and to promote CBR as a strategy for community-based inclusive development. The CBR guidelines aim to support stakeholders in meeting the needs PWD and their families and to encourage stakeholders to empower PWD and their families to become active participants in development and decision making processes (WHO, 2010).

One of the main barriers PWD face is poor access to healthcare services. It is estimated that only a small percentage of PWD in developing countries have access to rehabilitation and basic services (WHO, 2010). Community-based rehabilitation is therefore geared at meeting the needs of PWD within their own environment through the involvement of their family and community (Joint Position Paper, 2004). Approximately ninety countries around the world have successfully implemented

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CBR programmes (WHO, 2010). In each country the government is responsible for the health system to ensure that healthcare is provided to every individual.

Community health workers (CHWs)[1] have been used to implement PHC and CBR and therefore, the skills and training that CHWs need, will differ depending on the form of PHC they provide. Community health workers should be recruited from the communities they serve and should understand the health needs of those communities so that they gain the trust of the people they work with (WHO & UNICEF, 1978). In 1981 the WHO identified the need for a new cadre of CHW, trained in the field of rehabilitation, to work in CBR (WHO, 1989). The WHO recommended that these new CHWs in CBR should come from the same communities in which they work since they are in a better position to relate to the needs of that community (WHO, 2003).

It has been estimated that in South Africa, (according to Census 2001), 5% of the population is disabled (Statistics SA, 2003). A worldwide review conducted on access to rehabilitation services reported that South Africa provided 21% to 40% of the disabled population with rehabilitation services, which is higher than other developing countries (WHO, 2002). In South Africa, personnel who implement rehabilitation services in the community to ensure the success of disability inclusive development are mainly volunteers (PWD, family members, and home-based carers). In the Western Cape, CHWs recruited by non-governmental organisations (NGOs), carry out home visits but they may or may not receive basic training and they are not supervised.

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1 Community health workers are also referred to in the literature as community rehabilitation facilitators, mid-level workers, alternative workers and substitute workers.

In South Africa, in the 1990s, Community-based Rehabilitation Education and Training for Empowerment (CREATE) together with Disabled People South Africa (DPSA) and the Department of Health (DOH), trained CHWs called community rehabilitation facilitators (CRFs) to work in CBR programmes after receiving a minimum of two years training in CBR (Rule et al., 2006). However, in 2003, the Department of Health (DOH) and Professional Health Boards decided to stop training CHWs and to only train assistants in specific professions, because CHWs were engaging in activities outside of their scope of practice (Concha, 2009; Hugo, 2005).

South Africa's Department of Health (DOH) has become increasingly committed to addressing the needs of PWD at community level by strengthening PHC services and community-based services (CBS) with the support of secondary and tertiary level services (DOH, 2000). National government is therefore in the process of re-shaping the provision of PHC and CBS which is in line with the DOH's 2020 healthcare vision (Lorenzo, 2012) The need to train a new cadre of CHW in the field of rehabilitation has been identified by national government as part of the 2020 Health Plan to improve PHC and CBR in South Africa (DOH, 2000). A pilot project was initiated in 2012 in the Western Cape (Mitchells Plain and Athlone districts) to train such a new cadre of CHW. The vision of the pilot training programme was to upgrade the skills of current CHWs to become recognised members of the PHC team. In this way the newly trained CHWs will ensure efficient continuum of care of PWD and their families. (Rehabilitation Care Worker Second Quarterly Report DOH, 2013).The development, implementation and monitoring of an eighteen month training programme was awarded to the Department of Health and Rehabilitation Sciences,

Faculty of Health Sciences, University of Cape Town (UCT) by the Department of Health Western Cape (DOHWC) in August 2012 to train accredited rehabilitation care workers (RCWs)[2].

This pilot, the first of its kind in South Africa, was commissioned and funded by DOHWC (DOH Service Level Agreement, 2012). The DOHWC recruited thirty three CHWs through five non-profit organisations (NPOs) for this pilot training programme. The recruited CHWs were working in community, providing basic needs, but did not have any formal training and all had National Senior Certificates as their highest level of education (Rehabilitation Care Worker First Quarterly Report DOH, 2012). A total of sixteen students were recruited from the South African Christian Leadership Assembly (SACLA) Health Project, ten from Arisen Women, four from Philani, three from Opportunities to Serve Mission and one from University of the Western Cape (UWC) CBR project (Rehabilitation Care Worker First Quarterly Report DOH, 2012). By the end of the training course thirty students remained as one passed away and two failed to attend class regularly (Rehabilitation Care Worker First Quarterly Report DOH, 2012).

The CBR guidelines (recommended by the WHO, 2010) provided the conceptual framework for the training curriculum which was covered in five modules, each with specific learning outcomes. The learning areas covered in the modules were: health, wellness and functional ability; promoting healthy lifestyles; inclusive development and agency; disability information management and communication systems and

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[2] Community health workers trained in rehabilitation in this pilot study are now referred to as rehabilitation care workers (RCWs)

work integrated practice learning (WIPL).

The final module was a practical component called work integrated practice learning (WIPL). The core job function of the new rehabilitation care workers (RCWs) and the expected learning outcomes with regards to knowledge, skills and behaviour were clearly outlined by the DOHWC in the training specification report (see Appendix B) (DOH Training Specifications, 2012). The University of the Western Cape (UWC) Department of Physiotherapy was contracted by UCT to implement and monitor the practical module (WIPL). The WIPL module provided RCWs with the opportunity to work in different settings, namely intermediate care and community-based care, where they could apply the knowledge and skills that they had gained from the curriculum. The WIPL module ran over a period of fifteen weeks from July to November 2013 and the RCWs rotated after five weeks at a clinical placement.
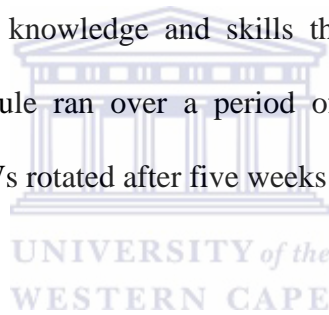
In order to create awareness of the new RCWs, continuing professional development (CPD) workshops were arranged by the DOHWC, UCT and UWC for all health professionals in the Mitchells Plain and Athlone districts. At these workshops, the invited health professionals received information about the RCW training curriculum, the role of health professionals in guiding and directing the RCWs and the role of the RCWs (according to the expectations of the DOHWC) in CBR. The invited participants were also required to engage in sessions of conversation where they were required to express their feelings and opinions regarding the RCWs and the training programme. Since this was the first time that South Africa was training RCWs, health professionals in the Western Cape raised their concerns at the CPD workshops as to

why the DOHWC wanted to train yet another new cadre of worker. Health professionals were unsure how the new RCWs would be different from other CHWs (who may not have had any training) and what the role of this new cadre would be in CBR (Rehabilitation Care Worker Third Quarterly Report DOH, 2013).

The rationale for this study emerged as it became evident to the DOHWC that research was necessary in order to explore health professionals' perceptions of the new RCWs in the South African health system. Health professionals gave written consent for their conversations at the CPD workshops to be audio taped for research purposes, since the DOHWC had invested in various research studies to be conducted around this pilot project. The results of the various research studies will help the DOHWC to ensure their 2020/2030 vision of strengthening CBR in the Western Cape and ultimately in the entire country. Health professionals are key stakeholders in the successful implementation of the RCWs in CBR as they would work closely together. It is therefore important to understand their perceptions of the new RCWs in CBR.

1.3 Problem Statement

In 2003 the DOH stopped training CHWs in the field of rehabilitation for two main reasons: CHWs were performing tasks outside their scope of practice; and health professionals were sceptical of the CHWs and wanted to protect their professions. The health professionals could also not come to a consensus on which specific discipline was responsible for supervising CHWs (Hugo, 2005). In 2012, the training of the new

cadre of rehabilitation care workers by the DOHWC caused a certain amount of uncertainty and curiosity among health professionals in the Western Cape and many were unsure of the role of the new RCW and their level of inclusion within the health system. Health professionals were anxious about the security of their positions or jobs and needed reassurance that their positions would be safe from the new RCWs (Rehabilitation Care Worker Third Quarterly Report DOH, 2013).

1.4 Research Questions

1.4.1 What are health professionals' expectations of the role of the newly trained RCWs in the health system?

1.4.2 What are health professionals' expectations of the level of inclusion of RCWs in the health system?

1.4.3 What are health professionals' perceptions of the knowledge, skills and behaviour of RCWs?

1.5 Aim of the Study

The aim of the study is to explore health professionals' perceptions of the scope of practice of RCWs, the level of inclusion of RCWs in the health system and the knowledge, skills and behaviour of RCWs in clinical practice.
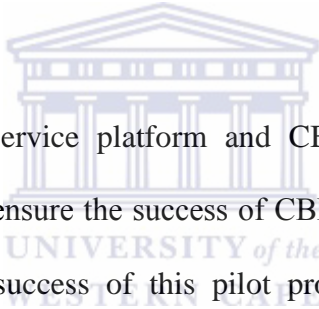
1.6 Objectives

1.6.1 To explore health professionals' expectations of the role the RCWs will have in the health system.

1.6.2 To explore health professionals' expectations of the level of inclusion of RCWs in the health system.

1.6.3 To explore health professionals' perceptions of the knowledge, skills and behaviour of the RCWs in clinical practice.

1.7 Significance

In order to strengthen the service platform and CBR in South Africa, national government's DOH needs to ensure the success of CBR programmes as envisaged in the 2020 Health Plan. The success of this pilot project in the Western Cape is important as it will lay down the foundation for future training of accredited RCWs. The current RCWs have been given the knowledge and skills in rehabilitation to equip them to improve the quality of life of PWD by providing support and care to PWD in the Mitchells Plain and Athlone districts. The outcome of this pilot project will enable the South African DOH to identify if it is feasible to train more RCWs. In this way the DOH will be extending health and rehabilitation services to more underserved communities, thereby enhancing the lives of PWD and reducing poverty nationally. Due to the uncertainly expressed by the health professionals regarding the new RCWs, the researcher identified the need to explore health professionals' perceptions of the RWCs. Health professionals will have a close working relationship with the RCWs as the RCWs will work under the direct supervision of health professionals.

Understanding the opinions of health professionals, as key stakeholders in the health system, will enable the researcher to identify facilitators and barriers that may impact on the role of the RCWs and how well RCWs will be utilised in CBR. Barriers identified will limit the role of RCWs in CBR thereby preventing PWD from achieving their full rehabilitation potential. Facilitators will enhance the successful implementation of CBR in the Western Cape and therefore these factors can be exploited by DOH to realise its healthcare vision for the future. Recommendations will be made to DOHWC to eliminate barriers and enhance facilitators to ensure success of CBR in South Africa. Policies and procedures can be developed and implemented to ensure national government's 2020/2030 vision to strengthen the service platform to communities using a new cadre of rehabilitation care workers.

The developers and implementers of the training programme (UCT) will benefit from this study as they can make improvements or adjustments to academic course curricula to optimise learning outcomes in the event that RCWs will continue to be trained in the future. The Department of Physiotherapy at UWC, the implementers of the practical component of the training programme (WIPL module), could also benefit from the results of this study, as it could identify challenges experienced with clinical placements, clinical supervisors and supervision sessions. This will allow UWC Physiotherapy Department to make improvements and adjustments to the module so that future training of RCWs will enhance knowledge, skills and behaviours or RCWs in clinical practice.

1.8 Summary

People with disabilities often struggle to access basic health services. Community-based rehabilitation is therefore a strategy that can ensure that PWD have access to these basic health services and that they are included in all aspects of community development. In this way CBR enhances the quality of life of PWD. The South African National DOH identified the need to train rehabilitation care workers (RCWs) to strengthen CBR specifically in the Western Cape. The DOHWC piloted a rehabilitation training programme in 2012 and successfully trained thirty RCWs. The training of RCWs has caused uncertainty among health professionals. Therefore the need to explore health professionals' perceptions of the newly trained RCWs so as to determine the impact RCWs will have in CBR in the Western Cape has been identified by the researcher.
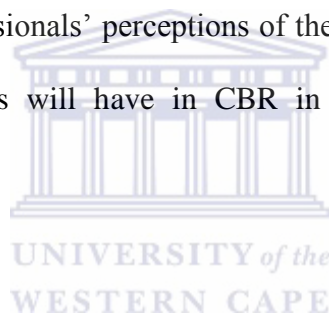
CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

This chapter presents the review of the literature which is relevant to this study. The chapter will focus on disability and inclusive development and the use of the International Classification of Functioning, Disability and Health as a framework for measuring health and disability. This chapter will also discuss community-based rehabilitation (CBR) as a strategy endorsed by the WHO to ensure inclusive development of all people with disabilities. It will review the impact that community-based rehabilitation programmes has on PWD and their communities. It will elaborate on the roles of the personnel involved in CBR namely; community health workers and qualified health professionals as they are important stakeholders in ensuring the success of community-based rehabilitation. Community-based Rehabilitation (CBR) Matrix will be reviewed as a theoretical framework which guides community-based rehabilitation programmes and how the CBR Matrix will be used in this study as a framework through which data will be analysed.

2.2 Disability and Inclusive Development

Disability is a broad term used to cover the impairments, activity limitations, and participation restrictions that PWD experience in their daily lives. Impairment is a problem in body function or structure e.g. muscle stiffness or muscle weakness;

activity limitation is a difficulty encountered by an individual in executing a task or action of everyday life as a result of the impairments e.g. washing, dressing; and participation restriction is a problem experienced by an individual in involvement in life situations, e.g. working, playing sport (WHO, 2011). Disability refers to difficulties experienced in any or all three areas of functioning.

The International Classification of Functioning, Disability and Health (ICF) is a WHO classification of the health components of functioning and disability and a framework for measuring health and disability at both individual and population levels. The ICF, endorsed by 191 member states on 22 May 2001 (WHO, 2001), consists of two parts, namely; functioning and disability, and contextual factors. Functioning and disability includes body functions and structures (describes actual anatomy and the physiology or psychology of the human body) and activity and participation (describes the person's functional status, including communication, mobility, interpersonal interactions, self-care, learning, and the application of knowledge). Contextual factors include environmental factors (factors that are not within the person's control, such as family, work, government agencies, laws, and cultural beliefs) and these factors have an impact on the components of functioning and disability. Personal factors include race, gender, age, social background, education, profession and copying styles. Personal factors are not coded in the ICF because of the wide variability among cultures. However, personal factors are included in the framework because they may affect how a person functions. Health conditions are diseases, injuries, and disorders while impairments are specific decrements in body functions and structures, often identified as signs or symptoms of health conditions. Disability arises from the

interaction of health conditions with contextual factors. Figure 1 is a schematic presentation of the ICF.

Health Condition
(Disorder or Disease)

| Body Structures Body Functions *Impairments* | Activities *Activity Limitations* | Participation *Participation Restrictions* |

| Environmental Factors | Personal Factors |
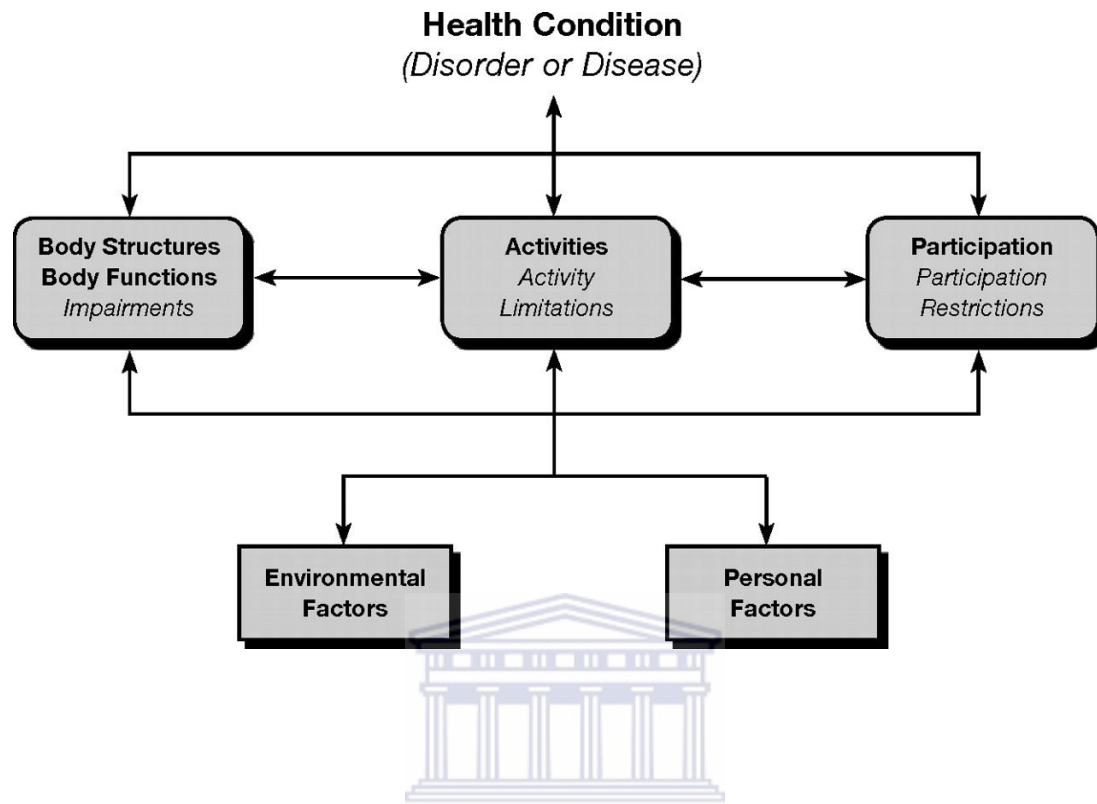
Figure 1: Model of the International Classification Framework of Functioning, Disability and Health (ICF) with its components

Interventions are needed to allow PWD to overcome difficulties with regards to their impairments, activity limitations, and participation restrictions and to remove environmental and social barriers. People with disabilities have the same health needs as non-disabled people but may experience a narrower margin of health, because of poverty and social exclusion (WHO, 2011). People with disabilities face barriers in accessing the health and rehabilitation services they need in many settings (WHO, 2011). The World Disability Report estimates that over one billion people in the world are disabled and that approximately 200 million experience significant difficulties with function (WHO, 2011). The United Nations Convention on the Rights of Persons with Disabilities (CRPD) is an international treaty which came into

effect on 3 May 2008 and addresses the right to health for all PWD. All parties to the Convention recognised that PWD have the right to enjoy the highest standard of health without discrimination of disability (CRPD, 2008). The Convention is a paradigm shift in its approach to disability and moves from a model where PWD are treated as objects of medical care, charity and social protection to a model where PWD enjoy human rights and are empowered to be actively involved in the decision-making processes that affect them. The main obstacles that PWD face are physical obstacles and negative attitudes which prevent them from fully benefiting from human rights. Inclusive development refers to acts or practices which involve all PWD and their families, especially those living in rural areas, to be active participants in all development initiatives. Inclusive development is about human rights; it is about PWD having the freedom to access and benefit from health, employment, information and to make decisions about their lives. People with disabilities need to receive physical rehabilitation and the support of community rehabilitation programmes in order to improve quality of life.

2.3 Community-based Rehabilitation

Community-based Rehabilitation (CBR) has been promoted internationally for more than thirty years by the WHO as a core strategy for improvement in the quality of life and services for people with disabilities. Community-based rehabilitation was defined by the WHO in 2010 as "a strategy within community development for the rehabilitation, equalisation of opportunities and social inclusion of all adults and children with disabilities" (WHO, 2010). Community-based rehabilitation is

implemented through the combined efforts of disabled people themselves, their families and communities and the appropriate health, education, vocational and social services" (ILO, UNESCO, WHO Joint Position Paper, 2004, p.2).

In 2003 in Helsinky, Finland, an international conference was held to review CBR. The three world bodies, ILO, UNSECO and WHO, recommended that guidelines be developed to strengthen CBR programmes globally (WHO, 2003). The CBR guidelines assist countries to develop and strengthen their own CBR programmes and promote CBR as a strategy for community-based development (WHO, 2010). The CBR Matrix, proposed in the CBR Guidelines, provides a systematic framework for the organisation and analysis of CBR programmes (Deepak, Kumar, Ortali & Pupulin, 2011). The CBR Matrix will be used as a framework through which the data of this study will be analysed since the RCW training curriculum was based on this matrix.
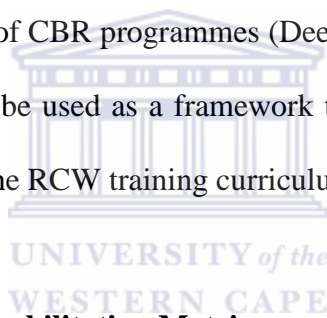
2.3.1 Community-based Rehabilitation Matrix

The CBR Matrix provides a visual representation of CBR and shows the different sectors which can make up a CBR strategy, thus providing a systematic framework for the organising and analysing of CBR programmes. The CBR Matrix consists of five key domains namely; Health, Education, Livelihood, Social and Empowerment and each component is divided into five key elements. Any one CBR programme may choose to address only some of the components and elements (WHO, 2010). According to Deepak, Kumar, Ortali and Pupulin (2011), the CBR Matrix can be a useful framework to understanding CHWs activities in CBR programmes and in identifying learning need of CHWs in terms of the different domains. The CBR

Matrix can also be used as a framework for the systematic review of different CBR programmes. The following diagram (Figure 2) illustrates the different components and elements which make up the CBR strategy.

CBR MATRIX

HEALTH	EDUCATION	LIVELIHOOD	SOCIAL	EMPOWERMENT
PROMOTION	EARLY CHILDHOOD	SKILLS DEVELOPMENT	RELATIONSHIPS MARRIAGE & FAMILY	COMMUNICA-TION
PREVENTION	PRIMARY	SELF-EMPLOYMENT	PERSONAL ASSISTANCE	SOCIAL MOBILIZATION
MEDICAL CARE	SECONDARY & HIGHER	FINANCIAL SERVICES	CULTURE & ARTS	POLITICAL PARTICIPATION
REHABILITATION	NON-FORMAL	WAGE EMPLOYMENT	RECREATION LEISURE & SPORTS	SELF-HELP GROUPS
ASSISTIVE DEVICES	LIFE-LONG LEARNING	SOCIAL PROTECTION	ACCESS TO JUSTICE	DISABLED PEOPLE'S ORGANIZATIONS

Figure 2: Community-based Rehabilitation Matrix components

Disability inclusive development is a broad construct and is not only concerned with physical rehabilitation. The RCWs training programme was based on the CBR guidelines (WHO, 2010) and the CBR Matrix (WHO, 2005). The training curriculum therefore looked at ensuring that the five key domains of the CBR Matrix were addressed, namely: Health, Education, Livelihood, Social and Empowerment. The two components which were given specific attention were the Health and Empowerment components (Rehabilitation Care Workers First Quarterly Report, DOH, 2012). Promoting inclusive development is fundamental for reducing poverty

and reaching out to marginalised groups. Community-based rehabilitation (CBR) guidelines can be a valuable instrument to support inclusive development for all the stakeholders internationally (Deepak, Kumar, Ortali & Pupulin, 2011).

2.3.2 Impact of Community-based Rehabilitation

CBR programmes are vital to improving the well-being of PWD and to enhancing participation of PWD in the community (Cornielje, 2009; Sharma, 2007). However, there is limited literature on the evaluation of the impact of CBR programmes on the well-being of PWD. Research is more focussed on the implementation of CBR than its evaluation, possibly because there are no universal criteria for the evaluation of CBR programmes (Finkenfugel, Cornielje &Velema, 2008).

The results of a study by Biggeri et al. (2012) showed that CBR programmes in India had a positive and significant impact on the health, livelihood, social participation and empowerment of PWD, especially after four years of CBR activities. These CBR programmes allowed PWD to live their lives with dignity and respect and to enjoy social participation (Biggeri et al., 2012). Between 1982 and 1997, field studies conducted in Botswana, India, Guyana, Vietnam, Egypt and Zimbabwe found that CBR programmes played a vital role in improving the lives of PWD and enjoyed a success rate of 40% to 91% (WHO, 2010). People with disabilities in these field studies improved in self-care activities, mobility, communication, education, employment and family and community participation (WHO, 2010).

Similarly Fuzikawa (2008) conducted a review on the effectiveness of rehabilitation

in CBR. The review identified twenty nine reports from twenty two countries in Asia, Africa and Central America reporting on the outcomes of rehabilitation in CBR in low and middle income countries published between 1987 and 2007. The review indicated that the CBR programmes were effective in improving independence, mobility and communication skills of PWD, providing coping mechanisms to parents of disabled children and increasing the number of disabled children attending schools. People with disabilities also enjoyed better income through economic interventions. Another impact of CBR activities in this review was that it improved community acceptance of PWD so that they could be socially included. These studies demonstrate that the success of CBR programmes is found across the five key domains of the CBR Matrix.

2.3.3 History of Community-based Rehabilitation in South Africa

In 1986, rehabilitation health professionals in South Africa proposed the training of a CHW in rehabilitation to the then South African Medical and Dental Council. This resulted in three training programmes for CHWs being set up in pilot sites in Khayelitsha in Cape Town, Alexandra Township in Johannesburg and in Acornhoek in rural Limpopo Province. The CBR programmes in Acornhoek and Alexandra trained CHWs over a two year period. These CHWs were then employed in both NGOs and government in many areas of South Africa. Mothers of disabled children in Khayelitsha were trained as CHWs over a six week period. Each of these three pilot training programmes had a different focus therefore CHWs in each pilot project were trained to work in slightly different ways. Over the last thirty years CBR programmes and the training of CBR personnel in South Africa have been conceptualised and implemented differently (Create Case Report, 2015). In 1998, in Mpumalanga,

Disabled People South Africa (DPSA) was contracted by the provincial DOH whereby PWD themselves were given minimal training to provide CBR services such as peer counselling and referral to other services. In South Africa, while CBR has been accepted as a philosophy that underpins rehabilitation services, there is no single strategy or method of implementation.

One of the roles of CHWs in South Africa is to provide emotional support to PWD in communities as advocated in WHO guidelines on CBR. The WHO reported a lack of interaction by PWD with their peers and families which led to further social exclusion as they were not willing to engage in discussions regarding emotional, psychological and social abilities (WHO, 2002). In South Africa, PWD in rural areas have benefited from CBR programmes utilising CHWs. These benefits included physical rehabilitation, education on rehabilitation, emotional support, counselling, access to resources and assistive devices and most importantly, reintegration into the community (Dawad & Jobson, 2005). These findings are in line with the Declaration of Alma Ata (1978) and the WHO's definition of health, that health is a state of complete physical, social and mental well-being. Furthermore, the WHO CBR guidelines identify psychological and emotional support as being vital in any CBR programme (WHO, 2002). Chappell and Johannsmeier (2009) reported that CHWs in South Africa made a significant impact in the lives of PWD through home visits, exercise, assistive devices and training in activities of daily living, resulting in an increase in independence, better social integration and mobility. Chappell and Johannsmeier also reported that CHWs had a positive impact on communities by changing the negative attitude towards PWD.

MacLachlan, Mannan and McAuliffe (2011) identified the need to train a CHW with mixed skills (physiotherapy, occupational therapy and speech therapy) appropriate to the new CBR guidelines. Como and Batdulam (2012) concur that CHWs need to be trained across all domains of the CBR Matrix.

2.4 Community Health Workers

Community Health Workers (CHWs)[3] is an umbrella term for alternative workers who receive less training than health professionals in order to deliver health services in underserved communities. Community health workers have been in existence for over a hundred years and have been known by different names, e.g. mid-level worker (MLW), community rehabilitation facilitator (CRF) or substitute health worker (SHW). According to Friedman (2002) there have been documented examples of the successful utilisation of CHW since the early 1950s. Community health workers have been defined by the WHO as members of the communities in which they work, selected by the communities, supported by the health system and who have shorter training periods than qualified health professional workers (WHO, 1989). Since the 1980s, CHW programmes have been a key component of PHC, playing a key role in extending health services in their communities. They have been recognised as playing a vital role in improving access to health services in order to strengthen CBR programmes (Friedman, 2002). Community-based rehabilitation programmes use

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3 Community health workers are referred to in literature as alternative workers, substituted workers, mid-level workers, community rehabilitation facilitators. In South Africa in 2012, 30 community health workers were trained in the field of rehabilitation and they are now referred to as rehabilitation care workers (RCWs)

CHWs for different reasons depending on the health need of the community.

In a study by Krieger, Takaro, Song, Beaudet and Edwards (2009) CHWs from different ethnic backgrounds provided self-management support for asthma suffers by doing home visits in Washington and the results indicated improvement in asthma control in low income communities. In Zambia, CHWs were capable of managing malaria fevers by correctly interpreting diagnostic test results and appropriately prescribing antimalarial medication. The CHWs knew when to refer severe malaria cases and febrile non-malaria fevers to a health facility for further management. During this study there were no recorded cases of severe progression of malaria and no deaths (Chanda, Hamainza, Moonga, Chalwe & Pagnoni, 2011). Similar results were found by Mukanga et al. (2011) in Uganda where CHWs were trained to use diagnostic tests for malaria in children.
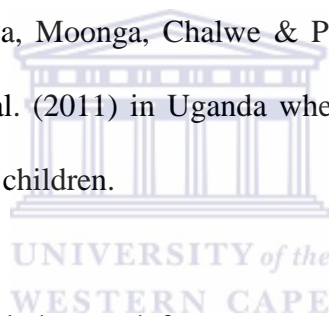
In 1981 the WHO advocated the need for a new cadre of CHW in the field of rehabilitation and recommended that they should either be a person with a disability, a family member of a person with a disability or a volunteer from the same community as they would be able to relate to the needs of PWD (WHO, 2003). The CBR programmes and CHWs must be supported by government and non-governmental health, education, vocational and social services (WHO, 2003). In South Africa these CHWs are now called RCWs. These new cadres must possess multiple skills to operate across the five domains of Health, Education, Livelihood, Social and Empowerment sectors, as described by the CBR Matrix (Mannan et al., 2012).

A review conducted on CBR suggested that there was wide support amongst
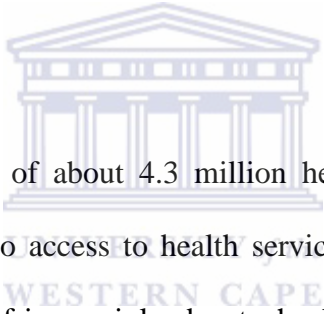
occupational therapists and physiotherapists for CBR. These health professionals felt that they could support CBR programmes by training and teaching community health workers the practical skills needed to deliver services to PWD. According to this review there is evidence that CHWs strengthen CBR (World Confederation of Physical Therapy, 2003; World Federation of Occupational Therapy, 2003). According to a review by Swider (2002), there is little consensus about the role and effectiveness of CHWs although they are being used to increase community involvement in promoting health. This review also found support for CHWs in improving access to health services in underserved communities. The literature suggests that CHWs can effectively assist clients with maintaining health and primary and preventive care by promoting cost-efficient use of medical delivery systems and thereby assist in improving clients' health outcomes and quality of life (Martinez, Ro, Villa, Powell & Knickman, 2011). According to Rule et al. (2006) the role of CHWs is to deliver rehabilitation services in communities because it is expensive and difficult to get health professionals to work in the community. Not only is the training of health professionals costly, they are trained to be institution-based and do not always cope well in rural settings (Deepak et al., 2011).

2.4.1 Training Community Health Workers

The Joint Paper of 2004, identified that CHWs should be trained to do home-based interventions, health promotion and prevention and awareness programmes. According to Deepak et al. (2011) CHWs should be trained according to the specific needs of the PWD targeted in CBR programmes. In Malaysia, for example, the CHWs were trained in basic principles of CBR, sign language, child development and the

needs of children with disabilities, nutritional needs and nursing care skills. Some CBR training programmes provide a few weeks of basic training to CHWs while others receive training for up to two years. In Ghana, a curriculum review identified a lack of knowledge and skills required by CHWs to promote the social inclusion of PWD (Deepak et al., 2011). The CBR guidelines encourage the development of a new curriculum through which to train a CHW with mixed skills. This curriculum must be interdisciplinary in order to address all five domains of the CBR guidelines (Rule, 2013).

2.5 Task Shifting

Globally, there is a shortage of about 4.3 million health workers, leaving over a billion people with little or no access to health services. There is a lack of human resources for healthcare in Africa mainly due to health professionals migrating to more developed countries as poorer, developing countries cannot afford to pay health professional (Dovlo, 2004). The greatest shortage is in the poorest countries (WHO, 2006). Uneven distribution of available health professionals frequently limits access to care, particularly for the poor and those living in rural areas. The lack of human healthcare resources has resulted in a call for task-shifting by the WHO (WHO, 2007). Task-shifting involves the rational redistribution of tasks among health workforce teams. Specific tasks are moved, where appropriate, from highly qualified health professionals to CHWs with shorter training and fewer qualifications, in order to make more efficient use of the available human resources for health (Dovlo, 2004). More countries are therefore shifting tasks from trained professionals to CHWs as a

way of increasing the provision of services in under-resourced communities (Dawad & Jobson, 2005). Over the past fifty years CHWs have been used around the world to fulfil the roles and functions of internationally recognised health professionals such as doctors, nurses and pharmacists. These CHWs offer a cost-effective mechanism to promote the use of appropriate health care resources. The cost to train, employ and support CHWs is inexpensive and this reduces the cost of CBR programmes (Witmer, Seifer, Finnochio & O'Neil, 1995). The CHWs are utilised to overcome the problem of human resources in Africa and fulfil clear and defined roles in the health sector (Dovlo, 2004). However it is important to understand the role of the health professionals in CBR.

2.6 Health Professionals in Community-based Rehabilitation

Health professionals and CHWs come from different socio-economic backgrounds and have different levels of education (Crigler, Gergen & Perry, 2013). Health professionals may have not tried to function in the work environment of a CHW and therefore health professionals lack insight into the role of CHWs and the challenges that they face in their workplace (Crigler, Gergen & Perry, 2013). Some health professionals are also unclear of their own role in CBR as they perceive themselves to be the experts in providing rehabilitation services. This could be due to poor input on CBR and the role of CBR personnel during their professional training (Bury, 2005). According to Dovlo (2004) CHWs can be effectively utilised in CBR if their role is understood and their potential is not limited by professional protectionism and scepticism. A clear understanding of the scope of practice of a new CHW will

minimise resistance by health professionals (Hugo, 2005). There is also a lack of integration of CHWs into the health staffing structures because health professionals are not sufficiently trained to support CHWs. This will result in CHWs not being well supervised by the qualified health professionals (Lehman, 2008). In South Africa the role of CHWs may be limited due to a lack of understanding of their capabilities (Finkenflugel & Rule, 2008). In 2003, in South Africa, the training of a multi-skilled CHW was stopped due to professional protectionism and a lack of willingness by health professionals to share skills across disciplines. Health professionals also could not decide which professional group would be responsible for supervision of the CHWs (Hugo, 2005). As a result, CBR programmes in rural areas deteriorated (Hugo, 2005).
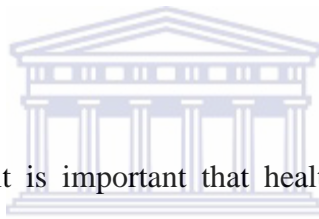
According to the literature, it is important that health professionals accept a new CHW as this is essential in the successful implementation of CBR programmes. It is therefore important that any new CHW is well received by health professionals so as to ensure success of CBR programmes. In an attempt to overcome the problem of introducing new cadres, Chappell and Johannsmeier (2009) recommended that CPD workshops be run to educate health professionals on training programmes and ways in which they will work as a team with a new cadre. The DOHWC used this recommendation in this pilot project and ran CPD workshops to inform the health professionals of the role of the RCWs and the training curriculum.

2.6.1 Supervision

In order to provide quality health care, supportive supervision is required as it is the

main link between CHWs and the health system (Haq & Hafeez, 2009). Health professionals, who provide this supportive supervision, are also responsible for guiding, monitoring and training CHWs and facilitating teamwork to achieve common goals. In this way health professionals enhance the credibility of CHWs by clarifying their roles, ensuring they have the supplies they need to perform their work, and addressing problems in the community (Crigler, Gergen & Perry, 2013; Freeman, Perry, Gupta & Rassekh, 2012). According to Strachan et al. (2012) supervision is an important factor for maintaining a functional cadre of motivated CHWs who feels valued. In the Gaza Province in Mozambique, CHWs were highly motivated and were able to make appropriate decisions regarding the community in which they worked due to a supportive environment and good supervision by the health staff (Edward et al., 2007).
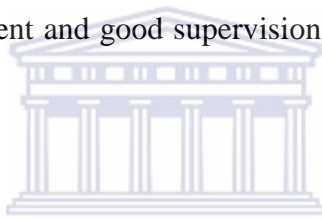
The role of the supervisor is to ensure that the CHW understands the tasks and that these tasks are executed at acceptable standards. According to Jaskiewicz and Tulenko (2012) two key elements that affect CHW productivity are supportive supervision and respect from the community and the health system. In terms of supervision, Jaskiewicz and Tuleno (2012) reported that CHWs need on-going and reliable support and supervision as this will ensure better outcomes and that if CHW do not receive adequate supervision they are often unproductive. Another study conducted by Stekelenburg, Kyanamina and Wolffers (2003) in Zambia, found that supervision of CHWs did not have a positive impact on performance because the quality of supervision was poor and CHWs did not experience any benefit from their supervision sessions.

Chappell and Johannsmeier (2009) found that a lack of knowledge of CBR and its cadres led to poor supervision and limitation of the CHWs' roles in CBR. A similar study by Bhutta, Lassi, Pariyo and Huicho (2010) found that in some CHW programmes in the Global Health Workforce Alliance review, supervisors did not understand the role of CHWs and resented the addition of supervision of the CHWs to their workload. Providing a supportive environment for CHWs is often not easy to achieve because many health professionals lack the background knowledge on CBR and its workers (Haines et al., 2007). Sufficient support for any new cadre of CHW is crucial in developing a patient-centred approach, integrated provision of care, continuity of care and a holistic approach to treatment which is on-going.

2.7 Trust

Within the health system the most common challenges are relationship and behavioural problems. According to Gibson (2003) trust is a voluntary action among people or parties based on expectations on how they will behave in relation to each other and expectations that are not met could have a negative impact on the relationship. Trust plays a vital role in health care, ensuring teamwork among the all disciplines so as to achieve a common goal (Gibson, Palmer & Schneider, 2005). Research done by Hartley, Finkenflugel, Kuipers and Thomas (2009) has shown that health professionals are often suspicious of workers outside their 'professional box' and are often unwilling to cooperate with them.

2.8 Summary

People with disabilities (PWD) experience problems with activities of daily living and participation in community and it is their right to be socially included in all aspects of community life. People with disabilities therefore need interventions to address their problems which may not just be physical. The needs of PWD can be addressed through community-based rehabilitation, which, according to the literature, has enjoyed global success. The WHO has recommended that CHWs be utilised in CBR and that they be trained in the field of rehabilitation so as to address the needs of PWD. The literature suggests that CHWs should be recruited from the same communities in which they work as they will have a better understanding of the needs of PWD in that community. The WHO also recommends that the CBR Matrix be used as a guide in CBR programmes to ensure inclusive development. Furthermore, the role of health professionals as supportive supervisors has also been emphasised as critical in the success of CBR. From the literature review it is evident that there has been a lack of understanding by professionals around the role of CHW in CBR and that mistrust may have led to poor utilisation of CHWs.

CHAPTER 3: METHODOLOGY

3.1 Introduction

This chapter describes Q methodology as a research design and discusses why and how it was used to gather and analyse the data for this study. The procedure of how to conduct a Q methodological study will be clearly outlined in five steps. A description will be given of how the data was collected and analysed for the development of the discourse for this Q study. A description will also be given of how the data was collected and analysed for the Q methodological component of this study. This chapter will also describe the research setting, the selection of the study population and the sampling strategy as well as the ethics that guided the research process.
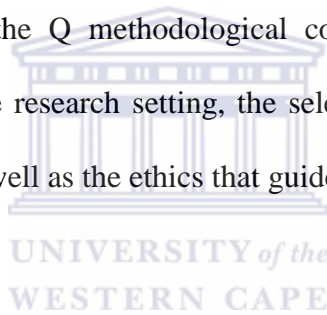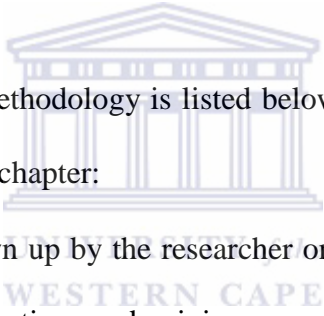
3.2 Research Design and Q methodology

This study uses an exploratory, cross-sectional design that made use of Q methodology to gather and interpret the data. Q methodology is a mixed method approach to research as it involves elements of quantitative and qualitative analysis in systematically studying subjectivity (McKeown & Thomas, 1988). Subjectivity is described by McKeown and Thomas (1988), as encompassing people's opinions, views and perceptions of an issue. This methodology was invented by British physicist-psychologist William Stephenson in 1953 who was interested in finding a way to explore the subjectivity of an issue (Stenner, Watts & Worrell, 2007). It can be

used to analyse opinions, perceptions, and attitudes in both clinical and non-clinical settings (Block, 2008). Studies that use Q methodology are therefore helpful in exploring tastes, preferences, sentiments, motives and goals that can have an impact on behaviour. Since this study seeks to explore health professionals' perceptions of RCWs, Q methodology was identified as a suitable research method to analyse the viewpoints of the participants. Another reason for the selection of this approach is that Q methodology does not require a large sample size (Van Exel & De Graaf, 2005). In this study there were only a certain number of health professionals who engaged with the RCWs in the clinical workplace and therefore these were the only participants whose opinions could be explored.

The terminology used in Q methodology is listed below and the researcher will refer to these terms throughout this chapter:

- Q-set: statements drawn up by the researcher on the topics being investigated and it is based on perceptions and opinions

- P-set: study population or the participants

- Q card: card on which a statement (from the Q-set) is written

- Q sorting: the process of ranking statements by P-set on a data score grid

- Q sort: the completed data score grid once Q sorting process has been completed

- Q concourse: involves ordinary conversation, commentary and discourse[4] about the topic under investigation

Q methodology has five distinctive steps and each step is described below in detail.

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[4] In Q methodology the discourse is referred to as the concourse

STEP 1 Development of the Q Concourse

The first step in Q Methodology requires the researcher to develop a Q concourse. In Q Methodology, concourse refers to "the flow of communicability surrounding any topic" in "the ordinary conversation, commentary, and discourse of everyday life (Brown, 1993, p.94). A Q concourse consists of a selection of statements regarding the topic, obtained from various sources of information that are referred to as discourses (Brown, 1993). The discourses are obtained through discussions, interviews, and the exploration of scientific and popular literature. Collecting the data from different discourses results in the acquisition of rich information required to encompass multiple viewpoints on the topic (McKenzie & Braswell, 2010). The researcher is required to identify a selection of statements from the themes that represent the topic in order to design the Q-set[5]. For the purpose of this study, data required to develop the concourse, was collected from focus group discussions, document analysis and a review of the relevant literature. The process of collecting this data is discussed under *Data Collection*.

STEP 2 Development of the Q-Set

The second step involves the development of the Q-set (Appendix C). The Q-set is a selection of statements developed from the concourse that are representative of the topics under discussion (McKeown & Thomas, 1988). For the purpose of this study several sources were analysed and used to develop the Q-set. The process of how the Q-set was developed, using literature, focus group discussions and documents (minutes of meetings, transcripts form workshops and written feedback from health professionals), is described under *Data Collection*.

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[5] Q-set are statements drawn up from the Q concourse

STEP 3 P-Set

The third step is to select the study population which is referred to as the P-set. The P-set are known as the variables of the study (Brown, 1980). There should be enough participants to obtain meaningful factors for comparison, but a large sample of participants is not required for this methodology (Brown, 1980). The selection of the P-set for the current study is described under *Sampling* below.

STEP 4 Q Sorting

The fourth step involves Q sorting which describes the process of ranking the Q-set (statements) by the P-set (participants). Q sorting enables a participant to represent his or her subjective opinion by arranging the Q-set along a continuum of agreement (Brown, 1993; Stenner, Cooper & Skevington, 2003). These statements are arranged on a grid (Appendix D) which becomes a model of that particular participant's opinion (McKeown &Thomas, 1988; Stenner, Watts & Worrell, 2007). In this study the process of Q sorting is described below under *Data Collection.*

STEP 5 Data Analysis and Interpretation

In the final step of the process the analysis of the completed Q sorts (Appendix E) is carried out using a computer-based software package to determine correlations and variance between views, and to complete a factor analysis of the multiple viewpoints obtained (Stenner, Watts & Worrell, 2007). Factoral trends are identified electronically through the use of this computer programme. The factors elicited are then qualitatively interpreted by the researcher (McKenzie & Braswell, 2010). The use of this computer software programme called PQMethod (Schmolck, 2002), to analyse the data is described in *Data Analysis* below. Finally the interpretation of the factors is described in the Results and Discussion chapters.

3.3 Research Setting

From July 2013 to November 2013, the RCWs in the final stage of their training programme were given the opportunity to practice their newly acquired skills at various health facilities in the Western Cape, one of nine provinces in South Africa. Within a period of fifteen weeks the RCWs rotated through three different learning areas, each rotation lasting five weeks. These learning areas included adult intermediate care, paediatric intermediate care and community-based services. The community-based placements included two paediatric day care centres and the households of people with disabilities. During their fifteen weeks of work integrated practice learning, the RCWs worked under the direct instruction of qualified health professionals employed at these different facilities and were supervised weekly by qualified physiotherapists and occupational therapists employed by UWC.
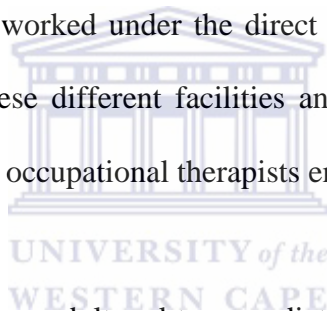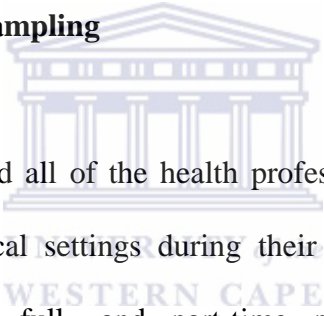
The RCWs also practiced at two adult and two paediatric intermediate care facilities. The first adult intermediate care facility was located in the Mitchells Plain District which is approximately forty kilometres from the City Centre on the Cape Flats. The second adult intermediate care facility was located in the City Bowl in Oranjezicht.

The first paediatric intermediate care facility was located in Athlone, a suburb in Cape Town on the Cape Flats which falls under the Athlone Health District of the Cape Metropole. The second paediatric intermediate care facility was located in Montana, which is also part of the Athlone Health District of the Cape Metropole.

The RCWs were also placed at the UWC Community Rehabilitation Project in Mitchells Plain. From this base, they were accompanied by the coordinator of the project (a qualified occupational therapist) into community facilities and the homes of

clients. The Community Rehabilitation Project was established in 2006 by the School of Public Health (Faculty of Community and Health Sciences at UWC) and focuses on the reintegration of the disabled person back into society in communities in Mitchells Plain and Nyanga. It is an outreach project which allows occupational therapy, physiotherapy and nursing students the opportunity to practice and experience clinical skills within a community-based rehabilitative framework (School of Public Health Faculty of Community Health Sciences Report of Activities, 2005-2006).

3.4 Study Population and Sampling

The study population included all of the health professionals who engaged directly with the RCWs in the clinical settings during their WIPL module. These health professionals included both full- and part-time physiotherapists, occupational therapists, speech therapists, physiotherapy assistants and occupational therapy technicians employed at the two adult intermediate care facilities and the two paediatric intermediate care facilities. It also included the occupational therapist, employed at the UWC Community Project, who accompanied the RCWs into the community. In the community the RCWs were working at two paediatric day care centres and in the households of patients. In total there were nineteen rehabilitation health professionals at these placements. The study population also include all the clinical educators who supervised the RCWs in the clinical setting. These clinical educators were physiotherapists and occupational therapists employed by UWC (implementers of the work integrated practice learning module). In total there were

eight clinical educators, six of whom were physiotherapists and two who were occupational therapists. This study made use of convenient sampling in that the selection of the study sample was based on the availability of the health professionals. The entire study population of twenty seven health professionals were invited to participate in the study and eighteen of them consented to take part

3.5 Data Collection

This section is divided into two sections. The first section describes how the data, that was needed to develop the concourse, was collected. The second section describes how the data was collected for the Q methodological component of the study.
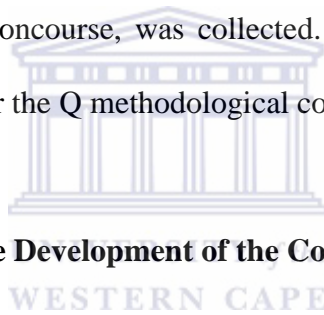
3.5.1 Data Collection for the Development of the Concourse

As described above, the concourse refers to the ordinary conversation, commentary and discourse of the topics under investigation (Brown, 1993) and represents the first step in Q Methodology. There are several topics under discussion in this research study, namely the expected role of the new RCWs and their level of inclusion in the health system as well as the knowledge, skills and behaviour of the RWCs. For the purpose of this study the researcher used four sources to obtain the concourse.

3.5.1.1 Literature Review
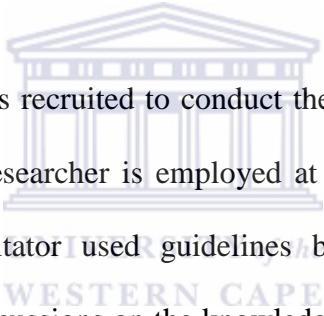
Firstly a literature review was conducted to obtain global opinions and viewpoints on

the topics under investigation. The literature review, which is outlined in chapter two, explored CBR and the role of CBR personnel; namely CHWs and health professionals. The need to train a new cadre of CHW with a multiple of skills to perform activities according to the CBR guidelines (set out by the WHO in the Joint Paper of 2004) is identified in the literature. The literature highlighted that new cadres of CHWs should be recruited from the communities they come from as they will be better able to address the needs of PWDs in their own communities. The literature suggests that health professionals need to clearly understand the role of new cadre of CHWs so as not to limit their potential in CBR. The literature also suggests that CHWs are not well integrated into the health system. Health professionals also play an important role in providing supportive supervision, guiding and training CHWs to ensure that they can perform tasks at acceptable standards. The literature was limited on exploring health professionals' perceptions of knowledge, skills and behaviours of CHWs. However, it was evident that respect and trust are needed among all stakeholders in CBR to ensure success of CBR programmes.

3.5.1.2 Focus Group Discussions

Focus group discussions were conducted with the health professionals who engaged with the RCWs in the clinical workplace to obtain their viewpoints about the RCWs. The focus group discussions explored health professionals' expectations of the role of the RCWs and their level of inclusion in health system as well as their perceptions with regards to the knowledge, skills and behaviour of the RCWs. Three focus group discussions were conducted at three different facilities. A total of eighteen participants were available and consented to participate in these focus group discussions.

The first focus group discussion was held at the UWC Department of Physiotherapy where seven female clinical supervisors participated in the discussion. Of the seven participants, five were physiotherapists and two were occupational therapists. The second focus group discussion was conducted at an adult intermediate care facility and there were six participants present namely; three male physiotherapists and three female physiotherapy assistants employed at that intermediate care facility. At the third focus group discussion, which was conducted at the paediatric intermediate care, there were five female participants namely; one physiotherapist, one occupational therapist, one speech therapist, a nursing sister and one occupational therapy technician who were all employed at that facility.

An independent facilitator was recruited to conduct these focus group discussions in order to reduce bias as the researcher is employed at UWC and is also a part-time student at UWC. The facilitator used guidelines based on training curriculum outcomes in order to elicit discussions on the knowledge of the RCWs, their practical skills and their behaviour in the clinical settings (See Appendix B for training outcomes.) The focus group discussions were audio-taped and then transcribed verbatim by an independent transcriber. The analysis of these transcriptions is discussed under *Data Analysis.*

3.5.1.3 Document Analysis

Several documents were analysed as part of the document analysis component of this study. These documents were obtained from UCT and UWC and included transcriptions of conversations at continuing professional development (CPD)

workshops, minutes of meetings as well as written feedback from the health professionals, which were submitted to the clinical coordinator of the work integrated practice learning (WIPL) module. These documents were made available to the researchers conducting independent studies around the RCWs.

CPD workshops: The DOHWC (initiators of this pilot) UCT and UWC (implementers of the RCW training programme) ran four CPD accredited workshops to provide health professionals with information on the structure and content of the RCWs' training curriculum, to clarify roles (of the RCWs, supervisors and health professional) and what the DOHWC 2020/2030 vision is for CBR in the Western Cape. At these CPD workshops health professionals were given a platform to express their views and concerns regarding the RCWs. These sessions were audio-taped by an employee of UCT and transcribed by an independent transcriber. The analysis of these transcriptions is discussed under *Data Analysis*.

Minutes of meetings: Three meetings were held (facilitated by academics from UCT and UWC) where health professionals and supervisors were given the opportunity to provide feedback on the progress of the RCWs and challenges they experienced in their practice learning module. The minutes of these meetings were read several times and analysed and will be discussed under *Data Analysis.*

Structured written feedback: The final documents that were analysed by the researcher were nine structured feedback forms that health professionals (clinicians and supervisors) sent to the UWC clinical coordinator of the WIPL module on the performance of the RCWs in the clinical workplace. These forms were used (by the clinical coordinator) as a tool to obtain feedback from the health professionals regarding the knowledge, skills and attitudes of the RCWs in the clinical workplace. In this way the clinical coordinator (employed by UWC) could identify which

learning areas needed to be focussed on in tutorial sessions with the RCWs. These structured forms were completed by three occupational therapy supervisors, two physiotherapy supervisors, one occupational therapy clinician working at a paediatric intermediate care facility and three physiotherapy clinicians, two of whom were employed at different adult intermediate care facilities and one employed at a paediatric intermediate care facility. (See Appendix F for a template of the feedback form.)

The data collected (from the literature review, focus group discussions, and documents described above) were used by the researcher to inform the Q concourse by identifying all the possible viewpoints of the participants regarding the potential role and level of inclusion of RCWs in the healthcare system and their knowledge, skills and behaviour in the clinical setting. The researcher could then proceed to the second step of the Q methodology process which was to develop the Q-set. From the concourse, a total of forty seven statements[6] were drawn up (Appendix C). These statements were typed and printed onto Q cards. Each card was numbered and had one statement typed on it. Figure 3 indicates examples of Q cards on which a statement was written.

Statement 1.	RCWs lacked professionalism in the clinical workplace.

Figure 3: Example of a Q card used in this study

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[6] Statements which were drawn up were based on the participants' perceptions of the RCWs.

3.5.2 Data Collection Procedure for Q methodology

The process of data collection for a Q study is called Q sorting. In this study, eighteen participants engaged in the Q sorting process. Some participants completed the Q sorting in their own time and in addition, two Q sorting sessions were held at two different health facilities. Demographic information was obtained from each participant in order to gain an understanding of the participants' level of professional education, work experience and current position or title in the workplace. The researcher provided each participant with a step-by-step written explanation of the process and verbal instructions were also provided to reduce uncertainty. Participants (the P-set) could complete the Q sorting individually in their own time. The completed Q data score grids were then electronically returned to the researcher or collected personally from the participants.
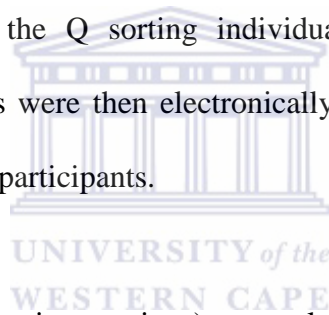
Data gathering sessions (Q sorting sessions) were also conducted in groups at two health facilities namely; one at an adult intermediate care facility and another at a paediatric intermediate care facility. Three participants engaged in the process of Q sorting at each of these health facilities. The participants at the health facilities also received verbal and written explanations of the process.

Q sorting: The process of Q sorting requires the P-set (the participants) to rank the Q-set (the statements drawn up by the researcher, based on participants' viewpoints). The P-set were given the Q-set (which consisted of forty seven Q cards with statements written on them) and a data score sheet in the form of a grid on which to rank these statements. The data score sheet is a diagram consisting of columns made up of forty seven blocks (Appendix D). The Q cards were numbered from one to forty

seven and each card had one statement on it. The P-set was instructed to first read all the statements carefully and then sort the statements into three piles, namely: statements they agreed with (pile one), statements they disagreed with (pile two) and statements they felt neutral about (pile three).

The P-set was then instructed to take the statements from pile one, which were the statements they agreed with, then rank each statement from "strongly agree" to "agree somewhat" on the data score sheet. There were four columns on the data score sheet in which the agreed statements could be ranked. The columns ranged from positive four to positive one. The column marked positive four was for statements that the P-set strongly agreed with and column marked positive one column was for statements that the P-set least agreed with. The P-set ranked three statements in the "strongly agree" column (which was the column marked positive four) and the rest of the statements in columns positive three, positive two and positive one columns.
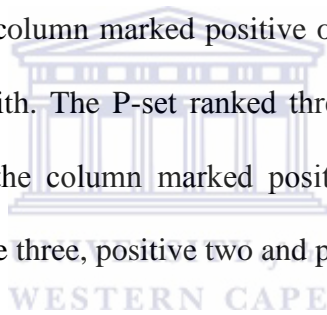
The P-set was then instructed to take the statements for pile two, which were the statements they disagreed with, and rank these statement from "strongly disagree to disagree somewhat" on the data score sheet. There were four columns on the data score sheet in which the disagreed statements could be ranked. The columns ranged from negative four to negative one. The column marked negative four was for statements that the P-set strongly disagreed with and column marked negative one column was for statements that the P-set least agreed with. The P-set ranked three statements in the "strongly disagree" column and the rest in columns negative three, negative two and negative one columns. The statements in pile three, which were statements that the P-set felt neutral about or felt that they did not have an opinion on,

were then placed in the neutral column, marked zero on the data score sheet.

The P-set could only write the number of one statement per block. The P-set were informed that there are no right or wrong answers as the researcher was interested in capturing their viewpoints. The P-set were given the opportunity to elaborate, in writing, on their score sheets, on their viewpoints placed on both extremes of the scale. The P-set explained why they had selected the statement they most strongly agreed with and the statement they most strongly disagreed with. After the Q sorting was completed, the P-set could review how they had ranked the Q-set and could make changes if they so wished. This ensured that the participants' personal viewpoints were accurately portrayed. A completed data score sheet is referred to as a Q sort (Appendix E) and it represents a participant's point of view. The completed Q sorts were the raw data which was entered into the PQMethod software programme (discussed under *Data Analysis*). The following diagram is an example of a data score grid (Appendix D).

-4	-3	-2	-1	0	+1	+2	+3	+4

Figure 4: Template of Q Data Score Grid

3.6 Data Analysis

The data analysis will be discussed in two subsections. The first section describes how the data collected for the Q concourse was analysed and the second section describes the data analysis for Q methodology.

3.6.1 Data Analysis for the Q Concourse

Thematic analysis was use to analyse the data collected for the Q concourse. This method allowed the researcher to become familiar with the data so as to identify, analyse and record the specific themes within the data (Braun & Clarke, 2006). The clinical coordinator of the WIPL module assisted the researcher in reviewing the data for the Q concourse to confirm that the relevant themes for this research study were accurately reported. In this way the clinical coordinator contributed to the development of the Q-set. The clinical coordinator of the WIPL module had background knowledge of this pilot training of the RCWs and could provide valuable insight into identifying health professionals' viewpoints regarding the RCWs in clinical practice.

3.6.1.1 Focus Group Discussions

The audio-taped recordings of the three focus group discussions were transcribed verbatim by an independent transcriber, with experience in this area, in order to produce a manuscript. These transcripts were read several times and the researcher highlighted the participants' perceptions of the potential role of the RCWs the health

system and what the RCWs level of inclusion in the health system would be. The researcher also identified the opinions of the participants regarding the knowledge, skills and behaviours of RCWs.

3.6.1.2 Document Analysis

CPD workshops: At the CPD workshops, health professionals were given the opportunity to express their concerns and to ask questions regarding the RCWs. These conversations were audio-taped and transcribed verbatim by an independent transcriber. The researcher read through these manuscripts several times and highlighted the opinions of the health professionals regarding the expected role of the RCWs and their level of inclusion in the health system. The researcher noted the concerns raised by the health professionals regarding the role of the RCWs in the health system. At the time that these CPD workshops were conducted, the RCWs had not yet started their WIPL module and therefore the participants could not have an opinion regarding the knowledge, skills and behaviour of the RCWs.

Minutes of meetings: Regular meetings were held between UCT, UWC, DOHWC, the health professionals and the supervisors, so that they could provide feedback on the RCWs performance in the WIPL module. The researcher read through the minutes of these meetings several times and highlighted the feedback reported by the supervisors and the health professional staff at the facilities where the RCWs were placed. Challenges and facilitators experienced in the clinical workplace were grouped into three categories namely; knowledge, skills and behaviour, thus gaining an understanding of what the health professionals' impressions were of the RCWs.

Structured written feedback: Health professionals were required to send electronic

feedback regarding the progress of the RCWs at their health facilities to the WIPL coordinator using a structured form (Appendix G). Nine feedback forms were returned to the WIPL coordinator and these forms were read several times by the researcher. The opinions of health professionals of RCWs in the clinical workplace were identified especially opinions related to the role of RCWs, their level of inclusion in the health system and their knowledge, skills and behaviour in the clinical workplace.

3.6.2 Data Analysis for Q Methodology

In order to analyse Q data (the Q sorts), a free computer software programme, called PQMethod, was downloaded from the internet. This software programme was developed by Peter Schmolck of the University of the Federal Armed Forces Munich to make the analysis of Q studies simpler (Webler, Danielson & Tuler, 2009). PQMethod is specifically designed to statistically analyse Q data to meet the requirements of Q studies (Van Exel & De Graaf, 2005). The PQMethod software programme aggregated the data into factored sets which were then qualitatively interpreted by the researcher.

Of the eighteen participants who completed Q sorting, sixteen Q sorts were used for this study as two participants did not complete the Q sorting process correctly and therefore their data sets were excluded from the study.

In the data analysis process the correlation matrix of all Q sorts (the completed data score sheets) was calculated. This shows the level of agreement or disagreement

between each of the participants in the study (Van Exel & De Graaf, 2005). The statistical method of factor analysis is used to identify common points of view among Q sorts. In Q factor analysis, the correlations between persons as opposed to variables are factored. It determines which sets of people cluster together. This process involved the following five steps (Appendix H).

1. Firstly the forty-seven statements were entered into the PQMethod software programme. The programme allowed the researcher to enter the number of the statement followed by the actual statement.

2. Secondly the researcher entered information in the following sequence:

   first the total number of statements (forty seven statements)

   the value of the column on the far left of the Q-sort (which was negative four)

   the value of the column on the far right of the Q sort (which was positive four)

   the number of rows in each column, from left to right.
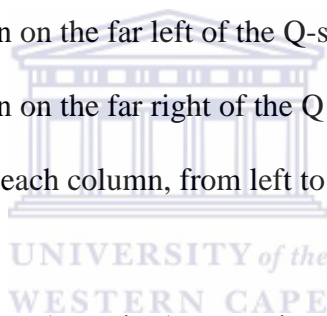
The sixteen individual Q sorts (raw data) were then ready to be entered into the PQMethod programme.

3. In the third step a Centroid Analysis[7] was selected as the method to be used to extract factors. A correlation matrix was calculated using the Centroid analysis. Centroid analysis is the preferred choice for William Stephenson and other users of Q methodology (Schmolck, 2002). An initial factor loading was established for each Q sort. Factor loadings represent how much a factor explains a variable in factor analysis. This conveyed how closely each factor was related to each individual Q sort (McKenzie & Braswell, 2010). A factor is representative of participants with similar

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7 Q methodology uses centroid factor analysis to extract factors. A centroid refers to an average of the relationships between all the sorts, because they are represented by their correlation coefficients (Brown 1980)
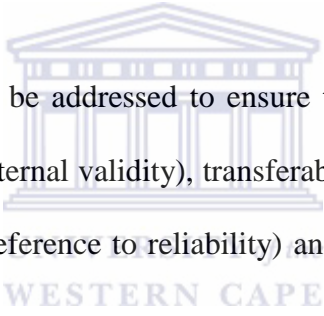
opinions. This implies that the number of factors is therefore dependent on the variability of opinions with more differing views resulting in more factors (Brown 1980, 1993).

4. In the fourth step a Varimax rotation of factors was selected. Varimax rotation (a computer algorithm) is well known and often used to improve interpretation of factors (McKenzie, Braswell, Jelsma & Naidoo, 2011). Varimax is a common rotation method. It is strictly mathematical and provides an orthogonal solution. This means that factors are rotated in such a way that they are always at right angles to each other, that is, the factors are uncorrelated. In Varimax rotation each factor has a small number of large loadings and a large number of zero (or small) loadings. The resulting final set of sixteen Q sorts, loaded onto two factors. This is an amalgamation of the individual Q sorts which are greatly comparable with one another and dissimilar with others (McKenzie & Braswell, 2010).

5. In the final step, Q Analysis was performed, whereby the programme produced a complete analysis of the Q sorts entered, resulting in the production of an output file reporting the factor loadings and factor scores. In Q factor analysis, participants load onto factors. These loadings represent the extent to which each Q sort is associated with each factor (Brown, 1993). Factor loadings are thus correlations between the Q sorts and the factor. A factor is defined by participants who unambiguously load highly on the factor. The factor scores are used as weights to create a weighted average Q-sort for each factor (McKenzie et al., 2011). A statement's factor score is the normalised weighted average statement score (Z score) of participants that define that factor (McKenzie & Braswell 2010). Based on these Z scores, a composite Q sort for each factor, called a factor array can be produced.

The two factors elicited were then interpreted to gain an understanding of the view points of the participants regarding the knowledge, skills and behaviour of the RCWs, their role in CBR and their level of inclusion in the health system. When interpreting factors, it is important to consider that the participants are the variables, while the Q-set statements are known as the sample elements (Brown, 1980). For the purpose of this study the ICF and the CBR Matrix were used as a theoretical framework through which factors identified in the Q method were mapped.

3.7 Trustworthiness

The four criteria that need to be addressed to ensure trustworthiness of a study are credibility (in preference to internal validity), transferability (in preference to external validity), dependability (in preference to reliability) and confirmabilty (in preference to objectivity) (Guba, 1981).

3.7.1 Credibility

According to Lincoln and Guba (1985) ensuring credibility is important in establishing trustworthiness. In this study credibility was achieved in the following ways:

Focus group discussions were facilitated by an independent person to reduce bias by the researcher who is employed at UWC (who was the implementer of WIPL). This facilitator was a qualified nurse with experience in CBR which allowed the facilitator to help participants generate in-depth discussions. The facilitator gave each group of

participants a summary of the discussions after each focus group discussion to verify that the information recorded was correct. Audio-tapes were also transcribed verbatim by an independent transcriber who specialises in transcription (Morrow, 2005; Shenton 2004).

Triangulation of data enhances credibility (Graneheim & Lundman, 2004). Several sources were used in this study to obtain the viewpoints of the participants. These sources included a review of the literature, analysis of manuscripts of transcribed focus group discussions and analysis of relevant documents (manuscripts of transcribed conversations at CPD workshops, minutes of meetings and written feedback received regarding RCWs performance in WIPL). Common viewpoints were expressed in these documents which verify how health professionals perceived RCWS in their clinical settings.
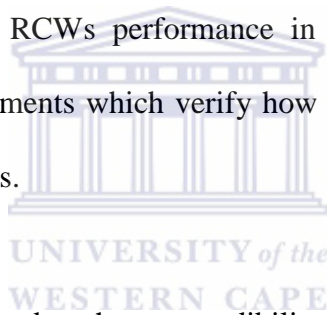
Peer scrutiny of the research study enhances credibility (Shenton, 2004). In this study, the thematic analysis of the focus group discussions and several documents for the development of the Q concourse and the Q-set, was reviewed by the clinical coordinator of the WIPL module. In this way the clinical coordinator's perspective minimised assumptions made by the researcher when developing the Q-set and ensured that the viewpoints of the P-set were accurately reported.

3.7.2 Transferability

External validity refers to the extent to which the findings of one study can be applied to other situations (Merriam, 2000). This was a pilot study in which RCWs were

trained and given multiple skills in physiotherapy, occupational therapy and speech therapy, and therefore it is a unique situation to the Western Cape. However if the DOH were to consider training more RCWs to service other districts or communities in the country, then possibly the findings of this study could be applied to similar future situations.

3.7.3 Dependability (Reliability)

According to Amin (2000) reliability is the ability to repeat the study, in the same context and using the same methods to obtain similar results. In Q methodology this can be established by test- retest. The most important type of reliability is replicability (Van Exel & De Graaf, 2005). Since this was a pilot study the researcher was unable to determine whether the resulting factors will be similar when the same Q sample is administered to different participants. The results of this study have inter-rater reliability as Q methodology requires participants to engage with the instrument simultaneously and the results were used to determine the factors independently from the researcher using PQMethod software programme.

3.7.4 Confirmability

To address confirmability in this study, triangulation of data was used. The sources used to collect the data to inform the Q concourse were literature review, FGDs and several documents which were thematically analysed. The clinical coordinator of the WIPL module also reviewed the thematic analysis of the sources used to inform the Q concourse and verified that the statements (Q-set) drawn up, to be ranked by the participants, were an accurate selection of all the viewpoints of the participants. An

independent facilitator guided the discussions at the focus group discussions to reduce researcher bias.

3.8 Ethics Statement

This research study was granted ethical clearance from the Research Committee at the University of the Western Cape and the Higher Degrees Committee in November 2013. The project registration number is 13/10/38 (Appendix A). All participants received written information sheets regarding the rationale and aim of the study (Appendix I). Written informed consent was obtained from all participants in order to conduct this study (Appendix J). All participants were informed that their participation in this study was voluntary and that they could withdraw at will and without fear of negative consequences. Participants in focus group discussions signed a confidentiality binding form (Appendix K) and during the focus group discussions participants used coded names instead of their real names so as to ensure anonymity. Permission was obtained from the participants to have the focus group discussions audio-taped and transcribed and used for the data collection. The researcher explained the process of Q sorting (ranking statements) to each participant in detail and ensured that the instructions for completing the process were understood. The researcher also gave each participant written instructions on the process of Q sorting to further reduce any uncertainty. Confidentiality and anonymity was assured by not including the participants' names on the data collection score sheets used in Q methodology.

The University of Cape Town requested permission from the participants at the CPD

workshops to audio tape the conversations and to use the transcribed audio tapes for research purposes. Permission for participants to complete the Q sorting at health facilities was also requested and obtained from the management at each facility. The study was conducted according to ethical practices pertaining to the study of human subjects as specified by the Faculty of Community and Health Sciences Research Ethics Committee of the University of the Western Cape and the Department of Health Western Cape. Audio-tapes were destroyed after transcribing. All documents and transcriptions will be destroyed after they have been analysed and this study completed. The research study posed minimal risk to the participants. However, should a participant be affected by this study, the researcher noted that the participant would be referred for counselling.

3.9 Summary

The data for the concourse for this study was collected by conducting a review of the relevant literature and analysing several documents and the focus group discussions using thematic analysis. These documents were made available to the researcher by the tertiary institutions (UCT and UWC) that were responsible for the training of the RCWs. Focus group discussions, initiated by the researcher, were conducted with the health professionals who engaged directly with the RCWs in the clinical setting. From the Q concourse, the researcher was able to draw up statements (based on the opinions of the P-set). Sixteen participants then successfully completed the Q sorting process which involved the ranking of the statements from "strongly agree to strongly disagree". The completed Q sorts were then entered into the PQ software programme

and statistically analysed. From the results of this Q study two factors emerged. The interpretation of these two factors will help to gain an understanding of the P-set's perceptions of RCWs and will be discussed in more detail in the Results and Discussion chapters.

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CHAPTER 4: RESULTS

4. 1 Introduction

This chapter contains the results of the analysis of the data gathered which attempted to meet the objectives of the study. The objectives of this study were to explore health professionals' perceptions of the role and level of inclusion the RCWs will have in the South African health system as well as to explore health professionals' perceptions of the knowledge, skills and behaviour of RCWs in clinical practice. The results will be presented in three sections. The first section describes the demographic profile of the participants (the P-set). The second section describes the results of the sources used to develop the concourse in Q methodology (using the focus group discussions and document analysis). The third section describes the results of the data that was analysed using the PQ software.

4.2 Demographic Profile of the Participants

The following table presents the demographics of the P-set. A total of eighteen health professionals agreed to participate in this study.

Table 1: Demographic profile of P-set indicating the age, profession, highest level of qualification and the number and number of years' experience in the field

Age	Profession/ Current position	Highest level of qualification	Number of years work experience
50	Head of Physiotherapy Department	PhD Physiotherapy	26
65	Retired/part-time lecture	MSc Physiotherapy	33
39	Senior lecture	PhD Physiotherapy	16
37	Associate lecturer	MSc Occupational Therapy	14
33	Part-time clinical supervisor	BSc Physiotherapy	8
33	Clinical supervisor	HBSc Physiotherapy	12
36	Clinician	BSc Occupational Therapy	14
36	Clinician and Rehabilitation project manager	BSc Physiotherapy	12
37	Clinician	BSc Occupational Therapy	15
33	Senior clinician	BSc Speech, Language and Communication Therapy	10
31	Head Of Department	MSc Physiotherapy	11
28	Clinician	BSc Physiotherapy	7
25	Clinician	BSc Occupational Therapy	3
24	Clinician	BSc Physiotherapy	3
52	Clinician (Head of Department)	BSc Occupational Therapy	25
48	Occupational Therapy Technician	Occupational Therapy Technician certificate	15
39	Occupational Therapy Technician	Occupational Therapy Technician certificate	15
58	Occupational Therapy Technician	Occupational Therapy Technician certificate	15

The mean age of the P-set was thirty nine years old with a mean of thirteen years of work experience. A total of 83% of the P-set had tertiary education with 40% of this population having completed post graduate qualifications. The three occupational therapy technicians were occupational therapy assistants with prior work experience in this field who then successfully completed a one year training programme. This resulted in them obtaining certificates as occupational therapy technicians.

4.3 Developing the Concourse

The following sources were used to gather the viewpoints of health professionals so as to develop the concourse for the Q methodology: transcriptions of focus group discussions, minutes of meetings, transcriptions of CPD workshops and written feedback forms.
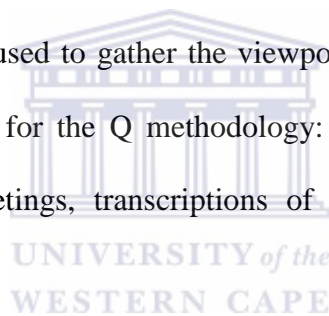
4.3.1 Focus group discussions

Three focus group discussions were conducted at three different facilities with a total of 18 participants. An independent facilitator conducted the focus group discussions in order to reduce researcher bias. The facilitator used guidelines based on the RCW training curriculum learning outcomes (Appendix B) to engage in discussions with the participants on the knowledge, skills and behaviour of the RCWs in the clinical settings. The first focus group discussion was held at the UWC Physiotherapy Department where seven clinical supervisors participated in the discussion, five of whom were physiotherapists and two who were occupational therapists. The second

focus group discussion was conducted at an adult intermediate care facility where RCWs did their work integrated practice learning. Three physiotherapists and three physiotherapy assistants employed at the facility participated in that discussion. The third focus group discussion was conducted at a paediatric intermediate care where RCWs did their work integrated practice learning. One physiotherapist, one occupational therapist, one speech therapist, a nursing sister and one occupational therapy technician all of whom were employed at that facility, participated. From the transcriptions of the focus group discussions the researcher could identify common as well as different viewpoints around the specific topics discussed. The purpose of conducting and analysing these focus group discussions was to obtain participants' viewpoint on the RCWs in the workplace as this would inform the concourse for Q methodology. This source, which was preliminary work done by the researcher in order to gather opinions, provided the most valuable information needed to develop the concourse.
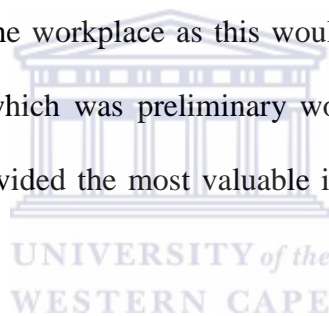
Knowledge

The first topic discussed in the focus group discussions was the knowledge of the RCWs and the discussions were guided by the learning outcomes identified by the training curriculum. (Appendix B).The following examples emerged from the focus group discussions with regards to the knowledge of RCWs.

P1 "Knowledge gained was broad based and it gave them insight into health issues and factors impacting on health. Their personal experience in health strengthened their knowledge. There was a lack of applied anatomy and that can be problematic."

P2 "RCWs were broad in their management of patients. They were not focussing on one specific profession, but would advise patients about occupational therapy, physiotherapy, audiology if there was a need. If patients needed to be referred, they knew where to refer them to."

P2 "Occupational therapy knowledge was vague. In terms of developmental sort of expectations of the child's norms and how to apply themselves, they battled with that. Their occupational therapy input was not as strong."

P3 "Their physiotherapy background comes out stronger. I appreciated their understanding of disability. Example: there was a blind child in the community and the RCW knew this child needed to participate so she got toys that the child could hear. She acknowledged that this child needs to participate and be with peers.
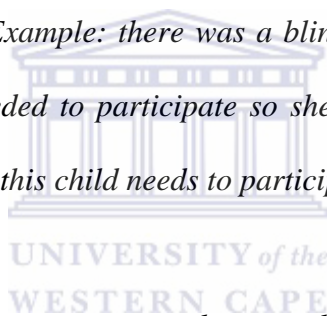
P5 "One RCWs took the initiative to go to the mental health sister to report that in one home, the patient's son was schizophrenic and was not complying with taking his medication and that he was not healthy."

From the above quotes it is evident that some health professionals were of the opinion that the RCWs had a good understanding health conditions, disability, participation of clients in community and the different roles of the health rehabilitation team, however there was one participant who felt that the RCWs knowledge of occupational therapy was lacking. This information informed the development of the concourse, allowing the researcher to draw up statements for Q methodology related to the knowledge of the RCWs.

Skills

The second topic discussed in the focus group discussions was the skills of the RCWs in the clinical workplace and the discussions were guided by the learning outcomes identified by the training curriculum (see Appendix B)**.** The follow examples emerged from the focus group discussions with regards to the skills of the RCWs in the clinical workplace.

P4 *"Communication was not a problem. Most of them [RCW]) were Xhosa speaking. That was not a problem because of our children are Xhosa speaking, but some of them [children] are Afrikaans speaking, but it was not an issue."*

P5 *"Their interaction with their clients was good. They were able to communicate well with clients and speak to them regarding their problems and trying to identify their problems. Many RCWs were competent with regards to basic passive movements, transfers and positioning of patients."*

P6 *"Record keeping, I was not good at looking at their records, but the grammar is not great but you get what they are saying. Time management was good. We gave them a timetable and they would work within time slots that we gave them so time management was good in general."*

P7 *"They were scared of facilitating groups and taking leadership. They were reluctant to engage with groups. You have to get used to groups and engaging with people to improve your group facilitation skills. But they need more exposure. They understand their role as facilitator and co-facilitator."*

From the above quotes it is evident that the participants had varying opinions as to which practical skills were well developed and which ones were not. However they felt that practical skills improved with time. This information was used to inform the development of the concourse allowing the researcher to identify statements for the Q methodology relating to the skills of the RCWs.

Behaviour

The third topic discussed in the focus group discussions was the behaviour displayed by the RCWs in the clinical workplace and the discussions were guided by the learning outcomes identified by the training curriculum (see Appendix B)**.** The follow examples emerged from the focus group discussions with regards to the behaviour displayed by the RCWs in the clinical workplace.
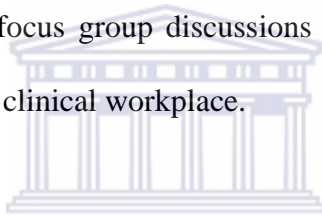
P7 "RCWs were very respectful and professional. They knew how to interact with clients at the hospital or elsewhere. They made a good impact on the patients and staff. The hospital staff was impressed with their behaviour and how they approached staff. Instead of dealing with issues themselves, they went to the clinician and had it sorted out."

P8 "They were professional with their patients and also when the supervisors came they were enthusiastic to learn. I think because of their background, they really show professionalism and respect."

P9 "They are a mature bunch of ladies with life experience and that really counts when it comes to positive attitudes and behaviours. A good quality they displayed was that they would stand up for their rights."

P10 "The fact that they do not waste time speaks a lot of their attitude towards their work. We did not have much complaints of the attitude of the RCWs, maybe just one or two, but the others were great that that one or two did not stand out."

From the above quotes it is clear that the participants felt that the RCWs displayed good, positive attitudes and behaviour toward their work and that they were professional and respectful in the clinical workplace. This information helped inform the concourse allowing the researcher to draw up statements related to the behaviour of the RCWs in the clinical setting.
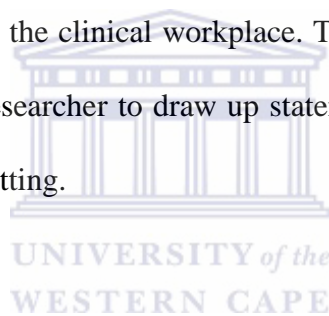
Role

The following are examples which emerged from the focus group discussions with regards to the perceived role the RCWs will have in the health system.

P11"They will be the extension of the hands of the therapists. The idea was not that they should be doing the assessments at the level of impairment. With the initial bid meeting, it was clear, that they [RCWs], at the level of impairment will only implement what is directed by the therapist. Participation and reintegration in the community is where they will work more independently."

P12 "There is a big role for them, whether it is in community or in the hospital. I know with our contract with the DOH they are featured in our contract as delivering 60% of the rehab output so that is a big number. They definitely have a role to play in the rehab team. "

P13 "RCWs play an important role in the development of transpiring the healthcare 2030 vision. Seeing them working in the community will be beneficial. Mobilisation of communities and advocacy roles is something that RCWs could drive because they have connections in communities. Community is where they need to be."

These quotes highlight the perceived role of RCWs in reintegrating clients into community and assisting with their participation in community and delivering rehabilitation services as instructed by the health professionals. Health professionals felt that the RCWs would have a role in advocacy and mobilisation of communities. These quotes were used to inform the development of the concourse for Q methodology.

Level of inclusion

The following are examples which emerged from the focus group discussions with regards to the perceived level of inclusion the RCWs will have in the health system i.e. where in the health system RCWs will fit in.

P14 "RCWs are definitely needed in community. At the step down facilities, the clinicians were excited because they [RCWs] were assisting them. RCWs should largely be placed in the households, in the communities. Example: a lady had an

amputation two months ago, still waiting a follow up appointment and she was being managed in that interim period by a RCW, so that is what RCWs would really be needed for."

P15 "If they work in a step-down facility they would be assisting with the workload of the therapists. At community level and they will be adding value if there is clear communication from the therapist at the hospital or through the referral. They will be playing a good role within the community because they will be continuing with what was done at hospital so the patient will not have to wait for an appointment at the clinics. I see them working at institutions and playing a major role within the home environment."

P16 "Community yes, I think there is a big need in community. That is probably the place where they would be needed the most. We are moving away from centralised services to more community-based services therefore the service needs to be accessible in the community.

From the above quotes it is clear that participants are of the opinion that RCWs will work in both intermediate care and in the community, indicating their understanding of where in the health system RCWs fit in.

The focus group discussions were one of the sources that were used to develop and inform the Q concourse. From the focus group discussions the opinions of the participants regarding the knowledge, skills and behaviour of the RCWs and their role

and level of inclusion in the health system, were then used to draw up the statements (Q-set) for this Q study.

4.3.2 Document Analysis

Documents were analysed in order to obtain the opinions of the participants regarding the knowledge, skills and behaviour of the RCWS as well as what the participants' expectations were regarding their role and level of inclusion in the health system. These documents included the minutes of meetings, transcripts of CPD workshops and written feedback on RCW performance in the clinical settings. The information obtained was also used to develop the concourse.

4.3.2 (a) Minutes of Meetings

The researcher read the minutes of three meetings (which were arranged by DOH, UCT and UWC) to identify the opinions of the health professionals with regards to the knowledge, skills and behaviour of the RCWs as well as their role and level of inclusion in the health system. There were not many opinions of health professionals that emerged from these documents since the discussions in these meetings were focused on the challenges with the clinical placements, structure of supervision sessions, examinations and course content. This source was therefore limiting in obtaining the information needed to inform the development of the Q concourse.

4.3.2 (b) CPD Workshops

The conservations at the CPD workshops (conducted to provide information to the health professionals regarding the training curriculum and the role of the RCWs) were

audio-taped and transcribed for the purpose of research. All researchers, working on a larger project, had access to these transcriptions. However, due to the poor quality of the audio-tapes, the transcriber was unable to clearly transcribe verbatim what the participants at the workshops expressed. It was therefore difficult for the researcher to identify the opinions of the health professionals. However, where possible, opinions and concerns of health professions were highlighted. What was evident from the transcriptions was that the health professionals were concerned about the role of the RCWs in the health system. This source was limited in providing the researcher with opinions and viewpoints of health professionals of the RCWs due to its poor quality. The following are examples of the poor quality of the transcriptions and were taken directly from the transcriptions.

Example 1

Facilitator: "Every group [unclear] one or two pointers on how you think you can use RCWs to strengthen your team."

Group1: "We said that assisted [unclear]. We said that there's many who run small groups like exercise groups [unclear]. {Hard to hear as there was phone interference and the speaker was not that close to the microphone}."

Group 2: "[Unclear] assisted devices, or recognizing the need for one. Assist with home visits."

Group 3: "Developmental screenings in the community.

Group 4: "(Routine?) maintenance and identifying rehab needs."

Facilitator 2: Yes, like mapping and asset management. Their [RCW] strength, the (current?) [unclear] they really have strength in the community. They feel

overwhelmed in the intermediate settings, but with regard to the community, they shine."

Example 2

Speaker: "There's the issue of uncertainty of roles. They [RCWs] found that the nurses were taking advantage of them and making them wash and feed the kids. We reinforced that washing the kids and feeding the kids can be done therapeutically. We clarified their [RCWs] roles to nurses. You [RCWs] are developing your own skills and therapeutically you're performing a function for your client or you're teaching your client.

Although the quality of the transcriptions were poor, the researcher was able to identify health professionals' perception of role of the RCWs in running exercise groups, assisting with home visits, assistive devices, developmental screening and identifying the rehabilitation needs of PWD. Participants also felt that RCWs were unsure of their role in the hospital setting and that their strength was in providing health services at community level.

4.3.2 (c) Written Feedback

The clinical coordinator of the work integrated practice learning (WIPL) module developed a structured form as a way of obtaining feedback from the clinical supervisors and health professionals working with the RCWs. The information obtained related to the RCWs themselves, the placement, and the coordination of WIPL module. It also identified where the health professionals thought RCWs would fit into the multi-disciplinary team. See Appendix G for an example of a feedback form received from a health professional. The clinical coordinator received feedback

from three physiotherapy clinicians, two physiotherapy clinical supervisors, two occupational therapy clinicians and two occupational therapy clinical supervisors who worked at different facilities. These forms were read several times so as to determine common or different viewpoints regarding the knowledge, skills and behaviours of RCWs and what their role would be in healthcare. The information obtained from this source was valuable and was used to inform the development of the concourse. The following are examples of the feedback received:

Positive aspects of RCWs:

P1: "Very eager to learn, respectful towards all levels of staff and very helpful."

P2: "The students tried their best throughout the block, and as the block progressed there was a noticeable improvement in their confidence, handling and overall competency."
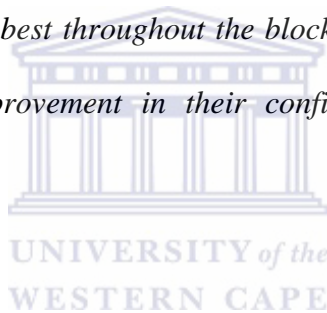
Negatives aspects of RCWs:

P1: "Did not have a great understanding of the conditions they were treating. Lots of theory had to be taught by clinicians and supervisors."

P2: "The uncertainty regarding their roles and function in intermediate care was initially very challenging."

Positive aspects of the coordination of WIPL:

P1: "Good guidance at meetings and always available to address queries and concerns."

P2: "Well organized and regular feedback sessions were informative."

Negative aspects of the coordination of WIPL:

P1: "The coordination between the supervisors could have been better. I would have liked to have known what the other clinicians and supervisors were doing."

P2: "Started off disorganized, with very little notice given regarding when students would arrive and what would be expected of them and staff (goals/outcomes)."

Positive aspects of the placement:

P1: "Suitable placements. RCWs were exposed to undergraduate students from whom they could learn."

P2: "Staff accommodating and willing to assist students."

Negative aspects of the placement:

P1:"Towards the end of the block staff became irritated and reacted negatively to the students."

P2: "Community placements were not well thought through and planned to incorporate the CBR strategies. This resulted in a disruption in the learning of the RCWs in that field."

Learning areas that students struggled with:

P1: "Applying theory in practice seemed to be very challenging for most students, but as time progressed most of them did much better at this."

P2: "Insight lacking. Students screened and identified problems easy enough but lacked conviction in how to effectively rectify the problem."

Learning areas students coped well with:

P1: "Gathering relevant information from the file."

P2: "Managed well with planning an exercise programme for specific patients."

Focus of tutorials:

P1: "Practical skills that would benefit them."

P2:" Group facilitation and community profiling"

RWC in multi-disciplinary team:

P1:"They could be an assistant to our nursing staff and P.T/O.T assistants/technicians, but they would require more intense practical training to lessen the burden on our staff."

P2:"Being the first OT clinician at CBS level has left room for developing a service with this cadre of worker. It became evident that there is a need as OTs at community health centres (CHC) are not able to follow up with patients discharged from the CHC or provide a service at a community level."

The researcher used all of the sources described in 4.3 to develop the concourse by analysing the transcriptions of the FGDs, transcriptions of the CPD workshops, minutes of the meetings and written feedback from the health professionals. As a result forty seven statements (Appendix C) emerged which were placed into five categories namely; knowledge, skills, behaviour, role of the RCW in the health system and the level of inclusion in the health system. The following table shows the number of statements that emerged in each category:

Table 2: Categories and number of statements in each category

Category	Number of statements
Knowledge	16
Skills	16
Behaviour	7
Role	5
Level of inclusion	3

These forty seven statements, called the Q-set, were then ranked by the P-set in a process called Q sorting (as discussed in Chapter 3). Of the eighteen participants who consented to participate in this study only sixteen completed the Q sorts correctly and therefore the two incorrect Q sorts were excluded from the analysis. Data analysis for Q studies have two components, namely a statistical analysis and a factor analysis.

4.4 Statistical Analysis of PQ

The forty seven statements and the sixteen correctly completed Q sorts were entered into the PQMethod software programme. The programme analysed and interpreted the Q sorts and produced tables on factor loadings (a factor is representative of participants with similar opinions), statement factor scores, and distinguishing (differing) and consensus (agreement) statements for the participants. A correlation matrix for all Q sorts was calculated representing the level of agreement between the individual Q sorts. This is the degree of similarity or dissimilarity in points of view

between the individual participants. The number of factors in the final set depended on the variability in the Q-sorts. Two factors emerged with a minimum of seven participants loading onto each factor (see Table 3). Factor loadings represent the extent to which each Q sort is associated with each factor (Brown 1993). Factor loadings are thus correlations between the Q sorts and the factor.

Table 3: Number of factors identified and the number of variables loading onto each factor

	Factor 1	Factor 2
Number of defining variables (number of participants)	9	7
Average reliability coefficient	0.800	0.800
Composite reliability	0.973	0.966

Factors one and two are significantly different with $p < 0.01$. Table 4 shows the factor matrix with X indicating to which factor the participant loaded. Nine participants loaded onto Factor one and seven participants loaded onto Factor two.

Table 4: Factor matrix identifying to which factor participants loaded onto

Q Sort	Factor 1	Factor 2
1	0.7239X	0.1153
2	0.6774X	0.2600
3	0.5042X	0.2185
4	0.4512	0.7060X
5	0.5514X	0.3759
6	0.2937	0.6435X
7	-0.0947	0.6197X
8	0.5532X	0.5113
9	0.2530	0.4472X
10	0.3595	0.5017X
11	0.1503	0.6372X
12	0.6818X	0.1984
13	0.6718X	0.2429
14	0.7056X	0.0345
15	0.5102X	0.3743
16	0.3364	0.3479X

4.5 Factor Analysis

PQ analysis of the sixteen Q-sorts led to the creation of two representative factors that offered the participants' different viewpoints as a single composite score sheet. Factors one and two emerged as significant. Factor interpretation was conducted with reference to literature, the ICF and the CBR Matrix.

4.6 Factor Interpretation

The two factors that emerged were named according to the viewpoints that were strongly featured. Factor one was named "Strengthening CBR and Promoting Participation" and Factor two was named "Promoting Participation in Intermediate Care and Community."
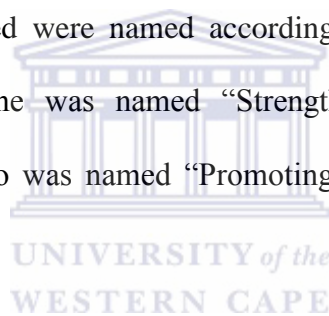
4.6.1 Factor One: Strengthening CBR and Promoting Participation

Table 5 shows the factor array for Factor one obtained from the Q analyses. The factor array contains the statements which participants in Factor one agreed with and ranked these statements at +4 and +3. The positive sign indicates agreement and the numerical value indicates the strength of the agreement. Statements ranked at +4 are statements that the study participants strongly agreed with.

Table 5: The statements that participants loading onto Factor one agreed with

Statement Number	Statement	Rank Score
41.	RCWs should work in both intermediate care and community under the supervision of a qualified health profession.	+4
42.	RCWs have a role in promoting participation of clients in the community.	+4
47.	RCWs will strengthen rehabilitation services across the health platform.	+4
2.	RCWs displayed enthusiasm and willingness to learn in the clinical setting.	+3
3.	RCWs were respectful towards clients and all staff members.	+3
10.	RCWs worked well in structured environments.	+3
30.	RCWs managed well with clients who were more mobile.	+3

Nine out of the sixteen participants loaded onto Factor one. These nine participants were of the opinion that RCWs will strengthen rehabilitation services in intermediate care and in the community and they will assist in promoting the participation of clients in the community. These participants also shared the same view that RCWs displayed good professional conduct and were enthusiastic to learn in the clinical workplace. The participants also felt that the RCWs worked well in structured clinical settings under the supervision of health professionals and that they were capable of working with patients who were mobile.

Table 6 shows the factor array for Factor one obtained from the Q analyses. This factor array contains the statements which participants in Factor one strongly disagreed with, ranking the statements at -4 and -3. The negative sign indicates the level of disagreement and the numerical value indicates the strength of disagreement. Statements ranked -4 are statements that participants strongly disagreed with.

Table 6: The statements that participants loading onto Factor one disagreed with

Statement Number	Statement	Rank Score
5.	RCWs were clear of their role in the workplace and were therefore assertive when executing tasks delegated to them.	-4
15.	RCWs always used correct medical terminology in the workplace.	-4
36.	As a health professional I will not benefit from having a RCW working at my health facility.	-4
11.	RCWs displayed good knowledge of basic health conditions.	-3
19.	RCWs understood the concept of disability in relation to the ICF and were able to apply it in the workplace.	-3
31.	RCWs were not always safe in their handling of clients.	-3
32.	RCWs were unable to transfer clients correctly.	-3

The nine participants who loaded onto Factor one felt that the RCWs were not sure of their role in intermediate care and as a result the RCWs lacked confidence in performing tasks delegated by the health professionals. The participants felt that RCWs did not use the correct medical terminology and that their knowledge and understanding of health conditions and disability was lacking. The nine participants felt that RCWs managed clients within the limits of safety in terms of transfers and basic handling and therefore these participants felt that it would be beneficial to have a RCW employed at their health facility.

4.6.2 Factor Two: Promoting Participation in Intermediate Care and Community

Table 7 shows the factor array for Factor two obtained from the Q analyses. The factor array contains the statements which participants in Factor two agreed with and ranked these statements at +4 and +3 where the positive sign indicates agreement and the numerical value indicates the strength of the agreement. Statements ranked at +4 are statements that participants strongly agreed with.

Table 7: The statements that participants loading onto Factor two agreed with

Statement Number	Statement	Rank Score
31.	RCWs were not always safe in their handling of clients.	+4
41.	RCWs should work in both intermediate care and community setting under the supervision of a qualified health professional.	+4
42.	RCWs have a role in promoting participation of clients in the community.	+4
10.	RCWs worked better in structured environments.	+3
16.	RCWs previous experiences helped them to screen clients appropriately.	+3
25.	Overall handling and practical skills improved with time.	+3
47.	RCWs will strengthen rehabilitation services across the health care platform.	+3

Seven of the sixteen participants loaded onto Factor two. These participants strongly agreed (as did the participants loading on Factor one) that RCWs should be included in the healthcare system at both intermediate care level since they worked well in structured settings and in the community where they would promote the participation of patients in their activities of daily living. This in turn would allow RCWs to assist in strengthening rehabilitation services across the health platform. Participants also believed that, although RCWs were not always safe in their physical handling of patients, this skill improved with time.
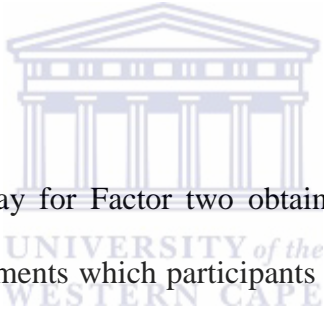
Table 8 shows the factor array for Factor two obtained from the Q analyses. This factor array contains the statements participants disagreed with and ranked the statements at -4 and -3 where -4 are statements that participants strongly disagreed with.

Table 8: The statements that participants loading onto Factor two disagreed with

Statement Number	Statement	Rank Score
22.	Occupational therapy skills were adequately developed.	-4
24.	RCWs were able to manage their time effectively when working with their clients.	-4
36.	As a health professional I will not benefit from having a RCW working at my health facility.	-4
15.	RCWs always used correct medical terminology in the workplace.	-3
21.	RCWs were confident and capable of engaging and facilitating psychosocial group discussions.	-3
27.	Documentation skills, such as writing SOAP notes and reflections, were good.	-3
44.	RCWs were creative in selecting age and developmentally appropriate toys.	-3

The seven participants loading onto Factor two were of the opinion that RCWs lacked the following skills: occupational therapy skills, using correct medical terminology, documentation skills, selecting appropriate, developmental toys and facilitation of

psychosocial groups. These participants loading onto Factor two share the same opinion as those participants loading on to Factor one, that health professionals would benefit from having an RCW employed at their health facility.

4.6.3 Distinguishing Statements

There were twenty two distinguishing factors which emerged (P < .01) from the Q output. Table 9 below identifies the twenty two statements and identifies what the ranks and scores were for Factors one and two and were obtained from the Q output. Only six of the most significant distinguishing factors will be explained and how they contrast to where they are ranked. The six most significant statements were selected based on the fact that these statements were ranked at the extreme ends of the scale. These are statements ranked at +4 and +3 or -4 and -3 (indicating statements participants either strongly agreed or strongly disagreed with) and statements ranked at either +1 or -1 on the one end of the scale (indicating statements which participants either slightly agreed with or slightly disagreed with) The statements were 30, 22, 24, 44, 16 and 31 and are highlighted below in the table 9.

Table 9: Distinguishing statements with the ranks and scores for Factor 1 and Factor 2

Statement number	Statement	Factor 1		Factor 2	
		Rank	Score	Rank	Score
47	RCWs will strengthen rehabilitation services across the service platform	4	2.34*	3	1.66
30	*RCWs managed well with clients who were more mobile.*	*3*	*1.52**	*-1*	*-0.44*
37	The role of the RCWs was not clearly defined to health professionals prior to them starting their work integrated practice module.	2	0.97*	0	-0.26
8	RCWs were capable of executing active exercise programmes with their clients.	2	0.77*	0	0.09
22	*Occupational therapy skills were adequately developed.*	*1*	*0.69**	*-4*	*-1.41*
33	Limited input from a speech therapy supervisor, made it difficult for the RCWs to screen clients with speech and hearing deficits.	1	0.28*	4	1.98
24	*RCWs were able to manage their time effectively when working with their clients.*	*1*	*0.22**	*-4*	*-1.54*
34	RCWs were able to screen assistive device appropriately.	1	0.18*	-2	-1.01
44	*RCWs were creative in selecting age and*	*1*	*0.16**	*-3*	*-1.27*

	developmentally appropriate toys.				
43	RCWs managed all paediatric cases well.	0	-0.01*	-1	-0.70
17	Poor literacy made reading medical files challenging.	0	-0.04*	2	0.90
29	RCWs were able to work with little resources in the community and improvised appropriately.	0	-0.06	2	0.67
45	RCWs coped well with positioning and seating cerebral palsy children in their wheelchairs.	0	-0.06*	-2	-1.09
46	RCWs were able to adapt an activity when engaging with a tired/bored child.	0	-0.10*	-2	-1.02
20	RCWs were capable of performing passive movements effectively.	0	-0.22*	1	0.52
16	*RCWs previous experiences helped them to screen clients appropriately.*	*-1*	*-0.28*	*3*	*1.17*
23	Physiotherapy skills were adequately developed.	-1	-0.72*	1	0.44
12	External support (e.g. transport money, resources) was lacking and this hindered learning in the clinical workplace.	-2	-0.72*	1	0.47
11	RCWs displayed good knowledge of basic health conditions.	-3	-0.94*	0	-0.94
31	*RCWs were not always safe in their*	*-3*	*-1.15*	*1*	*0.51*

	handling of clients.				
19	RCWs understood the concept of disability in relation to the ICF and were able to apply it in the workplace.	-3	-1.26*	-1	-0.55
5	RCWs were clear of their role in the workplace and were therefore assertive when executing tasks delegated to them.	-4	-1.60*	-1	-0.49

The participants, loading onto Factor one, ranked statements 30, 22, 24 and 44 on the positive end of the spectrum. These participants agreed that the RCWs had developed their occupational therapy and time management skills and their ability to select age and developmentally appropriate toys and their ability to work with mobile clients. On the other hand, participants loading onto Factor two, disagreed to all these statements (30, 22, 24 and 44), by ranking these statements on the opposite end of the spectrum, on the negative side. This indicates a clear difference in their opinion.

The participants loading onto Factor one disagreed to statements 16 and 31 which suggests that RCWs were not able to use their experience to screen clients appropriately and that RWCs were safe in their handling of patients. The participants, loading onto Factor one, ranked statements 16 and 31 on the negative end of the scale whereas participants, loading onto Factor, two ranked these statements positively thereby indicating their contrasting points of view.

4.6.4 Consensus Statement

Nine statements were identically placed by participants loading onto Factor one and Factor two and was therefore non-significant (p> .05). These are statements that participants loading onto both Factor one Factor two agreed with. Table 10 below identifies these statements and what their ranks and scores were and were obtained from the Q output.

Table 10: Consensus statements of participants loading onto Factor 1 and Factor 2

Statement number	Statement	Factor 1		Factor 2	
		Rank	Score	Rank	Score
1	RCWS lacked professionalism in the clinical workplace.	-2	-0.76	-2	-0.83
6	RCWs motivated and encouraged clients and their families during treatment sessions.	1	0.03	1	0.58
7	RCWs displayed positive attitudes and behaviour in the clinical workplace.	2	0.74	2	0.76
10	RCWs worked better in structured environments.	3	1.39	3	1.37
14	RCWs grasped concepts, relating to the management of patients, quickly.	-2	-0.83	-2	-0.88
26	RCWs were unable to extract relevant information from the folder.	-1	-0.41	-1	-0.44
36	As a health professional I will not benefit from having a RCW working at my health facility.	-4	-2.45	-4	-2.27
41	RCWs should work in both intermediate care and community setting under the supervision of a qualified health professional.	4	1.62	4	1.78
42	RCWs have a role in promoting participation of clients in the community.	4	1.71	4	1.79

The consensus amongst these nine participants can be described according to the following themes:

(a) Knowledge: The participants loading onto Factor one and Factor two, agreed to a certain extent, that RCWs lacked understanding of what information in patients' files were relevant to retrieve and that the RCWs lacked the ability to grasp new concepts relating to treatment.

(b) Behaviour: The participants loading onto Factor one and onto Factor two agreed that the RCWs working in clinical settings, display good, positive and professional behaviour at all times and that the RCWs motivated their patients during treatment sessions.

(c) Role in the health system: The participants loading onto both Factor one and Factor two agreed that RCWs have a clear role in promoting the participation of patients, which will ensure inclusive development.

(d) Level of inclusion in the health system: The participants loading onto Factor one and Factor two agreed that RCWs will fulfill their roles at intermediate care level, as the RCWs worked well in structured settings, and at community level, thereby strengthening the service platform. Further support for RCWs being employed at intermediate care facilities is also clear since the participants agreed that it would be beneficial to have RCWs working at intermediate care health facilities. However, the participants were of the opinion that the RCWs would need to work under the direction of the qualified health professionals.

The participants were instructed to explain or elaborate on the statement they strongly agreed with and the statement they strongly disagreed with. Participants were instructed to give reasons for ranking the statement they ranked at positive four and

negative four. The following are examples of what these participants reported on their Q sort.

Example 1: Participants agreed with statement 10 and reported the following on their Q sort:

P1 "RCWs have a broad understanding of each discipline but require a great deal of structure to be able to manage that knowledge and put it into clinical practice."
P2 "RCWs worked better in environments where the clinician had a set roster for each RCW to work from. Less time was spent loitering and more hands-on patient time."

P3 "I chose this statement as the RCW students work better within a structured environment, as they had difficulty with thinking about abstract things or when there was no instructions to follow."
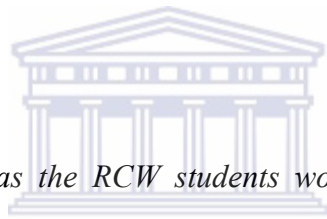
Example 2: Participants strongly disagreed with statement 36 (ranking it at -4) and reported the following on their Q sort:

P1: "I will definitely benefit from having an RCW at my facility. Nursing staff are not always able to follow through on activities in the ward whereas the RCW is able to do so. Positioning in seating devices and positioning of splints are not always managed well by nursing staff thus the RCW is able to correct a child's position in the buggy and make sure splints are worn correctly."

P2: "I strongly disagree because I have already experienced the advantage of giving specific tasks and roles to the RCW working at my facility and have seen how this changed and benefitted in the patient's overall care and continuation of care, especially tapping into their cultural, community knowledge and to help with language barriers (e.g. Xhosa speaking clients)."

P3: "I would benefit having an RCW in my working area. Being an OTT treating 50 clients, it is sometimes difficult to see all the clients and it was nice having someone assisting me with the difficult clients. They also assisted with running of groups which gave us time to do more for individual treatments."

4.7 CBR Matrix

The CBR Matrix is a framework through which the results of this study can be analysed. According to the participants who loaded onto Factor one and Factor two, RCWs would be capable of strengthening the service platform by promoting the participation of PWD in their daily activities. This implies that RCWs would be able to promote the participation of PWD across the five key domains of the CBR Matrix (Health, Education, Livelihood, Social and Empowerment). In this way the RCWs were perceived as being capable of ensuring the inclusion of PWD in their communities. From the results, it was found that participants agreed that RCWs could address the needs of PWD according to some of the domains of the CBR Matrix. Although participants did not directly identify which domains of the CBR Matrix RCWs could address, the following examples are taken from the Q concourse to

demonstrate how the RCWs were able to address the needs of PWD across the Education and Social domains of the CBR Matrix:

"There was a blind child in the community and the RCW knew this child needed to participate so she got toys that the child could hear. She acknowledged that this child needs to participate and be with peers."

This indicates that the RCWs could address early childhood development by identifying the need to play with appropriate toys which would stimulate the child. The RCWs also identified the need for this child to play with children of the same age as this too would promote learning.

"One RCWs took the initiative to go to the mental health sister to report that in one home, the patient's son was schizophrenic and was not complying with taking his medication and that he was not healthy."

This indicates that the RCW was able to address a social need within a family situation. The RCWs was not only able to identify the health needs of the patient's son, but also how this situation was affecting the patient's rehabilitation.

A more in-depth look at how the CBR Matrix as a framework, can be used to analyse the results of this study will be outlined in the Discussion chapter.

4.8 International Classification of Functioning, Disability and Health

The ICF is a framework through which the results of this Q study can be further analysed. According to the participants loading onto Factor one in the Q analysis, the RCWs did not display good knowledge of health conditions neither did they understand the concept of disability in relation to the ICF. However, the RCWs did not receive training on how to assess impairments, but were rather expected to identify impairments and problems related to function. The ICF table below indicates that RCWs were able to identify, understand and address only certain components of the ICF. Table 11 is an example of how the ICF is used to analyse RCWs understanding of health, disability and functioning as it relates to patients.

Table 11: RCWs understanding/lack of understanding of the components of the ICF

Impairments	Activity Limitations	Participation Restrictions
1. RCWs had difficulty screening patients with speech and hearing deficits (indicates lack of knowledge and skills to identify certain impairments). 2. RCWs were able to effectively perform passive movements to joints (ability to address impairment). 3. RCWs lacked confidence when executing tasks given to them by the health professionals (could indicate lack of knowledge and skills to implement treatment of impairments).	1. RCWs coped well when working with patients who were more mobile. 2. RCWs were broad in their management of patients advising patients about occupational therapy, physiotherapy, audiology if there was a need. 3. A participant (in FGD) reported that a patient with an amputation, waiting for a follow up appointment, was being managed in the interim period at home by RCWs	1. Participants agree that RCWs will promote participation of clients in community. 2. A participant reported that RCW was able to identify that a blind child needed to engage and socialise with peers and that the child needs to be stimulated through toys that she could hear. 3. A participant reported that mobilisation of communities and advocacy is something that RCWs could drive because they have connections in communities

4.9 Summary

The results of the analysis of the data collected (from the focus group discussions and document analysis), to inform the Q concourse for Q methodology, is described in this chapter as well as the results of the Q analysis. The Q analysis resulted in the emergence of two factors. Although contrasting opinions exist among the participants regarding the knowledge and skills of RCWs, it is evident that participants identified a clear need for RCWs in strengthening CBR and in promoting the participation of patients in both intermediate care and in the community, under the direction of qualified health professionals. Some data from this study were also analysed in terms of the CBR Matrix and the ICF frameworks in order to illustrate the RCWs understanding of health and disability. In the next chapter, detailed discussions of the results of the emerging factors from the Q analysis are outlined.
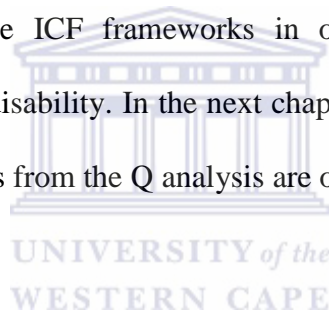
CHAPTER 5: DISCUSSION

5.1 Introduction

This chapter examines health professionals'[8] perceptions of the scope of practice of the new rehabilitation care workers (RCWs) and their level of inclusion in the health system. In the process of exploring this, the chapter focuses on and analyses the two major themes which emerged with other sub-themes related to their knowledge, skills and behaviour in clinical practice. The first major theme was the perceived role that RWCs have in primary health care and the second was where in the health system the participants in this study saw these new cadres working.
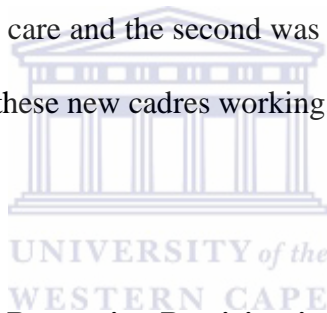
5.2 Strengthening CBR and Promoting Participation

The first major theme which emerged from this Q study was the perceived role of the new rehabilitation care workers (RCWs) in primary health care (PHC) and community-based rehabilitation (CBR). Health professionals who loaded onto Factor one and Factor two, agreed that the RCWs, trained and introduced into the health system in the Western Cape, would be capable of strengthening CBR and PHC by promoting the participation of PWD in activities of daily living.

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8 Health professional are the participants in this study and therefore both terms will be used in this chapter.

This means that RCWs were perceived as being capable of accessing and providing the necessary resources needed by PWDs in order to improve the difficulties they experience with everyday activities and assist them with becoming active participants in their society. The participants perceived that the RCWs previous work experience in the community, could help them to mobilise communities. They felt that the RCWs have a role in advocacy and lobbying at community level. In this way the RCWs could play a vital role in ensuring inclusive development and participation of all PWD in the Mitchells Plain and Athlone districts.

According to the literature, PWD are often poor and excluded from health, education, employment and social services which, in turn, can worsen disability and poverty (WHO, 2011). It has been reported that a significant number of PWD have difficulty with carrying out activities of daily living (e.g. washing, dressing, grooming, feeding) and participating in life situations (e.g. working, playing sport, engaging in social activities) (WHO, 2011). However, through CBR programmes, RCWs in the Western Cape would be able to focus on rehabilitation to address the difficulties faced by PWD. The RCWs would be able to assist PWD by breaking down barriers which would otherwise hinder their ability to enjoy social integration. In this way RCWs can enhance the quality of life of PWD and thus assist with reducing poverty.

The literature also identifies CHWs as key role players in extending health services in their communities and improving access to health services in order to strengthen CBR programmes for the past thirty years (Dawad & Jobson 2005). However, it is important that the role of any new CHWs is clearly understood as this will ensure that are effectively utilised and their potential is not limited by professional protectionism

and scepticism (Dovlo, 2004; Lehman, 2008). The health professionals in this study reported strong support for the utilisation of the new RCWs in strengthening PHC and CBR as the RCWs would be assisting with the continuum of care of patients. They agreed that RCWs, like other CHWs in South Africa and around the globe, will extend health services in underserved communities thereby improving the quality of life of PWD (WHO, 2011).

5.3 Promoting Participation in Intermediate Care and Community

The second major theme which emerged from this Q study was the level of inclusion of RCWs in the health system. The participants loading onto Factor one and Factor two in the Q analysis, agreed that the RCWs should work in both community and in intermediate care under the direct supervision of qualified health professionals. Further support for RCWs working in intermediate care was identified in both factors as participants agreed that RCWs adapted and worked well in structured environments. In other words, participants in this study were of the opinion that RCWs worked better when given specific instructions to complete specific tasks within a given time frame. This, in turn, could result in good health outcomes for patients in intermediate care as RCWs would also be assisting them in gaining as much functional independence as possible by the time of discharge. Health professionals also agreed that it would be beneficial to have RCWs employed at intermediate care facilities. This further supports the idea that RCWs should work at institutions or facilities.

In South Africa, community-based services (CBS) have two service elements, namely; home and community-based care, and intermediate care. These two elements are vital in strengthening the continuity of care and person-centred care towards achieving South Africa's 2030 healthcare vision. In line with this vision, RCWs were introduced into the health system as part of an interdisciplinary rehabilitation team.

According to Tulenko et al. (2013), in order to improve PHC and CBR, the role of RCWs and their potential to assist PWD, needs to be understood by health professionals. Rehabilitation care workers need to be effectively integrated into the national healthcare system in terms of employment, career development, supervision and support as this has been neglected in the past. This is further supported by Lehman (2008) who found that the uncertainty regarding the role of RCWs in the health system leads to a lack of attention to the integration of these workers into health staffing structures, as well as a lack of support, training and supervision. In most CBR programmes across the globe CHWs have not been given the opportunity to be part of a team of health workers who earn a salary and who have a say in the health system (Tulenko et al., 2013).

In this study health professionals expressed their strong support for RCWs in intermediate care and in the community. Health professionals also perceived that RCWs would assist PWD and their families to break the barriers which prevent them from enjoying social integration by extending health services in their homes. Since health professionals had positive perceptions regarding the RCWs it could be expected that they would provide efficient support and supervision which is required for the successful integration and utilisation of RCWs in CBR.

5.3.1 Intermediate Care

From the results of the Q analysis, it was found that health professionals in this study agreed that the RCWs work well in structured environments. During the Work Integrated Practice Learning (WIPL) module, the RCWs worked at two adult intermediate care facilities and two paediatric intermediate care facilities which were structured settings, guided by the health professionals who were employed at these facilities. Intermediate care refers to inpatient transitional care which gives patients, with a reduced ability to care for themselves, the opportunity to regain functional skills and activities of daily living so that they can be discharged either to home or supported living environments. Intermediate care involves post-acute, rehabilitative and end-of-life care (Steiner, 2001).
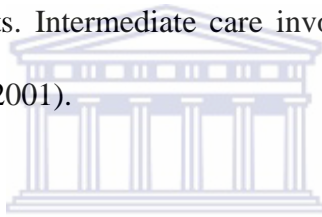
Participants loading onto Factor one and Factor two in this study are of the opinion that there is a definite place for RCWs in intermediate care settings and that it would be beneficial to have RCWs employed at intermediate care centres. Participants elaborated on why they felt they would benefit from having RCWs at their health facility on their Q data score grids. The following are examples of the participants' responses:

P1: "I will definitely benefit from having an RCW at my facility. Nursing staff are not always able to follow through on activities in the ward whereas the RCW is able to do so. Positioning in seating devices and positioning of splints are not always managed well by nursing staff thus the RCW is able to correct a child's position in the buggy and make sure splints are worn correctly."

P2: "I have already experienced the advantage of giving specific tasks and roles to the RCW working at my facility and have seen how this changed and benefitted in the patient's overall care and continuation of care, especially tapping into their cultural, community knowledge and to help with language barriers (e.g. Xhosa speaking clients)."

Another reason given by the participants for the support of RCWs at intermediate care facilities was that RCWs reduced health professionals' workload thus allowing health professionals to spend more time on individual patient treatments which require more intensive therapies. According to the literature there is a lack of health professionals to deal with increase in the population, increase in health demands and economic and social crisis and therefore more countries are using alternative workers especially in rural areas (Dovlo, 2004). Therefore the literature also supports the utilisation of RCWs working in intermediate care facilities.
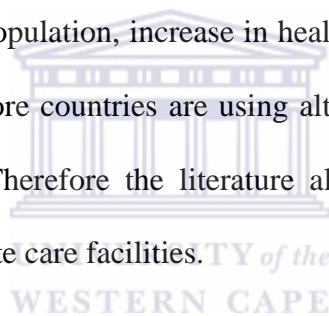
Working in intermediate care was a new experience for the RCWs as they had only worked in community settings before the pilot project and therefore there were certain challenges that they experienced in the new work environment. From the results of this study, it was found that the health professionals felt that RCWs are not sure of their role in intermediate care and therefore are not assertive when executing the tasks delegated to them. This could imply poor health outcomes if patients are not effectively managed. However, some health professionals in this study felt that the RCWs are capable of following work schedules and programmes which are drawn up for them which would result in effective time management and treatment outcomes. Despite the challenges they faced in intermediate care, health professionals reported

that RCWs work well in this new type of environment. Since the DOHWC's vision is for RCWs to deliver 60% of rehabilitation service in intermediate care, this positive feedback from the health professionals is a good indicator of the potential success of the programme.
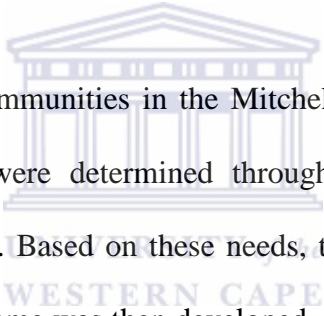
In terms of the components of the ICF, RCWs were perceived to have an important role to play in assisting health professionals in intermediate care to address impairments, activity limitations and participation restrictions. This implies that RCWs would be significantly involved in the comprehensive care of PWD in intermediate care. They would be able to identify the needs of patients and would be able to follow a more holistic approach to treatment. It was found that the health professionals had a positive perception of RCWs implying strong support for RCWs in PHC. This means that the DOHWC would be able to utilise RCWs to extend health services to patients in intermediate care and in this way assist the qualified health professionals with their workload as well as allowing them more time to spend with more complex cases.

5.3.2 Community Level Involvement of RCWs

Health professionals in this study reported that there was definite role for RCWs in community settings. They perceived RCWs as being capable of assisting PWD to become active participants within their community. According to one participant in a focus group discussion, *"participation and reintegration into the community is where RCWs will work more independently."* In another example, a participant at a CPD workshop reported the following: *"they [RCWs] really have strength in the*

community, they feel overwhelmed in the intermediate settings, but with regard to the community, they shine."
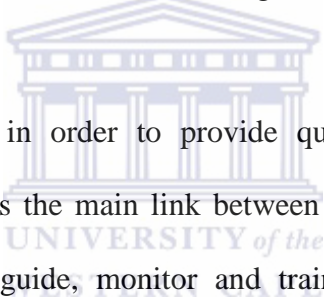
This indicates a strong support of the utilisation of RCWs at community level. RCWs were also more comfortable working in the households of PWD as they had prior work experience in this setting. This provided further support by the health professionals for RCWs to work in the community as they would be able to continue with treatment and rehabilitation after discharge from hospital settings. The RCWs would also be able or follow up on patients seen at community health centres thus contributing to patient-centred approach to healthcare.

This pilot project targeted communities in the Mitchells Plain and Athlone districts where the needs of PWD were determined through previous research done by Chappell and Lorenzo (2012). Based on these needs, the course content of the pilot rehabilitation training programme was then developed. The RCWs from the Mitchells Plain district were recruited from five non-profit organisations for this pilot project. According to the literature it is important that CBR programmes should be implemented through the combined efforts of PWD themselves, their families, and members of the community (WHO, 2004). RCWs should be members of the communities in which they work, selected by the communities, supported by the health system and have shorter periods of training than qualified health professional workers (WHO, 1989). Furthermore, CBR programmes should be designed to meet the specific needs of the community.
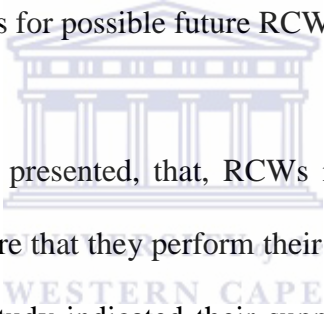
5.3.3 Supervision

The results of this study found that participants agreed that RCWs working in intermediate care and community will always work guided by the qualified health professionals. The RCW training curriculum specified that RCWs cannot assess patients, plan and progress treatments, or discharges. The core functions of RCWs are to perform tasks delegated by the health professionals to address impairments, activity limitations and participation restrictions experienced by PWD. RCWs will also contribute to addressing contextual factors which impact on PWD (DOHWC Training Specifications 2012). With this in mind, it is important that RCWs are well supervised and guided by health professionals so as to ensure good health outcomes of PWD.

According to the literature, in order to provide quality health care, supportive supervision is required as it is the main link between CHW and the health system. Supervisors are required to guide, monitor and train CHWs as this will ensure teamwork to meet the common goals of CBR programmes (Hugo, 2005). Supervisors must ensure that the CHW understands the tasks and that these tasks are executed at acceptable standards as this will ensure better outcomes. CHW who do not receive adequate supervision, are often unproductive (Jaskiewicz & Tuleno 2012; Crigler, Gergen & Perry 2013). A similar study by Bhutta, Lassi, Pariyo and Huicho (2010), found that in some CHW programmes in the Global Health Workforce Alliance review, supervisors did not understand the role of CHWs and resented the addition of supervision of the CHWs to their workload. In South Africa, Chappell and Johannsmeier (2009) found that a lack of knowledge of CBR and its cadres led to poor supervision and limitation of these cadres' roles in CBR.

In this study, CPD workshops were arranged by the DOHWC and UCT to provide health professionals with information about the RCW training curriculum and their core job functions. These CPD workshops also provided the platform for health professionals to engage in discussions about their role in guiding and training the RCWs. This may have helped to minimise the potential reluctance of the health professionals to accept the newly trained RCWs as well as emphasise the importance of efficient supervision. Chappell and Johannsmeier (2009) recommended that CPD workshops be run to clarify roles of personnel in CBR programmes. By implementing CPD workshops the DOH was able to identify that health professionals were uncertain of the role of the RCWs. In this way the DOH would be able to clarify roles so as to ensure better outcomes for possible future RCWs training programmes.

It is clear from the literature presented, that, RCWs in this study, will need to be supervised and guided to ensure that they perform their core job functions effectively. Health professionals in this study indicated their support for RCWs working under their direct supervision, performing tasks which have been delegated by the health professionals. This perception of health professionals towards the RCWs is vital so that they enjoy supportive supervision while delivering quality health care to PWD.

5.4 Knowledge, Skills and Behaviour

One of the objectives of this study was to explore health professionals' perceptions of the knowledge, skills and behaviour of RCWs in the clinical workplace since it is important in understanding how the RCWs will be received by the professional health

team. From the results of the Q factor analysis, this study found that health professionals agreed that, although RCWs lacked knowledge and skills in certain aspects of their training curriculum, their behaviour in the clinical workplace was always professional.

5.4.1 Knowledge

From the results of the Q analysis, health professionals in this study agreed that RCWs lacked basic knowledge of their role in intermediate care, basic health conditions, concepts of disability and how it relates to the ICF, as well as demonstrating an inability to use correct medically terminology. The opinions of the health professionals as it emerged from the Q study differ from what participants reported in focus group discussions. Participants in the focus group discussions felt that RCWs personal experiences gave them insight and helped them in the clinical workplace. Furthermore, the participants felt that RCWs were able to acknowledge when input from other disciplines was needed. The possible reason for this difference in health professionals' opinions could be related to the fact that the focus group discussions were conducted early on in this study when the RCWs were just starting their WIPL module. At this stage the RCWs had just completed their theory component and were introduced into the clinical environment so they may have lacked confidence to implement their newly acquired knowledge. By the time the participants engaged in the Q sorting process, the RCWs had completed two clinical rotations and had gained more experience in the workplace and this could be why the participants' perceptions changed. These viewpoints were reported by two

participants in the focus group discussion. The following are examples of what they reported:

P1 *"Knowledge gained was broad based and it gave them insight into health issues and factors impacting on health. Their personal experience in health strengthened their knowledge."*

P2 *"RCWs were broad in their management of patients. They were not focussing on one specific profession, but would advise patients about occupational therapy, physiotherapy, audiology if there was a need. If patients needed to be referred, they knew where to refer them to."*
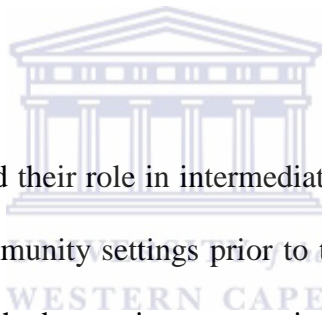
The RCWs uncertainty around their role in intermediate care stems from the fact that they had only worked in community settings prior to the pilot rehabilitation training programme. Thus they only had experience engaging with patients in households which made working in intermediate care more challenging. The difference between intermediate and community is that intermediate care is facility-based with structured work programmes and schedules whereas community work takes place in the households of PWD where there is no structure or set times in which to work. Being introduced into a hospital setting was unfamiliar and exposed RCWs to a different work environment to which they needed to adjust to. The knowledge that the RCWs were expected to have (Appendix B) may have been lacking due to this being a pilot study and the first time that a training programme in rehabilitation was developed and implemented in the South Africa. Another possible challenge may have been a lack of understanding due to language barriers as some of the RCWs were Xhosa speaking

and all the supervisors and rehabilitation staff at the health facilities were English speaking.

Training curricula must be relevant and appropriate and teaching methodologies and teaching personnel must be addressed when developing new training programmes for CHWs in CBR. The literature is silent on these topics, but the fragments of information available indicate that not all curricula and teaching methods are tailored to the needs and future practice of RCWs and to ensure well-trained new cadres with appropriate qualifications (Lehman, 2008). According to Deepak et al., (2011) a curriculum review identified a lack of knowledge and skills required by CHWs to assist PWD with social integration. the A systematic review by Viswanathan et al. (2009) found nine studies that reported evidence of improvement in knowledge in CHWs but no studies reported on the effects of CHW training on health outcomes. This may be due to the fact that there are many variables that influence patient outcomes and it is difficult to determine if the training curricula could be related to health outcomes in a population.

5.4.2 Skills

The results of this study identify health professionals' perceptions of the skills acquired by RCWs during the training programme. The health professionals agree that certain skills were better developed others than others but that the RCWs' skills improved with time. From the Q analysis it was reported that skills which are well developed include appropriate screening of patients, patient transfers, working with

higher functioning patient, communication skills and physiotherapy interventions. The following are examples of what participants reported in this study:

P5 *"Their interaction with their clients was good. They were able to communicate well with clients and speak to them regarding their problems and trying to identify their problems. Many RCWs were competent with regards to basic passive movements, transfers and positioning of patients."*

P3 *"Their physiotherapy background comes out stronger."*

The participants loading onto Factor one and Factor two in the Q analysis had a difference of opinion with regards to RCWs ability to work safely with patients. Participants loading onto Factor one felt that the RCWs were not always safe when handling patients and participants loading onto Factor two felt strongly that the RCWs were safe. Again this could be due to the fact that health professionals participating in the focus group discussions (which were conducted earlier in the study) reported that the RCWs handling of patients was poor at the start of their WIPL module. However, it is possible that this skill improved with time as the clinical blocks continued over a period of fifteen weeks. By the time the participants had to engage with the Q sorting[9] process, the RCWs handling of patients may have been perceived as better.

The RCWs also lacked in skills such as efficient time management, good documentation, appropriate selection of developmentally toys, facilitation of

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[9] Q sorting is the process of ranking statements (drawn up from the Q concourse) from strongly agree to strongly disagree on a Q data score grid.

psychosocial groups and occupational therapy skills. The following are examples of what participants reported in focus group discussions:

P2 *"Occupational therapy knowledge was vague. In terms of developmental sort of expectations of the child's norms and how to apply themselves, they [RCWs] battled with that. Their occupational therapy input was not that strong."*

P7 *"They [RCWs] were scared of facilitating groups and taking leadership. They were reluctant to engage with groups but they need more exposure."*

The occupational therapy skills of the RCWs were reported by participants as being not as well developed as their physiotherapy skills. There are two possible reasons the RCWs' occupational therapy skills were not adequately developed namely; a limited number of occupational therapy supervisors were available for the WIPL module and at each of the intermediate care facilities there was only one part-time occupational therapist employed. Thus the input and guidance that RCWs received from occupational therapists was limited. Health professionals were of the opinion that RCWs need time to practice skills acquired and therefore these RCWs will show further improvement as they gain experience. This is presented in the results as participants in the Q analysis agree that handling and practical skills improve with time. According to Lehman (2008) the evidence regarding the impact of CHWs on health outcomes is not good. Most studies show that CHWs improve access to and coverage of health services but there are very few studies that rigorously link health outcomes or health status to CHW.

The positive perceptions of the health professionals toward the RCWs implies that the pilot training programme will be successful and that RCWs will be well integrated into the health system and therefore would assist the DOHWC to achieve its goals to strengthen PHC and CBS.

5.4.3 Behaviour

In this study health professionals' agreed that RCWs displayed a positive attitude in the clinical workplace, behaving professionally and respectfully at all times. Health professionals agreed that RCWs displayed effective communication skills with all levels of health staff and patients, and this good work ethic, earned them the respect they need as new members of the rehabilitation team. Health professionals also felt that RCWs have a great passion and enthusiasm for learning. The RCWs ability to work well in the structured setting of intermediate care, where they work under direct supervision of health professionals with set time tables and good time management is perceived as positive by health professionals, as is evident in the following quotes.

P7 "RCWs were very respectful and professional. They knew how to interact with clients at the hospital or elsewhere. The hospital staff was impressed with their behaviour and how they approached staff."

P8 "They were professional with their patients and also when the supervisor came they were enthusiastic to learn."

P9 "They are a mature bunch of ladies with life experience and that really counts when it comes to positive attitudes and behaviours."

According to the literature, in order for RCWs to be effectively utilised in the health system, they need to be accepted and respected by members of the health team and by the community. The respect that RCWs receive from health professionals is dependent of how well their role is understood by the facility-based professionals. It is important that health professionals accept a new CHW as this is essential in the successful implementation of CBR programmes. There must be a clear understanding of the scope of practice of the new worker as this will minimize resistance by health professionals. The respect RCWs receive from the community is also important as trust is needed for effective working relationship (Hugo, 2005; Jaskiewicz & Tulenko, 2012).
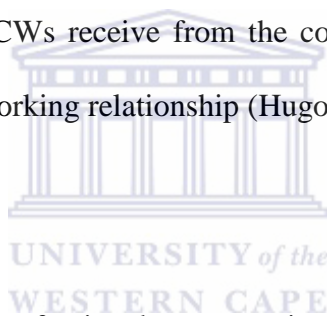
This study found that health professionals were excited to have a new cadre to assist with the extension of rehabilitation services to PWD as they perceive the new RCWs to be respectful and professional additions to the heath team. Trust and mutual respect amongst the rehabilitation health team is essential in achieving South Africa's Health Plan for 2020/2030.

This support for a new cadre is crucial in developing a patient-centred approach, integrated provision of care, continuity of care and a holistic approach to treatment which on-going as envisaged by the healthcare plan 2030.

5.5 CBR Matrix as a Theoretical Framework

From this study, it was further identified, that RCWs were perceived by the health professionals as being capable of implementing certain aspects of the CBR Matrix. The pilot training programme was based on the CBR guidelines (WHO, 2010) and the CBR Matrix (WHO, 2005). Their training curriculum looked at ensuring that the five key domains of the CBR Matrix namely: Health, Education, Livelihood, Social and Empowerment, was addressed as part of the comprehensive care of PWD. Specific focused was given to the health and empowerment components (Rehabilitation Care Worker Second Quarterly Report DOH, 2013). From the results of this study, it is evident that the RCWs were able to address the needs of PWD across some of the key domains of the CBR Matrix. The domains that participants felt RCWs engaged with were the Health, Education, Social and Empowerment. The following examples are presented in support of this.
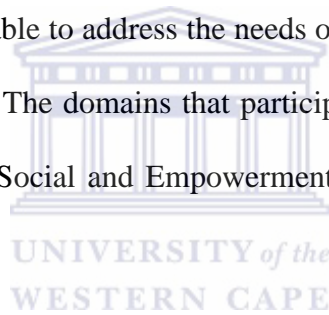
Health component: The participants in this study reported that RCWs are capable of performing tasks that are delegated to them. RCWs can therefore continue with treatment plans that have been outlined by the qualified health professionals, screen patients appropriately, screen assistive devices (e.g. wheelchairs, walking frames, canes, crutches), identify problems with splints and correct the seated posture of children with disabilities in wheelchairs. All these activities can be identified in some of the elements of the health component namely; prevention, rehabilitation and assistive devices. The follow quotes (from focus group discussion) are presented in support.

"RCWs were able to communicate well with clients regarding their problems and trying to identify their problems. Many RCWs were competent with regards to basic passive movements, transfers and positioning of patients."

*"RCWs managed well with planning an exercise programme for specific patients."*

"A lady in the community had an amputation two months ago, still waiting a follow up appointment and she was being managed in that interim period by a RCW, so that is what the RCWs would really be needed for."

Education component: According to a participant (focus group discussion), a RCW identified a blind child in the community who needed to engage with children of the same age and needed to be stimulated by using appropriate, audible toys. This provides some evidence that RCWs have the potential to encourage the participation of patients in education, specifically in early childhood development. This is important since the WHO and the Convention on the Rights of People with Disabilities (CPRD) identifies the right of PWD (adults and children) to be educated as this will assist in breaking down the barriers which prevent them from being included in their communities.

Social component: A participant reported that a RCW identified a social problem in a patient's home which was affecting the patient's rehabilitation. The patient's son was a schizophrenic and was not taking his medication resulting in poor health status as well as multiple social issues within the household. This RCW not only identified the need for an intervention by mental health services as well as referral to a mental

institution but also knew which resources to access in order to assist this patient's family. This is an example of addressing the element of relationships and family under the Social as well as the Health domains of the CBR Matrix.

Empowerment component: The participants in this study were of the opinion that RCWs have a role to play in mobilising communities and in advocacy and lobbing. The following quote is taken from the focus group discussion: *"Mobilisation of communities and advocacy roles is something that RCWs could drive because they have connections in communities. Community is where they need to be."* However the results of the Q analysis indicated that participants felt that RCWs lacked the ability and confidence to facilitate and engage patients in psychosocial group discussions. This indicates that some health professionals were of the opinion that RCWs were not able to implement the element of self-help groups in the empowerment component of the CBR Matrix. See Figure 5 below for the components in the CBR Matrix which RCWs are capable of implementing.
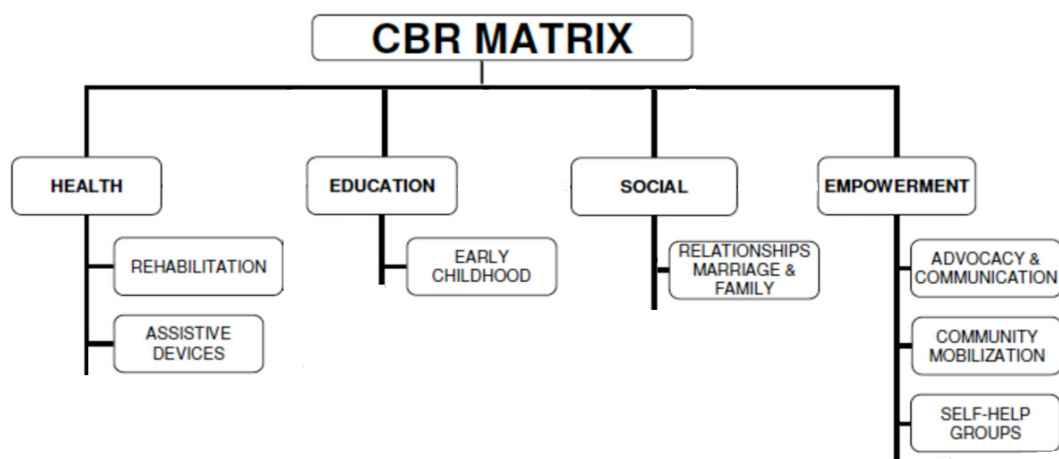
Figure 5: Community-based Rehabilitation Matrix showing components RCWs were perceived to implement

Health professionals were of the opinion that RCWs will promote the participation of patients in some key domains of the CBR Matrix as recommended by the WHO. This implies that RCWs would be able to ensure that PWD are accepted in their communities. RCWs would also be able to empower PWD to become actively involved in society so that they can enjoy their human right to be educated employed and socially included. This positive perception of health professionals of the role of the RCWs in CBR is important as it could mean that they are more likely to be effectively utilised in CBR. This is in line with the Department of Health's (DOH) commitment to address the comprehensive needs of PWD at community level and improve PHC and community-based services (CBS) as part of national government's health plan for 2020/2030.

5.6 International Classification of Functioning, Disability and Health (ICF)

The role of RCWs in CBR can effectively be explained using the components of the ICF as another way in which the RCWs were able to contribute to holistic patient management. In this context, it was clear that they were more than simply technicians who were carrying out the plans of others and that they were able to consider the patient in more holistic terms. The training programme provided the RCWs with knowledge and skills such as screening patients for a variety of health-related conditions, and treatment interventions such as exercise prescriptions and active and passive movements. The RCWs were able to use this knowledge and skills to manage impairments of PWD. In the activity limitation component of the ICF, RCWs were able to improve limitations in everyday activities by facilitating functional movements (e.g. walking, transfers) which then promotes independence. In the participation restriction component of the ICF, RCWs were able to promote the participation of PWD in the community by mobilising their assets in the community and this will enhance inclusive development. The RCWs may have been good at this because of their previous experience working in the households of PWD.

The ICF can be used in assessing individuals, their communities and the environment to determine the factors that are creating and contributing to the disability and provide structure for appropriate interventions. In CBR the ICF can be used to monitor and evaluate CBR programmes thus it can be useful in monitoring and evaluating the impact of RCWs in CBR.

5.7 Summary

This study aimed to explore health professionals' perceptions of RCWs in the clinical workplace and it was found that their perceptions were positive. Health professionals also had a clear understanding of the role of RCWs in strengthening the service platform and promoting the participation of PWD to ensure good health outcomes. They identified the need for RCWs to perform these roles at intermediate care and at community level. Health professionals were also had positive perceptions of the knowledge, skills and behaviour of RCWs. These positive perceptions are important as it will determine how well RCWs will be received by the health staff. This in turn ensures the acceptance of the RCWs as an integral part of the rehabilitation team and the realisation of their full potential in CBR in the Western Cape.

CHAPTER 6: SUMMARY, CONCLUSION, LIMITATIONS AND RECOMMENDATIONS

6.1 Introduction

This chapter provides a final summary of this research study and it outlines a brief overview of each chapter. The most important findings will be highlighted in the conclusion and any limitations of this study will be identified. The significance and recommendations emerging from this study are also outlined.

6.2 Summary

In 2003 the DOH stopped training CHWs in the field of rehabilitation because they were performing tasks outside their scope of practice. Health professionals were sceptic of these CHWs and wanted to protect their profession (Hugo, 2005). Therefore, the training of the new RCWs between 2012 and 2014, caused a similar uncertainty among health professionals in the Western Cape regarding the role of the new RCWs in the health system and their level of inclusion in the health system. The aim of this study was therefore to explore health professionals' perceptions of the newly trained RCWs introduced into the DOHWC's health system. The specific objectives were to explore health professionals' perceptions of the expected role and level of inclusion of the RCWs in the health system as well as their perceptions of the knowledge, skills and behaviour of the RCWs in clinical practice.

This study used an exploratory, cross-sectional design that made use of Q methodology to gather and interpret the data. Q methodology is a mixed methods approach to research and provides the foundation for the systematic study of subjectivity (Brown, 1993). Forty seven statements were drawn up from the Q concourse. The Q concourse was developed by reviewing the literature and analysing FGDs as well as several documents in order to obtain the viewpoints of the health participants. These statements were therefore based on the perceptions of the health professionals regarding the topic areas under investigation in this study. Participants then engaged in the Q sorting process whereby they ranked the forty seven statements from statements they strongly agreed with to statements they strongly disagreed with. The completed Q sorts were statistically analysed using the PQMethod software programme and two factors emerged. The results of the two factors were then analysed and interpreted.
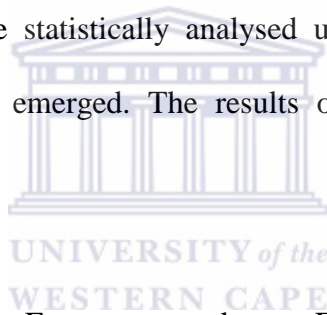
The participants loading onto Factor one and onto Factor two agreed that RCWs would have a definite role in strengthening CBR by promoting the participation of PWD in activities of daily living in both intermediate care and in the community. In this way RCWs will be able to ensure inclusive development of PWD. These participants further agreed that the RCWs worked well in structured environments when guided by qualified health professionals. The literature is clear that support supervision is essential in ensuring that the RCWs are well utilised in CBR and since health professionals had positive perceptions of the RCWs, it is possible that they will provide adequate supervision and guidance.

The results of the Q study further addressed the opinions of the participants with regards to the knowledge, skills and behaviours of the RCWs in clinical practice. The participants agreed that, although there were gaps in the knowledge of RCWs and that certain skills were not adequately developed, their behaviour and attitude in clinical practice was positive and professional. Health professionals felt that skills will develop and improve with more time and exposure in clinical practice. The overall perception of health professionals is a positive which implies that RCWs will be well received and well integrated in the health system.

The ICF and the CBR Matrix are two theoretical frameworks that were also used to further analyse the results of this Q study. According to the participants in this study, RCWs were capable of addressing certain components of these frameworks. Health professionals perceived the RCWs as being capable of addressing impairments and activity limitations and understood that PWD need to participate in all aspects of life situations. By using these frameworks, as a lens through which the data was analysed, it was evident that the RCWs were perceived as being capable of holistic management of PWD. This is important as it would ensure that RCWs would be able to assist PWD to achieve their full potential in rehabilitation and enjoy social inclusion in society. In this way RCWs will strength primary health care and community-based rehabilitation. This is in line with the DOH's national health plan for 2020/2030 to improve primary health care and community-based services.

6.3 Conclusion

The first objective of this study was to explore health professionals' expectations of the role of RCWs in the health system. This study found that health professionals were of the opinion that RCWs role would be to strengthen CBR and extend health services to PWD in the Mitchells Plain and Athlone substructures in the Western Cape. The health professionals in this study had positive perceptions of the RCWs and they were confident that RCWs would be able to enhance the quality of life of PWD (both adults and children) by ensuring inclusive development. This was evident during the work integrated practice learning module where RCWs displayed the ability to address the needs of PWDs holistically. The RCWs did not only implement treatment interventions to address physical rehabilitation but also identified and addressed problem areas in the education, social and empowerment components of the CBR Matrix on which their training was based. In terms of the ICF, the RCWs were perceived as being capable of addressing the different components thus indicating their understanding of disability and inclusive development. According to the literature, RCWs are utilised in CBR programmes to improve PWD's access to health services and to enhance quality care by facilitating social integration. The literature further suggests that health professionals need to clearly understand the role of the new cadre of workers so as to ensure that they are well utilised in CBR. In this way the success of CBR programmes will be optimised.

Another important finding of this study was that the health professionals identified the need for RCWs to work in intermediate care as well as in the community. The second study objective, which was to explore health professionals' expectations of the level

of inclusion of RCWs in the health system, was therefore met. The RCWs had experience working in the community prior to the rehabilitation pilot training programme and they were comfortable and confident in this environment. However, health professionals felt that the RCWs were uncertain of their role in intermediate care as this was a new work environment that they were now exposed to. Despite this, the health professions were of the opinion that the RCWs adapted and worked well in this new structured environment of facility-based care.

Health professionals were of the opinion that RCWs should be supervised and guided in CBR programmes. The literature also suggests that, any new worker introduced into CBR, will be effective in strengthening PHC and CBR if they receive supportive supervision. Health professionals in this study had positive perceptions of RCWs and this could imply that they will provide the efficient guidance and support that RCWs need in the workplace. This, in turn, will ensure that PWD, their families and communities will benefit from the RCWs. The RCWs also need to be effectively integrated into the health staffing structures to ensure successful outcomes of CBR programmes. These positive perceptions of the health professionals could possibly assist to achieve this.

This study found that health professionals were of the opinion that although RCWs lacked knowledge of certain health conditions and concepts of disability and that certain skills were not adequately developed they displayed good, professional behaviour in the clinical environment. They felt that skills could develop with more exposure and practice. This positive perception of the health professionals with regards to the behaviour displayed by RCWs in the clinical environment is vital in

accepting and respecting them as part of the rehabilitation health team. This in turn will ensure the success of CBR programmes. According to the literature (Deepak et al., 2011), a curriculum review identified a lack of knowledge and skills required by CHWs to provide the social inclusion of PWD. The literature however agrees that new workers who are well respected by health professionals and PWD will be well utilise in CBR.

The third objective of this study was to explore health professionals' perceptions of the knowledge, skills and behaviour of the RCWs in the clinical workplace and this objective was therefore also achieved.

6.4 Limitations

The following limitations have been identified for this study:

The sample size was small. Although in Q methodology a small sample size is acceptable, the researcher identified twenty seven health professionals, who engaged with RCWs in the WIPL module, as the study population. It would have been ideal if the entire population was able to participate in this pilot study. In this way all the health professionals' viewpoints would have been considered. Sampling was based on convenience, and only eighteen of the twenty seven health professionals who were invited to participate, agreed take part in this study. Sixteen participants completed the Q sorting process correctly and therefore the two incorrect and incomplete Q sorts were excluded from the study, making the sample size smaller.

As a research methodology, Q methodology has various limitations. The main limitation is that the Q sorting process is time-consuming (McKeown & Thomas 1988). The method and instructions need to be explained extensively to participants because they are generally unfamiliar with the process. If the participants' lack of comprehension leads to misrepresentation, then it can affect the validity of the study. In this study two participants failed to grasp the concept of ranking statements (Q sorting) and therefore their Q sorts (completed Q data grids) were excluded from the study.

The audio-taped conservations at the CPD workshops were of a poor quality due to background noise and the microphone being placed too far from the participants. The transcriptions were therefore difficult to read and to identify the viewpoints expressed by the health professionals. The transcriptions of the conversations at the CPD workshops were one of the sources used to inform the concourse for this Q study. This source was therefore limiting in providing health professionals' opinions and perceptions of the RCWs.

The minutes of the meetings (between UCT, UWC, DOHWC and the supervisors) which were analysed to inform the Q concourse also proved to be a limiting source in identifying health professionals' perceptions of the RCWs. The issues discussed at these meetings were not always related to the performance of the RCWs in the clinical workplace but were more focused on problems related to the coordination of the work integrated practice module and the structure of supervision sessions.

A limited number of health professionals (nine) completed and returned the structured feedback forms to the clinical coordinator of the WIPL module regarding the performance of the RCWs and their challenges in clinical practice. The information requested on these feedback forms was important as it highlighted RCWs weaknesses and strengths in clinical practice in terms of their knowledge, skills and behaviour. The coordinators of the WIPL module and the implementers of the training curriculum (UCT) used this information to plan tutorials to address RCWs weakness as identified by the health professionals. Therefore more viewpoints would have identified if more health professionals and supervisors had completed this form.

6.5 Significance of the Study

The findings of this study are important for the Department of Health (DOH), health organisations, tertiary institutions and rehabilitation health professionals in South Africa. The National Health Plan for 2020/2030 is committed to address the comprehensive needs of PWD by training RCWs to assist in improving access to health care and improving quality of life of PWD. This will further assist in reducing poverty as recommended by the WHO. The success of this pilot project will determine if it is feasible to continue training more RCWs as this will further support Government's plan to strengthen PHC and CBR nationally. The DOH will be able to put policies into effect to achieve their future goals. Health professionals' positive perceptions of the RCWs, as identified in this study, will also ensure that the new workers are well supervised and guided and well integrated into the health system. This will lead to the successful utilisation of RCWs in strengthening PHC and CBR.

This study identified gaps in the knowledge of the RCWs as well as a lack of the adequate acquisition of certain skills they need in the workplace. Tertiary institutions (UCT and UWC) will be able to make adjustments to the training curriculum so as to improve the quality of education future RCWs will receive if training is to continue. It will also assist other educational institutions in developing and implementing similar future RCW training programmes. The results of this study could also be used by other education institutions in guiding and developing their own training curriculum for RCWs.

6.6 Recommendations

Based on the findings of this study, the following recommendations can be made:

1. South Africa's National DOH should consider training more RCWs so as to provide health services to more underserved communities throughout the country. In doing so Government would strengthen the service platform and ensure that all PWD are included in all aspects of community participation. The DOH should recruit home-based carers or CHWs from the communities in which they would work since literature suggests that these workers will be more effective in understanding the needs of PWD, their families and communities if they come from the same geographic, economic, cultural and social background.

2. The DOH should provide the necessary support needed to sustain CBR programmes. This can be achieved by developing the career pathways of the RCWs and ensuring that RCWs are employed at appropriate health facilities as well as in community projects. The DOH should work closely with non-profit organisations (NPO) to assist with supporting, guiding and managing the workload of RCWs and identifying the needs of the community in which RCWs would work. The DOH should also determine how RCWs are perceived by higher management as this would be important in developing the career pathways of RCWs. It is not enough that RCWs are well perceived by the health professionals only, but also by the managers of health facilities as this would ensure employment opportunities for RCWs.
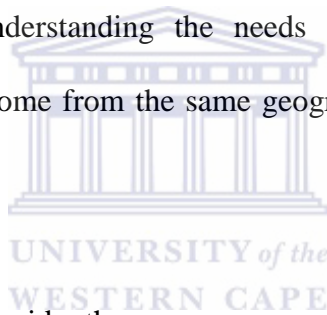
3. Health professionals will be supervising RCWs so it would be important for the DOH to provide support for the health professionals so that they do not become frustrated or demotivated by the additional task of supervision. Literature suggests that health professionals attend regular CPD workshops to find ways to work together as a team and to discuss their challenges. The DOH together with tertiary institutions can put policies into place to ensure on-going support for health professionals who supervise RCWs.

4. Tertiary institutions should adjust the training curricula to address gaps in the knowledge of RCWs. This can be achieved by either extending the duration of the training programme or by providing on-going refresher courses after RCWs have qualified. This would ensure that the RCWs' acquisition of knowledge is on-going. It is evident from this study that RCWs were not able to address the needs of PWD in all aspects of the CBR Matrix as recommended by the WHO. The RCWs' understanding of disability and inclusive development could be improved through the academic training programme as well as through more exposure examples in work integrated practice learning. In this way RCWs would be able to address the needs of PWD across all five domains the CBR Matrix (in terms of Health, Education, Livelihood, Social and Empowerment) and its key elements. This in turn would ensure inclusive development and good health outcomes for PWD, their families and their communities.

5. The researcher would like to recommend that further research be conducted on the impact that the current RCWs have made in CBR at intermediate care and community level. This would also help to determine if the DOH should consider training more RCWs. The health professionals' perceptions of the knowledge, skills and behaviour of RCWs in the workplace could also be explored again since it is now one year ago that the RCWs were accredited and they have gained more clinical experience.

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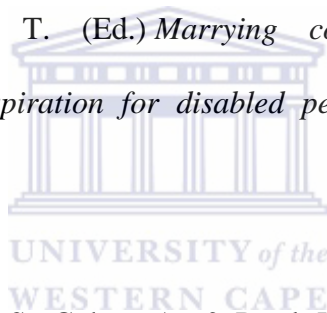
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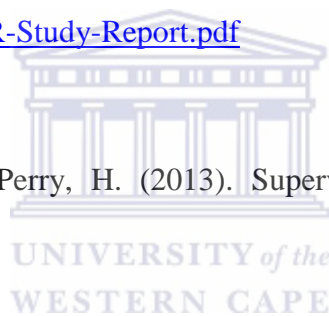
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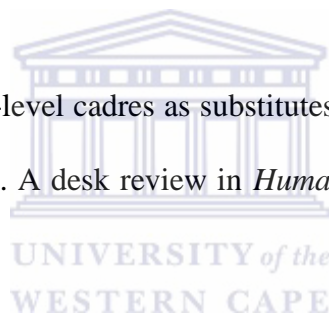
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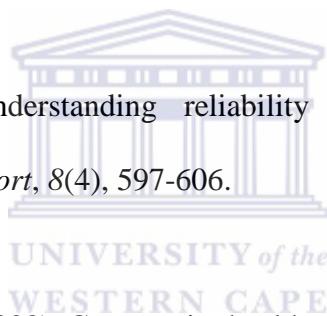
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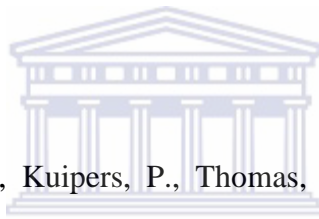
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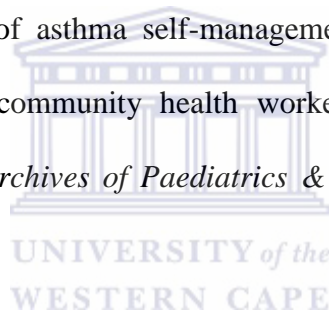
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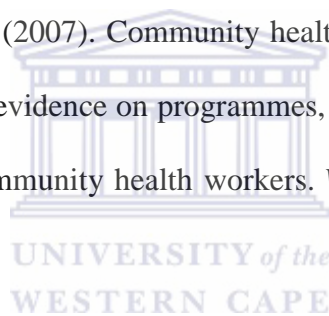
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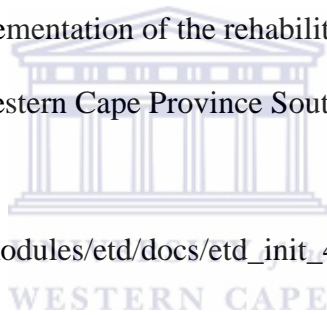
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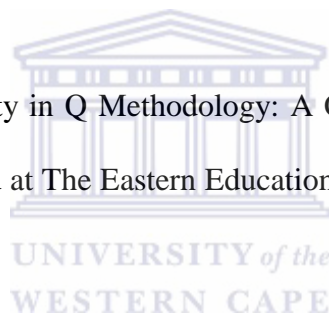
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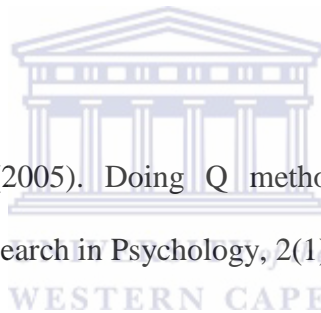
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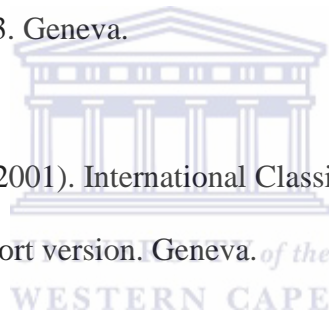
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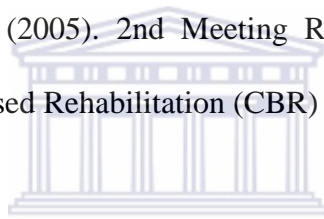
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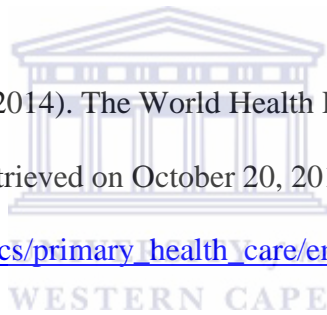
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Appendix A

OFFICE OF THE DEAN
DEPARTMENT OF RESEARCH DEVELOPMENT

UNIVERSITY *of the*
WESTERN CAPE

5 December 2013

To Whom It May Concern

I hereby certify that the Senate Research Committee of the University of the Western Cape approved the methodology and ethics of the following research project by:
Mrs S Gamiet (Physiotherapy)

Research Project: Exploring health professionals' perceptions of rehabilitation care

Registration no: 13/10/38

Any amendments, extension or other modifications to the protocol must be submitted to the Ethics Committee for approval.

The Committee must be informed of any serious adverse event and/or termination of the study.

Ms Patricia Josias
Research Ethics Committee Officer
University of the Western Cape

Appendix B

Learning outcomes for the five modules of the RCW training programme

1. **Health, Wellness and Functional Ability:**

- Describe normal development in children and adults

- Identify clients with selected disorders

- Demonstrate appropriate kinetic handling and positioning skills

- Identify risk factors for emotional distress in carers, clients and self

- Recognise when referral is required

- Demonstrate appropriate referral patterns and work within a multidisciplinary team.
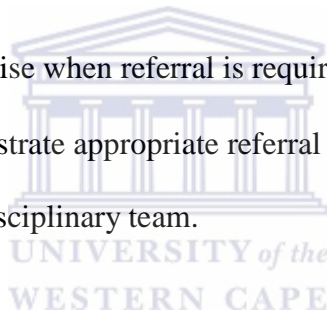
2. **Promoting Healthy Lifestyles:**

- Understand health promotion and the role of RCWs in health promotion

- Understand the importance of effective communication in health promotion

- Understand the challenges involved in selecting and developing media resources to promote health

- Determine appropriate stages of development in childhood, adolescence and adulthood

- Understand the importance of play in the development of children

- Explore ways of impacting socialisation of teenagers to enable them to become responsible, participating and healthy citizens

- Identify and map assets that can support community health, well-being and development

3. **Inclusive Development and Agency:**

- Identify core ideas related to disability rights and equal opportunities

- Reflect on local resources and challenges to enable participation in different opportunities

- Debate the relevance of international policies and guidelines to local contexts

- Explore the role and responsibilities of stakeholders in disability-inclusive development across different sectors: nationally, continentally and internationally

4. **Disability Information Management and Communication Systems:**

- Understand what information system is

- Understand where RCWs fit into an information system

- Describe the components of an information system

- Understand why an information system is important

- Understand types of information and the primary information that RCWs can collect

5. Work Integrated Practice Learning (WIPL)

Skills

- Observation
- Basic motor facilitation
- ADL facilitation
- Activity & education based group facilitation
- Interpersonal relationships
- Basic counseling
- Community engagement
- Advocacy & lobbying
- Mediation
- Critical thinking
- Communication
- Time management
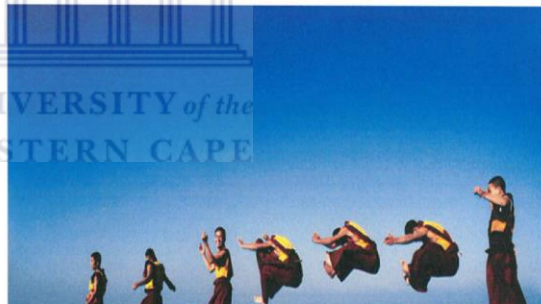
Behaviors

- Respectful
- Encouraging
- Supportive
- Professional
- Advisory
- Enabling
- Flexible
- Assertive
- Confident
- Reflective & reflexive

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Core Job Functions

- Perform tasks delegated by the rehabilitation professional to address impairments in body structures and body functions

- Assist rehabilitation professionals to address activity limitations and participatory restrictions experienced by the user

- Contribute to addressing contextual factors which interact with the user; as part of an interdisciplinary team

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Appendix C
Forty seven statements based on the opinions of health professionals

1.	RCWS lacked professionalism in the clinical workplace.
2.	RCWs displayed enthusiasm and willingness to learn in the clinical setting.
3.	RCWs were always respectful towards clients and all staff members.
4.	RCWs prior knowledge and experience boosted their confidence and willingness to work in different settings.
5.	RCWs were clear of their role in the workplace and were therefore assertive when executing tasks delegated to them.
6.	RCWs motivated and encouraged clients and their families during treatment sessions.
7.	RCWs displayed positive attitudes and behaviour in the clinical workplace.
8.	RCWs were capable of executing active exercise programmes with their clients.
9.	RCWs were capable of managing clients holistically.
10.	
11.	RCWs displayed good knowledge of basic health conditions.
12.	External support (e.g. transport money, resources) was lacking and this hindered learning in the clinical workplace.
13.	Co-ordination between supervisors, from the various disciplines, was poor and this affected the RCWs learning.
14.	RCWs grasped concepts, relating to the management of patients, quickly.
15.	RCWs always used correct medical terminology in the workplace.
16.	RCWs previous experiences helped them to screen clients appropriately.
17.	Poor literacy made reading medical files challenging.

18.	RCWs were able to identify when a client needed to be referred to other health professionals.
19.	RCWs understood the concept of disability in relation to the ICF and were able to apply it in the workplace.
20.	RCWs were capable of performing passive movements effectively.
21.	RCWs were confident and capable of engaging and facilitating psychosocial group discussions.
22.	Occupational therapy skills were adequately developed.
23.	Physiotherapy skills were adequately developed.
24.	RCWs were able to manage their time effectively when working with their clients.
25.	Overall handling and practical skills improved with time.
26.	RCWs were unable to extract relevant information from the folder.
27.	Documentation skills, such as writing SOAP notes and reflections, were good.
28.	RCWs coped better in the community setting because they had previous experience in this area.
29.	RCWs were able to work with little resources in the community and improvised appropriately.
30.	RCWs managed well with clients who were more mobile.
31.	RCWs were not always safe in their handling of clients.
32.	RCWs were unable to transfer clients correctly.
33.	Limited input from a speech therapy supervisor, made it difficult for the RCWs to screen clients with speech and hearing deficits.
34.	RCWs were able to screen assistive device appropriately.

35.	RCWs always communicated well with clients and medical staff.
36.	As a health professional I will not benefit from having a RCW working at my health facility.
37.	The role of the RCWs was not clearly defined to health professionals prior to them starting their work integrated practice module.
38.	Health professionals were unsure of their role in facilitating the RCWs' learning in the clinical workplace.
39.	RCWs did not receive adequate training across all rehabilitation platforms in order to function as an integral part of the multi-disciplinary team.
40.	The knowledge gained by the RCWs during their training was broad and gave them insight into health related issues.
41.	RCWs should work in both intermediate care and community setting under the supervision of a qualified health professional.
42.	RCWs have a role in promoting participation of clients in the community.
43.	RCWs managed all paediatric cases well.
44.	RCWs were creative in selecting age and developmentally appropriate toys.
45.	RCWs coped well with positioning and seating cerebral palsy children in their wheelchairs.
46.	RCWs were able to adapt an activity when engaging with a tired/bored child
47.	RCWs will strengthen rehabilitation services across the health care platform.

Appendix D
Q data score grid

Strongly Disagree   Neutral   Strongly Agree

-4	-3	-2	-1	0	+1	+2	+3	+4

Elaborate on:

1. The statement you most agreed with. Why did you choose this statement?

_____

_____

_____

_____

_____

2. The statement you most disagreed with. Why did you choose this statement?

_____

_____

_____

_____

_____

_____

Thank You

Strongly Disagree				Neutral			Strongly Agree	
-4	-3	-2	-1	0	+1	+2	+3	+4
36	32	43	31	45	46	2	22	42
28	10	39	27	18	33	29	8	12
35	1	34	26	16	17	20	47	13
	14	30	21	5	46	25	3	
		24	19	4	44	23		
			15	38	7			
			11	37	41			
				9				
				6				

Elaborate on:

1. The statement you most agreed with. Why did you choose this statement?

47 - I feel there is a place for rcw's in our health care system as they spend more quality time engaging with clients, families, understand contextual factors better as are constantly visible in the community. Current health care professionals do not enter communities.

2. The statement you most disagreed with. Why did you choose this statement?

28 - Rcw's prooved to fit into intermediate care centres well. They were able to adapt to the environment & relate better to clients as they came from communities. They interacted & engaged with families as this is similar to their previous role.
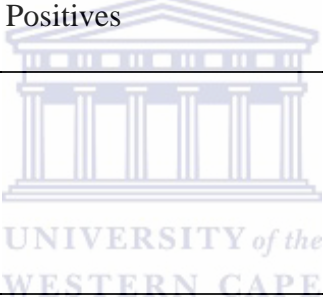
Thank You

Appendix F

Template of feedback form

SUPERVISORS and CLINICIAN FEEDBACK FORM: BLOCK 1

Name: **Date:**

1. Please reflect (positives and negatives) under the following headings:		
	Positives	Negatives
Students		
Co-ordination (WIPL-UWC)		
Placements		

2. Which areas of practice learning do you think students found very difficult?

3. Which areas in practice learning do you think students managed really well?

4. What areas should be focused on in the Friday tutorials?

5. Any comments or further recommendations for the WIPL module?

For clinicians only:

6. Do you think this worker will be a benefit to your facility? If yes, how? Where would they fit into the multidisciplinary team?
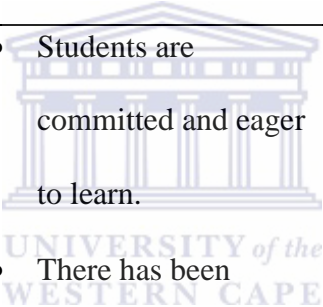
Appendix G

Example of completed feedback form

Name: Date: 4 SEPTEMBER 2013

| 1. Please reflect (positives and negatives) under the following headings:		
	Positives	Negatives
Students	• Students are committed and eager to learn. • There has been personal growth and development noted. • They have been positive role models for their children. • Prior knowledge has boosted their confidence and willingness to work in different settings.	• Some complained about the allowance being too little when in communities. • No access to a budget for interventions at community level. • Some fell ill during the placement for extended periods thus affecting their learning and

		progression in treatment.
Co-ordination (WIPL- UWC)	• Placements allows for experiential learning in all areas of development namely from birth to adulthood. • Communication was clear and constant. • Good systems were put in place.	• Students were unclear regarding venues for tutorials. • Supervision was overwhelming to the RCW. • Too many meetings and correspondence which was often confusing. • Templates for community were not included in the manual. This resulted in the RCW not presenting their CBR strategies but sticking to the

		individual approach.
Placements	• Ideal for exposure to different life and development stages. • In community the RCW learned to work around limited resources and even not having an office to work from.	• Community placements were not well thought through and planned to incorporate the CBR strategies. This resulted in a disruption in the learning of the RCW in that field. • Some staff at the placements did not understand the role of the RCWs and their scope. This created conflict in the work place. • More exposure to group facilitation is needed and mental health.

2. Which areas of practice learning do you think students found very difficult?
1. Administration was challenging as they were unclear as to what to complete for the supervisors, clinicians, etc. work ended up with incorrect role players as they were not clear regarding this.   2. There is room for further knowledge regarding mental health, group facilitation and profiling a community.
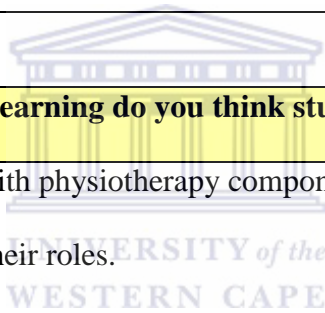
3. Which areas in practice learning do you think students managed really well?
1. They were very good with physiotherapy components and integrating that with function in relation to their roles. 2. Individual approach was more leaned towards as their prior knowledge and experience made them feel familiar.

4. What areas should be focused on in the Friday tutorials?
1. Practical skills that would benefit them in their placements.

2. Group facilitation, community profiling, CBBR template

3. Site visits that would empower them with tools to implement in their clinical.

1. Digital story telling of their experiences. This will enhance their learning and make the sharing of their experience more accessible.

2. Examinations should not weigh so much (60%) as anxieties affected many students. The overall consistent behavior and attitude in the placement should count more as the current method could potentially set a good learner up for failure.

For clinicians only:

6. Do you think this worker will be a benefit to your facility? If yes, how? Where would they fit into the multidisciplinary team?

DEFINITELY!

Being the first OT clinician at CBS level has left room for developing a service with this cadre of worker. Through networking with other OT'S at the CHC, it became

evident that there is a need as they are not able to follow up with patients discharged from the CHC or provide a service at a purely community based level that will incorporate the PHC principles and strategies. They could also assist in facilitating support groups and psychosocial groups in the community and screen clients that have "fallen through the cracks" by referring back to the appropriate facilities.

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Appendix H

The steps followed when using PQ Method:

Enter [Path and] Project Name:

Eg. mystudy

Current Project is ... c: /pqmethod/projects/mystudy

Choose the number of the routine you want to run and enter it.

1 - STATES   - Enter (or edit) the file of statements

2 - QENTER   - Enter q sorts (new or continued)

3 - QCENT   - Perform a Centroid factor analysis

4 - QPCA   - Perform a Principal Components factor analysis

5 - QROTATE - Perform a manual rotation of the factors

6 - QVARIMAX - Perform a varimax rotation of the factors

7 - QANALYZE - Perform the final Q analysis of the rotated factors

8 - VIEWLIST - View output file mystudy.lis

X - Exit from PQ Method

UNIVERSITY OF THE WESTERN CAPE

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E-mail:

INFORMATION SHEET

Project Title: Health professionals' perceptions of the rehabilitation care workers.

What is this study about?
This is a research project being conducted by Shamila Gamiet at the University of the Western Cape. I am inviting you to participate in this research project because you are a health professional who engaged with the rehabilitation care workers in the clinical setting and you have been identified as a suitable participant for the study. The purpose of this research project is to explore health professionals' perceptions of the knowledge, skills and behaviour of the rehabilitation care workers in the clinical setting and to explore the health professionals' expectations of the role of RCWs and their level of inclusion in the j\health sytem.

What will I be asked to do if I agree to participate?
You will be asked to participate in a focus group discussion where you can express your viewpoints on the RCWs. You will also be asked, at a later stage, to rank a set of statements made regarding the RCWs, from statements you strongly agree with to statements you strongly disagree with. You will be given a data score grid onto which you can capture your responses. You will be asked to explain in writing why you selected the statement you most agreed with and the statement you least agreed with. A space will be provided on the data score grid where you can elaborate on this. The data collection will be conducted at the health facility where you are employed and it will be conducted at the University of the Western Cape, Physiotherapy Department. The focus group discussion and the ranking of the statement will take approximately 45 minutes for each session but these two sessions will take place at different times.

Would my participation in this study be kept confidential?
I will do our best to keep your personal information confidential. To help protect your confidentiality I will use code names in the focus group discussions. You do not need to write you name on the data score grid when you rank statements. All information will be kept locked away and only the researcher will have access to these documents. If I 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 to understand how the new RCWs will be accepted by health staff and in community-based rehabilitation.

Understanding what health professionals' perceptions are of RCWs will give an indication of how well they will be utilised in primary health care.

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, there will be no repercussions.

Is any assistance available if I am negatively affected by participating in this study?
If you are in any way negatively affected by this research you will be referred for counselling, although there are no known risks to your participation

What if I have questions?
This research is being conducted by Shamila Gamiet Physiotherapy Department at the University of the Western Cape. If you have any questions about the research study itself, please contact Shamila Gamiet at: UWC Physiotherapy Department Robert Sobukwe Road Bellville 021 9592542 or 0823376443 or shamila.gamiet@gmail.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 A. Rhoda
Dean of the Faculty of Community and Health Sciences: Professor J. Franz
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 J

UNIVERSITY OF THE WESTERN CAPE

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E-mail:

CONSENT FORM

**Title of Research Project:** Health professionals' perceptions of the rehabilitation care workers

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.............................

Participant's signature..

Witness...

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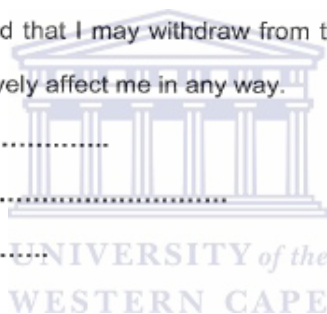
Should you have any questions regarding this study or wish to report any problems you have experienced related to the study, please contact the study coordinator:

Study Coordinator's Name: Shamila Gamiet

University of the Western Cape

Private Bag X17, Belville 7535

Telephone: (021)959-2542

Cell: 0823376443

Email: shamila.gamiet@gmail.com or sgamiet @uwc.ac.za

Appendix K

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e-mail: shamila.gamiet@gmail.com

FOCUS GROUP CONFIDENTIALITY BINDING FORM

Title of Research Project: Health professionals' perceptions of rehabilitation care workers

The study has been described to me in a 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. I agree to be audio-taped during my participation in the study. I also agree not to disclose any information that was discussed during the group discussion.

Participant's name…………………………………………..

Participant's signature………………………………………..

Date………………………