

**THE UNIVERSITY OF THE WESTERN CAPE
FACULTY OF COMMUNITY AND HEALTH SCIENCES
DEPARTMENT OF PHYSIOTHERAPY**

**THE SATISFACTION OF PERSONS WITH DISABILITIES REGARDING
SERVICES RECEIVED AT PRIMARY HEALTH CARE CENTRES IN
NDOLA, ZAMBIA**

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**A mini-thesis submitted in partial fulfilment of the requirements for the
degree of Magister Scientiae in the Department of Physiotherapy, University
of the Western Cape**

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ABSTRACT

Client satisfaction is an outcome measure of quality care. Therefore, health care providers (HCP) have a responsibility to provide quality care services in order to satisfy clients' health needs. The aim of this study was to establish the satisfaction level of persons with disabilities regarding health services provided at primary health care centres (PHCC) in Ndola, Zambia. The study employed a cross-sectional descriptive design and quantitative research method. The sample comprised 200 male and female persons with disabilities aged between 18-65 years old, selected using a convenience sampling technique. The clients were health care service beneficiaries from four PHCCs and four community based rehabilitation centres (CBR). The self-administered General Practice Assessment Questionnaire (GPAQ) was used to collect data on client satisfaction. A test-retest was conducted on 15 clients and after the questionnaire was adjusted to suit the Zambian environment. The Statistical Package for Social Science (SPSS) was used to capture and analyse data. The Chi-Square test was used to test associations between variables with the level of significance at $p \leq 0.01$. Ethical considerations pertaining to confidentiality, voluntary participation and their right to withdraw from the study were upheld. The results showed that majority of clients were dissatisfied with availability of health services. There was a significant association between care providers' skills and clients' satisfaction level at $p < 0.0001$. There is need to increase and assign specifically trained health professionals to health centres. Besides this, a multi-disciplinary approach that incorporates other professionals might help to deliver quality care services to persons with disabilities.

KEY WORDS

Ndola, Zambia

Satisfaction

Client

Disability

Health services

Needs

Perceptions

Quality of care

Primary health care

Health care provider



DECLARATION

I hereby declare that **“The satisfaction of clients with disabilities regarding services provided at primary health centres in Ndola, Zambia”** is my own work and it has not been submitted or any part of it for a degree at any university. All sources used or quoted have been indicated and acknowledged by means of complete references.

Signature.....

Date.....

Sr. Rabeca Marjorie Mwansa



DEDICATION

“How can I repay Yahweh my God for His goodness to me?”

Psalms 116:12

This thesis is dedicated to my wonderful grandparents: Protasio Mwansa Ngweshi (late) and Theresa ‘Suse’ Mwandwe who raised me to be the person I am. They taught me that the most humble way to learn is to listen. I owe them love.

It is also dedicated to the Franciscan Missionary Sisters of Assisi for their unconditional love and support throughout the course of this thesis.



ACKNOWLEDGEMENTS

I would like to formally thank the following people:

I deeply appreciate my Provincial Sr. Mary Veronica Zulu and her Councillors, and the Franciscan Missionary Sisters of Assisi-Zambian province, for their untiring spiritual, material and financial support that they provided to me during this research project.

My family and friends, your friendship, encouragement, constant communication and support was very sustaining. I am indebted to Sr. Beatrice Chanshi, Sr. Mavis Kapeso, Twin Severiano and Fr. Bwanali.

CBR clients who agreed to participate in this research project; without your co-operation this project would not have been possible.

The Bishop of the Catholic Diocese of Ndola and CBR programme co-ordinator for granting me permission to conduct this research project in their rehabilitation centres as well as their support.

The Provincial Director of Health, Ndola District Health Management, and the Research Ethics Committee (UNZAREC), for availing me with relevant information and granting me permission to use human subjects and PHC centres.

My supervisor, Mrs. Nondwe Mlenzana, for her advice and careful guidance from the inception of this thesis to the final draft.

My sincere gratitude to Br. Clement Sindazi, Fr. Douglas Sumaili and Fr. Lawrence, the Catholic students, parishioners at Sts. John and Paul Parish in Belhar for their friendship and spiritual support.

Finally I would like to thank Dr. Makupe, Mrs. Makupe and family whose extreme generosity will be remembered always.

GOD BLESS YOU!



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DEFINITION OF TERMS

Patient satisfaction: The appraisal of the extent to which the care provided has met an individual's (patient's) expectations and preferences (Bernna, 1995).

Satisfaction: Is a reflection of value judgements after a clinical experience or a series of assessments about medical care/treatment (Sahin and Tatar, 2006).

Disability: Limitations in functional and activities of daily living (ADL) and restrictions in social participation (WHO, 2001).

Quality of health care: The art of doing the right thing, at the right time, in the right way, for the right person, and getting the best possible results (Zineldin, 2006).

Attitude: It is the inclinations to react in a certain way to certain situations, to see and interpret events according to certain predispositions or to organize opinions into coherent and interrelated structures (Badran, 1995).

Need: The capacity to benefit from healthcare services (Asadi-Lari et al., 2004).

Health perceptions: The ways that people comprehend and reflect on their health (Sholkamy, 1996).

Patient/client: Individuals receiving primary health care services at a community health centre (McKague, 2000).

Primary health care: "Essential health care made accessible at a cost a country and community can afford, with methods that are practical, scientifically sound

and socially acceptable universally made available to individuals and families through their participation". (WHO, 1978. p.3).

Service: A result of provider's actions aimed at meeting the needs of a client (Blazevska, Vladickiene, & Xinxo, 2004).

Health care providers: These are physicians and other allied professionals such as nurses, doctors, physician's assistants who provide health services at health centres (Carr, 2001). Physician's assistants were called clinical officers in this study.



ABBREVIATIONS

ADL	Activities of Daily Living
ADH	Arthur Davis Children's Hospital
CBR	Community Based Rehabilitation
CHAZ	Churches Health Association of Zambia
CO	Clinical Officer
CSO	Central Statistics Office
DHMT	District Health Management Teams
FBO	Faith based Organisation
GNP	Gross National Product
GPAQ	General Practice Assessment Questionnaire
GPAS	General Practice Assessment Survey
HCP	Health Care Providers
HIV	Human Immune-Deficiency Virus
ICF	International Classification of Functioning, Disability and Health
ICIDH	International Classification of Impairment, Disability and Handicap
NCH	Ndola Central Hospital
NGO	Non-Governmental Organisation
NPCRDC	National Primary Care Research and Development Centre
PHC	Primary Health Care
PHCC	Primary Health Care Centre
SPSS	Statistical Package for Social Sciences
STIs	Sexually Transmitted Infections

TB	Tuberculosis
TDRC	Tropical Diseases Research Centre
UN	United Nations
UNICEF	United Nations International Child Education Fund
UNZAREC	University of Zambia Research Ethics Committee
USA	United States of America
WHO	World Health Organisation



CHAPTER ONE

INTRODUCTION

1.1 Background

There is a general notion that persons with disabilities face a lot of challenges in accessing primary health care services worldwide (Nocon & Sayce, 2008). These challenges are: poor communication especially for persons with learning difficulties, poor quality of care and inaccessible information, lack of understanding as well as the negative and discriminatory attitudes of health care providers (HCP) (Melville, 2005; Nocon & Sayce, 2008). In fact, the increased morbidity and mortality rate of persons with disabilities can be prevented by putting in place effective primary care services to meet their physical needs (Nocon & Sayce, 2008). These authors believe that effective health care services will increase clients' life expectancy. This shows that health care systems are not promoting the goal of primary health care (PHC) which is to deliver health services close to the people with full participation of individuals and the community (WHO, 1978).

As a matter of fact, insufficiently trained care providers often have a tendency of focusing on the disability of clients than on prevailing health care needs (Veltman, Stewart, Tardif & Branigan, 2001). For this reason, persons with disabilities spend much of their consultation time in educating care providers on the disability and this frustrates them. Perhaps, health inequalities which clients with disabilities experience are perpetuated because appropriate knowledge and skills

regarding disability is not imparted during training of health care professionals (Melville, 2005). This might be the reason why medical practitioners and other health care professionals often feel incapacitated in their work. Their education and training programme does not empower them to attend to the needs of clients with disabilities (Veltman et al., 2001; Melville, 2005).

According to the United Nations General Assembly (1994), equal opportunities entail availing services, activities, information and documentation to each individual, especially to clients with disabilities. To ascertain that this is accomplished, the Standard Rules on equalization of opportunities were enacted and member countries were advised to adequately train care providers. The purpose of quality training is to equip care providers with appropriate knowledge and skills that are relevant to effective health care service delivery (UN, 1994). As a result of quality training, clients with disabilities will receive appropriate information on how to mitigate disability, thereby improving their level of functioning. However, the reports on monitoring and implementation of equalisation of opportunities bring to light areas that have not received much attention from member countries (WHO, 2002: UN, 2007). These areas are communication and personnel training among others. WHO (2002) disclose that disability issues are principally in the training programme for orthotic professionals, occupational therapists, physiotherapists and social workers. Whereas medical and nursing professionals, receive no training or the least training on disability issues in spite of being involved in providing services to clients with disabilities at all levels including primary health care. Melville (2005) proposes incorporating clients with disabilities in training schools as

teachers in order to facilitate awareness campaign on how impairment affects individuals as well as on the barriers to access health care services. The researcher consents to this opinion because partnership with persons with disabilities in service delivery can enhance prioritising satisfactory health services.

The concept on consumer-directed services can be traced to over three decades ago in the disability rights and independent living movements initiated by younger clients with disabilities whose quest was to prevent further disability (Mahoney, Simon-Rusinowitz, Loughlin, Desmond & Squillace, 2004). In this line, satisfaction is considered as a health outcome, a quality of care indicator and a predictor of patient's behaviour. It is also perceived as a social construct between health care consumers and care providers as well as an outcome of effective care (Mahoney et al, 2004). Furthermore, client satisfaction has become popular among health care researchers since it plays a vital role in planning services and is used as a tool for measuring health care quality (Alazri & Neal, 2003). Assessing client satisfaction helps to understand the perception of clients regarding health services and the quality of health centres (Cobos et al., 2004). Therefore, data collected on patient/client satisfaction has become a suitable measure of general responsibility for employers as well as customers in health planning (Beller, 2001). Clients of social services have an affluence of information on how these programmes function (Harris & Poertner, 1998). Thus, gathering views of clients gives a researcher an insight on how they experience these services. That is why health care reforms are now determined by the patient's perception of quality of health care (Mahoney et al, 2004), to the extent that routine assessment of quality of hospital care and PHC includes surveying patients' experience of care.

Primary health care is a vital part of health care systems because of its holistic approach to individual needs rather than focusing on their medical condition (Starfield, 2001). Larson-McNeal, Carrothers and Premo (2002), underscore services provided at PHC as preventive, health maintenance, treatment of minor medical problems, and advocacy for persons with physical disabilities. For PHC to fulfil its principal goal, the services must be accessible and available at the time they are needed and should provide a variety of services that are relevant to prevailing health problems (Atun, 2004). The PHC programme in Zambia dates back to 1981 with a core aim of making health care available to all people in the community in an acceptable way and with their participation. The programme activities in Zambia were based on the following five principles: To encourage equity among all people, community participation, prevention of diseases, use of suitable techniques, and inter-sectoral approach (Stekelengburg, Kyanamina & Wolffers, 2002). Zambia adopted the PHC system through Health Reforms programme in 1991. This was in line with WHO's (1978) Alma-Ata Declaration on PHC. The purpose of the Health Reforms programme was to improve the quality of service delivery and to shift from curative to preventive care (Eide & Loeb, 2006) as well as to avail all Zambians "a basic health care package" (BHCP) with a full community participation (Stekelengburg et al., 2002). The BHCP vision has not been achieved because of a decline in service delivery and quality of care. Poor retention of care providers, poor health centres, inadequate drugs and medical supplies along with high poverty levels among the people, has also contributed to this underachievement (Eide and Loeb, 2006). Zambia has

1,345 rural and urban health care centres with 40% of these being under government whereas 60% are under private sector (Ministry of health, 2002; Dlamini, Lush, Auton & Nkandu, 2004).

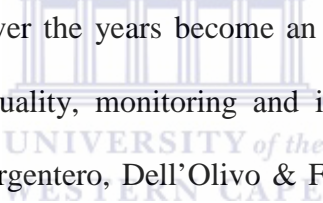
Most PHC centres (PHCC) in Ndola and countrywide are essentially managed by clinical officers (COs), nurses, and doctors on consultation basis. The fact that other health professionals are not part of the district health management teams (DHMT) shows that PHC service delivery lacks a multi-disciplinary approach. A multi-disciplinary team is described as consisting of traditional health care providers, physicians, nurses and allied health professionals (Garners et al, 2006). The advantage of a multi-disciplinary approach to health care helps to meet clients' demand for quality service delivery and to implement client satisfaction through diverse health care professionals (Codispoti et al, 2004). In this case, physiotherapists could be valuable members of the team if incorporated in health centres in Ndola. This is because a typical phenomenon of care for individuals with disabling conditions involves multiple medical professionals working in collaboration with education and social service providers (Allington-Smith, 2006).

1.2 Motivation

The purpose of the Health Reforms in Zambia was to improve the quality of service delivery at health centres, to shift from curative to preventive care and to avail services to the community with full participation of individuals (Eide & Loeb, 2006). The researcher, who worked as CBR programme co-ordinator and physiotherapist, observed that some of the health care services that are supposed to be available at health centres are not provided. These services are education,

rehabilitation, social services, provision of assistive devices and anti-convulsion drugs to persons with disabilities. Instead, these services are provided by community based rehabilitation (CBR) programme under the Catholic Diocese of Ndola, a Faith-Based Organisation (FBO) on the Copper Belt province. Even though client satisfaction with PHC services is a global issue, little or no information was found regarding satisfaction of persons with disabilities in Ndola, Zambia. Therefore, the researcher was motivated to investigate the satisfaction level of persons with disabilities regarding services provided at four selected PHCC in Ndola and it was for this reason that the study was undertaken.

1.3 Problem statement



Client satisfaction has over the years become an important tool that is used for measuring health care quality, monitoring and improving health care services (Alazri & Neal, 2003; Argentero, Dell’Olivo & Ferretti, 2008). Satisfaction also implies fulfilling clients’ values and expectations. However, there seems to be a problem with delivery of quality care and availability of services at health centres in Ndola. Rehabilitation and assistive devices are not provided at health centres whereas prescribed drugs are either inadequate to cover the full course of treatment or are not available. Thus, clients are forced to buy medicines from expensive private drug stores. Consequently, those who cannot meet transport cost to the hospital for rehabilitation services as well as the cost of assistive devices and medication either get these services from CBR centres or end up not complying with treatment regimen. It is not known whether persons with disabilities are satisfied with health services provided at health centres in Ndola.

Thus, the research questions the extent to which the persons with disabilities are satisfied with health services provided at PHCC in Ndola-Zambia.

1.4 Aim of the study

The aim of this study was to establish the satisfaction level of persons with disabilities regarding health service delivery at PHCC in Ndola, Zambia.

1.5 Objectives of the study

1. To establish which services are available and provided to persons with disabilities at PHCC in Ndola.
2. To identify factors contributing to satisfaction or dissatisfaction with services provided at PHCC in Ndola.
3. To establish whether associations exist between communication skills of HCPs and client enablement.
4. To make recommendations to relevant authorities who are responsible for the welfare of persons with disabilities.

1.6 Significance of the study

Clients are reliable sources of information on how effective health care service delivery is at PHC (Haddad et al., 2000). This implies that disregarding information on their experiences will lead to dissatisfaction with services, shunning health centres and subsequent deterioration of their health condition. Since there is little or no information on client satisfaction in the country, this

study was undertaken with the hope that information from persons with disabilities will contribute to the body of knowledge on the satisfaction of clients with disabilities regarding health care services. The findings of this study might be used by policy makers as a basis for evaluating health service delivery and improving effectiveness and availability of health care services to persons with disabilities. According to Molton et al. (2003), assisting clients with disabilities to attain their full potential in life as well as meeting their needs require a multi-disciplinary approach to quality care services.

1.7 Summary of the chapter

In this chapter, the background of the study including client satisfaction and PHC in Zambia has been described. The motivation and significance of the study along with the aim and objectives have also been described. Chapter two will illustrate the relevant literature that was reviewed in relation to satisfaction of clients with disabilities regarding services provided at health centres in Ndola.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter presents the literature reviewed in relation to persons with disabilities and disability prevalence, client/customer satisfaction, primary health care and health care systems. Relevant literature on needs and perceptions of persons with disabilities regarding health services, quality of care and factors contributing to satisfaction/dissatisfaction has been covered.

2.2 Defining disability

In the Persons with Disabilities Act of 1996, the Zambian government categorized “any restriction or lack of ability to perform any action in the manner or within the range considered “normal” for a human being” as a disability. This was modelled on the International Classification of Impairment, Disability and Handicap (ICIDH) developed by WHO in 1980. Lawther et al. (2003), view persons with disabilities as a diverse group of people ranging from children with developmental disabilities, adults with severe psychological or physical impairments, persons with severe acute injuries, sensory disorders to communication difficulties. Barnet and Penny (2004) describe them as vulnerable people in need of rehabilitation and support services. However, the establishment of the International Classification of Functioning, Disability and Health (ICF) (WHO, 2001) offers a consistent and comprehensive concept of disability that is a shift from a medical model to a social model. Disability is then defined as impairment, limitations in activities of daily living (ADL), and restrictions in social participation (Eide & Loeb, 2006). Since there are numerous

definitions of disability, it was imperative to adopt one definition that was suitable for this research setting. For this study, the researcher used the ICF model to define disability as described by Eide and Loeb (2006).

2.2.1 Disability prevalence

The disability prevalence rate that is frequently cited is 7% of the world's total population (WHO, 2002). Out of the total disability prevalence rate, only 20% of persons with disabilities reside in developed countries while 80% are in developing countries. However, the actual disability prevalence rate is 10% of the total world population as Veltman et al. (2001) claims. United States of America (USA) has 19.4% and Canada between 13.7% and 31.3%, whereas Kenya and Bangladesh have 1%, and New Zealand 20% (Mont, 2007). The figures that are reported in high-income countries are between 10-20% higher than 5% reported in low-income countries such as those in Africa (Loeb, Eide and Mont, 2008). However, WHO (2002), recorded 10% in Kenya, between 7-19% in Rwanda and 6.6% in South Africa that has since increased to 12%. The lower disability prevalence rate in low-income countries is only representative of severe disabilities (Eide & Loeb, 2006). Conversely, high in-come countries like Canada consider any condition that affects one's health a disability even if it does not limit a person's activity participation (Mont, 2007). Another contributing factor is that persons with disabilities in developed countries have a higher survival rate compared to developing countries. Mont attributes the lower survival rate of persons with disabilities in developing countries to poor health care, poor nutrition and unsafe living conditions. Loeb et al. (2008), attributes variation in statistics to diverse disability definitions, methods used for data collection and the quality of survey designs. They encourage researchers to use the ICF model for measuring disability prevalence because

the tool encompasses functional ability, activity restrictions and reduces disparity in reporting data.

In Sub-Saharan Africa the prevalence rate for all developmental disabilities vary from 11 to 60:1,000 children (Couper, 2002). These impairments are primarily from adverse social and environmental conditions such as poverty, poor nutrition and social deprivation in early childhood. For instance, only 5% of children with disabilities have access to health care, education and social welfare services in Sub-Saharan Africa (WHO, 2002). Solarsh and Hofman (2006) observed that the health care system in developing countries has not taken prevention of developmental disabilities as a priority. Hence, malaria which has taken a major role, nutrition deficiencies, accidents and injuries contribute to developmental disabilities. The common causes of disability are accidents and injuries such as road traffic accidents (RTA), falls, burns and accidental poisoning leading to head injury (Solarsh & Hofman, 2006). They associated long term cognition and school performance deficits to nutrition deficiencies. This study involved clients with various disabilities whose cause might have been facilitated by the above factors.

Zambia's disability prevalence rate increased from 0.9% in 1990 to 2.7% in 2000, of which 53% are male while 47% are female (CSO, 2000). Physical disability is the commonest in Zambia with 35.2% of the total disability population. Seemingly the two censuses only included four categories of impairment (visual, hearing/speech, intellectual and mobility) to identify persons with disabilities (Eide & Loeb, 2006; Loeb et al., 2008). The living condition survey conducted in Zambia Eide and Loeb (2006), used the Washington Group on Disability Statistics which has six life domains namely difficulties with vision, hearing, mobility, remembering, self-care, and communication. Results from their survey show that Zambia's actual disability prevalence rate is 14.5% and Copper Belt province has approximately 9.8 %

persons with disabilities of the total prevalence rate. The 2.7% only represent persons with severe disabilities in the country. The major causes of mortality and morbidity in Zambia are communicable diseases (malaria, diarrhoea, acute respiratory infections, measles, tuberculosis (TB) and meningitis and congenital diseases, malnutrition, accidents, and HIV) (CSO, 2000; Eide & Loeb, 2006). Therefore, most people in Zambia become disabled before the age of 5 years and this is a major challenge to health services available for the vulnerable especially women and children (Eide & Loeb, 2006).

2.3 Customer satisfaction

Customer satisfaction is an important entity in business (Lam, Shankar, Erramilli, Murthy, 2004). It influences customers' future purchase intentions and leads to loyalty (Lam et al., 2004; Hsu, 2008). Satisfied customers spend more finances per purchase, talk extremely about the purchase to others and are loyal to a particular service (Sovd, Mmari, Lipovsek & Manaseki-Holland, 2006). Whereas, dissatisfied customers are not likely to repurchase the products or make future access of the services and will narrate to others their negative experience with an organisation. Hence, satisfaction comes from the level of quality and value of services that customers receive (Bodet, 2008; Hsu, 2008). That is why business institutions believe that customer satisfaction has impact on perception of quality and behavioural loyalty. Lewin (2009) presumes that customer satisfaction has a significant influence on current and future performance of an organisation. It evaluates performance of suppliers on a variety of services that they provide. The researcher assumes selling satisfactory products to a customer in business industry is as important as providing satisfactory health services to clients in the health sector.

2.3.1 Client/Patient satisfaction

Client satisfaction with health services has been extensively researched in developed nations than has been done in developing nations (Newman, Gloyd, Nyangezi, Machobo & Muiser, 1998). The developing nations especially in Africa where such surveys have been carried out are Mozambique, Ethiopia, Tanzania and Egypt to mention a few (Gilson, Magomi, & Mkangaa, 1995; Newman et al., 1998; Oljira & Gebre-Selassie, 2001; Gadallah et al., 2003). Often, the overall satisfaction with health services reported in developed nations range from 74.5% in Poland, 81.65 in Australia, to 98% in USA (Iezzoni, Davis, Soukup, & O' Day, 2002; Blazevska, Vladickiene & Xinxo, 2004; Potiriadis et al., 2009). Compared to developing countries such as Mozambique where the overall satisfaction was as low as 22% in Gondar town and 55% in Jimma hospital, Ethiopia recorded 57.1%. Otherwise the highest was 98% in Egypt after health centres were upgraded (Newman et al., 1998; Oljira & Gebre-Selassie, 2001; Gadallah et al., 2003). The study by Bernhart, Wiadnyana, Wihardjo and Pohan conducted to determine patient satisfaction in developing countries shows low overall patient satisfaction (28%). Bernhart et al. (1999), attribute low satisfaction in these countries to long waiting hours at health centres, high cost of care, non-availability of services especially prescribed drugs and attitudes of care providers. Nevertheless, common limitations of patient satisfaction surveys are methodological challenges, gratitude and courtesy biases (Bernhart et al., 1999; Sovd et al., 2006). Gratitude bias is the clients' tendency to cover-up problems and complaints which may be prompted by fear (Bernhart et al., 1999). On the other hand, courtesy bias is the reluctance of clients to give negative opinions about the services while they are within the clinic premises (Sovd et al., 2006).

Client satisfaction refers to self-assessment clients make in relation to perceptions of how well services fulfil their needs (Sanders, Trinh, Sherman, & Banks, 1998). Satisfaction is then a reflection of how patients assess health services either after a clinical experience or a series of medical care (Sahin & Tatar, 2006). Since client satisfaction is an integral component of health services, satisfaction with health services determine the effectiveness of health care (Oljira & Gebre-Selassie, 2001). Measuring client satisfaction, as Sanders et al. (1998) claim depends on individual needs, prior experiences and interactions with others during treatment. Therefore, the purpose of evaluating client satisfaction is to analyse the function of health centres from the perspective of clients (WHO, 2002). Seemingly, client satisfaction has become an essential tool for research, administration, health planning and improving accountability (Das & Sohnesen 2006). For over 20 years now data collected from client satisfaction studies is used for evaluating, monitoring and improving quality of health services (WHO, 2002; Sahin & Tatar, 2006; Bikker & Thompson, 2006; Argentero, Dell'Olivo & Ferretti, 2008). The growing interest in patient evaluation is because of consumerism and concerns about compliance with treatment (Bikker & Thompson, 2006). This is why patient satisfaction has become a major source of feedback from patients to service managers and is an acceptable way of involving patients in service delivery. Satisfaction with health care predicts patients' decisions to choose a certain health care plan (Fan, Burman, McDonell & Fihn, 2005). Studies have demonstrated that satisfied clients provide medically relevant information to care providers and continue using health services (Bernhart et al., 1999; Sovd et al., 2006). Clients whose expectations are fulfilled are likely to be satisfied and have better outcomes (Alazri & Neal, 2003; Liptak et al., 2006). Hence satisfaction with health care is related to outcomes (Liptak et al., 2006). The outcomes are better compliance with medical treatment and continuity of the relationship with care

providers (Oljira & Gebre-Selassie, 2001; Alazri & Neal, 2003; Gadallah et al., 2003; Fan et al., 2005; Sovd et al., 2006; Kumari et al., 2009).

2.3.2 Customer loyalty and complaints

Customer loyalty is a devotion to repurchase a preferred service always in the future (Hsu, 2008). Satisfied and loyal customers provide free word-of-mouth advertising and are faithful to a particular service (Sovd et al., 2006; Hsu, 2008). Therefore, customer loyalty has become essential to managers in competitive service industries because the relationship between customers and the organisation is a guide in relational marketing approach (Bodet, 2008). It is a sign of customer satisfaction that has an impact on the profit of a firm. Yet, only satisfied and productive employees deliver quality services that lead to transaction-specific satisfaction and overall satisfaction (Bodet, 2008; Lewin, 2009). Overall or cumulative satisfaction includes past, current and future customer expectations, current service quality and perceptions of value received (Zeithaml (1988). Measuring customer or client satisfaction has shifted from post-choice evaluative judgment of a specific product or service transaction to cumulative or overall satisfaction (Zineldin, 2006; Bodet, 2008; Lewin, 2009). For this reason, overall satisfaction is a better predictor of customer's intentions and behaviours (Olsen & Johnson, 2003).

On the other hand, a complaint is a conflict between a customer and the organisation (Hsu, 2008). As such, an increase in customer complaints leads to customer dissatisfaction and decreases customer loyalty (Fornell et al., 1996 cited in Hsu, 2008). Industrial service providers take customer complaining as feedback that can prevent an organisation from deteriorating quality and flow of customers (Mittal, Huppertz & Khare, 2008). Unfortunately, many health care organizations throughout history view patients as subservient recipients of services through a top-down hierarchy (Zineldin, 2006). Although, all industries have focused

on customer satisfaction, there is enough evidence to show that health care system is the only service industry where customers are not adequately considered (Kumari et al., 2009). It is not surprising that certain customers return to service providers even after being dissatisfied with the services, because overall satisfaction has an intermediary role between transaction-specific satisfaction and attitudinal loyalty (Jones & Suh, 2000). The study conducted in Egypt and Jordan by Zineldin (2006), proves that patients' loyalty in the health sector is situational due to the high cost of switching from one hospital to another. It is therefore not surprising why some patients return to the same health centre and are treated by the same care providers even though they are dissatisfied with the services (Zineldin, 2006). Consequently, health care administrators whose priority is to maximise patient loyalty, market share and financial performance should be concerned about patient satisfaction (Sahin & Tatar, 2006). The challenge to the health care sector is that only 11% of clients will complain about service failure compared to secular sectors and industries (Mittal et al., 2008). Clients seeking health services are so dependent on care providers that they are afraid of retribution hence, they fail to criticise the services (Bernhart, Wiadnyana, Wihardjo, & Pohan, 1999). Besides, complaining is regarded as disobedience in health care (Mittal et al., 2008). The researcher found it important to familiarise with clients' loyalty and complaints because these factors might affect their satisfaction with health services.

2.4 Determinants of satisfaction/dissatisfaction

Satisfaction is a complex notion that has many determinants and is considered to be a proxy for health (Das & Sohnesen 2006). The factors which influence client satisfaction are the level of literacy, intellectual, physical and sensory disability, language skill difficulties and cultural diversity (Doherty, 2003). Client satisfaction is then determined by the characteristics of clients, care providers, the client-HCP relationship, and the health care setting providing

services (Doherty, 2003; Fan et al, 2004; Wensing et al, 2004; Das & Sohnesen, 2006). Clients' characteristics include demographic factors, socioeconomic status (financial, education and technology), and the general health status of the client. Whereas, the commonly cited care provider's characteristics are professional competence, communication skills, responsiveness, age, and gender (Gadallah et al., 2003; Bikker & Thompson, 2006). The difference in opinion encourages investigators to identify dimensions which contribute to satisfaction with services (Argentero et al., 2008). Some of these factors are highlighted below.

2.4.1 Continuity of care and Interpersonal relationship

Continuity of care is described as a longitudinal relationship between a client and the care provider (Kerse et al., 2004). Interpersonal relationship is central to health care delivery and fundamental to PHC due to its association with high utilisation of health services (Kerse et al., 2004; Fan et al., 2005). A cross-sectional study conducted in the US by Fan et al. (2005) on 21, 689 patients show the influence of continuity of care on patient satisfaction with health services. Fan et al. (2005) reports a high significant association ($p < .0001$) with continuity of care and satisfaction. This means that clients who saw their usual care provider were highly satisfied with health service delivery than those who often changed. Eldar (2004) concurs with the idea that patients hold personal continuity of care in high esteem. The reason being that continuity of care reduces emergency visits and hospitalization, improves management of chronic conditions and increases utilisation of preventive services (Lawthers, Pransky, Peterson, & Himmelstein 2003; Fan et al, 2005). With the increased number of institutions that are providing health services, continuity of care is difficult to maintain at health centres (Eldar, 2004; Argentero et al., 2008). Since clients easily switch from one health institution to

another and care providers' work schedule or call arrangements does not promote continuity of care (Argentero et al., 2008).

2.4.2 Communication skills of health care providers

Inadequate dissemination of information on the condition of a client, the cost of health care services, availability and ease of access to HCPs are aspects generating greater dissatisfaction in persons with disabilities (Iezzoni et al., 2002). In the evaluation report on quality of primary care, Eldar (2004) states that clients need and value information concerning their condition and are eager to participate in their care. Participation in care happens when clients are consulted about service planning and delivery, health evaluation and research. The information provided to clients should be accurate, relevant and given at the time when clients need it most (Blazevska et al., 2004). Clients expect quality care and a variety of health services to choose from except they cannot make such choices without adequate information (Blazevska et al., 2004). Similarly, the findings obtained in Bikker and Thompson's (2006) telephone survey showed that interpersonal relationship and dissemination of information affect satisfaction with health services. This survey involving 3052 clients in four health care settings in Scotland, had a high significant association with satisfaction at $p < 0.000$. Thus, satisfaction with health services is expressed in relation to care providers' affective behaviour and skills in communication (Bikker & Thompson, 2006). Communication barriers between care providers and clients with disabilities especially those with intellectual, vision, hearing, and speech impairments impact negatively on successful health care delivery (Abdulhadi, Al-Shafae, Ostenson, Vernby & Wahlstrom, 2006). These barriers lead to clients' poor compliance with treatment and health outcomes and prevent care providers from making appropriate diagnosis. Thus improving client-care provider communication enhances the level of satisfaction of clients (Kumari et al., 2009).

2.4.3 Accessibility, acceptability and availability of health services

Health systems in low income countries have limited resources and the disadvantaged have poor access to health services (Palmer, Mueller, Gilson, Mills & Haines, 2004). Accessibility is one of the principles of achieving health for all stated in the Alma-Ata declaration of 1978 on PHC (Gadallah et al., 2003; Bagheri, Benwell & Holt, 2006; Kumari et al., 2009). It is defined as the ability of patients to utilise health services (Blazevska et al., 2004). Access is therefore expressed in terms of availability, co-ordination and cost of care, and health service delivery system. Thus, access to care is the performance and the degree to which individuals are able to utilise the needed health services (Blazevska et al., 2004). It is also the availability of health centres and services to all citizens (Bagheri et al., 2006). The five types of barriers to accessibility of health services are availability, affordability, accommodation and acceptability (Bagheri et al., 2006). These authors further explain availability as a variety of health services from where clients can choose. Access is measured in terms of travel distance and time between health centres and the residential area. The cost of care and the ability to pay means health services are affordable. In addition, accommodation is the extent to which health services meet clients' needs such as hours of operation, waiting time, and consultation procedure. Acceptability deals with clients' perceptions of health services and their interaction with care providers. Lawther et al. (2003), point out that both clients with disabilities and those without experience barriers to access health services even though persons with disabilities are the most affected.

2.4.4 Disability and accessibility of health services

Accessibility to health care services is a major issue among clients with disabilities because they utilise health services more and require a comprehensive range of services that the general population does not require (Dhont, Beatty & Neri, 2000; Beatty et al., 2003; Liptak et al., 2006). In spite of this fact, there is a gap in utilization of health services between clients with disabilities and the average individual. Bingham and Beatty (2003), Beatty et al. (2003) and Blazveska et al. (2004) show access difficulties which persons with disabilities experience regarding health services. One of the health promotion barriers of clients with disabilities is access to quality health of care (Larson McNeal, Carrothers & Premo, 2002). Consistently, disability is portrayed as an independent risk factor for dissatisfaction with health services and often persons with disabilities have unmet health needs due to communication barriers (Iezzoni et al., 2002; Jha, Patrick, Macle hose, Jason & Chan, 2002; Shapiro et al., 2003). The Medicare Current Beneficiary Survey conducted in 1996 by Iezzoni et al. (2002) in the US on 16,403 Medicare beneficiaries endeavoured to compare satisfaction with quality and access to health services among persons with disabilities (sensory and physical impairments). They found a significant association ($p \leq 0.05$) between being disabled and dissatisfaction with overall quality care, cost of care, access to information about the condition and availability of the doctor. Several authors affirm Iezzoni et al.'s findings (Veltman et al., 2001; Jha et al., 2002; Lawther et al., 2003; Hwang et al., 2009). These studies highlight access difficulties as pertaining to preventive services, medicines, follow-up care, specialised doctors, assistive devices, and availability of care after hours at health centres. Critical to Iezzoni et al.'s (2002) study is that information on sensory and physical impairments were self-reported and this makes clients' perceptions about their

functioning clinically inaccurate. The use of proxies is criticised on grounds that they exaggerate rating disability than the persons with disabilities.

In spite of the increased prevalence rate in society, persons with disabilities are the most discriminated in health care systems and have poor overall health outcomes (Hwang et al., 2009). A consumer-based longitudinal study conducted in Washington, Dhont, Beatty and Neri (2000) compared accessibility of health care services among people with physical disabilities under managed care plan and traditional fee-for-service plan. Accessibility to services such as specialty, physical rehabilitation, assistive devices, and assistive equipment repair generated clients' dissatisfaction under both service plans (Dhont et al., 2000). This suggests that access to care remains a challenge to clients regardless of their of service plan. Furthermore, Beatty et al.'s (2003) national survey involving 800 conveniently selected persons with disabilities assessed access to various health services. Half of the clients accessed rehabilitation services more than primary care doctors, specialists, and assistive equipment and prescribed medicines. However, the poorest of health and low income had no access to the services under investigation. Kumari et al. (2009) assume that client satisfaction is apparent in accessibility, distribution and utilisation of health services. Therefore, health care delivery systems should strive to overcome potential barriers to access including disability so as to reduce equity gaps and attain good outcomes for all patients (Atun, 2004; Rohrer et al, 2008).

2.4.5 Waiting time and accessibility

The length of time which clients spend at the health centre before health services are provided, determines client satisfaction and utilisation of health services. Patro et al. (2008)

define waiting hours as the time clients spend from registration to meeting with the care provider for consultation. Clients who wait longer for their treatment to commence become dissatisfied with services than those who are attended to within the expected time (Blazevska et al., 2004). Instead, shorter waiting time as well as longer consultation time contributes to greater satisfaction (Ojira & Gebre-Selassie, 2001; Gadallah et al., 2003; Eldar, 2004). In the same way, Bikker and Thompson (2006) found a significant association ($p < 0.001$) between satisfaction with health services and the length of time clients spent while waiting for consultation to start.

Kumari et al.'s (2009) cross-sectional survey investigated satisfaction of 1688 clients in all government health centres of Lucknow district in India in order to identify areas and causes of low satisfaction among clients. Results showed a high clients' satisfaction level because health centres in India are easily accessible. However, clients who waited more than 30 minutes before consultation had a low satisfaction level. According to Kumari et al., a positive way of utilising long waiting hours is to provide health education to clients while they are waiting for consultation to start. Apart from long waiting hours, client satisfaction is influenced by confidentiality during consultation (Gadallah et al., 2003). In two separate studies Gadallah et al. (2003) and Sovd et al. (2006) established that clients whose consultation is interrupted either by other care providers or the presence of other clients in the room at the time of examination are dissatisfied with the services. Hence, preventing interruptions during consultation contribute to client satisfaction (Sovd et al., 2006; Sahin and Tatar, 2006).

2.4.6 Environmental factors

The current concept of health is the ability of an individual to function effectively in a given environment (Larson McNeal et al., 2002). This implies that persons with disabilities must have architectural, equipment and social accessibility since physical barriers and inaccessible equipment make utilisation of medical care difficult. Veltman et al. (2001) cites non-availability of ideal transport services to the health centre for medical appointments as one barrier clients with disabilities encounter. Furthermore, satisfaction with health services is influenced by the structure or the type of health setting delivery health services (Fan et al., 2005; Liptak et al., 2006). An appealing physical environment of the health centre enhances satisfaction with health services and motivates clients to return to the facility for health care needs (Sovd et al., 2006). Authors insist that environmental or structural factors represent the social and physical environment in which health care services are delivered (Argentero et al., 2008; Hwang et al., 2009). Factors such as lack of ramps, parking spaces and limited space in treatment rooms are often barriers to utilisation of health services in persons with disabilities (Larson McNeal et al., 2002). The descriptive study conducted by Sovd et al. (2006) on acceptability of health facilities among adolescents in Mongolia, showed more than 30% client dissatisfaction with the services. These results suggest that unclean and inappropriate toilet facilities affect overall satisfaction with the services. The main limiting factor in Sovd et al.'s study was courtesy bias. In a similar study, Kumari et al. (2009) reported dissatisfaction of clients resulting from unclean toilet facilities, surroundings and lack of clean drinking water at health centres. On the other hand, inaccessible examination rooms and tables in the doctors' room can be a major challenge to receipt of services for persons with physical disabilities (Hwang et al., 2009). Often, examination tables are not adjustable

and weight scales cannot accommodate wheelchairs. This means that improving environmental service facilities can increase the satisfaction level of clients.

2.4.7 Demographic factors

The socio-demographic characteristics of clients and previous experiences with health care are important to include in client satisfaction surveys (Eldar, 2004; Fan et al., 2005; Bikker & Thompson, 2006). This is because these characteristics are associated with overall client satisfaction and determine the satisfaction level with health services (Fan et al., 2005). Demographic factors are age, gender, education level, the general health status as well as the economic status of a client. For instance, the age of a client especially the older is associated with greater satisfaction than the younger clients (Crow, Storey and Page, 2002; Iezzoni et al., 2002; Shapiro et al., 2003; Argentero et al., 2008). Gender is often inconclusive since either men or women are more satisfied than the other (Bikker & Thompson, 2006). In Fan et al.'s study (2005) female clients were more satisfied with health services than the male clients. On the contrary, Das and Sohnesen (2006) and Argentero et al. (2008) established a high satisfaction level among male clients than female clients. As for education status, the educated clients are more critical about health services delivery and dissatisfied than those with lower education level (Eldar, 2004; Bikker & Thompson, 2006). Equally clients with poorer health status and lower income (economic status) are often dissatisfied because they encounter access barriers to health services (Beatty et al., 2003; Eldar, 2004).

2.4.8 Methods of measuring client/patient satisfaction

The methods used to measure client satisfaction and the relevance of data collected from such surveys is controversial in health services (Williams, Coyle & Healy, 1998). Most of the measurement scales used for measuring client satisfaction were developed basing on

customer satisfaction scales (Argentero et al., 2008). The collection of users' evaluation data involves diverse methodologies including qualitative (in-depth interviews), quantitative surveys and combined techniques (Williams et al., 1998; Sanders et al., 1998). This is because a client is not a standard variable. Sanders et al. (1998) explains that quantitative approach measure responses from clients and provide statistics while qualitative approach provides the depth of understanding clients' responses. Subsequently, the combined methods may give a better understanding of clients' experiences and perceptions. Hammell (2001) argues that qualitative research method is the most appropriate tool to identify and address client priorities because it explores the complexity of clinical practice and of persons with disabilities.

The London Department of Health (1998) cited in Williams et al. (1998) claims that satisfaction surveys (quantitative method) have continued to flourish in the midst of various methods available to measure client satisfaction. The advantage of this method is that it is objective, explains the social life of the participants and uses a high level of measurement which makes generalisation of findings possible (Sarantakos, 2000). Furthermore, Haber and Reichel (2005) support the use of quantitative methods and questionnaires because they provide an overall statistical picture of clients' satisfaction level. For this reason, Monnin and Perneger (2002) suggest that the researcher matches survey instruments with the health care services under investigation. This means that the best survey method of assessing client satisfaction depends on an individual researcher (May, 2001). For this study, the researcher used a quantitative method and questionnaires because it is suitable for achieving the aim and objectives.

2.5 Needs of persons with disabilities

The socio-economic circumstances and limited provisions available to persons with disabilities contribute to consequences of disability (WHO, 2002). The meaning of equal rights in Standard Rules on equalization of opportunities is that the needs of every individual are met within the society and are of equal importance. This implies that, education, health, employment and social service needs of persons with disabilities should also be met within the society. WHO encourages member countries to strive for inclusion of persons with disabilities in society as well as to adapt the environment according to their needs. Iezzoni, Davis, Soukup and O' Day (2002) established that persons with activity limitations have unmet health care needs. They are among the poorest of the poor people because functional limitations lead to social exclusion, unequal rights to economic and social opportunities (Wiman, Helander & Westland, 2002; WHO Bulletin, 2005). Persons with disabilities need access to basic health care services and facilities which will prevent impairments from progressing into disability, rehabilitation to restore function and technical aids and assistive devices to compliment functional limitations (Wiman et al., 2002). A need is defined as the ability to benefit from health care services and facilities (Asadi-Lari et al., 2004). They recognised the relationship that exists between clients' needs and satisfaction with health services. The researcher of this study thus acknowledged the importance of identifying the needs of persons with disabilities if appropriate and satisfactory services are to be provided to them.

Clients with disabilities need reliable, ideal public transport system, coverage for functional therapies, prescribed drugs and assistive devices (Iezzoni, McCarthy, Davis & Siebens, 2000). Lack of these health services contribute to dissatisfaction of clients. In Lorenzo's (2003) study conducted in South Africa, the women with disabilities expressed the need for

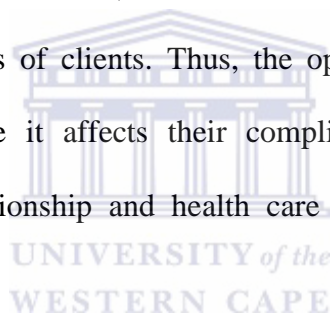
emotional support, for identity, and protection. Whereas, the studies done in Zambia show that persons with disabilities need vocational training, welfare services, counselling and educational services, assistive devices, medical rehabilitation and health services (Eide & Loeb, 2006; Loeb, Eide & Mont, 2008). The researcher deduced that access to health care services is the most basic need for persons with disabilities even though these needs vary significantly depending on disability type and environmental setting where they are found.

2.6 Perceptions of quality care

The measuring of patient perception has been integrated into quality of care assessments as a way of involving patients in decision-making and improving their expectations (Haddad et al., 2000). Such surveys help to develop strategies that facilitate better service delivery and increase utilisation of health services (Baltussen, Ye, Haddad & Sauerborn, 2002; Patro, Kumar, Goswami, Nongkynrih & Pandav, 2008). This implies that clients' illness and symptoms are treated with appropriate decision-making and technology (Lawthers et al., 2003). Moreover, patient satisfaction is used to monitor patients' perception of quality care because satisfaction level with health services is determined by perceptions (Monnin & Perneger, 2002; Sovd et al., 2006). For instance, as a way of assessing patients' perception of quality, a survey involving 473 patients from 11 primary care units in Montreal was conducted in 1999 by Haddad et al. (2000). Their findings show a high correlation of perception with interpersonal care especially the attention ($r=0.83$) that doctors gave to patients. Overall perception of quality in this survey was determined by doctors' professional and interpersonal skills along with outcomes of care. These results confirm that clients are the main source of information on accessibility of health services and effectiveness of health care that they receive (Haddad et al., 2000). That is why, policy makers of service delivery and financing use clients' perspective to define quality of health care (Liptak et al., 2006).

Similarly, Baltussen et al.'s study (2002) in Nouna health district in Burkina Faso also revealed that clients rate interpersonal quality care positively. The clients rated financial and physical accessibility, availability of drugs and cost of care as poor quality.

The unequal distribution of health care services contributes to clients' non-utilisation of services and subsequent poor quality of care (Patro et al., 2008). Their study found good community perception of quality and high clients' satisfaction level due to care providers' competence and skills. Patro et al. proposes a paradigm shift from defining health care quality and quality standards according to clinicians' perspective to client's perceived quality. Clients' experience of health services is subjective which makes defining quality difficult (Lawthers et al, 2003; Sahin & Tatar, 2006). The same authors suggest that defining quality is based on perceptions and values of clients. Thus, the opinion of clients whether right or wrong cannot be ignored since it affects their compliance with prescribed treatment, continuity of interpersonal relationship and health care outcomes (Haddad et al., 2000; Lawthers et al, 2003).



2.6.1 Quality of health services

Developing countries have overlooked the quality of health services and especially the interpersonal aspect of technical quality until recently (Haddad & Fournier, 1995). The reason for the lack of interest was to improve availability of services. Lately interest in research on quality of health care and client satisfaction has increased and satisfaction surveys are now part of tools used to assess the quality of care at PHC (Starfield, 2001; Eldar, 2004; Baltussen & Ye, 2005; Sahin & Tatar, 2006). Investigators use both qualitative and quantitative methods to measure perceived quality care from users of health centres (Baltussen & Ye, 2005). The information collected from such surveys help to improve

effectiveness of health care practice, to increase utilisation of health services and to promote change (Eldar, 2004; Tunajek, 2006).

Health service quality has three relevant aspects namely client quality, professional quality and management quality (Gadallah, 2003). Of the three aspects, client quality is the most important because clients' level of satisfaction depends on quality of health care. Quality of care occurs when health services bring out desired health outcomes and are consistent with current standards of health care practice or professional knowledge (Haddad, Fournier, Machaef & Yatara, 1998; Eldar, 2004; Tunajek, 2006). Otherwise, the medical model of care portrays clinical quality as doing the right thing, in the right manner and obtaining the right outcomes (Lawthers et al., 2003). Therefore, quality of care is defined as the interpersonal relationship and communication between clients-care providers (Lawthers et al., 2003; Tunajek, 2006). In fact high quality of care consists of accomplishing effective results, providing patient-centred services which are timely and equitable, efficiency and clients' safety (Lawthers et al., 2003; Eldar, 2004; Zineldin, 2006). To these investigators, safety requires giving adequate information to clients about quality care because this gives them a better understanding of their health care.

Sahin and Tatar (2006) indicate that the marketing principle for customer satisfaction is to meet the demands and expectations of clients and this require quality service delivery. Argentero et al. (2008) conducted a cross-sectional study on 695 clients to assess satisfaction with the quality of dialysis care from 10 health centres in northern Italy. Client satisfaction was assessed basing on four dimensions of service quality such as the quality of information, of patient-care provider relationship, treatment received, and quality of service organisation. Results showed that client satisfaction is dependent on the quality of relationships between

care providers and clients. The low satisfaction was due to poor quality of information provided to clients regarding side effects of the treatment. Lawthers et al. (2003) claim that quality of care include providing adequate information, respect for patient preferences, shared decision-making, satisfaction, continuity of care, and co-ordination. Respectively, a study was conducted using focus group discussions which involved 180 participants to assess the quality of care at health centres in Lower Guinea (Haddad et al., 1998). Most of the participants were concerned about the availability of drugs at health centres which is considered a priority among other characteristics of quality. Haddad et al. (1998) suggest that clients are responsive to both interpersonal relationships and technical quality care in their assessment of health care services. It is therefore the responsibility of PHC to provide quality health services (Zineldin, 2006).

2.6.2 Negative attitudes and health behaviours

Peoples' health behaviour and decision to seek health care services depend on their perceptions of health (Mahasneh, 2001). As such, the negative perception of quality care is attributed to health inequalities which prevent clients with disabilities from accessing effective health care services (Melville, 2005; Rohrer et al., 2008). These inequalities include discriminatory attitudes, insufficient knowledge and skills of care providers towards disability. From the WHO (2001) conference on "Rethinking care from the perspective of disabled people", reports submitted by persons with disabilities indicate the existence of negative attitudes among health professionals. The common trend is the discouraging remark that disabled women are incapable of being parents. African women with disabilities are discriminated against on the basis of being women and living with a disability (WHO, 2001). In South Africa, Mgwili and Watermeyer (2006) examined discriminatory attitudes and health practices towards women with physical disabilities at family planning and antenatal

clinics and in delivery rooms. The study disclosed discriminatory attitudes of care providers in form of unkind questions relating to marital relationships and how these women expected to undergo physical examination. These attitudes contribute to the negative perception of reproductive health care among women with disabilities. Inadequate training on disability issues and stress from high patient loads might explain care providers' attitude (Mgwili & Watermeyer, 2006).

2.7. Health care systems

The population's level of health in low-income countries is much lower than in high-income countries as reported by WHO, UNICEF and World Bank (Johannes, 1988) in world development report and social indicators of development. A correlation exists between the Gross National Product (GNP) and the level of health and health care (Evaluation Report, 1988). For example, poverty is linked to poor health and disability because of malnutrition, poor health services, unsafe drinking water, poor sanitation and housing (Evaluation Report, 1988; Mont, 2007). In addition, poor paying jobs expose people to a great risk of uncontrolled diseases such as malaria. Therefore, health cannot be improved without first combating poverty. Health care system in developing countries includes traditional methods apart from the modern health care which has two sectors namely public and private (Evaluation Report, 1988). The public sector is controlled by the government under the Ministry of Health whereas the private sector aims at maximising profit. Besides these two sectors, charitable institutions run by missionary organisations, are also a major contribution to health care in developing countries. The Evaluation Report (1988) revealed that modern health care system operates in functional units such as hospitals, health centres and stations that are classified as primary, secondary or tertiary according to the level of medical care. The physician per population in low income countries is 1:17,670 while in high income

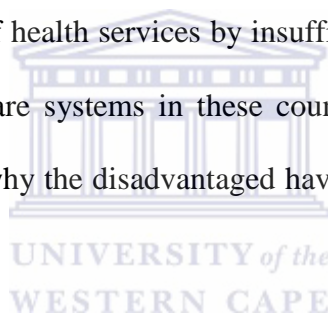
countries is 1:550. Equally the nursing personnel are 1:7,130 in low income countries and 1:180 in high income per population (Evaluation Report, 1988). In Zambia, there are 647 doctors with a doctor population ratio of 1:14,000 due to poor retention of health workers as revealed by Bloomfield (2007).

Health care in Zambia is provided by government institutions, churches under Churches Health Association of Zambia (CHAZ), industries i.e. mines, parastatals organisations, private practitioners, traditional sector, and the armed services (Kasonde & Martin, 1994; Eide & Loeb, 2006). The government being the principal health service provider runs health centres and hospitals while religious missions run district and general hospitals. Health centres provide care mostly to the rural population and have general inpatient care beds and maternity care (Kasonde & Martin, 1994; Dlamini, Louisiana, Martin & Nkandu, 2004). The lack of trained health personnel in low income countries has been created by brain drain or migration of qualified staff to high income countries (Kasonde & Martin, 1994; Eide & Loeb, 2006). This migration impacted negatively on the attempt to provide a people-centred health care approach in Zambia and of 590 locally trained doctors in 1990 only 117 were retained (Kasonde & Martin 1994).

2.7.1 Primary health care

PHC is the first line of contact between an individual, the family and community and the health care system (Larson McNeal et al., 2002; Atun, 2004; Bagheri et al., 2006). It is a strategy that aims at improving and maintaining the well-being of the population and emphasise health promotion through prevention of illness (Atun, 2004; Cott, Devitt, Wong, Soever & MacKay, 2005). The role of PHC is to provide cost effective care as well as to link

the people to specialised secondary and tertiary care (Atun, 2004; Eldar, 2004; Cott et al., 2005). Furthermore, primary care depends on the socioeconomic and cultural situation of the country. Hence, health care should address the most important health problems in the community such as promoting health, preventive, curative and rehabilitation services. The dimensions of primary care are availability, accessibility, comprehensive and continuity of care and accountability (Eldar, 2004). Primary care then is “Health by the people” and not “Health for the people” which means accessibility and availability of services to all (Bagheri et al., 2006). There are reports of access barriers to health services which affect both Persons with disabilities and those without but differ according to countries (Lawther et al., 2003; Bagheri et al., 2006). In low-income countries access to medical services entail the ability to pay which has led to provision of health services by insufficiently resourced NGOs/Charities (WHO, 2001). Usually health care systems in these countries have limited allocation and distribution of resources that is why the disadvantaged have limited access to health services (Palmer et al., 2004).



2.7.2 PHC and quality of care

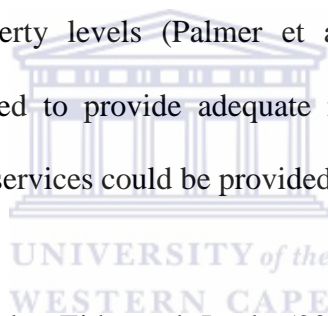
WHO and USAID have been instrumental in fostering and supporting the advent of health care quality (WHO, 1993). The Alma Ata declaration of 1978 on PHC influenced health sector policy agendas in developing countries more than developed countries (Green, Ross & Mirzoev, 2007). They are influenced to the extent that health care systems which previously concentrated on availability of health services are now focusing on the quality of PHC services (Haddad et al., 1998). In the exploratory paper on the meaning and implications of health reforms in developing countries, Cassels (1995) indicates that health reforms are necessary in developing countries for two reasons. Firstly, there is insufficient and uneven use of scarce resources hence poor people cannot access health services because of poverty,

transport cost and non-availability of services. Secondly, there is poor quality of care due to inadequately trained health professionals, long waiting hours, inconvenient clinic hours, lack of confidentiality and inadequate supply of drugs. The cost recovery strategies which WHO, UNICEF and the World Bank introduced included user fees in order to increase the supply of drugs, utilisation health services and improve provision of quality care (Haddad & Fournier, 2000; Wilkinson et al., 2001; Palmer et al., 2004; Streefland, 2004; Eide & Loeb, 2006). However, these strategies have proved inappropriate in developing countries because of financial barriers to access and a decline in utilisation of health services (Haddad & Fournier, 2000; Whitehead et al., 2001; Palmer et al., 2004; Ovretveit, 2004). In addition, client dissatisfaction with quality of both public and private health care has increased (Ovretveit, 2004).

Health care challenges in developing countries are low level of basic primary and hospital care, inadequate knowledge about quality care and low utilisation of services due to poor treatment and user fees (Zineldin, 2006). Other challenges are increased private care without government regulations, lack of credible and agreed standards authorized by the Ministry of Health and professional body, lack of skills in programme implementation and insufficient training of care providers. In spite of the transition in the health sector there is still a great difference in the availability of health services between high and low income countries (Green et al., 2007).

Zambia had a component of PHC in the health care system long before 1978 (Kasonde & Martin, 1994). Kasonde and Martin indicate that policies were in place for free medical services to all Zambians with priority to the rural population along with community participation such that 30% of rural health centres were built through self-help projects. Like other African countries, PHC approach was adopted because it is the judicious way of

identifying urgent health problems and improving the quality of care (Eide & Loeb, 2006). A document titled “Health by the people: proposal for achieving health for all in Zambia” was developed in order to effectively implement and sustain primary care at community level (Kasonde & Martin, 1994). The introduction of PHC in 1980 meant that the concept of PHC was to be implemented at district level where health centres and district hospitals interacted with local communities, traditional birth attendants, healers and community health workers (Eide & Loeb, 2006;). Between 1991 and 2002 the quality of care, health service delivery and the economy of the country declined due to poor funding while the demand for health services increased (Kasonde & Martin, 1994; Eide & Loeb, 2006). Some of the factors which contributed to this decline are user fees, inadequate supply of drugs, poor health centres, brain drain, and increased poverty levels (Palmer et al., 2004; Eide & Loeb, 2006). Eventually, the government failed to provide adequate medical supplies, equipment and infrastructure from where health services could be provided.

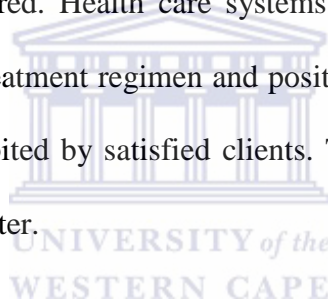


The national survey conducted by Eide and Loeb (2006) in Zambia on persons with disabilities shows that health services are available to a large majority of persons with disabilities. However, 20% of the persons with disabilities from their study reported that they did not receive health services at the time when they were in need. Thus, Eide and Loeb (2006) concluded that the quality of health services provided as well as availability of these services is problematic. This is contrary to the UN Convention on the Rights of Persons with Disabilities (2007), to which Zambia is a member country. The Convention mandates member countries to provide affordable health care services, sexual and reproductive health to all the people including persons with disabilities (Guernsey, Nicoli & Ninio, 2007). Kasonde and Martin (1994), allege that the future of PHC in Zambia is obscure for the following reasons; PHC is perceived as one of the vertical programmes of the Ministry of

Health, it is not a priority of the country, and there is lack of commitment to PHC and health needs are looked at in terms of shortage of doctors and need for more hospitals. The researcher agrees that clients can only be satisfied with PHC if both health services and care providers are available at PHCC.

2.8 Summary of the chapter

The literature search in this study examined issues on client satisfaction, needs and perceptions of persons with disabilities in relation to quality of health care services. The factors contributing to satisfaction and dissatisfaction along with challenges on accessing health services have been explored. Health care systems and policies on PHC have been covered too. Compliance with treatment regimen and positive feedback to care providers are some of the characteristics exhibited by satisfied clients. Therefore, the study methodology will be discussed in the next chapter.



CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter provides information on the background of the research setting, population, study design, sampling methods and data collection. The ethical consideration statement is also highlighted. The aim of this study was to establish the satisfaction level of persons with disabilities regarding health service delivery at PHCC in Ndola, Zambia. The objectives of the study were to establish which services are available and provided to persons with disabilities at PHCC, to identify factors contributing to satisfaction or dissatisfaction with services provided, to establish if associations exist between communication skills of HCPs and client enablement and to make recommendations to relevant authorities who are responsible for the welfare of persons with disabilities.



3.2 Research setting

The study conducted in the Copper Belt province of Zambia. The Copper Belt province is one of the nine (9) provinces in Zambia which has its main source of livelihood from copper mining and agriculture. It is the second most densely-populated province after Lusaka province. Copper Belt province has a population of 1.6 million, of which 50.6% are male while 49.4% are female. The language commonly spoken by the people is *Icibemba* and English. However, the *Icibemba* is dominated by a dialect of *Chi Copper Belt* which is composed of English, *Bemba*, *Lamba*, *Nyanja* and other languages.

Ndola is one of the ten districts on the Copper Belt that has a population of 23.7% that of the total population of Copper Belt province. It is the regional headquarters of the province and an industrial, mining town even though some of the industries have been closed due to privatisation. The closure of industries has contributed to the poor economic status of the district and the general health of the people. There are 18 PHCC in the district that provides curative and preventive care to the general population. These health centres have no facilities for rehabilitation services. The clients who need rehabilitation and specialised services are referred to Arthur Davis Children's Hospital (ADH) and Ndola Central Hospital (NCH) which is a tertiary referral hospital for adults. Out of the 18 health centres, four have a special link to CBR programme and these are known as Kapokotamayamba (Chifubu), Chipulukusu, Mushili and Twapia. Health centres in Zambia are managed by trained paramedical personnel such as COs, nurses and health assistants. The four health centres have 10 clinical officers, 81 nurses and two doctors (Personal communication with Ndola DHMT Offices, 26.01.2009). The personnel distribution among the health centres is three COs and 20 nurses for Chifubu (Kapokotamayamba), three COs and 23 nurses for Chipulukusu, two COs and 13 nurses for Mushili and two COs and 25 nurses for Twapia.

Ndola district is one of the six CBR catchment areas that have four rehabilitation centres called Chifubu, Chipulukusu, Mushili and Twapia. The CBR programme which is under the Catholic Diocese of Ndola (a faith-based organisation) also provides rehabilitation services to the public. The programme receives its clientele through referrals from the four named PHCC, the hospitals and rehabilitation workers from the community. The researcher selected the four PHCC because persons with disabilities access health services from there. In turn, these health centres refer clients to the four rehabilitation centres for rehabilitation services.

The two settings are located in the same townships, hence provided a convenient venue where to meet persons with disabilities needed for the study sample.

The services that are provided at rehabilitation centres include physiotherapy, epileptology clinics, day care, special education, pre-vocational training, social services to orphaned clients and home-based programmes. Each centre has trained and specialised personnel who are assisted by volunteers in carrying out centre activities. However, the entire rehabilitation programme is supervised and monitored by the programme co-ordinator at the provincial level.

3.3 Study design

A cross-sectional, descriptive study design was carried out using quantitative research method. A cross-sectional design describes the population under study at a given time (Balnaves & Caputi, 2001), and is appropriate for describing the relationship of a phenomenon at a specific point in time for a defined population (Polit, Beck & Hingler, 2001). It is economical, ethically safe, quick in data collection and easy to manage within a limited time frame. A descriptive research design gives direction to health care service delivery in health education and evaluation of community health services (Mahasneh, 2001). It provides baseline data upon which other studies can be built. It is also accurate and precise (Babbie & Mouton, 2006) and suitable for addressing the objectives of this study. The possibility of recruiting persons with disabilities from the two settings was high and the sample size was expected to be large.

3.4 Study population

The target population is described as a group of persons, organisations or communities at which an intervention is directed (Fouche, De Jager & Crafford, 2004). The target population of this study was approximately 400 persons with disabilities who received rehabilitation services from four rehabilitation centres, accessed health services from four PHCCs, male and female aged between 18-65 years old and reside in Ndola district, Zambia.

3.5 Sampling technique and study sample

The researcher used a convenient sampling method to recruit willing, readily available and accessible participants from selected rehabilitation centres. Watters and Biernacki (1989) reports that researchers who study health and social problems of individuals who are inaccessible as a result of social stigma, legal status and lack of visibility, benefit from convenient sampling. In view of this, the researcher made prior appointments with centre managers to meet all persons with disabilities who received rehabilitation services from the four rehabilitation centres. These clients were diagnosed as persons with disabilities by care providers at PHCCs. The researcher identified approximately 400 persons with disabilities from the registers that were found at each centre and the PHCCs. The sample size was

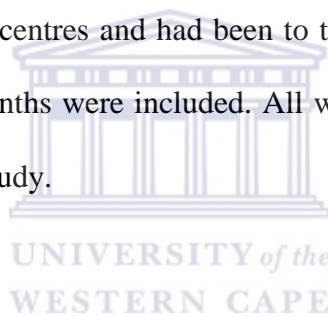
established using the Yamane's formula: $n = \frac{N}{1 + N(e^2)}$ (Israel, 1992). Where the letter n

stands for the study sample, N for study population and e for constant error = 0.05. In line with Cobzby (1997), a convenient sampling method uses readily available and accessible individuals to achieve a desired sample. That is any individual (persons with disabilities) who crosses the researcher's path and meets the inclusion criteria for the study is recruited. Therefore, a sample size of 200 was arrived at by recruiting willing and available persons

with disabilities, male and female aged between 18-65 years old from rehabilitation and health centres to participate in this study. Furthermore, participants are essentially not known to the researcher but the researcher use those who are readily available (Polit, et al., 2001). However, non-probability samples restrict the researcher to choose who to participate in the study and this might be a potential source of researcher bias (Currier, 1979; Bless & Hugson-Smith, 2000). The researcher is known to the clients as their physiotherapist and co-ordinator.

3.5.1 Inclusion criteria

The criteria included adult persons with disabilities both male and female between the ages of 18-65 years old in order to simplify issues of consent. Those who received rehabilitation services from four rehabilitation centres and had been to the four health centres for medical check-up over a period of 12 months were included. All willing clients who met the criteria were asked to participate in the study.



3.5.2 Exclusion criteria

The CBR outreach programmes in Ndola were not included in this study because clients live in townships that are outside the selected rehabilitation centres. Clients under the age of 18 years were excluded due to issues of consent and to avoid involving proxies in the study. Rehabilitation services are provided in their homes and they do not receive health services from the selected PHCC for this study. Persons with physical disabilities from Chifubu CBR centre were also excluded from the study because another researcher was conducting a study at the same centre which focused on persons with physical disabilities only.

3.6 Research instrument

The structured self-administered questionnaire used in this study is known as the General Practice Assessment Questionnaire (GPAQ). A questionnaire is an instrument commonly used to monitor the quality of care because it is cheap and adequate data can be collected within a short time (Kyrkas, Paunonen & Laippala, 2000). The GPAQ was developed by the National Primary Care Research and Development Centre (NPCRDC) in United Kingdom (UK) for use in primary health care in 2003. The questionnaires used to compile the GPAQ were the Primary Care Assessment Survey (PCAS) developed by Safran et al. (1998) and the General Practice Assessment Survey (GPAS) by Ramsey et al. (2000), both cited in Chisholm and Askham (2006). This questionnaire was recently used in an Australian survey conducted to determine the satisfaction of patients with health care received from general practitioners (Potiriadis et al., 2008). The tool is reported to have high reliability and validity. Chisholm and Askham (2006) stated that a questionnaire must contain items which assess skills and qualities of HCPs according to patients' perception and are important for improvement of quality care. Therefore, the 19 item GPAQ used in this study (Appendix A) contains skills and qualities structured into key domains. This study combined items defined by NPCRDC and those used in Potiriadis et al.'s study:-

- **Interpersonal skills; cover** the relationship between HCPs and clients. The personal skills of HCPs or their behaviours such as taking a holistic approach to care, respect for clients, putting them at ease and empathy which illustrate clients' perception of quality of care. This part also contained eleven items on accessibility to care namely utilisation, availability of health services, opening and waiting time for appointments, promptness to see HCPs and availability of the specialist at PHCC. Environmental

factors were also included (Q.1; 3a, b; 4a, b; 5a, b; 6a, b; 7a, b; 8a, b; 9, a; 10a, 10b; 12).

- **Reception by the receptionist/clerk;** this was assessed in question two (Q.2).
- **Communication of information;** communication consisted of eight (8) questions which included giving clear explanations about the diagnosis and treatment, listening to the patient, encouraging and responding to questions. This covered questions on patient engagement (11a, b, c, d, e, f, g & h).
- **Patient engagement and enablement;** engagement meant interacting with the client, helping clients to understand their condition and involvement in decision making about treatment (11a, b, c, d, e, f, g & h). Enablement (13a, b, c, d, & e) included the ability of HCPs to help clients understand their condition, involvement in decision making about treatment, provision of information on how to take medication, risks involved and on self-care. Patients who have been enabled to cope with their condition or illness and engaged in their care have good adherence and health outcomes (Chisholm & Askham, 2006).
- **Continuity of care;** the question on continuity of care was (Q.10a, b).
- **Overall satisfaction;** this reflected patients' expectations and measured the overall level of satisfaction. It also focused on whether the patient would recommend the HCP to a friend (Q.14, a, b).
- **Socio-demographic factors;** this required participants to describe their overall health and long standing or limiting illness which is a strong determinant of high consultation rate among patients. The participants were asked to provide demographic details such as employment status, age, and gender (Q. 15, 15a, 16, 17, 17a, 18).

- The open-ended question (Q.19) required clients to comment on their PHCC in terms of what is good or facilitators to access and what needs to be improved or barriers to access of health services.

Questions 8a, 8b, 15 and 16 were omitted from the instrument and replaced by questions 9, 13b, 15a, and 17a. The omitted questions focused on making appointments with the HCPs and asking for advice from the doctor on phone (8a & b). Question 15 required the clients to indicate which ethnic group they came from (i.e. White, Black, Asian) while question 16 consisted of information on the type of accommodation in which client live. The researcher made adjustments in order to suit the research setting and to cover the objectives of this study.



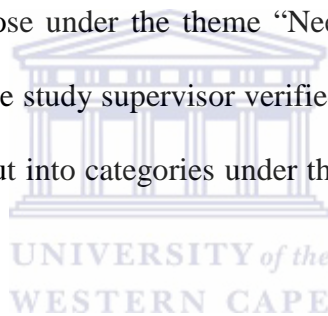
3.6.1 Study variables

The participants assessed the level of satisfaction with each item basing on three-, four-, five- and six-point Likert scale. The questionnaire contained one set of questions on demographic data which with other questions had responses grouped into two (1=yes, 2=no). The rest of the questions (17) described the characteristics of health services using a 3-6 point Likert scale. The 6-point response options were (1=very poor; 2=poor; 3=fair; 4=good; 5=very good; 6= excellent). Good, very good and excellent were grouped into “good” while poor and very poor into “poor” categories. Five (5) questions assessed client enablement after consulting the doctor on a 4-point Likert scale. The responses were (1=much more than before; 2=a little more; 3=same as before; 4=does not apply) and one question had (1=yes, 2=no, 3=I am not sure, 4=Does not apply). The level of satisfaction with treatment at the health centre had three (3) questions. The one on overall treatment had a 4-point Likert scale with response such as (1=very unsatisfactory; 2=unsatisfactory; 3=very satisfactory;

4=satisfactory). Very unsatisfactory and unsatisfactory were also grouped into unsatisfied or dissatisfied to identify clients who were unhappy with their care. Similarly satisfactory and very satisfactory grouped into satisfied (1=satisfied, 2=dissatisfied). The other two (2) questions were validation items which probed the future intentions of clients to return to the PHCC if need arose and to recommend the health centre to others. A 3-point Likert scale was used and responses were (1=yes, 2=no, 3=never). The variables to questions on access to the health facility and services were rated on a 3-point or 5-point Likert scale.

3.6.2 Coding of the open-ended question (19)

The researcher grouped all the responses and all those under the theme “Good things” were considered as facilitators and those under the theme “Need to be improved” as barriers to access of health care services. The study supervisor verified this classification by reading the responses. The responses were put into categories under the two themes then counted before they were statistically analysed.



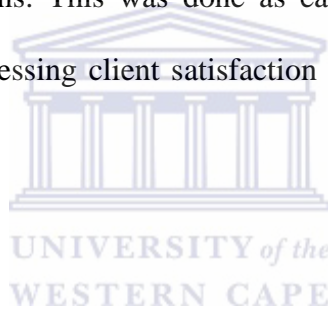
3.6.3 Translation of the instrument

The language commonly spoken by the people of Ndola is English and Icibemba. The GPAQ was originally in English but was translated from English to *Icibemba* by a professional translator for the participants who could not understand or read English (see Appendix B). Then two independent translators translated the *Icibemba* version of the questionnaire back to English. The reason for translating back to English was to ascertain that the meaning of the questions was not lost during the course of translation. The researcher compared the two *Icibemba* versions of the questionnaire to check if the content and meaning was the same. The translated *Icibemba* questionnaires had the same content and meaning as the English version of the questionnaires which implied that the meaning was maintained.

3.7 Validity

3.7.1 Content validity

Content validity is the capacity of the assessment tool to measure what it is intended to measure (Chisholm & Askham, 2006). The questionnaire was circulated to experts for review to establish content validity. The questionnaire was circulated to experts for review to establish content validity. The experts consulted included a professor in physiotherapy lecturing at the University of the Western Cape, also qualified in quantitative research. Others were lecturers from the University of Zambia and an organisation for persons with disabilities in Zambia. The researcher was advised to paraphrase or omit some of questions and replace them with a new set of questions. This was done as earlier stated and the questionnaire contained the items ideal for assessing client satisfaction with services that are provided at PHCC.



3.7.2 Pilot study

The purpose of conducting a pilot study is to test the adequacy of the research instrument and assess whether the research protocol is realistic and workable (Van Teijlingen & Hundley, 2001). The pilot should be done on a small group of participants who are as similar as possible to the target population and must be administered in the same way as would be administered in the main study (Van Teijlingen & Hundley, 2001). A pilot study involving 15 clients with disabilities was carried out at Bishop De Jong House in Ndola, a business centre for persons with disabilities under CBR programme management. This study was carried out in order to assess clarity of the questions and clients' understanding of the questions. It was done to establish adequacy of contents and how long clients will take to complete the questionnaire. These clients took approximately 45 minutes to complete the questionnaire.

After the study, the researcher and research assistants had a meeting with the clients to discuss the problems which they encountered during the study. The clients found it difficult to read font of the questions and the squares for responses were too small. Both the font and squares were enlarged as part of changes recommended by participants.

3.7.3 Reliability of the research instrument

Reliability is the ability of the assessment tool to yield the same results when repeated measurements are taken under comparable conditions (Chisholm & Askham, 2006). A test-retest is used to determine stability and consistency of the questionnaire to produce relatively same results at two different times (Golafshani, 2003; Babbie & Mouton, 2006). The GPAQ has shown very high reliability for evaluating clients' satisfaction level with health care services (Chisholm & Askham, 2006; Potiriadis et al., 2008). However, the authors have not stated test-retest reliability coefficient.

In the present study, test-retest reliability was determined by randomly selecting 15 clients to complete the questionnaire. The clients came from the same centre where the pilot study was conducted. The same group of clients completed the questionnaire again after two weeks. As was the case with the pilot study, the clients who participated in this study were excluded from the main study to avoid biased responses. The two sets of data were analysed using Statistical Package for Social Science (SPSS) soft-ware and Scale Test. The findings obtained were Cronbach's Alpha coefficient of 0.8 which shows that instrument was reliable.

3.8 Procedure

Ethical clearance and permission to conduct a study was obtained from the Higher Degrees Committee at the University of Western Cape (see Appendix C, D & E). Further permission was obtained from the Catholic Diocese of Ndola. The researcher discovered that permission from the Provincial Director of Health had to be obtained from the Ethical Clearance Committee at Tropical Diseases Research Centre (TDRC) in Ndola or University of Zambia Research Ethics Committee (UNZAREC) in Lusaka. An application letter was submitted to UNZAREC along with copies of the proposal, research questionnaires, information sheet as well as a consent form. The official permission from UNZAREC (Appendix F) to proceed with the study was granted towards the end of January, 2009 and this impacted greatly on the time planned for data collection. The researcher arranged to meet with the community health workers to select research assistants among them. These workers have a basic training in community health and on disability hence, they were involved in identifying persons with disabilities in the community. The researcher explained the purpose of the study and the role of research assistants during the meeting. Then four research assistants were chosen on grounds that they had a basic training in community health, on disability and were able to identify persons with disabilities. They were also fluent in English and *Icibemba* and were willing to participate in the study. The researcher conducted a one day training workshop for four research assistants in order to create a better understanding of the study, its purpose, the ethics, how to administer the questionnaires and their role as assistants. Their role was to assist participants who were unable to read or write to complete the questionnaires, apart from distributing and collecting questionnaires.

Prior to data collection, the researcher and research assistants made appointments with HCPs, CBR centre managers and the clients to meet at their respective centres. The researcher with the research assistants used the PHCC register to ascertain the number of clients that were referred to CBR programme. The list was then compared to the CBR registers to check for clients that were referred from and had been to the health centres. This procedure helped to get the sample size for the study. The rehabilitation centres are day centres where persons with disabilities go to on a daily basis and not all clients reported to the centres every day. For this reason, clients were enrolled as they came for rehabilitation and each centre was allocated five working days in which to complete the exercise. The purpose of the study and the importance of participating in the study were adequately explained to the clients through informed consent (Appendices I & J). They were assured that confidentiality and anonymity of their participation will be upheld. The researcher introduced research assistants to the clients and invited them to voluntarily participate in the study. Written consent forms were obtained from willing participants (Appendices K & L). The clients were given chance to choose their preferred version of the questionnaire. In total two hundred questionnaires were distributed to the clients at four rehabilitation centres. The questionnaires were collected soon after completion except for clients who could not manage to complete them on the same day due to the nature of their disability. These were assisted by research assistants and questionnaires were returned a day after. On average, the clients took a maximum of 45 minutes to complete filling in the questionnaires. Out of the two hundred distributed questionnaires, one hundred and ninety one were completed and returned while the other nine were not returned.

3.9 Data capturing

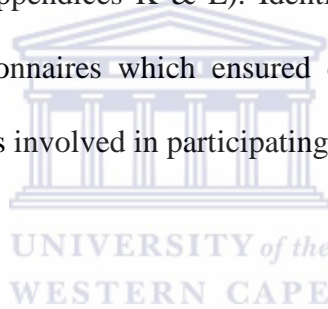
The raw data collected from this study was first entered into Excel spreadsheet. The responses were converted from nominal to numerical codes. The coding of the questions in the questionnaire has been described in details understand the study instrument. The responses from question 19 were categorised and counted before they were statistically analysed and converted into percentages as advised by the statistician.

3.9.1 Data analysis and interpretation of the Pearson Chi-Square (χ^2)

The data that was collected from the clients was captured and analysed using the Statistical Package for Social Science (SPSS) version 16.0 software programme. To check for the normality of scaled data and for the shape of the curve, the histogram was used and a box plot to check for outliers. Descriptive statistical data analysis was performed in order to convert independent variables into frequencies and percentages. These were presented as figures and tables. Inferential statistical analysis was carried out using cross-tabulation to determine associations between the satisfaction level of persons with disabilities and communication or personal skills of HCPs. The Pearson Chi-Square statistical test is used to determine the relationship between two variables or determine whether the variables are independent or dependent on each other. Chi-Square (χ^2) is considered statistically significant at (p-value 95% or 99%) $p \leq 0.05$ or $p \leq 0.01$. The stricter level of significance ($p \leq 0.01$) was used because of the large number of statistical tests involved in this study. This test was used for categorical variables in bivariate analysis to statistically determine the associations between the determinants of satisfaction or dissatisfaction and client enablement. In addition, the Spearman's test for correlation was used to establish the strength of association between these variables.

3.10 Ethical considerations

Ethical clearance was granted by the Senate Research and Study Grant Committee at the University of Western Cape before the study was commenced. The researcher obtained written permission from UNZAREC (Appendix F). Further written permission was obtained from the Bishop of Catholic Diocese of Ndola who is the legal holder of CBR programme and from the CBR Co-ordinator (Appendices G & H). This allowed the researcher to conduct the study at the selected CBR centres. The respondents were clearly informed about the aim of the study along with their right to withdraw from the study at any given time (Appendices I & J). They consented by voluntarily completing the questionnaire and written informed consent forms were obtained (Appendices K & L). Identity codes were used as references instead of names on the questionnaires which ensured confidentiality and anonymity of information. No apparent risk was involved in participating in the study.



3.11 Summary

This chapter described the methods used in the study. The study design, methodology and data analysis were supported with literature. The ethical procedures for conducting the study were explained and followed. The study results are presented in the next chapter.

CHAPTER FOUR

RESULTS

4.1 Introduction

This chapter illustrates the results which were obtained from the study. These results are presented in percentages and frequencies under subheadings such as; the socio-demographic factors which comprised of the response rate, the type of disability, gender, age, the economic status and the rehabilitation/PHCC from where health care services are provided. Other subheadings are accessibility of services and communication skills which highlight client engagement and enablement. The results from overall treatment at the health facility and the satisfaction level of persons with disabilities are also presented.

4.2 Response rate

Out of the 200 clients who participated in the study, 191 successfully completed and returned the questionnaires. This showed an overwhelming response rate of 95%. The rest of the questionnaires 5% were not returned.

4.3 Client profile and socio-demographic characteristics

The socio-demographic and economic characteristics included age, gender, the type of disability, employment status and the place from where participants received rehabilitation and health care services were obtained. This was in order to complete the client profile as presented in Table 4.1 below. The clients who participated in the study aged between 18 and 65 years old (mean=25.46; SD=8.572years; RANGE=50). The sample comprised of

persons with disabilities from the selected rehabilitation centres who receive health services from four PHCC. Many clients who received health care services came from Chifubu 33% and Mushili 34% centres which are bigger townships. Most of them were persons with learning difficulties 52%. The study considered the economic status of the clients at four (4) levels and the majority were clients at school 72%.

Table 4.1: Demographic characteristics of clients (N=191)

Variable	Characteristics	N	%
Illness or disability	Yes	148	77
	No	37	20
Illness or disability type	Physical disability	73	38
	Learning difficulties	100	52
	Visual impairment	5	3
	Epilepsy	80	42
	Hearing difficulties	0	0
	Combined disabilities	9	5
	Others	4	2
Gender	Male	105	56
	Female	84	44
Age (years)	Minimum	18	
	Maximum	65	
	Mean	25.5	
	Standard deviation	8.572	
Rehabilitation centre/PHCC	Chifubu	63	33
	Chipulukusu	37	19
	Mushili	64	34
	Twapia	27	14
Economic status	Employed	17	9
	Unemployed	34	18
	At school	137	72
	Retired	2	1

4.3.1 Clients' age group

Figure 4.1 below shows the distribution of clients according to age group. Many clients 48% were between the ages of 18-22 years old. Clients who did not indicate their age were 3%.

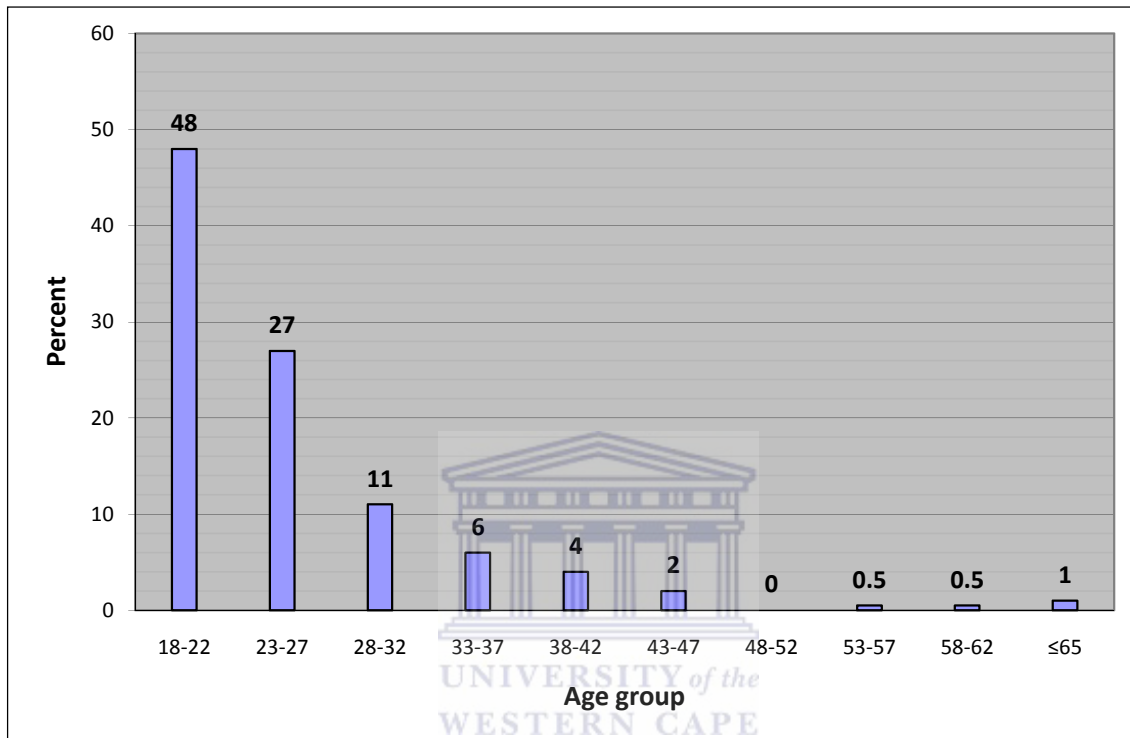


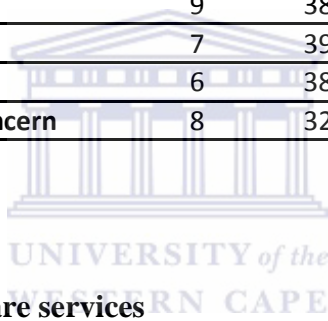
Figure 4.1: Age distribution of clients with disabilities (N=186)

4.4 Accessibility of health care services

Table 4.2 below gives a summary of how persons with disabilities perceived various aspects of health care services which are provided at the health centres (Questions 2 to 11h).

Table 4.2: The responses of clients regarding accessibility of health care services

Variable	Responses (%)						n
	Very poor	poor	Fair	Good	Very good	Excellent	
Satisfaction with receptionist	5	26	20	36	11	2	190
Satisfaction with opening hours	13	37	20	23	5	2	190
Satisfaction with availability of doctor	23	42	12	10	8	5	191
Satisfaction with waiting time	32	38	15	7	3	5	191
Satisfaction with availability of specialist	26	45	11	10	4	4	191
Satisfaction with availability of services	26	36	27	8	3	0	190
Satisfaction with availability of adequate space	16	39	20	18	5	2	191
Satisfaction with available facilities	7	15	42	27	7	2	188
Satisfaction with attitude of the HCPs	11	38	31	17	2	1	190
Satisfaction with HCP's questioning	5	29	25	30	8	3	191
How well the HCP listened to you	4	28	29	26	8	5	191
How well the HCP put you at ease	8	34	24	25	7	2	191
How much you were involved in decision-making	6	43	25	18	7	1	190
Satisfaction with HCP's explanation	9	38	26	18	8	1	191
The amount of time spent with you	7	39	29	18	6	1	191
Satisfaction with HCP's patience	6	38	29	18	8	1	190
Satisfaction with HCP's caring & concern	8	32	28	23	7	2	191



4.4.1 Clients' rating of health care services

Figure 4.2 shows clients' rating of health care services after the responses were grouped into "good", "Fair" and "poor" categories (Questions 2, 3a, 4b, 5b, 6b, 7b, 8b & 9b). There was relatively high displeasure among clients with availability of specialist and waiting time at the health centre. They rated these services as poor, 71% and 70% respectively.

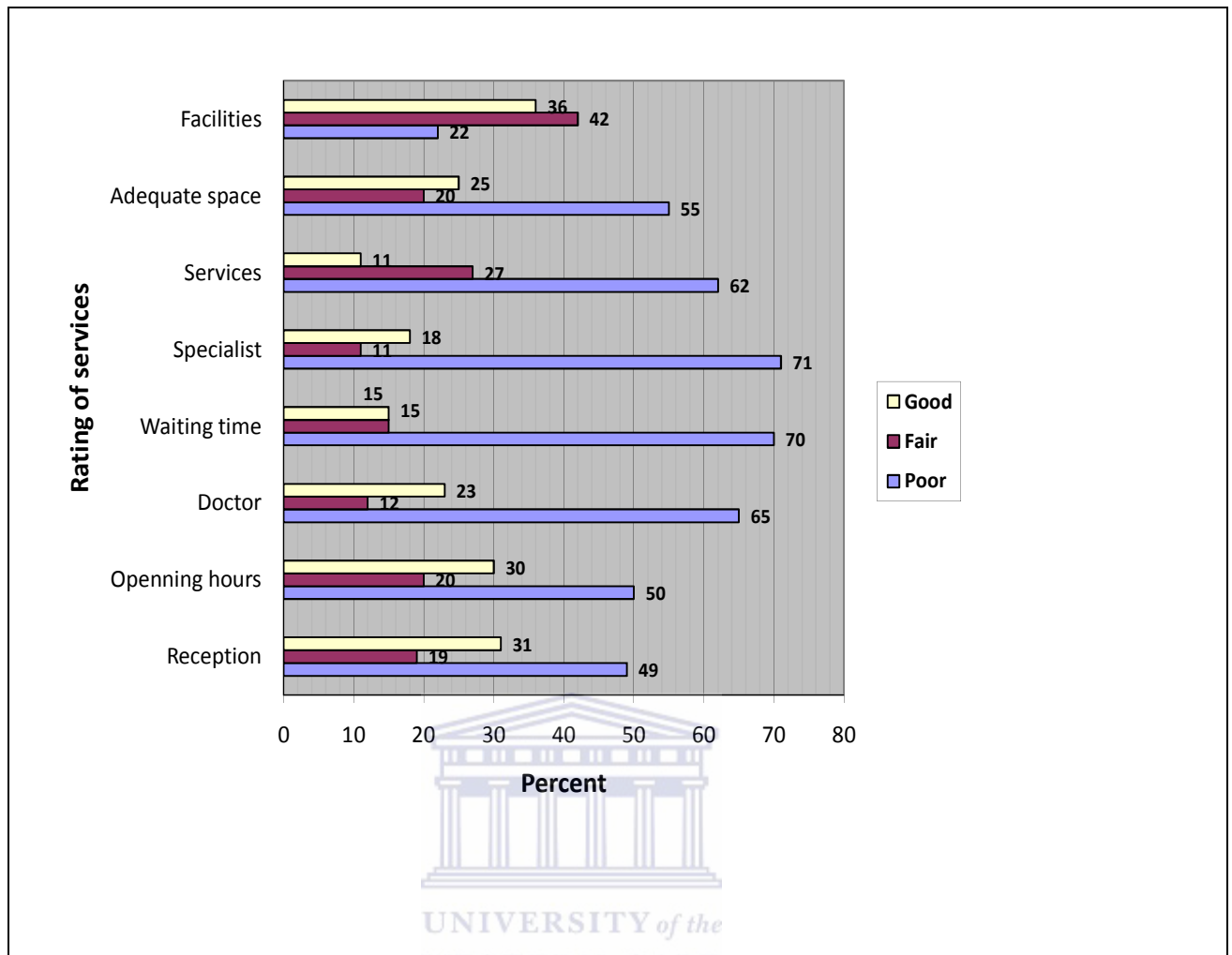


Figure 4.2: The distribution of Health care service ratings (N=191)

4.4.2 Utilisation of health care services

Figure 4.3 shows that clients who visited the health centre once or twice over a period of 12 months were 51%. Only 2% of clients did not visit the health centre.

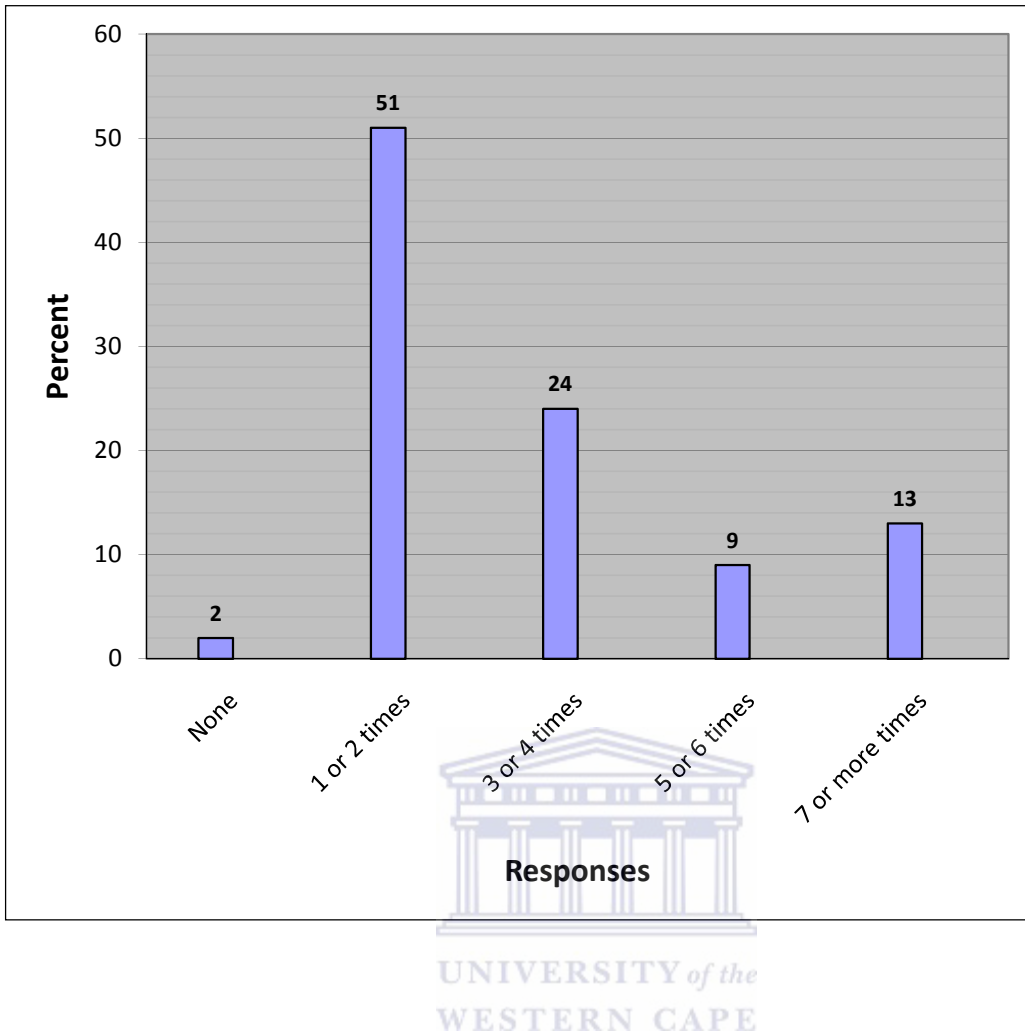


Figure 4.3: The frequency of being seen by the doctor over a period of 12 months (N=191)

4.4.3 Additional hours of opening the health centre

The clients were requested to tick all additional hours for opening the health centre according to their need. Figure 4.4 shows that majority 82% of client preferred the health centre to open early in the morning.



Figure 4.4: The frequency of proposed additional hours of opening the health centre (N=191)

4.4.4 The promptness of being seen by the doctor

Figure 4.5 shows that only 29% of clients were seen by the doctor on the same day that they visited the health centre (Question 4a).

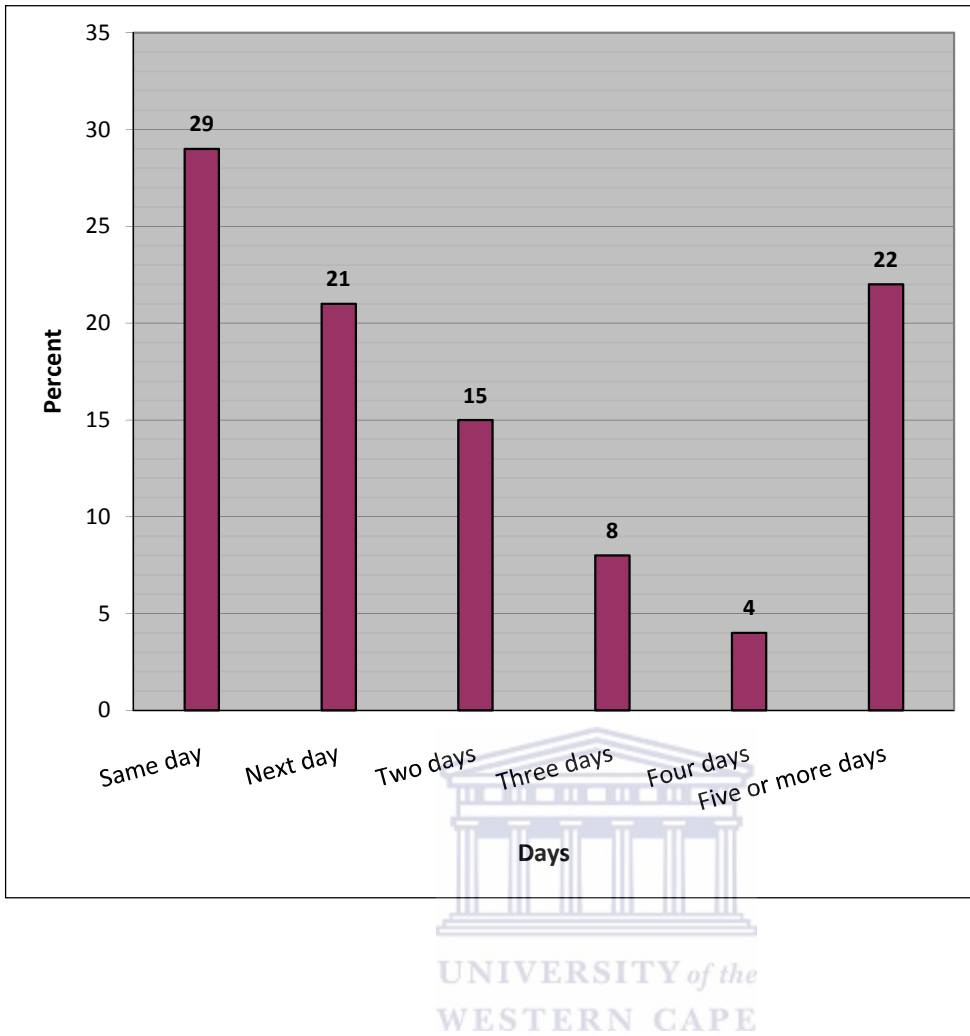


Figure 4.5: Availability of the doctor to see clients (N=191)

4.4.5 The length of waiting time before consultation

The majority of clients 65% waited for more than 40 minutes before being seen by the doctor (Question number 5a). The least waiting time was 10 minutes (9%) as shown in Figure 4.6.

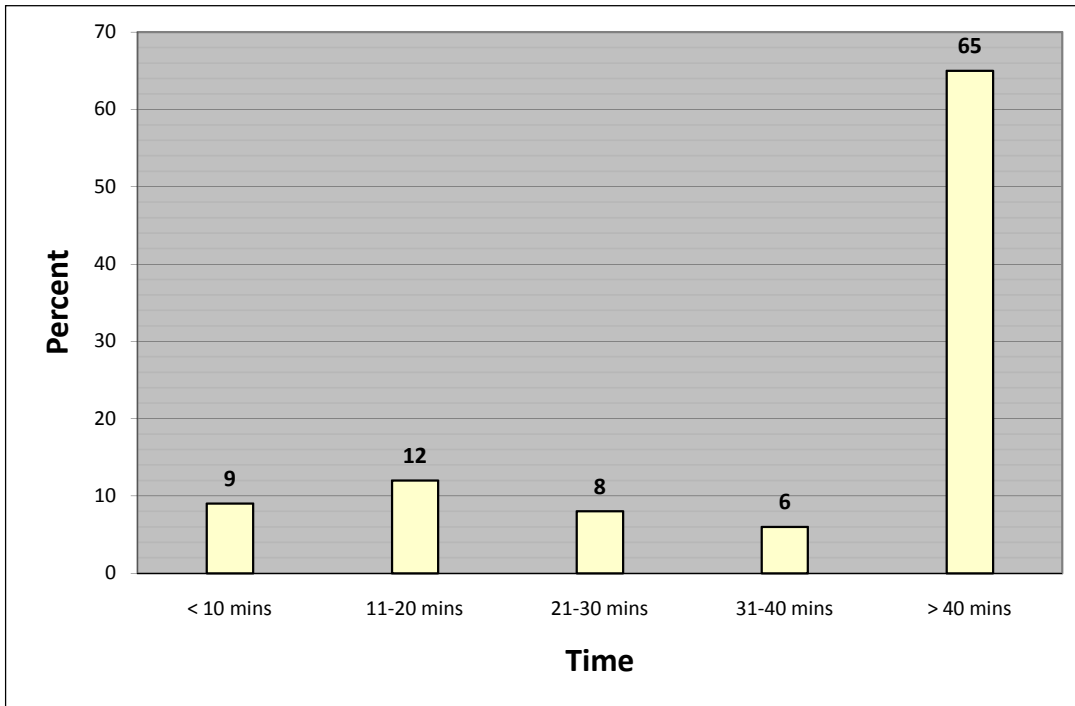
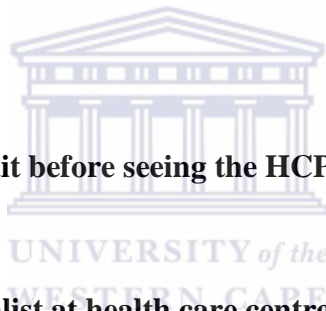


Figure 4.6: How long do you wait before seeing the HCP (N=191)



4.4.6 The availability of a specialist at health care centres

Table 4.3 demonstrates that majority of clients 73% were not able to see the specialist on the same day they were referred for specialty care (Question number 6a).

Table 4.3: The possibility of being seen on the same day by a specialist (N=189)

Responses	N	%
Yes	30	16%
No	139	73%
I do not know	20	11%

4.4.7 The availability of health care services

The majority of clients 82% indicated that health care services were sometimes available at health centres as shown in Table 4.4.

Table 4.4: The frequency of accessing health care services (N=190)

Responses	N	%
Always	16	8
Sometimes	156	82
Never	18	9

4.4.7.1 The availability of various health care services

In response to availability of various health care services at the health centre, clients were asked to tick all the services which they received over a period of 12 months. 70% of clients commonly utilised curative care as shown in Figure 4.7.

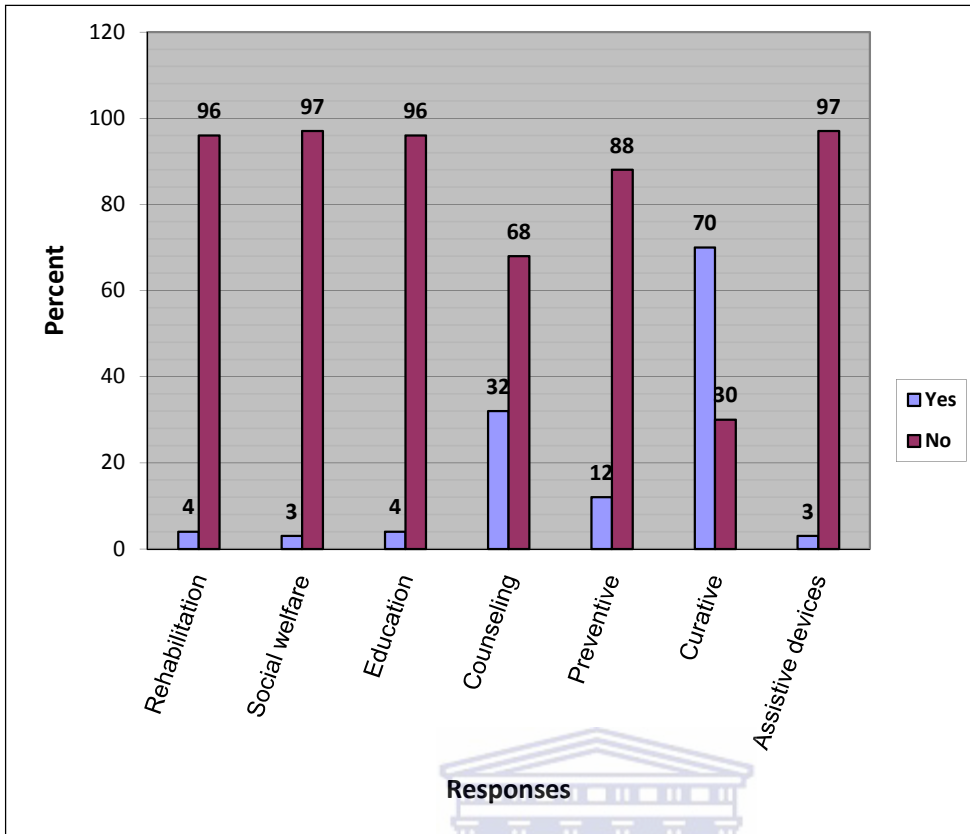


Figure 4.7: The distribution of available health care services (N=191)

4.4.8 Continuity of care

Figure 4.8 shows the possibility of clients being seen by the same HCP at the health centre.

The majority of clients 83% saw different doctors.

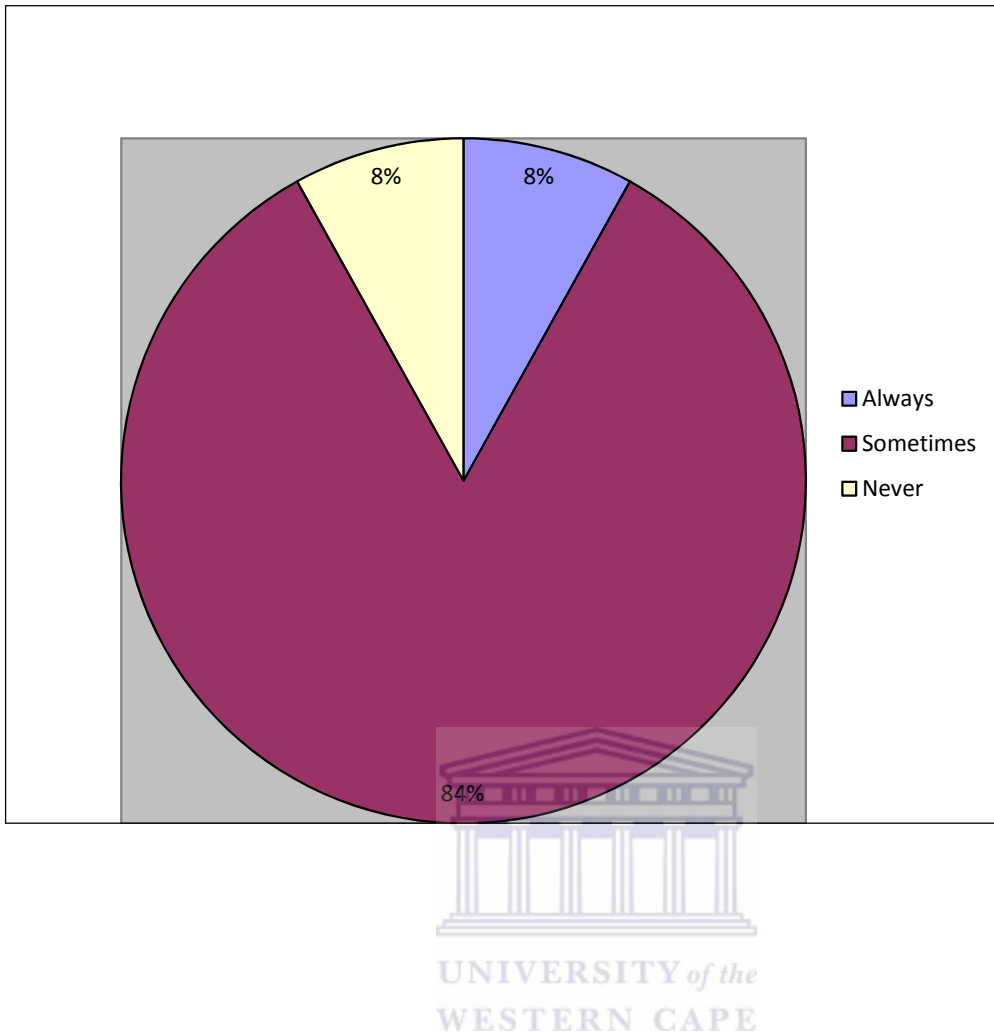


Figure 4.8: The possibility of being seen by the same doctor at PHCC [N=191]

4.4.9 Cost of health care services

The majority of clients 81% always paid for services which they received from health centres as shown in Table 4.5 below.

Table 4.5: The frequency of paying for health care services (N=191)

Responses	N	%
Always	155	81
Sometimes	25	13
Never	11	6

4.5 Communication between health care providers and clients

The personal skills and communication between clients and care providers included client engagement and client enablement. Client engagement was characterised by the care providers' attitude, manner of asking questions, putting clients at ease, patience and caring and concern towards the clients. Client enablement was characterised by the ability of providers to make clients understand their condition, cope with illness, keep themselves healthy, take prescribed drugs correctly and go back for review.

4.5.1 Personal skills of health care providers

The rating of personal skills show that 49% the attitude of care providers was outstandingly poor, whereas 31% of clients indicated this skill as fair (Figure 4.9).

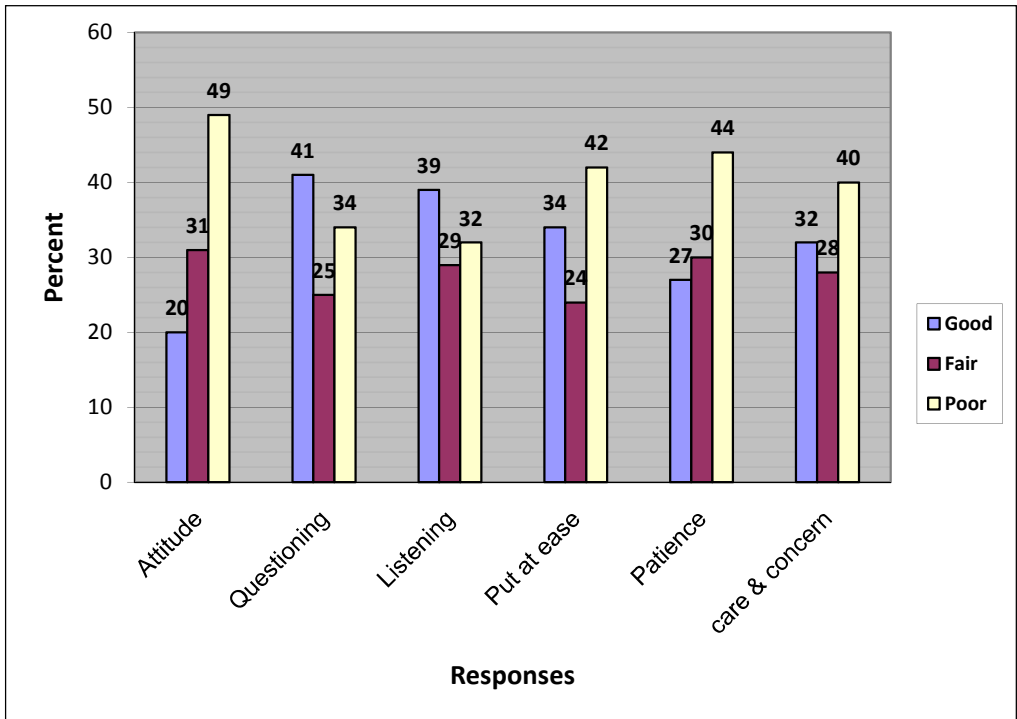


Figure 4.9: The rating of how health care providers communicated to clients (N=191)



4.5.2 Client engagement

The ability of care providers to engage a client during consultation was generally poor. Clients’ involvement in decision-making was also 49% poor as shown in Figure 4.10.

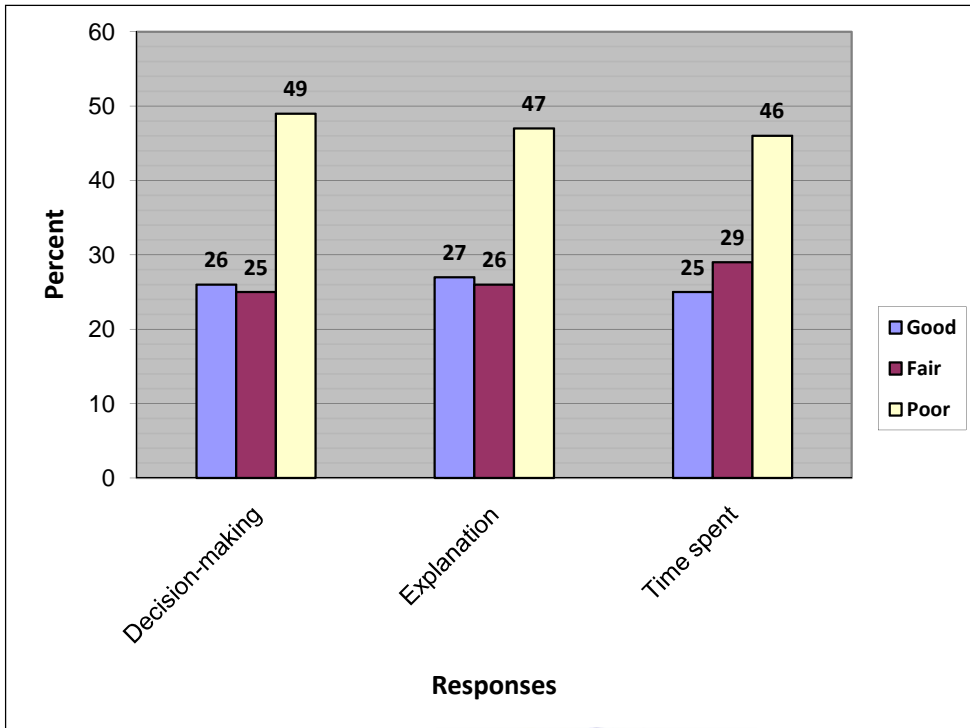
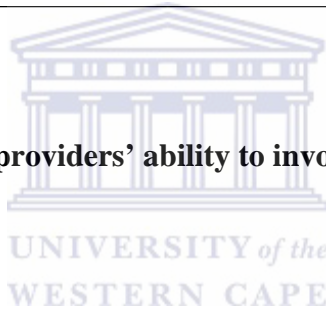


Figure 4.10: The rating of care providers' ability to involve the client during consultation (N=191)



4.5.3 Client enablement

In general the HCPs made it possible for clients to understand their health problems, to cope and take care of their health. The majority of clients 56% were able to understand their health condition a little more after consultation as shown in Figure 4.11 below.

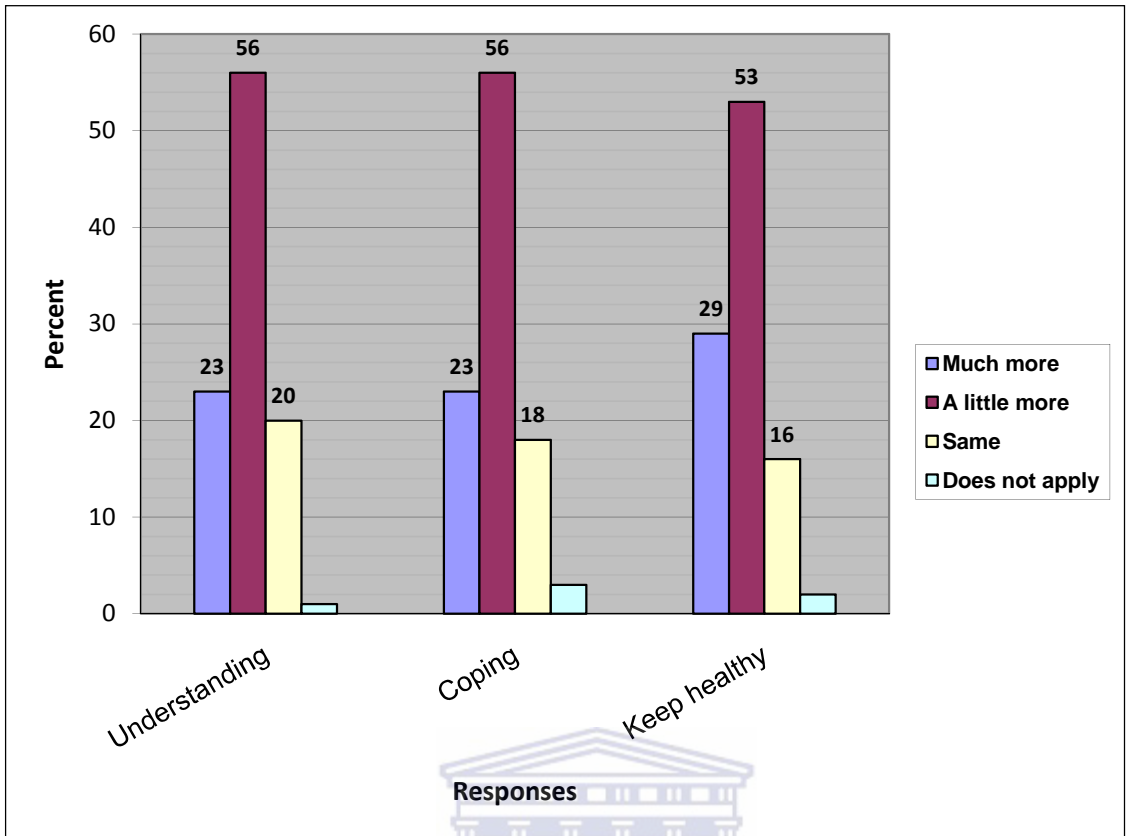


Figure 4.11: The ability of HCPs to enable clients after consultation (N=191)

Similarly, results show that many clients 49% knew when to go for review and that majority 69% of them were able to take drugs correctly as shown in Figure 4.12.

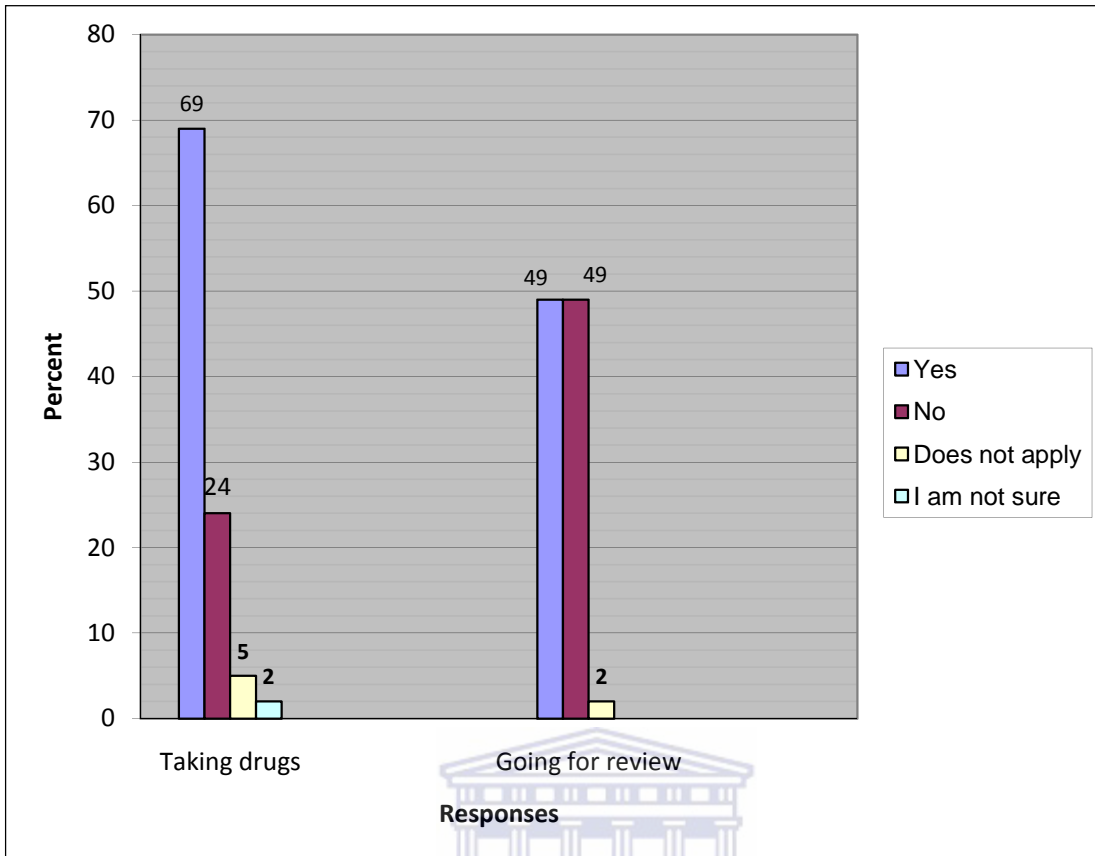


Figure 4.12: Ability to take drugs correctly and to go for review (N=191)

4.6 The overall satisfaction with treatment

Figure 4.13 gives a summary of clients' overall judgement of the treatment at health centres. Out of the total number of clients 40% were satisfied and 36% were dissatisfied with overall treatment.

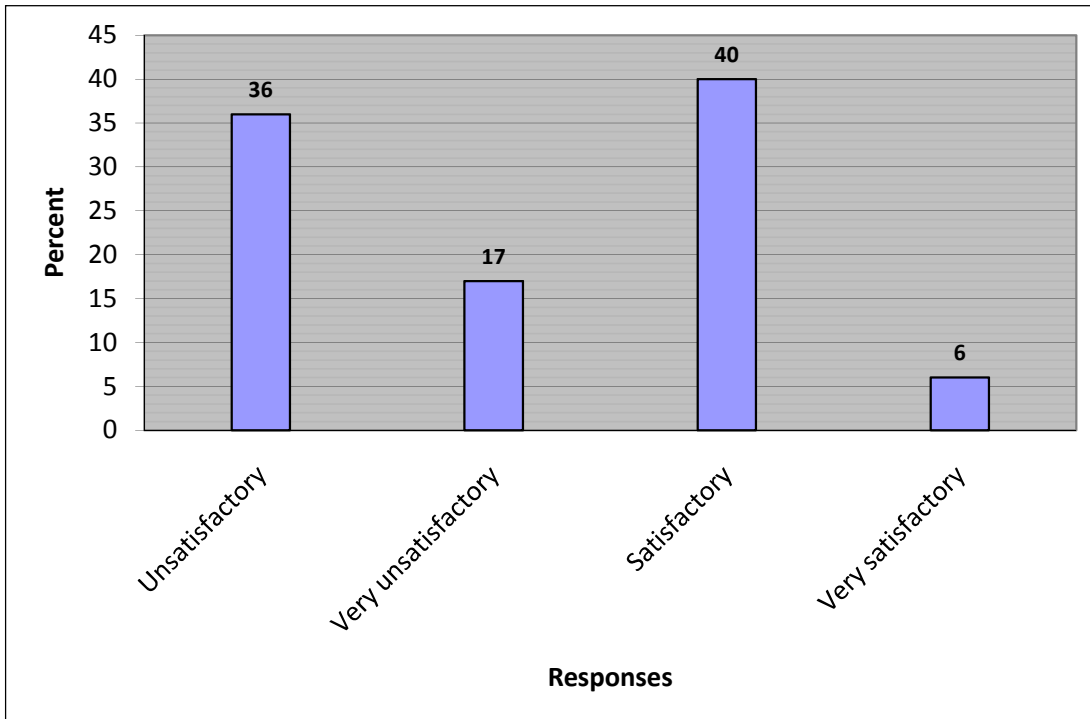


Figure 4.13: How do you rate the overall treatment at PHCC (N=191)



4.6.1 The satisfaction level of persons with disabilities

After grouping the four responses into “satisfied” and “dissatisfied” the results demonstrate that majority of clients 54% were dissatisfied with health care services as shown in Table 4.6.

Table 4.6: The satisfaction status regarding health care services (N=190)

Responses	N	%
Satisfied	88	46
Dissatisfied	102	54
Total	190	100

4.6.2 Willingness to recommend PHCC to friends

The majority of clients 63% were willing to recommend the health centre to their friends. Also majority of them 60% expressed willingness to be seen by the same HCP as shown in Figure 4.14 below.

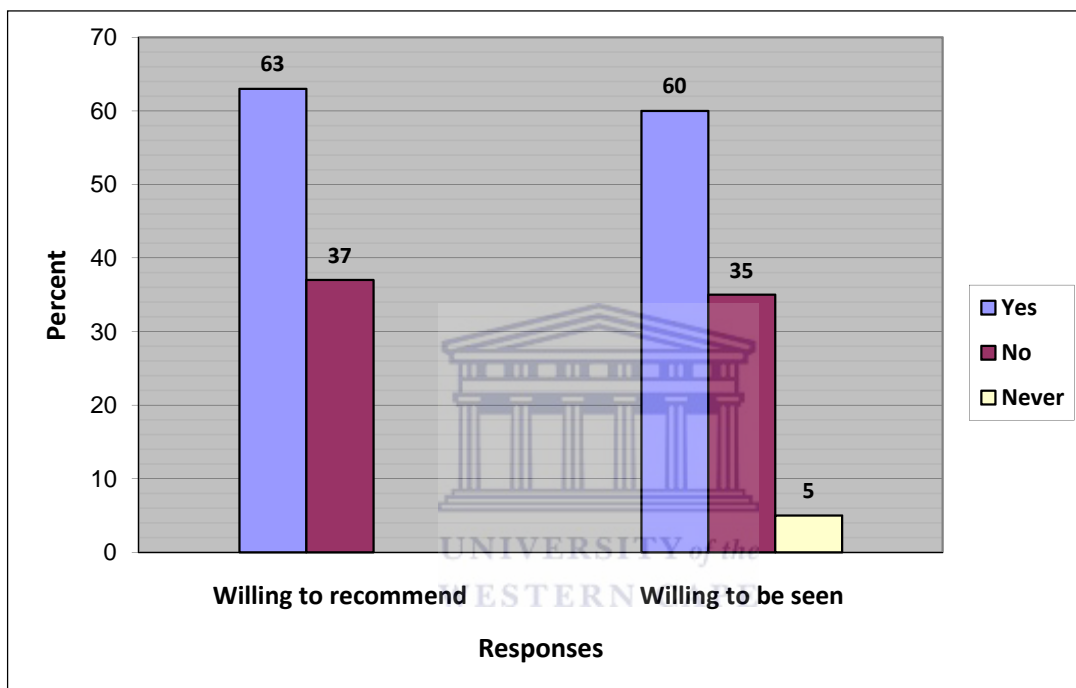


Figure 4.14: Are you willing to see the same HCP and recommend the health centre (N=191)

4.6.3 The satisfaction level of clients with specific characteristics

The Chi-square and Spearman's correlation coefficient tests were used to establish the relationship between demographic variables and satisfaction level of persons with disabilities. Equally, the relationship between communication skills which included personal skills of

HCPs and satisfaction level of clients was done. The results revealed a high significant association between most of these variables and the satisfaction level of clients at $p < 0.0001$.

The Spearman's test showed both positive and negative but low correlation between satisfaction level and these variables (Table 4.7).

Table 4.7: The relationship between satisfaction level and specific characteristics

Variables	Satisfied	Dissatisfied	P-value	r
Gender	46%	54%	0.3980	0.0620
Male	49%	51%		
Female	43%	57%		
Age group	82%	17%	0.6300	-0.0360
Economic status				
Employed	69%	31%		
Unemployed	27%	73%	0.0320	-0.0430
At school	48%	52%		
Retired	50%	50%		
Preventive care	68%	32%	0.0290	0.1590
Reception	60%	40%	<.0001	-0.2840
Waiting time	24%	76%	0.0004	-0.2483
Availability of services	16%	84%	<.0001	0.3230
Adequate space	41%	59%	0.9040	0.0090
Continuity of care	48%	52%	0.5005	-0.0567
Attitudes	36%	64%	0.0006	0.2524
Thoroughness with questioning	55%	45%	<.0001	0.4032
Listening	40%	60%	<.0001	0.4862
Put at ease	38%	62%	<.0001	0.3810
Decision-making	26%	74%	<.0001	0.4336
Explanation	32%	68%	<.0001	0.4315
Time spent	36%	64%	<.0001	0.3503
Patience	28%	72%	<.0001	0.4668
Caring & concern	35%	65%	<.0001	0.4222
Cost of care	16%	84%	0.1029	0.1270
Understanding	45%	55%	<.0001	-0.3988
Taking drugs	60%	40%	<.0001	0.4000
Coping	52%	48%	<.0001	-0.4080
Keeping healthy	41%	59%	<.0001	-0.3951
Going for review	25%	75%	<.0001	0.3910 0.4360

$p \leq 0.01$: The stricter level of significance was used due to the large number of statistical tests.

4.6.4 The association between satisfaction level and listening by HCPs.

Table 4.8 shows how listening skills of the care providers influenced the satisfaction level of clients with overall treatment. The clients who perceived care providers' listening skills as poor showed a 58% increase in dissatisfaction level while their satisfaction level was reduced. Those who perceived these skills as good had a 57% increase in satisfaction level and a reduction in dissatisfaction. Both the Chi-square and Spearman's correlation tests showed a significant association at $p < 0.0001$ and a positive correlation at $r = 0.4862$ between listening and satisfaction level respectively.

Table 4.8: How you were listened to by the care providers at PHCC (N=190)

Responses	Unsatisfactory	Very unsatisfactory	Satisfactory	Very satisfactory
Poor	29(58%)	23(8%)	0(0%)	0(0%)
Very poor	2(25%)	2(25%)	0(0%)	4(50%)
Fair	22(41%)	2(4%)	1(2%)	29(54%)
Good	10(20%)	5(10%)	6(12%)	28(57%)
Very good	4(25%)	0(0%)	2(12%)	10(62%)
Excellent	2(22%)	1(11%)	1(11%)	5(57%)

4.6.5 The associations between doctors' communication skills and client enablement

The Chi-square test showed a significant association between communication skills and client enablement at $p < .0001$ as presented in Table 4.9. The doctors' questioning about the symptoms and feelings of clients during consultation influenced the ability of clients to understand, cope well and keep healthy, to take drugs correctly and know when to go for

review. There was no significant positive or negative correlation between these variables except the patience of doctors.

Table 4.9: Communication skills and client enablement

Variables	Understand	Cope	Keep healthy	Take drugs	Review	r-value
Employment				0.1972	0.0187	
Reception	0.0084	0.0501	0.1363	0.1941	0.0004	
Promptness	<.0001	<.0001	0.0002	0.1699	<.0001	
Waiting time	0.0008	<.0001	<.0001	0.1231	<.0001	
Specialist				0.9097	<.0001	
Services	0.0125	0.0014	0.0017	0.2098	0.0013	
Space				0.0076	0.2363	
Continuity	0.6095	0.0557	0.2837	0.0009	0.8294	
Attitude	0.0008	0.2677	0.2241	<.0001	0.0013	
Questioning	<.0001	<.0001	<.0001	0.0002	<.0001	
Listening	<.0001	<.0001	0.0017	0.0283	<.0001	
Put at ease	<.0001	0.0008	<.0001	<.0001	0.0005	
Decision-making	<.0001	<.0001	<.0001	<.0001	<.0001	
Explanation	<.0001	<.0001	<.0001	<.0001	<.0001	
Time spent	<.0001	<.0001	0.0004	<.0001	<.0001	
Patience	<.0001	<.0001	<.0001	<.0001	<.0001	-0.4060
Caring & concern	<.0001	<.0001	0.0013	<.0001	<.0001	
Cost of care	0.0580	0.0287	0.0844	0.0171	0.1933	

p≤0.01: The stricter level of significance was used due to the large number of statistical tests.

4.6.6 The associations between patience of HCPs and coping with illness

The Table 4.10 below demonstrates how the patience of care providers toward questions or worries of clients enabled clients to cope with their illness or condition. The results show that when clients perceived the patience of HCPs as very poor 50%, their ability to cope with illness remained the same as before consultation. Likewise, when the care providers were perceived as very good 60% at practising patience, the ability of clients to cope with illness increased to much more than before consultation. There was a high significant association

between patience and the ability to cope with illness or condition at $p < .0001$ and a negative correlation coefficient at $r = -0.4060$.

Table 4.10: The relationship between patience and ability to cope with illness (N=184)

Responses	Much more	A little more	Same as before
Poor	6(8%)	41(58%)	24(34%)
Very poor	4(33%)	2(17%)	6(50%)
Fair	11(21%)	40(75%)	2(4%)
Good	13(39%)	18(55%)	2(6%)
Very good	9(60%)	5(33%)	1(7%)
Excellent	0(.0%)	0(.0%)	0(.0%)

4.7 Clients' perception of health care services

The clients were asked to write down what they perceived as good about the health centre and what they would like to see improved. Even though not all clients responded to this question, the frequencies and percentages presented below were calculated based on the study sample (N=191) as advised by the statistician. The findings showed that majority of clients perceived the shortage of drugs 67% as a barrier to utilisation of health care services. They recommended an improvement in this area. On the other hand, availability of clean drinking water 52% was perceived as good and facilitated utilisation of health care services as shown in Table 4.11 below.

Table 4.11: The comments of clients regarding health care services (N=191)

Responses	n	%
Barriers to access		
Shortage of drugs; anti-convulsions	127	67
Shortage of PHC staff	60	31
Cost of care; exemption from user fees, lack of transport need ambulances at clinics.	50	26
Environmental factors; few screening rooms, inadequate benches, small health centres, no maternity wing, nutrition centre and laboratory	35	18
Attitudes of HCPs; use of abusive language, harsh and uncaring attitude and reporting late for work	81	42
Long waiting hours	30	16
Facilitators to access		
Referrals to the hospital whenever there was need	21	11
Availability of painkillers	50	26
Environmental factors; clean water for drinking	100	52
Good reception	70	37

4.8 Summary

The results showed that the availability and accessibility of health care services were generally poor although clients perceived availability of health facilities as fair. Most of the clients had visited the health facilities more than once over a period of 12 months. Majority of them were dissatisfied with the services that were provided at these facilities. There was a statistical significant association between availability of health care services and Persons with disabilities' level of satisfaction. These results are discussed in the next chapter.

CHAPTER FIVE

DISCUSSION

5.1 Introduction

In this chapter the results of the study are discussed with reference to the research question, aim and objectives of the study as well as linked to the relevant literature. This study endeavoured to establish the satisfaction level of clients with disabilities regarding services provided at PHCC.

5.2 Accessibility and acceptability of health care services

Equity, accessibility and acceptability of health services summarise the relationship between client satisfaction and quality of services (WHO, 2001). These dimensions are further explained in Sovd et al (2004) in three parts. Firstly, equity pertains to policies and procedures which allow all clients to access health services and get equal treatment from health care providers. Secondly, accessibility is when health services are provided at a minimal fee or free, in a suitable place at the right time and adequate information is given to clients. Lastly, acceptability deals with confidentiality and privacy of a client and spending adequate time with clients in an appealing clinic environment. In this study accessibility, acceptability and availability were used as an umbrella to assess variables relating to client satisfaction and quality of services.

5.2.1 Utilisation of health services

The findings of this study established that 13% of clients had visited their respective health centres more than seven times over a period of 12 months as shown in Figure 4.3. Dhont et al. (2000), suggest that clients with disabilities require access to health care services that the general population does not need. This is because some of them have complex medical needs which make them seekers and intensive users of health care services (Dhont et al., 2000; Liptak et al., 2006). The results in this particular study showed that 50% of the hours at which health centres are open for appointments are poor. Majority of clients 82% proposed early in the morning as the ideal time for opening the health centres. However, the high response rate for all additional hours, above 50% suggests that clients need availability of services at lunch-time, evening and weekends. Similarly, 26% of clients in both Iezzoni et al. (2000) and Kumari et al. (2009) wanted availability of services in the evening but also expressed the need for afternoon, at night and weekend services. These results are much lower than 63% obtained in this study for evening services. In order to provide satisfactory services and quality care to the clients, a 24 hours a day availability of care providers and health services at the facility is needed as suggested by Eldar (2004). There is also a need to increase working hours at PHCC in Ndola. The rationale is that, increased working hours will be a possible accessibility measure, a way of facilitating client satisfaction and improving the quality of care.

Persons with epilepsy accounted for 42% of clients in this study and the supply of essential drugs in particular anti-convulsions was reported as inadequate at health centres. Clients were sometimes given prescriptions to buy medicines from drugs stores even though CBR programme supplies anti-convulsions to health centres for them. This generated

dissatisfaction among clients. This is in agreement with Streefland's (2004) assertion that non-availability of drugs is one area where clients feel their trust in health care betrayed because they expect to get medicines. In addition, several studies have also found a relationship between the availability of drugs at health centres and clients' satisfaction with health services as well as health seeking behaviours (Gilson, Magomi & Mkangaa, 1995; Haddad et al., 1998; Streefland, 2004; Baltussen & Ye, 2005; Chuma, Musimbi, Okungu, Goodman & Molyneux, 2009). Hence, basic drugs should not only be available at health centres but dispensed to clients as well Gilson et al. (1995). In the qualitative study conducted in Uganda, Haddad et al. (1998) also found the shortage of drugs as one factor contributing to deterioration of health services. In the same study, clients said availability of drugs is equal to good reception of patients at health centres. Chuma et al. (2009) recommend that the reduction of user fees be accompanied by adequate drug supply in order to increase clients' utilisation of health services. The situation at health centres in Ndola might be one of the reasons why clients shun going for review, do not comply with treatment and have poor health outcomes.

5.2.2 Availability of the doctor and specialist

The findings show that the doctor attended to at least 29% of clients on the same day. Other clients were seen after five or more days as shown in Figure 4.5. The 11% clients who were referred to the hospital for specialty care, is an indication that health centres in Ndola have a referral system that links clients to specialty care (Table 4.11). However, the majority 73% were not able to see the specialist the same day of referral to the hospital because special clinics are booked for unless the condition of a client is an emergency. This might be the reason why few clients were attended to the same day by specialists as depicted in Table 4.3.

Liptak et al. (2006) and Miller et al. (2007) state that health centres and health specialists should be acceptable, accessible and available at PHC because they are fundamental and major factors contributing to client satisfaction. Clients rated both the availability of the specialist and doctor as 71% and 65% poor respectively. This implies that availing doctors and specialists to clients at health centres would help to prevent some medical conditions from progressing into a disability and increase clients' satisfaction level.

5.2.3 Waiting time

Waiting time is estimated from the time clients are registered by the clerk to the time when their consultation is commenced. Studies established that long waiting hours influence satisfaction with quality of health care (Gadallah et al., 2003; Blazevska et al., 2004). The longer clients wait for their treatment to commence, the more dissatisfied they become with services and are unlikely to return for further treatment. Clients who are attended to within the expected time are always satisfied. According to results of this study, most clients (65%) waited for over 40 minutes at health centres before their consultation commenced. This waiting period was long and poor which led to clients' dissatisfaction. Conversely, surveys conducted by Gadallah et al. (2003) in the lower and upper districts of Egypt, Patro et al. (2008) in India and Kumari et al (2009) established a mean waiting time of less than 30 minutes. Only Malaysia had an average of 52 minutes waiting time. This study therefore, found a high significant association at $p < 0.0001$ and a negative low correlation $r = -0.2483$ between waiting time and client satisfaction, which means that clients' dissatisfaction was caused by long waiting hours at the health centre. This is as affirmed in Patro et al. (2008) that long waiting hours are major causes of dissatisfaction and non-utilisation of health care services.

5.2.4 Consultation time

Consultation time is the length of time that health care providers spend with a client during consultation. Spending adequate time with clients during consultation is an assurance of good communication otherwise the quality of health care becomes questionable (Abdulhadi et al., 2006). The doctors in this study spent little time with clients during consultation and 46% of the quality of time was poor. 29% of clients found consultation time rather fair. As a result of a short consultation time, 64% of clients were dissatisfied with health services. Statistically there was a high significant association ($p < 0.0001$) between the quality of time spent with clients and their satisfaction level. There was a low positive correlation between the length of time spent during consultation and client satisfaction ($r = 0.3503$). This shows that the amount of time doctors spend with clients during consultation influence their satisfaction with health services. On the other hand, findings from the clients in Patro et al.'s study (2008), 41.3% were satisfied with health services because care providers spent a minimum of 5 minutes with them during consultation. Both Eldar (2004) and Patro et al. (2008) demonstrate that short waiting hours with longer consultation time increases clients' satisfaction level with health services and with personal skills of care providers. One of the barriers to access of health services was the shortage of health professionals (31%) especially doctors at health centres. Personal communication with DHMT Administration Officer (2009) revealed that there is a minimum of three COs for each health centre with only two doctors assigned to four health centres. This might explain why clients waited long hours and had short consultation time with care providers in Ndola.

5.2.5 Availability of health services

Health services provided at PHCC are preventive care, health promotion, treatment of minor medical ailments and advocacy for persons with disabilities (Larson-McNeal et al., 2002). Atun (2004) stresses the goal of PHC as making health services accessible to clients at the time of need and providing various services which are appropriate to current health problems. Previous studies conducted in Zambia identified vocational training, social welfare, counselling, education, assistive devices, medical rehabilitation and health care as services which persons with disabilities need (Eide & Loeb, 2006; Loeb et al., 2008). Out of the scheduled health services at health centres in Ndola 82% were occasionally accessible and clients were more likely to receive curative services than assistive devices. In particular, a small group of clients (4%) accessed rehabilitation services which means that comprehensive rehabilitation is not provided at these health centres. This is contrary to Wiman et al. (2002) who advocates for a range of services for clients with disabilities, such as prevention of impairments from progressing into disability, rehabilitation to restore function and technical aids or assistive devices to compliment functional limitations. Since a single type of service is not enough to meet the comprehensive needs of persons with disabilities, these results might be an indication that health centres are not living the vision of Zambia for health reforms namely to improve the quality of service delivery and to provide comprehensive care (Eide & Loeb, 2006). Besides, Eide and Loeb found that disabilities which are preventable at birth or in early childhood are not prevented in developing countries (i.e. Zambia) compared to developed countries. There was a significant association between availability of health care services and clients' satisfaction and a low positive correlation ($r=0.3230$, $p<.0001$). The significance of association with satisfaction is appropriately within the range of values reported in previous studies ($p<.01$ - $p<.0001$) regarding access and availability of health

services (Iezzoni et al., 2002; Alazri & Neal, 2003; Bikker & Thompson, 2006; Potiriadis et al., 2008). This confirms the relationship between ease of access and availability of health services and clients' satisfaction level. The high clients' dissatisfaction level recorded in this study was from barriers to access of health services and irregular availability of these services.

Health centres in Ndola district lack a multidisciplinary approach to care which could be a reason why some of the health services are not provided. Multidisciplinary care is a better approach to utilization of resources in providing quality care, implementing and increasing client satisfaction (Codispoti et al., 2004; Verhoef et al., 2007). This approach helps to meet clients' high demand for health services. The quality of services in this study was poor and dissatisfactory except that those who had access to preventive care were satisfied. There was a significant association with preventive care at $p=0.029$. Eide and Loeb (2006) confirm the existing gap in health care service provision especially social welfare, assistive devices, counselling and vocational training. Preventive care thus reduces overall health care costs and is essential to reduction of medical conditions (Nocon & Sayce, 2008). For this reason, there is a need to adopt a multidisciplinary approach to care at health centres in order to meet the comprehensive health needs of clients with disabilities.

5.2.6 Environmental factors

Structural-environmental factors represent social and physical infrastructure in which health services are provided (Argentero et al., 2008; Hwang et al., 2009). Some factors cited in these studies are lack of ramps on entry to health centres, no specific parking space for persons with disabilities and inadequate space in treatment rooms. Sovd et al.'s study (2006) on adolescent clients showed acceptability of health services as a major factor contributing to

client satisfaction. Clients who perceived toilet facilities as unclean were dissatisfied with health services and Sovd et al. found a significant association between environmental factors and satisfaction at $p > .10$. About 18% of clients in this study perceived environmental factors as barriers to utilization of health services. These factors were few screening rooms, inadequate benches in the waiting room which contributed to long time standing in queues, a small health centre, non-availability of a maternity wing, nutrition centre and a laboratory. In spite of this, most clients (52%) commended their health centre on the availability of clean drinking water as well as a clean environment. These results are consistent with the definition provided by WHO (2001) that acceptability of health services means an appealing clinic environment. Other environmental factors perceived as barriers were unclean toilets at some health centres and a television set at the reception which is no longer in operation. Gadallah et al. (2003), insist that a good waiting room increases satisfaction level among clients seeking health services. Kumari et al. (2009) confirm that unclean toilet facilities, unappealing surrounding at health centres and non-availability of clean water for drinking leads to clients' dissatisfaction with health services.

Besides these factors, 55% of clients indicated that the space at health centres is inadequate although there was no association and correlation between availability of adequate space at the facility and satisfaction with health services. Structural-environmental barriers as elaborated by Hwang et al. (2009) include inaccessible examination rooms (i.e. adjustable-height tables, weight scales that would accommodate wheelchairs) as well as unavailable and ideal transportation services to medical appointments. This means that improving environmental factors at health centres can enhance clients' satisfaction level and instill in them the desire to return to the health centre for health care needs. Moreover, there is need to set up adequate and comfortable benches for clients in Ndola.

5.2.7 Continuity of care with health care providers

Continuity of care is associated with a sustainable relationship between care providers and a client (Mead et al., 2002; Gadallah et al., 2003; Pandhi & Saultz, 2006). This is an interpersonal and service relationship which requires mutual trust, an attitude of respect for clients and their right to confidentiality (Lussier & Richard, 2008). Occasionally, majority of clients (83%) saw the same doctor at the health centre. This shows that clients and care providers did not establish a lasting relationship which resulted in dissatisfaction with health services. Nevertheless, this study found no significant association between continuity of care and client satisfaction.

Conversely, other studies found associations between continuity of care and client satisfaction in the range of $p < .001$ -.0001 (Lawther et al., 2003; Shapiro et al., 2003; Alazri & Neal, 2003; Fan et al., 2004; Potiriadis et al., 2008). Continuity of care in these studies is related to better health care outcomes such as reduced emergency visits, fewer cases of hospitalization, improved management of chronic diseases, and increased usage of preventive services. Fan et al. (2004) performed a cross-sectional study in primary care clinics at 7 Veterans Affairs medical centres to evaluate how much continuity of care contributes to patient satisfaction. They found a significant association between continuity of care and clients' satisfaction level at $p < .0001$. Suggesting that improving continuity of care might lead to increased client satisfaction with health services and access to care. The recent increase in medical groups, changes in organisation and delivery of health care such as call arrangement by doctors make continuity of care difficult to maintain (Fan et al., 2004; Argentero et al., 2008). This corresponds to health centres in Ndola and national wide where care providers work in shifts, a situation that makes continuity of care and follow-up care almost impossible.

5.2.8 Cost of health care

Health care services are affordable to clients when they are provided at a minimal fee or free of charge at clinics (WHO, 2001). These services should be provided at an appropriate time and in a suitable place. The consultation fee for each visit at health centres in Zambia is K1, 500.00 (Zambian Kwacha) which is approximately (\$0.30) on average and is generally affordable for those who have a source of income and people who are employed. Any other services like laboratory tests and X-rays are considered a separate cost. This study revealed that most clients (81%) paid for health care services each time they visited the health centre even though some were unemployed or retired. Clients at school depended on their parents or guardians for sustenance and upkeep. The cost of care which includes user fees and transport cost to health centres contributed to access barriers. The findings are in line with several studies which depict cost of care as a barrier to access of health services and the removal of user fees as an encouragement to disadvantaged clients to utilise services (Haddad & Fournier, 1995; Wilkinson, Gouws, Sach & Abdool Karim, 2001; Palmer, Mueller, Gilson, Mills, & Haines, 2004; Baltussen & Ye, 2005).

According to WHO (2001), the cost of care has contributed to health services being provided by NGOs and charities that are poorly funded in low income countries. User fees are one of the reasons why clients' utilisation of health services has diminished in many countries namely Kenya, Zaire (now The Democratic Republic of Congo), Uganda, South Africa and Zambia (Palmer et al., 2004). Baltussen and Ye (2005) affirms the relationship between cost of care and clients' utilisation of health services. Their study on 853 users and non-users of modern health services in Nouna health district in Burkina Faso proves that the cost of care is one of the reasons why users who had no money could not access the services. In a cross-sectional survey conducted in Kwale and Makueni districts in Kenya on reducing user fees

for PHC, it is clear that cost of care contributes to household poverty and promotes health inequality (Chuma, Musimbi, Okungu, Goodman & Molyneux, 2009). As such, the attempt to reduce the cost of care should be accompanied by adequate drug supply (Chuma et al., 2009).

In addition few clients in this study accessed hospital services because health centres have no ambulances to carry them to the hospital. Apart from the cost of care, Develay et al. (1996) believe that availability of transport determines utilisation of health services. Cott et al. (2005) urge PHC administration not only to promote health and prevent illness but to link clients to specialised secondary and tertiary care as well. There was no significant association between clients' satisfaction level and cost of care even though clients were dissatisfied with the cost of care. In terms of dissatisfaction, these findings correspond with Iezzoni et al.'s (2002) longitudinal study in which they found that 18% of dissatisfaction in the younger clients compared to 29% in clients with disabilities come from cost of care. In this case , there is a need to either provide free services or put in place health insurance schemes for persons with disabilities in Ndola otherwise their health will continue deteriorating.

5.3 Personal and communication skills of health care providers

All the characteristics related to personal skills of care providers and their ability to engage clients during consultation and care are discussed under communication. The personal qualities of care providers such as respect, kindness and friendliness are specific communication skills are important to clients (Shapiro et al., 2003).

5.3.1 Satisfaction with attitudes of health care providers

Some of the barriers to access of health services are discriminatory attitudes, insufficient knowledge and competencies of care providers regarding disability (Melville, 2005). 49% of care providers' attitude to clients was poor. Many clients (42%) experienced this attitude in form of abusive language, unwelcoming and uncaring attitude which contributed to dissatisfaction with health services. A significant association at $p=0.0006$ with care providers' attitude and satisfaction level of clients was found in this study. WHO (2001) mentions discrimination of female clients which comes from care providers' lack of knowledge on how to help these women during family planning. In fact, older clients with disabilities feel discriminated against when some care providers deprive them of medical care on account of their disability (Shapiro et al., 2003). In South Africa Mgwili and Watermeyer (2006) examined discriminatory attitudes and health practices surrounding reproductive rights of women with physical disabilities in family planning clinics, antenatal clinics and delivery room settings. Findings showed that these women experience hostile questions regarding how to examine them during antenatal clinic and about their marital relationships. It is these attitudes that impact negatively on clients' perception of health services. Such attitudes might be from stress of high patient loads and lack of adequate training of most health care professionals in South Africa (Mgwili & Watermeyer, 2006).

Negative attitudes of care providers contribute to challenges that persons with disabilities face worldwide in relation to health care services (Melville, 2005; Nocon & Sayce, 2008). Sovd et al. (2006) emphasise change of attitudes in order to increase access to services. However, Argentero et al. (2008) attribute these attitudes to high stress levels in care

providers. In the study on staff burnout and client satisfaction, Argentero et al. revealed that emotional exhaustion of care providers is likely to progress into insensitive attitude towards work, affect performance and eventually extend to co-workers and clients. Emotional exhaustion impacts negatively on the satisfaction level of clients and on access of health services. The behaviour of care providers at health centres in Ndola could be a result of emotional exhaustion from understaffing and a high workload. This means that increasing the number of care providers could reduce stress created by overload and subsequently boost the satisfaction level of clients.

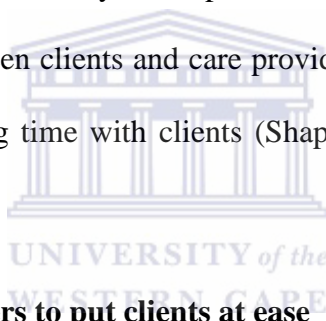
5.3.2 Satisfaction with care provider's questioning and listening skills

This is the diligence of care providers to ask clients about symptoms and how they are feeling during consultation as well as the ability to listen to what clients had to say. The results of this study show that many clients (41%) perceived the questioning of care providers about symptoms and how they are feeling as good. These clients were satisfied with health services and a significant association ($r=0.4032$, $p<0.0001$) between this skill and satisfaction level of clients was found. These results are similar to inferences made in Gadallah et al. (2003), and Das and Sohnesen (2006) that client-care provider relationship anchors on competence, performance, responsiveness of care providers and their ability to communicate with clients.

Another skill that many clients (39%) perceived as good was the ability of care providers to listen. However, most clients (60%) were dissatisfied with listening and this explains the relationship between attentive listening and satisfaction. Whenever clients perceived listening

as very poor or poor, their satisfaction levels reduced to zero (0%), whereas good, very good or excellent perception elicited high satisfaction levels and reduced dissatisfaction.

Statistically a moderate, positive correlation coefficient ($r=0.4862$) and a significant association ($p<0.0001$) between attentive listening and client satisfaction with services was found. Clients' satisfaction level is then influenced by the attentive listening of care providers during consultation. Clients who were dissatisfied even after being listened to in this study might be because of short consultation time which means that care providers in Ndola need to spend more time with them. On the contrary in Shapiro et al.'s (2003) qualitative study, clients were dissatisfied because care providers did not listen to them and dismissed their complaints. Care providers were in a hurry and superficial in arriving at a diagnosis as well as treatment. The relationship between clients and care providers firmly depend on eye contact, listening attentively and spending time with clients (Shapiro et al., 2003; Abdulhadi et al., 2006).



5.3.3 The ability of care providers to put clients at ease

The ability of HCPs to put a client at ease during physical examination is a communication skill. According to Lawther (2003) and Eldar (2004), good communication is a major antidote to satisfaction with health services. The ability of care providers to put them at ease during physical examination in this study was (42%) poor. The failure to make clients comfortable elicited a high clients' dissatisfaction level and highly significant association ($p<0.0001$) with clients satisfaction with health services. Communication is an essential part of clinical practice and well executed communication has a therapeutic effect on clients (Travaline, Ruchinskas and D' Alonzo, 2005). This means that the willingness of clients with disabilities to access health services and to be examined might be influenced by how much information they are given and how comfortable some procedures make them feel.

5.3.4 Involvement in decision-making

Decision-making relates to the ability of health care providers to allow clients to participate in decisions made about their health care. Clients value information about their medical condition and are eager to participate in decisions that care providers make with regard to health care (Eldar, 2004). Findings from this study confirm that clients were not always involved in decision-making about their care, hence, 49% of them perceived involvement in decision-making as poor. These findings concur with Blazevska et al.'s (2004) study which depicts consumers (clients) of health care as searching for information. One way of accessing information is through consulting clients about health care delivery as well as their participation in decision making. The failure to adequately involve clients in decision-making generated dissatisfaction among clients and a statistically significant association ($r=0.4336$, $p<0.0001$) was found. Zineldin (2006) is for the view that responsiveness of care providers to the opinion and needs of clients is what causes satisfaction with health services. Seemingly, clients with disabilities in Ndola might express more satisfaction if care providers consider giving them a chance of participating in decision-making about their health care.

5.3.5 Satisfaction with care provider's explanation

The ability of care providers to give a comprehensive explanation of a medical problem as well as responding to questions that clients ask during consultation is a sign of respect for clients (Shapiro et al., 2003). The findings of this study demonstrated that care providers' skill to explain medical problems and prescribed treatment was (46%) poor and majority of clients were dissatisfied. Both Abdulhadi et al. (2006) and the latest study conducted by Kamuri et al (2009) obtained higher rates, 52% and 54.3% respectively for provision of information to clients than this study. There was a high significant association ($r=0.4315$, $p<0.0001$) between the ability to explain prevailing medical problems and treatment that a

client might need and satisfaction with health services. Lewin et al. (2001) states that care providers are unable to explain medical problems and treatment to clients because they are always in a hurry during consultation. They revealed that poor communication in health centres result from care providers' focus on management of diseases than taking a holistic approach to clients' lives and their health needs. Bikker and Thompson (2006) acknowledge that satisfaction with health services is expressed in relation to affective behaviour of health care professionals and their skills in communication. The implication is that, adequate explanation and information about a medical condition would increase client satisfaction with health services at health centres.

5.3.6 Satisfaction with care provider's patience, caring and concern

This study revealed that care providers were not patient with questions or worries expressed by clients during consultation. Many clients (44%) perceived patience with questions or worries as poor. The results in Abdulhadi et al. (2006) were slightly higher (47%) because clients were encouraged to ask questions. The lack of patience increased clients' dissatisfaction levels and a significant association ($r=0.4668$, $p<0.0001$) between this skill and satisfaction with health services was found. Further, Abdulhadi et al. demonstrate that asking questions during consultation should be encouraged because it is associated with good health outcomes. It is a way of seeking for information from care providers, of ensuring that clients understand their condition and of participating in health care. 32% of clients in this study said care providers were caring and showed concern to them. On the other hand, 40% of clients perceived this skill as poor and were dissatisfied with health services thereby showing a significant association ($r=0.4222$, $p<0.0001$) with the satisfaction level of clients. On the contrary, Shapiro et al (2003) established that clients with disabilities are satisfied because care providers are caring, compassionate and reassuring.

5.3.7 Socio-demographic factors

Socio-demographic factors and economic status such as age, gender, education level and the general health status of a client were included in this study because of the reported association with overall client satisfaction (Fan et al., 2004; Bikker & Thompson, 2006). Moreover, utilisation of health services is determined by age, socio-economic level as well as the health status of a client (Develay, Sauerborn & Diesfeld, 1996). The response rate in client satisfaction surveys shows variations of 28%-83.3% (Harris & Poertner, 1998; Alazri & Neal, 2003; Cobos et al., 2004; Argentero et al., 2008) whereas Potiriadis et al. (2008) says it ranges from 26% to 55%. Reasons for this variation is because some client satisfaction surveys are community based, exit and telephone interviews, and depends on the sampling methods or sample size used (Harris & Poertner, 1998; Oljira & Gebre-Selassie, 2001; Iezzoni, 2004). This study recorded a higher client response rate (95%) than those reported in most surveys. Harris and Poertner (1998) claim high participation rates are possible in convenience samples or very small sample sizes. This is true of this study, the researcher used a convenience sampling method and the sample size was smaller compared to other surveys such as 385 in Ethiopia (Oljira & Gebre-Selassie, 2001) 514 in Egypt (Gadallah et-al., 2003) and 556 in Italy (Argentero et al., 2008).

The mean age of all clients was 25.5 years with a standard deviation of 8.572 years and a range of 50. The large standard deviation shows a big deviation in the age of persons with disabilities and implies that the majority of clients were between the age of 18 and 34 years old. A large number of clients (72%) were at school which is similar to Sovd et al.'s study (2006) where 96% of clients were at school. These clients plus the unemployed were highly dissatisfied with health services but only unemployment showed a significant association at $p=0.0320$. The findings correspond with the study from the USA where the older clients were

more satisfied than the younger clients (Shapiro et al., 2003). They presumed that satisfaction level increases in older clients because they become less assertive and reluctant to complain, hence care providers take charge of their health. Similarly, the study conducted in Poland shows younger clients up to 35 years old dissatisfied with the services, while the retired clients aged 46 years and those older were more satisfied (Blazevska et al., 2004).

The unemployed clients are dissatisfied with health services because their relationship with care providers is of poor quality (Argentero et al. (2007). Gender did not show any significant association with clients' satisfaction level. Both genders were dissatisfied with health services although the female gender had a higher rate (57%) of dissatisfaction than the male gender. Gadallah et al. (2003) found no association between gender and client satisfaction with PHC services. In contrast, Das and Sohnesen (2006) established that the elderly male clients and those in good health have a high level of satisfaction than the younger and those in poor health. Although all clients who participated in this study had a disability, 23% did not indicate as having a disability. Studies conducted by Iezzoni (2003), and Loeb and Eide (2006) revealed that many persons with disabilities decline to acknowledge as being disabled because they do not see their type of impairment as a disability.

5.4 Overall satisfaction of persons with disabilities

The surveys that have been conducted to evaluate clients' satisfaction level with health services report overall satisfaction ranging from as low as 22% to 98% high satisfaction level (Newman et al., 1998; Oljira & Gebre-Selassie, 2001; Carlson & Gabriel, 2001; Gadallah et al., 2003; Cobos et al., 2004; Bikker and Thompson, 2006; Potiriadis et al., 2008). The GPAQ surveys of 2003-2004 reported 77%-78% overall client satisfaction which is within the 78% GPAQ benchmark figure (GPAQ-Practice Report). The recent study on client satisfaction recorded 81.6% overall satisfaction with health services (Potiriadis et al., 2008). The findings

from this study showed that 46% of clients were satisfied with the overall treatment at health centres in Ndola. This is much lower than the GPAQ benchmark and the results from studies conducted in African countries such as Mozambique (55%), Ethiopia (57.1%) and Egypt (98%), (Newman et al., 1998; Oljira & Gebre-Selassie, 2001; Gadallah et al., 2003). The cross-sectional survey conducted by Gadallah et al. (2003) on 514 patients in the upper and lower districts of Egypt, showed that majority of clients were satisfied in both districts. The clients were satisfied with accessibility of health centres, attentive listening of care providers and the cost of care which is free in Egypt. In this study, clients' overall satisfaction level was facilitated by the reception at the health centre, questioning of the doctor about clients' symptoms and feelings and employment status.

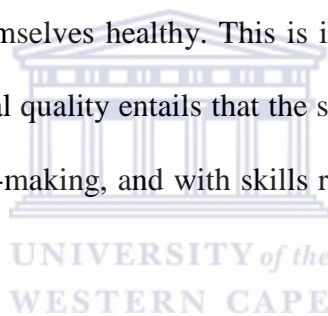
Nonetheless, some of the factors contributing to low satisfaction with health services as indicated in previous studies are non-availability of essential drugs and the cost of care (Oljira & Gebre-Selassie, 2001; Iezzoni et al., 2004; Sovd et al., 2006). Gadallah et al. (2003) allude to inaccessible health centres, unclean health environmental and frequent staff turnover. Long waiting hours, short consultation time, and doctor-client communication, cause dissatisfaction with services (Kumari et al., 2009). The cost of care and non-availability of services were the leading elements of dissatisfaction with health services in this study. Other contributing factors were long waiting hours, lack of patience and attitudes of care providers and the inability to involve clients in decision-making. These are mostly personal and communication skills of care providers. Shapiro et al. (2003) confirm that persons with disabilities are always dissatisfied with interpersonal relationships. The current study agrees with Bikker and Thompson's (2006) conclusion that professional competence of care providers and the client-professional relationship are common determinants of overall satisfaction.

The low satisfaction level indicates poor quality of health services as shown in this study. Good quality service occurs when the choice of services is appropriate to the needs of an individual (Lawthers et al., 2003). The rating of quality as poor might be a confirmation that some of the services provided to clients in this study were not appropriate to their needs. Poor quality of care represents the unfriendly atmosphere at PHC in developing countries (Zineldin, 2003). In the same way, quality and value customers receive determines customer satisfaction in service industry (Lewin, 2007; Bodet, 2008). Hence, overall satisfaction is a summary of past, current and future customer expectations and the quality of current services (Zeithaml, 1988; Zineldin, 2006; Bodet, 2008; Lewin, 2009). In spite of high dissatisfaction level majority of clients (63%) said they would recommend the health centre to their friends and showed 60% willingness to be seen by the same care provider. In comparison to Blazevska et al.'s (2004) survey, clients were very satisfied hence 99% were willing to recommend the health services and to return to the health centre for more care.

Claims have been made as to why some clients return to health centres after being disappointed by service delivery. For instance, Jones and Suh (2000) claim that dissatisfied customers return to service providers because overall satisfaction has an intermediary role between transaction-specific satisfaction and attitudinal loyalty. Zineldin (2006) makes inferences to patients' loyalty in the health sector as situational because the cost of switching from one hospital to another is high. It is for this reason that clients return to the same health centre and are attended to by the same HCPs even though they are dissatisfied with health services. Probably clients in this study returned to health centres because they lacked resources to pay for health services at alternative health centres.

5.4.1 Perceptions regarding quality of health services

Good quality of care depends on the perceptions and values persons with disabilities attach to health service delivery (Lawthers et al., 2003), and the satisfaction of clients is achieved by obtaining data on perceptions of clients (Sahin & Tatar, 2006). The dimensions attributed to quality are waiting time, communication skills, continuity of care and how health care is co-ordinated (Blazevska et al., 2004). Most of these variables were rated as poor in this study, apart from reception by the clerk, thoroughness and listening skills of HCPs which were perceived as good. Therefore, perception of quality care determines the extent to which clients are satisfied with health services (Sovd et al., 2001). Apart from these skills, clients felt empowered a little more to understand their health problems, to cope with illness/disability and to keep themselves healthy. This is in conformity with Lawthers et al. (2003), who indicated that clinical quality entails that the symptoms and illness of clients are treated with appropriate decision-making, and with skills relevant to the current professional practice (Tunajek, 2006).



Conversely, some clients perceived the quality of health services as fair thus maintaining the rating of services at approximately 30%. Clients are the only source of information on accessibility to health services and effectiveness of health care that they receive hence, the importance of measuring clients' perception of primary health care (Haddad et al., 2000). Furthermore, Mahasneh (2001) suggested that peoples' health behaviour and their resolution to seek for help, depends on their perceptions of health. The characteristics associated with quality of care are communication, dissemination of information, respect for patient preferences, shared decision-making, satisfaction, continuity of care and co-ordination (Lawthers et al, 2003). Sahin and Tatar (2006) established that dissatisfaction of the target group is a recipe to noncompliance with treatment procedures. This implies that health care

providers at health centres in Ndola need to be tactful in communication skills and improve on service delivery in order to satisfy their clients. This is because clients' perception of the services whether right or wrong cannot be overruled (Haddad et al., 2000).

5.5 Association between communication skills and client enablement

The ability of a client to understand, take drugs correctly, to go for review, cope with health problems, to take care of their health after consultation comprised patient enablement. Findings of this study demonstrate that most clients were empowered a little more to take care of their health needs. There was generally a high significant association ($p < 0.0001$) between client enablement and communication skills. This relationship between communication and client enablement is illustrated in Table 4.10 which represents patience of care providers and clients' ability to cope with disability and illness. When patience was poor or very poor the ability to cope with disability/illness remained the same as before consultation (50%). However, clients' coping skills improved with the improved practice of patience by care providers (60%). Patience with questions and worries of clients had a significant association ($p < 0.0001$) with all client enablement characteristics and a negative, moderate correlation coefficient ($r = -0.4060$). These results therefore, imply that well executed communication skills enable clients to effectively function much more after consultation with patient health care providers. Equally, poor communication skills leave them the same as before consultation and dissatisfied with health services. This is the reason why, HCPs should be receptive and flexible in the way they use their communication skills because as Schneider et al. (2007) put it, it produces good health outcomes.

5.5.1 Associations between communication skills and compliance

Non-compliance with prescribed treatment regimen is a major problem in the general medical setting and wide spread in clients with chronic conditions (Vermeire et al., 2001; Jones et al., 2006; Pies, 2007). From client enablement variables, the ability of clients to take drugs correctly and to go for review was tested for associations with communication skills and compliance with treatment regimen. Almost all communication skills of care providers had significant associations with compliance at $p < 0.0001$. Compliance with treatment regimen depends on the extent to which clients participate in decision-making and their relationship with care providers (Vermeire et al., 2001). For this reason, non-compliance should be perceived as a need for educating the client, care providers and the general public to take responsibility (Lilleyman & Lennard, 1997; Fido & Hussein, 1998). They cite side effects of medicines, fear of drug dependence, social stigma, behaviour of care providers, poor communication and complex treatment regimen as interactive and organisational reasons for non-compliance.

Employment status is the only variable of socio-demographic factors that had a significant association with the ability of clients to go for review ($p=0.0187$) and to take drugs correctly ($p=0.1972$). The reason for the association could be that employed clients had a high education background to understand their health condition and they earned an income to meet the cost of care. In contrast, results reported in Fido and Hussein (1998) shows a relationship between compliance, age and gender. The younger, male clients discontinue their medication before time. The rationale for non-compliance with treatment especially in clients with epilepsy is the age, attitude towards taking drugs, beliefs about health, emotions and poor coping strategies (Lilleyman & Lennard, 1997; Jones et al., 2006). On the other hand, Cox et al. (2007) posit that younger female clients, the educated, and those in good health want to

participate more in decision-making about their care. The reason is that, participating in decision-making improves their health outcome and increases their satisfaction level (Caress, Beaver, Luker, Campbell & Wood Cook, 2005; Cox et al., 2007).

5.5.2 Associations between client engagement and compliance

Involving clients in decision-making and providing adequate information will motivate them to adhere to medical advice and have health-related behaviour change (Beck et al., 2002). A high significant association was found between involving clients in decision-making and compliance to treatment at $p < 0.0001$. This means that clients who did not participate in decision-making failed to comply with prescribed regimen. In line with Haddad et al. (2000), taking note of clients' opinion has an effect on compliance to treatment regimen, continuity of care as well as health care outcomes. The relationship between clients and care providers determines the ability of clients to go for review and to adhere to treatment regimen (Kerse et al., 2004). This differs with the study Schneider et al. (2007) conducted where clients who participated in decision-making, discontinued their prescribed drugs after feeling better. They concluded that clients who prefer to have more information have associations with non compliance to treatment.

5.5.3 Association between accessibility and compliance

Sometimes clients do not comply with treatment because they have not accepted their illness or disability while the mentally challenged have fears of being labelled as insane (Pies, 2007). The variables which affected the ability of clients to return to the health centre for review were availability of services and the specialist, the length of time care providers spent with them and how long they waited for their consultation to start. Generally, the results showed a statistical significant association between these variables and compliance with treatment at

$p < 0.0001$. Non-compliance in poor countries is caused by inconsistency in drug supply and shortage of appropriate drugs (Breen et al., 2007). This is made worse by overcrowding at the health centres which leads to long queues and long waiting hours before consultation. In Breen et al.'s view, clients leave the health centre before collecting drugs, default treatment and start splitting dosages.

One of the reasons for non-compliance in adolescent clients is that they make judgement about their personal need for treatment and doubt the need for medicines (Bucks et al., 2009). One of the recommendations from clients in this study was the need for creating nutrition centres at PHCC. One can only infer that clients need to have food before taking their medication especially those taking anti-convulsants, otherwise they start skipping some doses. There is need for health centres to have constant and adequate supply of medicines in order to promote compliance to treatment and positive health outcomes.

5.6 Summary of the chapter

The discussion in this chapter focused on results from this study in relation to previous studies. The services that are available and provided to clients with disabilities at health centres in Ndola, the perceptions of quality care and clients' satisfaction level have been discussed. The services that are available and provided to persons with disabilities and factors contributing to satisfaction/dissatisfaction with the services at PHCC in Ndola have been established. Therefore, the objectives of the study have been answered. The summary, conclusions and recommendations are presented in the next chapter.

CHAPTER SIX

SUMMARY, CONCLUSION AND RECOMMENDATIONS

6.1 Summary

This study originated from concerns raised by persons with disabilities regarding services that are provided at health centres in Ndola. The aim of the study was to establish the satisfaction level of persons with disabilities regarding services provided at four selected health centres. Factors contributing to satisfaction or dissatisfaction were investigated. The services that are provided and perceptions of clients in relation to quality care were also examined. The study used a cross-sectional study design using quantitative research methods. The population comprised clients of both genders, aged between 18 and 65 years old who were recruited from Ndola district in Zambia. A convenience sampling technique and the Yamane's formula were employed to choose a sample size of 200 participants. A structured self-administered questionnaire (GPAQ) was used to collect data on the satisfaction level of clients regarding health services. Descriptive and inferential statistics were used to analyse the data.

The results demonstrated that the satisfaction level of clients with disabilities was very low. The factors generating dissatisfaction were mainly personal and communication skills of care providers. Of all personal and communication skills, dissatisfaction mostly came from the negative attitudes of care providers and their failure to involve clients in decision-making about their care. This study also established that health centres in Ndola do not provide all the services stipulated by WHO in the Alma Ata Declaration of 1978 on PHC. Instead health centres are dominated by curative care, counselling and preventive services to a certain extent which led to the dissatisfaction of clients. In addition, clients perceived the quality of health

services as poor. These services marred were with a lot of barriers to access such as transport, cost of care and long waiting hours. There was a significant association between these factors and client satisfaction.

Furthermore, this study established that clients were enabled a little more to understand their health problems, to remain healthy, to cope with illness/disability, and to go for review. This was illustrated in the relationship between the patience of care providers and the ability of clients to cope with illness or disability. Continuity of the relationship between clients and care providers was not possible and showed no significant association with client satisfaction. However, communication skills of care providers had a statistical significant association with compliance to treatment regimen.

6.2 Conclusion

Clients with disabilities who accessed health services from four health centres in Ndola were dissatisfied with aspects of health services. In particular, the negative attitudes of care providers, long waiting hours, the cost of care, and personal and communication skills were sources of client dissatisfaction. However, most clients were satisfied with thoroughness of care providers to ask about their symptoms and feelings, the reception by the clerk and overall treatment at health centres. Clients also felt enabled to take drugs correctly and to cope with illness or health problems which led to satisfaction. Most factors that contributed to dissatisfaction with services were associated with non-compliance. This study corresponds to earlier studies that illustrated common determinants of overall satisfaction as professional competence, care providers, and client-professional relationship. Similarities with other studies were that discriminatory behaviour of care providers, poor interactions or

communication with clients and sometimes complex treatment regimen contribute to non-compliance with treatment.

It is likely that the general health of clients with disabilities will continue deteriorating if care providers do not change their attitudes along with improved availability, accessibility and delivery of health care services at health centres.

6.3 Recommendations

The following recommendations were made based on the results from this study.

6.3.1 The Provincial Director of Health and District Director of Health

- **Client satisfaction surveys:** The assessment of client satisfaction at health centres should be an ongoing process. There is a need for administrators to encourage client satisfaction surveys as a way of seeking feedback from clients on health care while bearing in mind that clients in the health care system rarely voice out their views against poor service delivery.
- **Training of health care providers:** To ensure that persons with disabilities receive appropriate information on how to take care of their health, refresher courses and intensive training on disability issues should be enhanced in training schools for care providers. Consequently, adequately trained care providers will be assigned to health centres. This will facilitate continuity of care, change of attitude towards clients with disabilities, dissemination of adequate information to clients and implementation of preventive programmes.
- **Staffing at health centres:** The most affected population by professional migration are clients with disabilities. There is need for the Zambian government to consider

improving working and living conditions of health personnel as a way of mitigating professional brain drain. Also the number of care providers should be increased at health centres to avoid emotional stress caused by an overload of clients. This will reduce long waiting hours at the facility and increase participatory decision-making and consultation time.

- **Transport cost:** There is need for health management to put in place ambulances that would ferry clients from either homes or health centres to the hospital when need arises. A public transportation system that would accommodate clients along with their assistive devices such as wheelchairs, callipers or crutches should be lobbied for from the Ministry of Transport and Communication.
- **Cost of care:** There is need to increase the supply of essential drugs to health centres by medical stores in order to prevent buying drugs from costly drug-stores. It is also proposed that an insurance policy be put in place for persons with disabilities to cover their medical costs.
- **Rights of persons with disabilities:** There is need for on-going sensitisation of health professionals and the general public on the rights of persons with disabilities to accessible and quality health care services. It is recommended that the UN Convention on the Rights of Persons with Disabilities is availed to and implemented in health institutions in Zambia.

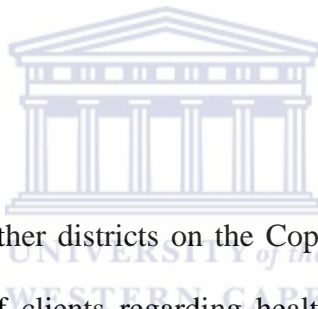
6.3.2 Multidisciplinary team approach

Suitably trained health professionals are not employed at health centres hence rehabilitation, x-ray and social services are not found there. There is need for the appointing authority (Ministry of Health) to consider appointing care providers from other professions such as

physiotherapy, occupational and speech therapy, social work, pharmacy as well as radiology to be part of the PHC teams. However, ideal facilities for the delivery of such services should be available at health centres.

6.3.3 The physiotherapists in Ndola

As physiotherapists are valuable members of multidisciplinary teams of PHC settings, there is a need for physiotherapists in Ndola to diversify by joining interdisciplinary and multidisciplinary teams in community-based programmes such as PHC service delivery and CBR programmes. They have to shift their focus from the traditional hospital settings. In addition, health management also needs to put in place facilities for rehabilitation services at health centres.



6.3.4 Further research

Carrying out similar studies in other districts on the Copper Belt is recommended so as to establish the satisfaction level of clients regarding health services that they receive from health centres. Similar studies can also be carried out in the other developing countries especially in the Sub-Saharan region. This will help to compare the results since this study was conducted in one district only and in a particular country.

6.4 Limitations and strengths of the study

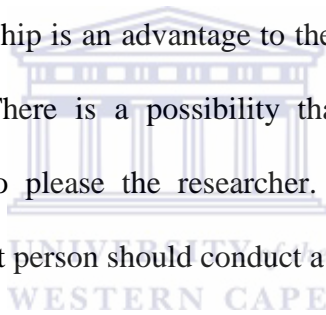
- The research instrument (GPAQ) used in this study is the first to be used in the country.
- Responding to the questionnaire in an environment away from the health centre helped to remove fear from some clients who might not have been free to say something negative in the presence of care providers.

-The study was restricted to four health centres in Ndola district which might not be fully representative of clients' satisfaction with health services in Zambia.

-The study on client satisfaction was the first to be conducted in Ndola so there were no similar studies in Zambia to compare with.

-The process of making formal applications to the Ethical Clearance Committee (TDRC) and to UNZAREC in Zambia delayed the collection of data. The researcher became aware of this procedure late, hence received the permission letter late too. Therefore, time for data collection was limited.

-As has been disclosed earlier in Chapter 3, the researcher once worked with persons with disabilities. This kind of relationship is an advantage to the researcher as well as a limitation and potential source of bias. There is a possibility that some participants might have responded positively in order to please the researcher. For comparison of results, it is recommended that an independent person should conduct a similar research project.



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