

**FACTORS ASSOCIATED WITH APPROVAL AND REJECTION OF DISABILITY
PENSION APPLICATIONS IN THE KHOMAS REGION OF NAMIBIA**

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DEDICATION

To our newly-born son **Enoch**, one day when you grow up to be able to read this:
Remember you have a purpose and mission to accomplish on this earth. Discover your
star and follow your dreams. Love humanity, and God bless you in all your dealings.

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ABSTRACT

Determination of eligibility for disability pension is a challenging area in view of the complexities surrounding defining and measuring disability. Currently there is an absence of eligibility criteria for the disability pension in Namibia, and people with disabilities have described the process of getting the disability pension as extremely difficult. To improve the process of determining eligibility for disability pension knowledge of the current factors associated with approval or rejection of disability pension should be available.

The study aimed to explore and describe characteristic factors of approved and rejected disability pension applications and, to identify factors associated with determination of eligibility for disability pension in the Khomas Region. The objectives of the study were to describe socio-demographic and medical factors that characterize approved and rejected disability pension applications in the Khomas Region and to identify factors positively or negatively associated with rejection of disability pension applications in the Khomas Region.

A quantitative, analytic, case-control study design based on records was used. The population consisted of all disability pension applications processed between 1 January 2008 and 31 December 2010 in the Khomas Region. The population size matched the estimated sample size. Cases were the rejected applications for a disability pension and controls were those applications that were approved. A data extraction form was used to collect data from disability pension application forms. Data were analyzed using Epi

info statistical package version 3.5.1. Ethical considerations were observed during all stages of the study.

Low educational level, unemployment, lack of income, and having a permanent health condition are factors that typically characterize disability pension applications in the Khomas Region. At 95.0% CI, considering Odds Ratios and $p < 0.05$, there was a high association between rejection of disability pension applications and: being fit for open labour employment setting; and a lower disability percentage. Approval of disability pension applications was highly associated with: disability that will worsen; mental functions affected; reduced life expectancy and being unfit for any type of employment setting. A multiple logistic regression analysis revealed that personal care abilities; possible intervention to restore work ability of applicant; and percentage of disability were significant in determining disability pension eligibility in the Khomas Region.

The factors associated with determination of eligibility for disability pension in the Khomas Region followed the international trends. However, the process can be improved through responsive policy formulation and the development of clear eligibility criteria to make the assessment more objective and holistic.

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CHAPTER 1

INTRODUCTION

1.1 ORIENTATION TO THE STUDY

It is acknowledged that there is a need worldwide to provide economic assistance to people with disabilities due to the strong link between disability and poverty. Availing equal socio-economic opportunities to people with disabilities is one of the policy objectives that has been reiterated and reinforced for a long time in most developed countries and, more recently in developing countries (African Union, 2006; Mutasa, 2010). One approach that is being used in Namibia to assist people with disabilities is the provision of a monthly disability pension. Disability pension applications have increased significantly over the past few years, in both developed and developing countries (Govender, 2009). As a result the disability pension is gradually becoming the subject of a growing body of research on how such a pension is reaching the intended beneficiaries as well as its socio-economic impact on the beneficiaries' lives in developing countries (Ellis, Devereux & White, 2009).

According to the World Health Organization (WHO), there are over a billion people (or about 15.0% of the world's population including children) who are estimated to be living with disability (WHO, 2011). Disabilities are diverse in the society hence the state of being a person with disability is not a singular, two-dimensional phenomenon but rather a complex process that deserves to be understood as part of the human condition

and not simply something that represents a physical or mental deviation from the 'normal' (Altman & Barnartt, 2006). The definition of disability, and its operational measurement, varies greatly among studies (Freedman, Martin & Schoeni, 2002; Hashimoto et al., 2010; Perenboom, Van Herten, Boshuizen & Van Den Bos, 2004).

In the context of human existence, disability is an evolving concept therefore definitions are problematic especially for purposes of determining eligibility for disability benefits, such as the disability pension. However, the International Classification of Functioning, Disability and Health (ICF), developed by the WHO, has advanced the understanding and measurement of disability (WHO, 2001). The ICF was developed through a long process involving academics, clinicians and, more importantly, persons with disabilities. As a result the way disability is construed has changed substantially in recent years: from a previous predominantly medical focus on the individual and his/her impairments and deficits to a social focus and, more recently, to a bio-psychosocial model.

The ICF uses the bio-psychosocial model to define disability as problems in bodily functions or structure; problems related to activity and problems related to social participation (WHO, 2011). Broadly speaking, disabilities can be classified as physical, sensory, communication, mental, and learning disabilities. Causes of disability can be classified into three broad groups of origin: biological/genetic factors; disease; and injuries which can be due to unintentional or intentional causes (Association for Health and Environment Development, 2004). The major causes of disability in Southern

Africa are disease, birth related or congenital abnormalities, and accidental injuries (Eide, Nhiwathiwa, Muderedzi & Loeb, 2003).

Disabilities can be temporary or permanent. For example, a temporary disability could be an uncomplicated femoral fracture that prevents a person from working. Such a temporary state would change following healing of the fracture allowing the person to resume working. An example of a person with a permanent disability could be due to amputation of a lower limb hence permanent impairment, which may result in inability to work. Furthermore, permanent disabilities can be static or progressive. Static disabilities are those that remain constant as they do not improve nor do they get worse. An example would be a spinal cord injury. Progressive disabilities are those that worsen over time, such as multiple sclerosis. Disabilities might have a negative impact on the socio-economic well being of affected individuals and their families irrespective of whether the disability is temporal or permanent (Guernsey, Nicoli & Ninio, 2007).

Often people with disabilities have a lower socio-economic status compared to the general population (WHO, 2001). Statistics reported by the United Nations (UN) indicate that one in five of the world's poorest people has a disability, and 82.0% of people with disabilities in developing countries live below the poverty datum line (Gooding, 2006). For many policy makers a more pressing justification for disability benefits is this close link between disability and poverty. The vicious poverty-disability cycle shows that disability increases the risk of poverty while poverty creates the

conditions for increased risk of having a disability. For example, people who have disabilities are less likely to be involved in labour force participation, while people in poverty are more predisposed to disabilities associated with undernourishment, poor sanitation, overcrowding and lack of health care services (Emmett, 2006). The physical and attitudinal barriers to participation in education, labor market and general community development activities that people with disabilities encounter restrict them from economic participation (Braithwaite & Mont, 2008).

People with disabilities experience additional financial costs in their daily life irrespective of their financial status. Examples of such costs include transport costs to access health services, paying caregivers or even purchasing of assistive devices if state health facilities are unable to provide such (Mitra, 2005). Social assistance is seen as an intervention to assist people with disabilities to get out of the above mentioned poverty-disability cycle. This intervention enables people with disabilities to access services and employment opportunities (United Nations, 1993).

The UN's standard rules on the equalization of opportunities for persons with disabilities give a more precise statement on the role of social assistance as income maintenance, placing the element of extra costs within this. Rule 8 on income maintenance and social security states that:

States should ensure the provision of adequate income support to persons with disabilities who, owing to disability or disability-related factors, have

temporarily lost or received a reduction in their income or have been denied employment opportunities. States should ensure that the provision of support takes into account the costs frequently incurred by persons with disabilities and their families as a result of the disability (United Nations, 1993).

The determination of eligibility for disability pension is of great social and financial importance (Spanjer et al., 2010). In many countries an assessment of disability that focuses on eligibility for disability benefits, such as pension, allowances or insurance, is controversial (de Boer, Donceel, Brage, Rus & Willems, 2008). The government of Namibia provides social assistance in four categories: old age pension; child maintenance grant; foster care grant; and disability pension. The distribution percentage of the social assistance budget among the four is 64.0% (old age); 21.0% (child maintenance); 3.0% (foster care), and 12.0% (disability pension). This study focuses on disability pension provided by the Namibian government. This study excludes disability benefits provided by the Government Institutions Pensions Fund (GIPF); parastatal organizations, such as the Motor Vehicle Accident (MVA) Fund, and the Social Security Commission (SSC). In Namibia the Ministry of Labour and Social Welfare is responsible for administering the disability pension. However, determination of eligibility for this pension is the responsibility of the Ministry of Health and Social Services (MoHSS) in which medical practitioners play a major role of assessing applicants.

In settings where legal criteria are available, they are usually formulated in general and broad terms offering a wide range of decision-making latitude to the medical practitioners responsible for assessments (Meershoek, Krumeich & Vos, 2007). In other settings the assessments are carried out in complex organisational settings with high workloads, inappropriate space, and limited technical expertise in disability evaluation (Ydreborg, Ekberg & Nilsson, 2007). The basic concepts of what constitutes disability vary and this has led to variations in approaches to determine eligibility for disability pension (Gronvik, 2007; WHO, 2011).

The three commonly used approaches to determine eligibility for disability pension globally are: a medically based universal approach; a means testing approach; and an assessment panel approach. These approaches are discussed in-depth in Chapter 2. In most countries, including Namibia, the actual assessment of functional limitations is carried out by a medical practitioner (Wahlstrom & Alexanderson, 2004; de Boer et al., 2008).

Personal, medical, educational, occupational, socio-economic, and environmental phenomena may influence a disability status and consequently the decision on disability pension eligibility (Mansson & Rastam, 2001; Mutasa, 2010). People who cannot find gainful employment as a result of physical or mental incapacity are entitled to a disability pension. However, there are several factors that can influence disability pension eligibility decisions. Such factors include inter alia: disease features, job

features, interaction between these two, social positions, social welfare features and personal characteristics (Karlsson, Carstensen, Gjesdal & Alexanderson, 2008).

1.2 STATEMENT OF THE PROBLEM

The Namibian national policy on disability stipulates that a disability pension should be provided to all persons who are entitled to such a pension. However, the policies and procedures provide no clarity on defining neither entitlement nor what the factors that determine a disability are. This may lead to discrepancies in determining eligibility for disability pension (Government of the Republic of Namibia, 1997a). Records reveal that among all applications for disability pension in the Khomas Region, some are approved while others are rejected. However, the factors associated with approval and rejection of disability pension applications in this region have not been documented. In the absence of defined eligibility criteria, it is unclear why some disability pension applications are rejected. The rejection of a disability pension might pose concerns given that there are no set criteria for rating who should be disqualified.

During the national Namibian survey on disability and rehabilitation, people with disabilities described the process of getting a disability pension as being extremely difficult (Government of the Republic of Namibia, 1995). Furthermore, the survey report confirms that there is a lack of clear criteria and procedures for the MoHSS to grant disability pensions. The National Poverty Reduction Strategy of 2002 emphasized the

need to have clear and simplified criteria to determine eligibility for disability pension and other aid grants (Government of the Republic of Namibia, 2002).

Medical practitioners complete a medical report when assessing a disability pension applicant. However, both aforementioned ministries do not have records of the history of the development of this disability pension medical report thus there is no evidence of its validation. While information about the applicant can be supplied on the medical report, there are no established threshold scores or levels that differentiate those who are approved from those who are rejected. Research has not yet been done to establish whether the current decisions to approve or reject disability pension applications in the Khomas Region are evidence based.

The absence of appropriate tools, guidelines and training, combined with high levels of poverty worldwide, are considered to lead to subjective, discretionary decisions and lack of uniformity in determining eligibility for disability pension (Gooding & Marriott, 2007). Improving the process of determining eligibility for disability pension will be difficult if the current factors associated with approval or rejection of disability pension applications in the Khomas Region are unknown.

1.3 PURPOSE OF THE STUDY

The purpose of this study is to explore and describe characteristic factors of approved and rejected disability pension applications, and to identify factors associated with rejection of disability pension applications in the Khomas Region.

1.4 OBJECTIVES OF THE STUDY

- i. To describe socio-demographic and medical factors that characterize approved and rejected disability pension applications in the Khomas Region.
- ii. To identify factors associated with rejection of disability pension applications in the Khomas Region.

1.5 SIGNIFICANCE OF THE STUDY

This study is important because the researcher needs objective information on eligibility for disability pension since he is a coordinator of the National Community Based Rehabilitation Program who engages the communities on issues of empowerment and equalization of opportunities for people with disabilities. Results of this study could provide information to educate potential applicants about disability pension eligibility during outreach activities, workshops, and community meetings to prevent unnecessary or incomplete applications, thereby resulting in a reduction in costs and time for both the applicants and hospital service providers (Govender, 2009).

Within the Division Disability Prevention and Rehabilitation, which is one of the divisions of the MoHSS, the research could provide pertinent information to review the national policy on disability and to develop national guidelines and strategies in terms of determining disability pension eligibility criteria to ensure that the disability pension is granted fairly. Thus the research could provide the legislator with evidence for informed decision-making in terms of the disability pension eligibility. Furthermore, the results of this study could reveal whether the disability pension in the Khomas Region is approved or rejected according to the stipulation of the National Pensions Act (Act 10 of 1992).

Results of this study could bring clarity on factors used by the Chief Medical Officer (CMO) when deciding the eligibility of disability pension applicants in the Khomas Region. When factors associated with rejection for disability pension are known they can be considered when developing criteria for determining eligibility for a disability pension. Samson (2006) noted that there is a huge knowledge gap on criteria used for targeting cash-transfers to persons with disabilities in developing countries. The results of this study could therefore add to the body of knowledge about social assistance for people with disabilities particularly with regards to targeting recipients for the disability pension.

1.6 DEFINITIONS OF KEY CONCEPTS

Disability:

Disability is an umbrella term for impairments, activity limitations and participation restrictions. Impairment can be viewed as a problem in body function or structure. An activity limitation reflects a difficulty encountered by an individual in executing a task or action. A problem experienced by an individual in involvement in life situations such as education or employment, can be regarded as a participation restriction (WHO, 2001). In terms of this research the concept ‘disability’ refers to any health condition or impairment which interacts with the environmental barriers making an individual unable to work or provide a service in order for him or her to earn a living (Government of the Republic of Namibia, 1992b; WHO, 2011).

Disability pension:

Disability pension is a form of pension given to those people who are permanently or temporarily unable to work due to a disability (Subbarao, 1998; Devereux, 2001). In Namibia, the National Pensions Act (Act 10 of 1992) defines disability pension as a pension paid to a ‘disabled person’, meaning any person who, owing to any physical or mental disability, is incapable of obtaining from any employment or the practicing of any profession or trade, or from the rendering of any service, the means needed to enable him or her to adequately provide for his or her own maintenance, and has attained the age of 16 years and is below 60 years (Government of the Republic of Namibia,

1992b). In terms of this study disability pension is also used to refer to ‘disability grant’ or ‘disability allowance’ as used in different countries.

Disability pension application:

A disability pension application is a medical report for disability pension completed by a state employed medical practitioner after assessing an individual for the purpose of determining eligibility for disability pension (Annexure A). The completed medical report for disability pension contains socio-demographic, medical, and work capacity information about the applicant. The application is then forwarded to the CMO who reviews the information therein and makes a final decision to approve or reject the application for disability pension.

Approval of disability pension application:

Approval of disability pension application refers to when the CMO, as delegated by the Namibian Permanent Secretary, certifies that an applicant for disability pension does have a disability and should be paid the disability pension either on temporary or permanent basis. Temporary approval can be from one to a maximum of five years. This implies that the applicant has to reapply for the disability pension once the specified period lapses (Government of the Republic of Namibia, 1992b). Permanent approval is granted until the recipient is 60 years old and thereafter the disability pension is converted to the old age pension. Approval of a disability pension is recorded on the last page of the disability pension application in a field square named “recommended”

followed by another record for the duration of the approval and number of years if the approval is not permanent (Annexure A). In terms of this research both temporary and permanent approvals are combined and referred to as approved disability pension applications.

Rejection of disability pension application:

Rejection of disability pension application is when the delegated CMO certifies that an applicant for disability pension does not deserve to be paid a disability pension either on temporary or permanent basis. Rejection of a disability pension application is marked on the last page of the disability pension application in a field square named “disapproved” (Annexure A). In terms of this thesis all applications marked ‘disapproved’ are referred to as rejected disability pension applications.

Factor:

A factor is anything that contributes to or is associated with a particular outcome (Soanes, 2007). In this study factor refers to the variables, listed on the medical report for disability pension, that are considered when an applicant is assessed for the purpose of determining eligibility for disability pension.

Association:

Association is when a relationship exists between two variables such that, as one changes the other changes in a predictable way. Two variables are associated if statistics

prove that some of the variability of one can be accounted for by the other. An association can be positive or negative. In a **positive association**, one quantity increases as the other one increase. For example, statistics demonstrate that smoking increases the risk for lung cancer. In a **negative association**, an increase in one quantity corresponds to a decrease in the other. For this study associations will be determined using Odds Ratios (ORs), 95.0% Confidence Intervals (CI) and Chi-square p- values less than 0.005.

The Khomas Region:

The Khomas Region is one of the 13 administrative regions in Namibia. It is the region in which Windhoek, the capital city of Namibia is located. The region has the highest population in the country compared to other regions. In 2001 the population of the Khomas Region was 250,262.00 and the projected population during the period of this study was 336,617.00 (Government of the Republic of Namibia, 2003, 2006). The majority of residents are from high density locations and informal settlements. Most of the people use cheaper public health services instead of the more expensive private health services (Regional Network for Equity in Health in Southern Africa [EQUINET], 2005). Public health facilities in the Khomas Region include the Windhoek Central Hospital (the highest referral hospital), the Katutura Intermediate State Hospital, the Katutura Health Centre, the Khomasdal Health Centre, and eight clinics (Ministry of Health and Social Services, 2010).

1.7 ETHICAL CONSIDERATIONS

The research committee of the University of Namibia approved the research proposal prior to the commencement of the study (Annexure B). Prior to the commencement of the study written permission was obtained from MoHSS (Annexure C and D) and, the Ministry of Labour and Social Welfare (Annexure E and F), to use patients' records from the offices of the pension officer for the Khomas Region. The study only focused on reviewing of records, therefore confidentiality and anonymity were guaranteed by not recording applicants' names on the data extraction forms. There was no foreseeable harm either to the disability pension applicants whose records were used or to the disability pension officers who retrieved the records. Instead inclusion of the records in this study was deemed important in terms of contributing to clarify factors currently used to determine eligibility for the disability pension. This research should ultimately contribute to the development of fair criteria for assessing disability pension applications.

1.8 SUMMARY

An outline of the study is provided in this chapter. The chapter presents the statement of the problem; purpose of the study; objectives; significance of the study; definitions of key concepts and ethical considerations. The focus of the next chapter is a review of relevant literature. This is done to address definitions of disability and discuss disability pensions as well as approaches for determining eligibility for disability pension and factors associated with approval or rejection of disability pension applications.

CHAPTER 2

LITERATURE REVIEW AND CONCEPTUALIZATION

2.1 INTRODUCTION

Chapter 1 provided an introduction and background to the study. A review of literature that discusses disability is presented in this chapter. The review also describes the link between disability and poverty as well as the concept of disability pension. There is also a discussion on different approaches for determining eligibility for disability pension. The chapter highlights the challenges in determining eligibility for disability pension and identifies some knowledge gaps in the local disability evaluation procedures. Furthermore, this chapter discusses factors associated with approval and rejection of disability pension applications in developed and developing countries.

2.2 DISABILITY

The UN convention on the rights of persons with disabilities, to which Namibia is a signatory, states that: “Persons with disabilities include those who have long-term physical, mental, intellectual or sensory impairments which, in interaction with various barriers, may hinder their full and effective participation in society on an equal basis with others.” (United Nations, 2006, p. 4).

In Namibia, the National Pensions Act (Act 10 of 1992) defines a ‘disabled’ person as any person who, owing to any physical or mental disability, is incapable to obtain an

income needed to enable him or her to adequately provide for his or her own maintenance from any employment or the practicing of any profession or trade, or from the rendering of any service. The ‘disabled’ person must be a Namibian citizen or permanent resident in order to qualify for the disability pension and must be not less than 16 years old and not older than 60 years old (Government of the Republic of Namibia, 1992b).

In the current world report on disability document, certain health conditions have been documented as being highly associated with disability ultimately leading to the need for disability pension or other disability benefits for those affected. The report broadly categorizes health conditions linked to disability as infectious diseases, chronic conditions and injuries (WHO, 2011). Tuberculosis (TB) and the Human Immune Deficiency Virus (HIV) are some of the most prominent infections leading to a disability in which the affected individual may become unable to work and earn a living (WHO, 2008). Diabetes, cardiovascular diseases, mental disorders, and cancer, are the most common non-communicable diseases associated with disability (WHO, 2005). Road traffic injury, occupational injury, and violence, have also long been associated with disability (WHO, 2002; WHO, 2009).

2.2.1 Models defining disability

The understanding of disability has shifted from the medical model, to the social model and presently to the bio-psychosocial model (Mpofu & Oakland, 2010). This shift

implies that disability has to be conceptualized in terms of the impairments and environmental barriers that can make an individual unable to earn a living.

In the past disability was often defined as a physical, mental, or psychological condition that limits a person's activities (de Kleijn-De Vrankrijker, 2003). This was interpreted according to a **medical model**: the disability was linked to various medical conditions and thus viewed as an abnormality in the affected individual causing inability to function. In terms of this model interventions focused on medical rehabilitation and social assistance only (Shakespeare & Watson, 1997). To a large extent this model can be used as the first stage when determining eligibility for disability pension since it makes provision for a more objective measurement of anatomical or physiological impairment.

The focus shifted to the **social model** of disability which conceptualizes disability as arising from the negative interaction of a person's health condition or impairment with the environment. The environment could be physical infrastructure, cultural practices or policies guiding access to goods and services (Hughes & Paterson, 1997). If the environment is designed for the full range of human functioning, and incorporates appropriate accommodations and supports, then people with functional limitations would not be viewed as 'disabled' in the sense that they would be able to fully participate in society (Mont, 2007). This statement implies that the physical environment, for example, can be modified to accommodate people with disabilities.

This creates a disability friendly environment and fewer numbers of people would be categorized as 'disabled'. According to the social model, disability is the outcome of the interactions of persons and their environment and is therefore neither person nor environment specific (Hurst, 2003; Smart, 2005). According to this model determination of eligibility for disability pension should bring to perspective the negative effects of the environment in which the person lives.

More recently the focus has shifted to the **bio-psychosocial model** which incorporates the useful aspects of both the medical and social models (Peterson & Elliott, 2008). The bio-psychosocial model integrates diagnostic medical information with psychosocial aspects of life, such as personality traits, coping abilities, stress, and social support (Elliott, Kurylo & Rivera, 2002). This model has influenced the evolving of the WHO's International Classification of Impairments, Disabilities and Handicaps (ICIDH) into the current International Classification of Functioning, Disability and Health(ICF) (WHO, 2001; Mpofo & Oakland,2010). The ICF requires that an individual's appraisals of environmental assets and liabilities, personal body functions, and his/ her ability to participate in desired personal and social activities, are considered along with professional classification of functioning, disability, and health (Peterson & Threats, 2005; WHO, 2001). The bio-psychosocial model definition of disability provides a framework for a more objective and holistic assessment for determining eligibility for disability pension.

Combining aspects of the three models, Zheng et al., (2011) summarize the dimensions of disability by defining it as one or more abnormalities in anatomical structure or the loss of a particular organ or function (either physical or psychological) affecting a person's ability to carry out a normal activity and to participate fully in study, work, community and social life. Furthermore, disability can lead to limited access to education, health care and rehabilitation services, to the detriment of people with disabilities, their families and local communities, health-care systems and social security systems.

2.2.2 The International Classification of Functioning Disability and Health (ICF)

The ICF describes disability as an umbrella term for impairments, activity limitations and participation restrictions (WHO, 2001). **Impairments** are problems in body function or structure, such as a significant deviation or loss. For example, paralysis or blindness would be considered as being impaired. **Activity limitations** are difficulties an individual may have in executing activities: walking or eating, for example. **Participation restrictions** are problems an individual may experience during involvement in life situations. For example, facing discrimination in employment or public transport services due to the individual's specific impairment. Disability refers to difficulties encountered in any or all three areas of functioning mentioned above. In the ICF disability and functioning are viewed as outcomes of interactions between health conditions (diseases, disorders and injuries) and contextual factors. In the latter there are external environmental factors (for example, social attitudes, architectural

characteristics, legal and social structures, as well as climate and terrain) and there are also internal personal factors. These include gender, age, coping styles, social background, education, profession, past and current experience, overall behaviour pattern, character and other factors that influence how disability is experienced by the individual (WHO, 2001).

The interaction of an individual's health condition with contextual factors, environmental and personal factors determines whether a person is classified as 'disabled'. Figure 2.1 illustrates the interaction between the ICF components.

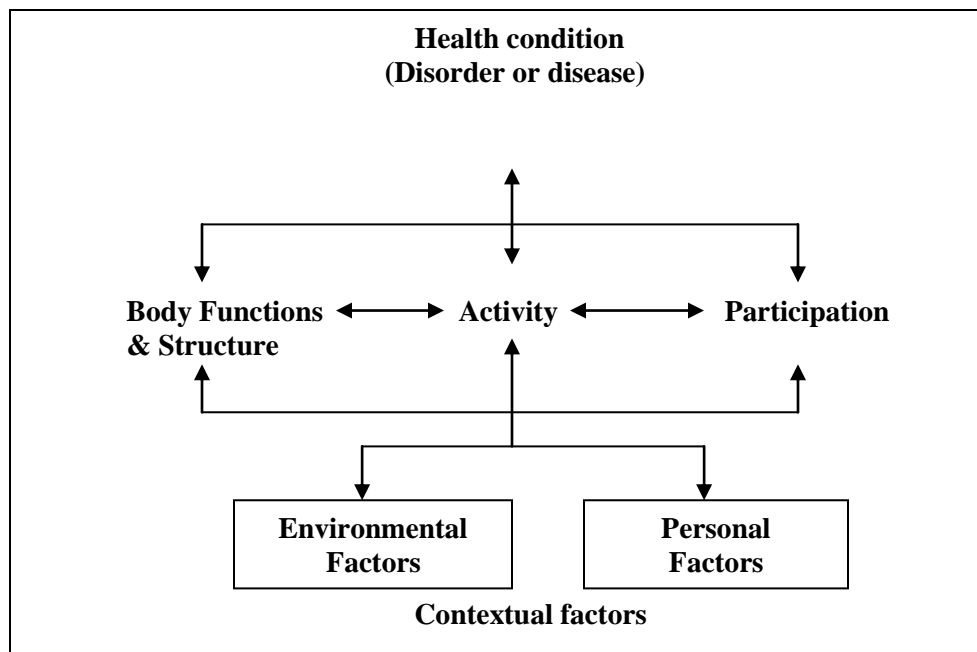


Figure 2.1 The interactions between the components of the International Classification of Functioning Disability and Health (ICF) (WHO, 2001)

- ❖ Body functions refer to physiological functions of body systems (including psychological functions).

- ❖ Body structures refer to anatomical parts of the body such as organs, limbs and their components.
- ❖ Activity refers to the execution of a task or action by an individual.
- ❖ Participation refers to involvement in a life situation.

2.3 DISABILITY AND POVERTY

Although defining disability is complicated and controversial, the relationship between disability and poverty is commonly accepted. The previously mentioned vicious poverty-disability cycle (see p.3) results in a situation where people with disabilities are amongst the poorest of the poor (Yeo & Moore, 2003). In reality not all people with disabilities are poor. Apart from direct costs of disability, such as payment of medical bills or assistive devices, disability can place a constraint on an individual's capacity to earn a living through reduced ability to work or inaccessibility of work environments and employment discrimination (Mitra, 2005).

A study done in the United Kingdom (UK) by Zaidi and Burchardt (2003) reflect that extra costs of disability are substantial and that these costs rise with the severity of disability. The previously mentioned authors also established that a household with a chronically ill individual needs 40.0% more income to reach the income level of a healthy reference household. These findings are supported by Chowdhury (2005) who reported that a dependent with severe impairments is three times more expensive to take care of than someone without disability. In rural India it was reported that the direct cost

of a chronic illness or impairment, in terms of equipment and treatment, averaged three months of a person's income (Erb & Harris-White, 2001). Furthermore, in developing countries people with disabilities are usually considered to be the responsibility of their families (Elwan, 1999). Thus family members take the role of full time caregivers and they are then unable to take up employment opportunities, resulting in loss of income.

2.4 DISABILITY PENSION

In light of the previously highlighted evidence on the association between disability and poverty, social assistance to people with disabilities is fundamental. Social protection is both a human right and an empowerment agenda among the African Union member states including Namibia (African Union, 2006). Social assistance to people with disabilities can include financial assistance, in-kind transfers and vouchers or fee waivers for selected services. However, the information available suggests that the majority of regular and predictable transfer schemes for people with disabilities are cash-based (Gooding & Marriott, 2007). The disability pension is part of the government's disability targeted safety net program to protect people with disabilities against chronic incapacity to earn a living (Mitra, 2005). In Namibia the National Pensions Act 10 of 1992, and the National Policy on Disability of 1997, provide the legal direction on the general administration of the disability pension. The disability pension is a public funded cash transfer for people who are unable to work due to disability.

Several countries have disability pension schemes specifically for persons with disabilities. The monthly amounts paid to people with disabilities vary from country to country. For example, amounts reported in 2009 converted to US dollars were as follows: Lesotho US\$16.60, Bangladesh US\$3, Brazil US\$125, South Africa US\$92, Mozambique US\$1.14 and Namibia US\$58.44 (Gooding & Marriott, 2009).

The annual cost of a disability pension in Namibia has increased over six fold; from N\$23.2 million in 1998 to over N\$150 million in 2010 as per calculation using the current number of disability pension recipients as reported by officials in the Ministry of Labour and Social Welfare according to monthly payment printouts (K. Strauss, personal communication 23 October 2011; Subbarao, 1998). The increase has been attributed both to the raise in individual monthly payment amount and the increased number of applicants as a result of increased societal awareness on the availability of the disability pension over the years.

Some within the disability movement feel that the disability pension is associated with 'welfarist' attitudes towards people with disabilities. They argue that it is important to provide skills and jobs rather than a disability pension (Swartz & Schneider, 2006). Contrary to the latter statement, others in the disability sector stress that the disability pension should not be viewed as creating dependency, but rather as enabling development by providing economic empowerment for overcoming many of the barriers

faced by persons with disabilities, and thus equalising opportunities (Guthrie et al., 2001).

The disability pension has a poverty reduction effect (Levine, Van der Berg & Yu, 2009; Loeb, Eide, Jelsma, Toni & Maart, 2008). In support of the latter statement the poverty reduction effect of the disability pension in Namibia has been found to be effective in reducing more severe forms of poverty (Levine et al., 2009). One rationale for providing disability pension to people with disabilities as a poverty reduction measure is to support them to meet the previously mentioned extra financial costs associated with having a disability. Another rationale is to provide a form of income replacement for people with disabilities who are frequently excluded from employment (Whitworth, Wright & Noble, 2006).

From the researcher's point of view the disability pension is an essential source of income especially to those who do not have any other source of stable income. However, the disability pension should not be regarded as the only approach to assist people with disabilities. It is crucial for people with disabilities to also be empowered with appropriate knowledge, skills and environments in order for them to maximise their potential in economic productivity and general socio-economic development of their own communities.

In Namibia the disability pension program is the only social grant program for the working age population who cannot work due to disability. This pension does not require any prior contributions by the recipients whereas contributions are required for disability social security or insurance schemes. All disability pension recipients get the same financial compensation in Namibian dollars. Unlike in developed countries' disability programs, the Namibian disability pension does not offer services, or incentives for its beneficiaries to return to work or obtain some form of income generation occupation (Mitra, 2009). This scenario may cultivate a culture of dependency and learned helplessness among people with disabilities. Alternatively, provision of a disability pension should be linked to some form of sustainable income generation: for example, protected employment, vocational rehabilitation or income generating projects for people with disabilities. The disability pension is often the main source of income and sometimes the only one for the recipients and members of their households (de Paoli, Gronningsaeter & Mills, 2010).

Some countries that provide disability pensions have scaled amounts depending on the severity of disability. Australia and South Africa make use of a two-tier system in which the amount paid to beneficiaries depends on the severity of their conditions. Disability pension recipients with severe disabilities receive higher amounts than those with moderate disabilities or chronic illnesses which require care but not permanent home care (Guthrie et al., 2001). Currently Namibia offers a flat rate for disability pensions despite differences in severity of disability among recipients.

A scale of benefits depending on the need could be introduced in light of evidence. For example, the amount spent on monthly medical expenses for the recipients of disability grants in South Africa varies from R7.00 to R1000.00, the amount on extra care from R19.00 to R780.00, the amount on therapy or treatment from R1 to R500.00, and the amount on other expenses from R10.00 to R800.00 (de Koker, Waal & Vorster, 2006). These different needs mean different levels of income are required by people with disabilities to meet their disability-associated monthly expenses. In Namibia free health care services are provided in public health facilities for people with disabilities. However, people with disabilities have to pay for transport to/from their homes and the health facilities. Furthermore, if there is need for home care they have to pay the caregiver.

2.4.1 Introduction of the disability pension in Namibia

Non-contributory state pensions for the elderly, and people with disabilities, were introduced in South Africa in 1928 (Sagner, 2000). These pensions were introduced to Namibia (the former South West Africa) in 1949 under the colonial rule of South Africa; only Whites were eligible during these early years. In 1965 Coloureds also began to receive pensions and Blacks commenced receiving pensions only in 1973 (Devereux, 2001).

During the pre-independence era from South Africa the pension system was both discriminatory and regressive; the poorer ethnic groups received a lower pension than

the wealthier ethnic groups. Table 2.1 shows the social pension payment schedule for Namibia in 1990 at independence for both old age and disability pension. It shows that the highest monthly amount was R382.00 for Whites and the least was R55.00 for the Owambo, Kavango and Caprivi ethnic groups.

Table 2.1 The social pension payment schedule for Namibia in 1990

Ethnic group	Pension per month 1R = 1N\$	Percentage of White
White	R382	100%
Coloured	R192	50%
Rehoboth "Baster"	R150	39%
Tswana	R100	26%
Damara	R75	20%
Herero, Nama	R65	17%
Owambo, Kavango, Caprivi	R55	14%

Source: (Devereux, 2001)

In 1990, upon achieving independence from South Africa's colonial rule, the new government of Namibia passed The National Pension Act of 1992. This meant a policy direction shift aimed at equalizing pensions across ethnic groups and removing discriminatory laws and practices (Government of the Republic of Namibia, 1992a, 1992b). By 1994 all racial disparities in payments of pensions were eliminated when a standard rate was imposed by the government (Devereux, 2001).

The National Pensions Act of 1992 also allowed for the possibility of means testing to be introduced. However, no attempts were made to act on this provision for several years. In 1997 the government's integrated poverty reduction strategy recommended the

introduction of a means test in order to reduce inequality as well as poverty (Government of the Republic of Namibia, 1997b). The National Poverty Reduction Action Program reiterated the need for a simplified means test that would ensure that those people most in need get the financial support (Government of the Republic of Namibia, 2002).

In 1998 the Department of Social Services drafted an amendment to the National Pensions Act of 1992. The amendment was aimed at introducing a means test in order that those persons, who received more than one pension and, those with other assets, should not be eligible for the pension (Government of the Republic of Namibia, 1998). There was neither disagreement nor agreement over the principle of introducing means testing. However, the parliamentarians disagreed on the mechanism for means testing. The draft amendment to the act was submitted to parliament during 1998 but was withdrawn by the Department of Social Services before being read and debated (Devereux, 2001). According to the director of Social Services, the major reason was the realisation that only a small number of pension recipients were not in poverty. The majority of recipients were already in poverty thus the administration of a means test that targeted to eliminate a very small group of people would not be cost-effective (B. Katjuongua, personal communication 21 December 2011).

The act defines disability pension as a non-contributory pension that provides a monthly income to Namibian citizens or permanent residents between the age of 16 and 60 years

who are unable to adequately provide for their own maintenance due to their physical or mental disability. Children below the age 16 years with disabilities apply for the child maintenance grants through the Ministry of Gender and Child Welfare; for people above 60 years the disability pension is automatically converted to a universal old age pension. People who are suffering from alcoholism or drug addiction, those who refuse treatment, and those who are obtaining long term care as in-patients in a state treatment facility are not eligible for the disability pension (Government of the Republic of Namibia, 1992b).

2.4.2 Disability pension assessment tools

In Namibia the medical report for disability pension is the official communication of the Ministry of Health and Social Services to the Ministry of Labour and Social Welfare certifying whether a disability pension applicant is eligible. This report provides the demographic details of the applicant and the results of the medical examination. Medical practitioners are responsible for completing this form. When completing the medical report for disability pension, medical practitioners are required to record factors about the applicant such as: gender; highest educational level; previous occupation; body system affected; diagnosis; cause of disability; duration of disability; percentage of disability; progression of disability; possible interventions to restore applicant's function; functioning capacity with respect to work; work settings suitable for the applicant; ability of applicant to adequately provide for own maintenance and effects of disability on life expectancy. In addition, some records can be attached to the medical

report for disability pension. For example, reports from allied health professionals such as occupational therapists/social workers/ audiologists.

Other countries have standardized assessment tools for determining eligibility for disability benefits. In the UK the personal capacity assessment tool has 14 categories: walking; sitting, lifting and carrying; speech; continence; walking up and down stairs; rising from sitting; manual dexterity; vision; remaining conscious without having epileptic or similar seizures during awake hours; standing; bending and kneeling; reaching; and hearing (Zeitzer, 2002). In this UK assessment the applicant is scored against the abovementioned physical and mental activities. A set threshold score is used to determine eligibility for disability pension.

Australia has adopted the ICF for use in assessing disability. An adult is defined as 'disabled' if determined so by the Adult Disability Assessment Tool (ADAT). This tool defines what encompasses moderate, severe, and profound disability (Guthrie et al., 2001). Firstly, the tool has a claimant questionnaire which gathers information on how well an individual manages his/her daily life. Secondly, a professional questionnaire is used as an objective assessment of execution of personal activities of daily living, such as grooming, feeding and bathing. The responses are coded and each has a score. To determine eligibility for disability pension the scores are totaled and compared to a set threshold score. Furthermore, there is a list of chronic illnesses covering all illnesses that qualify for assistance. Such an approach could be relevant in Namibia once the illnesses

considered to deserve disability pension have been determined. South Africa has initiated the process of developing uniform, simplified and more effective assessment procedures with regard to grants for people with physical, mental and sensory disabilities (Guthrie et al., 2001).

2.5 THE PROCESS OF OBTAINING DISABILITY PENSION IN THE KHOMAS REGION

Potential applicants, who either have a disability, or the caregiver for a person with disability, obtain information about the disability pension from community members, health workers or the media. Having obtained the information a potential applicant then makes a decision to apply. A medical report form for disability pension can be obtained from pension officers in the Ministry of Labour and Social Welfare or from the social workers in MoHSS. The person with a disability would then go, or be taken, to the nearest state health facility where there is a state medical practitioner in order to be assessed in terms of the prescribed medical report.

In the Khomas Region disability pension applications can be done at the Katutura Health Centre, the Katutura Intermediate Hospital and the Windhoek Central Hospital. Only those who reside in the region are allowed to apply for disability pension in the Khomas Region. Medical practitioners in each department, for example, psychiatry, surgery, or ophthalmology, independently assess and evaluate applicants and complete the medical report for disability pension in their respective departments. Completed medical reports

include the respective medical practitioners' recommendations to either approve or reject the application.

These completed reports are then forwarded to the CMO based at the Khomas Regional Health Directorate offices. The CMO has been delegated by the Permanent Secretary of Health and Social Services to make a final decision on the eligibility for disability pension (Government of the Republic of Namibia, 1992b). The CMO does not physically examine the applicant but analyses the completed application and makes a decision on the eligibility of the applicant for disability pension based on the information supplied in the medical report for disability pension. If the CMO cannot make a decision using the provided information he/she can send the application back to the medical practitioner for reassessment of the applicant or request to be furnished with more information in order to make a decision.

The CMO can either approve or reject an application. Approval can be temporary or permanent. A temporary disability pension can be granted for one year up to five years. At the end of the period an applicant has to reapply for the disability pension. A permanent disability pension is intended to last until a person enters the old age pension program. In this study the decisions of the CMO are divided into two outcome categories: approved and rejected. This means that in this study all approved applications, despite the differences in duration, are classified as approved. All applications that were rejected fall into the other outcome category.

The CMO then sends all applications to the pension officers in the Ministry of Labour and Social Welfare. The rejected applications are archived and all of the approved applications are processed for payment. The data gathering system, in the Ministry of Labour and Social Welfare, clusters the records according to pay points. This often presents technical complexities in retrieval of data on trends of disability pension over specified time periods.

The 1991 statistics from the National Housing and Population Census reflect that people with disabilities constituted 3.0% of the population (Government of the Republic of Namibia, 1991). In 1995 only 25.0% of people with disabilities in Namibia were recipients of the disability pension (Subbarao, 1998). The 2001 National Housing and Population Census revealed that people with disabilities in Namibia had increased to 5.0% of the population (Government of the Republic of Namibia, 2003). In 2002 a large household survey revealed that the proportion of people with disabilities receiving disability pension stayed fairly constant at 26.0% (Loeb et al., 2008). In South Africa, where means testing is used to determine eligibility for disability pension, 43.0% of all people eligible for disability pension in 2002 were actually receiving the disability pension (van der Westhuizen & van Zyl, 2002).

Considering that the disability pension in Namibia is not means tested, the previously mentioned disability pension percentage coverage of 26.0% is regarded to be very low. Such low percentage coverage of disability pension has been attributed to complex,

time-consuming and costly bureaucratic administrative processes. In addition, low public awareness of entitlements, and the limited spread of service delivery points to the potential beneficiaries, also contributes to the lower disability pension coverage (Gooding & Marriott, 2007). It is also evident that in some developing countries over 60.0% of people with disabilities are unaware of the existence of disability pension in their country (World Bank, 2007).

During the period of this study in Namibia the disability pension was paid on a flat rate monthly amount of N\$500.00 (about US\$63.00) is paid to each approved disability pension applicant. According to the officer responsible for statistics in the Ministry of Labour and Social Welfare by end of September 2011 there were 25 647 people on disability pension in Namibia. This translates to a total monthly amount of N\$ 12,823,500.00 that is spent on disability pension by the government (K. Strauss, personal communication 23 October 2011).

Coverage of the target population for the disability pension is difficult to accurately measure and as such the 26.0% disability pension coverage for Namibia may not be accurate. This is because information on the number of beneficiaries as a proportion of the total number of those eligible is difficult to credibly determine using housing and population census data because such statistics have been collected using different measures to those used for determining eligibility for disability pension (Community Agency for Social Enquiry [CASE], 2005).

In Namibia payments of pension payments can be electronically done through a bank or post office, posted by cheque to recipients' homes, or paid in cash from vehicles fitted with cash dispensing machines. Disability pension recipients are issued a smart card that includes biometric data. No beneficiary should have to travel more than 10 kilometres to reach a pay-out point (International Monetary Fund, 2006).

2.6 APPROACHES FOR DETERMINING ELIGIBILITY FOR DISABILITY PENSION

Governments typically have three goals with respect to their disability programs. Firstly to provide economic security of persons with disabilities, secondly to encourage work among persons with disabilities, and thirdly to keep government costs low (Honeycutt & Mitra, 2005). To reach these goals there is a need for implementation of procedures and processes to ensure that those entitled for disability pension are not deprived of their right to social protection while on the other hand controlling unnecessary payment of government's funds to those who are not eligible and are capable to work and earn a living.

The determination of eligibility for disability pension is a challenging area for most medical practitioners (Govender, 2009; Overland, Overland, Johansen & Mykletun, 2008). To determine eligibility for disability pension requires the need to first ascertain the presence of a disability. Ascertaining disability can be extremely complex and includes facing ideological, technical and administrative challenges, such as deciding on

an acceptable definition of disability (Gooding & Marriott, 2007). Disability is an evolving term that remains difficult to define let alone measuring it (WHO, 2011). The question a disability assessment has to answer is individual and categorical: “Does this person qualify for a disability pension or not?” Since disability is contextual, and fluctuates according to social and environmental conditions, makes it difficult to make a decision, to approve or reject an application (Swartz & Schneider, 2006).

Persons with disabilities form a very heterogeneous group and the challenge of determining eligibility for disability pension can be particularly acute in the case of invisible impairments, such as lower back pain, or episodic ones, such as certain mental illnesses (Gooding & Marriott, 2007). As a consequence a disability assessment is inherently prone to classification errors with some persons who are not ‘disabled’ receiving disability pensions (inclusion error) while others who are rejected are truly ‘disabled’ (exclusion error) (Mitra, 2010). It is important to note that inclusion errors can be as a result of the subjective nature of disability assessments as well as fraud in some situations (Zeitler, 2002).

In practice it is very difficult to determine whether or not a person is able to work as is the aim of assessment of eligibility for disability pension. Research, that examines the targeting effectiveness of disability programs, was done almost exclusively in developed countries (Benitez-Silva, Buchinsky & Rust, 2004; Mitra, 2010). Since disability is an umbrella term for impairments, activities and participation restrictions, determination of

eligibility for a disability pension can be done using different approaches: a medically based universal approach, a means testing approach, and assessment panels.

2.6.1 Medically based universal approach

The medically based universal approach evaluates a person's limitations as defined by the medical condition (Kroskstad, Magnus, Skrondal & Westin, 2004). Medical practitioners are principally responsible for recommending whether or not an applicant is eligible for disability pension (Govender, 2009; Kroskstad et al., 2004; Kroskstad, Johnsen & Westin, 2002). Logically applicants for disability pension with medical conditions regarded as severe and long term have a greater probability of being eligible for disability pension. An applicant becomes eligible for the disability pension without any further non-medical evaluation when this approach is used based on the reports of medical practitioners in terms of them confirming the presence of anatomical or functional limitations. The disability pension provided on this basis is universal in that everyone who is certified as having a disabling condition is eligible for the disability pension despite their economic wellbeing (Gooding & Marriott, 2007; Willmore, 2001).

Medical practitioners who assess disability pension applicants may refer the applicants for further assessment by other health professionals, such as occupational therapists, physiotherapists, social workers, behavioural scientists or specialists with specific competence to improve assessments (Jarvholm & Olofsson, 2002). When the assessment is finalized the medical report for disability pension, with recommendations, is either

forwarded to the next level for final approval or is forwarded to authorities responsible for processing the payments depending with the country's regulations.

In situations where medical practitioners complete a medical certificate/report for disability pension and forward it for final approval by a CMO or medical board, there are higher chances of the medical practitioners' recommendations being accepted (Jorvholm & Olofsson, 2002). This statement is supported by Ydreborg et al., (2007) who reported that the up to 90.0% of judgments in the social insurance board follow the recommendations of the medical practitioner who completed the medical certificate. Such decisions are based on assessment of an applicant's reduced work capacity due to medical reasons, and the judgement is based on a medical certificate and recommendations thereof (The National Insurance Board, 2002). Thus recommendations on the medical report for disability pension sent to the CMO for final approval are of great importance. This implies that the state's medical practitioners have a major function in completing medical reports for disability pension since they are required to provide details of diagnoses and treatment, functional limitations, possible further interventions, prognosis, and, finally, whether the applicant will be able to work or not (Soderberg & Alexanderson, 2005).

It is difficult for medical practitioners to give a specific diagnosis and it is more difficult to determine prognosis about recovery and future work capacity when disability pension applicants somatise their mental symptoms and/or when health problems and symptoms

are vague (Hussey, Hoddinott, Wilson, Dowell & Barbour, 2004; Overland et al., 2008). Applications from persons who have neuro-psychiatric conditions are more time-consuming and often demand an extended assessment to obtain clarification of their medical status (Mitra, 2005). Complicated medical problems, high unemployment rates and poverty; language difficulties and cultural differences, may complicate the assessments and make it difficult for medical practitioners to decide on eligibility for disability pension (Ydreborg et al., 2007). To contextualize this statement, language difficulties, and cultural differences in particular, could be common because Namibia has many expatriate medical practitioners.

Tremendous variations in disability ratings can be found when the same set of patients is assessed by different medical practitioners (Lax, Manetti & Klein, 2004; Wolfson, Doctor & Burns 2000). To decrease such variation the United States Social Security Administration (SSA) planned to develop functional standardized assessment tools that accurately measure an individual's functional abilities and that are universally accepted by the public, the advocacy community, and health-care professionals (Spanjer et al., 2010). Guidelines and protocols might further narrow the differences in assessment among medical practitioners (Streiner & Norman, 1995).

In the absence of standard procedures and criteria the state medical practitioners are the weakest link in determining eligibility for disability pension (Overland et al., 2008). This is because medical practitioners are often torn between the desires to relieve suffering among their patients and the responsibility to control state benefit payouts.

Medical practitioners end up awarding disability pension to those who would otherwise not be eligible (Hussey et al., 2004). The role of medical practitioners' in state health facilities implies finding a balance between advocating for the applicant's expectations to receive the disability pension and their health needs, and acting as a 'gatekeeper' on behalf of the state by restricting unwarranted access to this public benefit-scheme (Overland et al., 2008). The execution of this function is difficult when specific factors used to determine eligibility for disability pension are unknown, as is the current situation in Namibia.

In a South African study on HIV/AIDS, disability grant and antiretroviral treatment adherence, many medical practitioners stated that there were no clear national guidelines concerning eligibility for the disability pension (de Paoli et al., 2010). From one perspective this gave them some flexibility in evaluating disability pension eligibility whereas from another perspective it also increased the pressure on them to make a decision that might be unethical. This can be illustrated by the following quotations from some of the medical practitioners who were interviewed in the South African study: one medical practitioner said: "The most difficult thing about being a doctor is that you have to write disability grants. It is like you are God. You just have to look at the person's face and decide about whether they qualify or not" (de Paoli et al., 2010, p. 17). This indicates that a decision to approve disability pension may be very subjective in the absence of well defined criteria.

Another medical practitioner said: “I always enquire about their employment. If they are employed, and their general health condition is good, I do not offer disability grant. In cases where there is no income through employment, I offer disability grant” (de Paoli et al., 2010, p. 17). This indicates to some extent the socio-economic status of a disability applicant can be considered to determine eligibility for disability pension. The same action may be interpreted as if the extra costs faced by people with disabilities are not considered when determining eligibility for disability pension.

In a similar study on sickness certification in the UK general practitioners described conflict of interest surrounding determination of eligibility for sick pay. One general practitioner said: “I consider my relationship with a patient possibly more important than being that government officer that says you shall get no sick pay because you are fit for work” (Hussey et al., 2004; p.3). In the absence of established criteria there can be bias among medical practitioners in determining eligibility for disability pension. In a South African survey, regarding social grants capability, the results reflected that senior social security officials expressed concerns on the implementation of the disability pension program because of difficulties in conducting medical assessments (van der Westhuizen & van Zyl, 2002).

Most medical practitioners receive little or no training in the process of conducting assessments for disability pension (Mitra, 2010). With shortages of such practitioners, it is a challenge to the health systems to provide disability assessments thereby reducing

accessibility of disability pension to people with disabilities (Thomas, 2005). Furthermore, where health resources are limited medical practitioners may feel resentful if expected to do other tasks hence could try to avoid work which they see as more administrative, such as assessments for grants rather than the clinical work for which they were trained (Watermeyer, Swartz, Lorenzo, Schneider & Priestly, 2006).

Medeiros, Diniz and Squinca (2006) note that the ambiguities in defining who has a disability indicate that the disability application forms designed to guide the examination process are considered by many clinical teams as being inefficient. In addition, many doctors who are working as assessors have not received specific training for the assessment hence generate a risk that the disability targeting system may lack uniformity (Govender, 2009). As a result medical practitioners end up giving secondary importance to the application forms and the legal definitions of disability and tend to use their discretion to determine eligibility for disability pension (Watermeyer et al., 2006).

Equating an anatomical or functional limitation with inability to work or earn a living, may not be the case depending on many other aspects, such as the applicant's age, education, income, previous work experience, and skills (Zeitler, 2002). Assessments of capacity to work is particularly challenging for medical practitioners given that barriers preventing people with disabilities from working are complex (Ydreborg et al., 2007). The barriers include inaccessible physical environments and negative attitudes and discrimination of society. Other barriers to employment, such as low self-esteem, a

lack of social, technical and practical skills, and low educational attainment, might also need to be considered when determining eligibility for disability pension (Gooding & Marriott, 2007; Mitra, 2005).

It is also notable that very few human beings are not biologically capable of doing some kind of work and most people with severe physical and intellectual impairments are capable of some form of labour activities (Medeiros et al., 2006). Therefore, defining 'inability to work' requires more of an understanding of the local labour markets than just clinical knowledge. People with the same impairment can have very different needs, depending on social, economic, physical and environmental factors, as well as support structures and resources available to them (Guthrie et al., 2001). Thus a holistic assessment procedure should include all the needs of an applicant and not only the type and severity of all types of impairment or illness.

To a greater extent measuring impairment can be more objective compared to other socio-economic characteristics (Cocchiarella & Lord, 2001). Clearly articulated medical standards and assessments tools, that ascertain disability, can be used by medical practitioners trained in assessing disability (Wind, Goutteborge, Kuijer, Sluiter & Frings-Dresen, 2009). For accountability and transparency there should be a quality review system. For example, medical practitioners should know that a percentage of their decisions will be randomly selected and subject to quality reviews by higher level authorities so that they must document why they did or did not award benefits. There

should also be a heavy reliance on objective findings such as signs, symptoms and laboratory findings to back up any decisions made. However, medical standards should only be the first level of assessment and further socio-economic assessments should be done to obtain a holistic understanding of the applicant before making a decision on eligibility for disability pension (Zeitzer, 2002).

Despite some technical challenges that haunt the medical based approach to determine eligibility for disability pension it has its strengths and advantages. There is growing evidence that cash-transfers that are allocated according to category (for example, old-age or disability) and then applied universally without means testing are very effective in tackling vulnerability (Barrientos & Lloyd-Sherlock, 2002). Universal disability pensions are simple to manage and have much lower administrative costs than the conflict-ridden means-tested ones (Devereux, 2001; Inter-Regional Inequality Facility, 2006).

2.6.2 Means testing approach

Means testing is a way of measuring a person's income and assets to determine eligibility for disability pension (Hussey et al, 2004; Gooding & Marriott, 2007). In its purest form this approach implies that a person with a severe disability who has a high income will not be eligible for disability pension (Szymendera, 2004). When using income based means testing, the value of an applicant's assets and earnings should not exceed a specified amount of money for him/her to be eligible to receive a disability

pension (Devereux, 2001; Gooding & Marriott, 2009; Kroskstad et al, 2002; Kroskstad et al., 2004). The earnings of spouses are also taken into account when the income based test is applied to a married applicant; usually there is a threshold amount for married applicants which are higher than the threshold of single applicants (South African Social Security Agency [SASSA], 2011). However, the initial evaluation, or part of the evaluation, should still be medical to ascertain if the applicant has a disabling condition (Zeitzer, 2002).

Some research studies reflect that a diagnosis of a health condition alone does not predict service needs, level of care or functional outcomes (Jelsma, Maart, Eide, Toni & Loeb, 2008; Kroskstad et al., 2002). The presence of a disease or disorder cannot solely be an accurate predictor of being eligible for disability pension, work performance, returning to work potential, or likelihood of social integration (WHO, 2001). This is the reason why some countries shifted from the universal approach to the means testing approach to determine eligibility of applicants for disability pension (Gooding & Marriott, 2007; Mitra, 2005).

Mitra's (2005) study of several countries providing disability pension revealed that Namibia and Kyrgyzstan were the only countries that did not use means testing to determine eligibility for disability pension. However, for Namibia the National Pensions Act 10 of 1992 makes provision for means testing to be done but there is evidence that it has not yet been put into effect (Government of the Republic of Namibia, 1992b).

In the United States of America the process of determining eligibility for the Supplemental Security Income (SSI) for people with disabilities requires a means test. One of the requirements of the five step disability test is that eligible applicants must earn less than US\$810 per month (Szymendera, 2004). Ireland also offers means tested social assistance programs to persons with severe disabilities who require full-time home care and caregivers (Guthrie et al., 2001). In Brazil the continuous cash benefit program (BCP) is a monthly cash transfer paid to poor individuals with disabilities who are unable to work because of disability (Medeiros et al., 2006). The BCP threshold for persons to be eligible is a family per capita income of less than 25.0% of the value of minimum wage (below US\$1/day in December 2005). Family per capita is evaluated by means of a questionnaire that gathers information on occupational status of family members and the declared income of all sources of each member. However, there is no standardized protocol to test the trustworthiness of the declared information but verification thereof resides with the social worker conducting the evaluation (Medeiros et al., 2006).

In South Africa people with disabilities who meet the requirements of a means test are entitled to disability grants. The South African Social Security Agency (SASSA) administers the disability grant. To qualify for the disability grant a single person should not have assets that exceed R752 400.00 and the joint marital assets of a 'disabled' married applicant should not exceed R1, 504 800.00. However, the value of a house that a person lives in is not taken into account regardless of who it belongs to. For the

income threshold, a single person should not earn more than R3 740.00 per month or more than R44 880.00 per year; and a married person's joint income with his/her spouse should not exceed R89 760.00 per year, or R7 480.00 per month. The assets and income of a spouse are taken into account whether they are married in or out of community of property (SASSA, 2011).

The decision to limit disability pension to those considered unable to adequately provide for their own maintenance on the basis of a means test is controversial. This is because means testing for disability pension often focuses on the income of the applicant rather than the added expenditures brought by disability (Gooding & Marriott, 2007). Difficulties surrounding means tests include: administrative challenges in accurately measuring individual or household income; maintaining an accurate database of applicants' income status, and hard moral choices of selecting the poorest in a community where poverty is widespread (Devereux, Marshall, MacAskill & Pelham, 2005).

Some disability organisations argue that the extra costs associated with disability can be interpreted to mean that disability pension should be provided to all regardless of income levels, in order to equalise opportunities (Inter-Regional Inequality Facility, 2006). The extra costs faced by people with disabilities imply that the general poverty line may not be appropriate to judge the poverty status of a person with disability (Medeiros et al., 2006; Mohapatra, 2004). If a fixed measure of income is used to assess

eligibility for disability pension this could mean that people with disabilities would not get the assistance needed to achieve the same outcomes as those who do not have disabilities. Therefore, when using this approach it is recommended that consideration should be given to the extra financial needs and costs incurred by a person with disability. For example, costs incurred for several follow-up hospital visits, home adaptations and assistive devices, or even payment of a caregiver (Dube, 2005).

Developing countries generally lack the administrative capacity required to run disability targeting cash transfer programs (Mitra, 2005). Means testing requires an administrative infrastructure for successful program implementation for the collection of adequate information of applicants and for monitoring disability determination decisions (Mitra, 2005). Furthermore, means testing is costly, as was noted in the United States of America. Disability benefits accounted for only 15.0% of social security's total benefit payments for its old-age and survivors and disability insurance programs, whereas administering the disability benefits accounted for 45.0% of the agency's annual administrative expenses (Old-Age and Survivors Insurance and Disability Insurance Trustees, 2004). These administrative costs include those incurred: in the initial screening, in delivering benefits, and in undertaking periodic assessments to determine if applicants are still eligible, since some disabilities may be temporary and income may change over time.

The administrative requirements associated with means testing are also generally thought to be the main barrier to a greater up-take of disability grants among poor rural households in South Africa, for example (Samson, MacQuene & van Niekerk, 2006). This is because peripheral rural areas in most African countries, including Namibia, have the least access to the official identification documents necessary for one to access a disability pension. Furthermore, the income test discriminates against households with many dependants since the same threshold of earnings is used for small and big families. This means that in a very big family each individual utilises far less income compared to a smaller family with the same income (Samson et al., 2006). As a result the nature of this means test has been described as controversial, complex, and demanding huge administrative resources. The total expenses incurred in attempting to implement effective means testing cannot be justified; money spent could instead be channelled into providing a universal grant to more recipients (Guthrie et al., 2001).

The use of means testing heavily depends on a country's incidence of disability, administrative capacity, and expected administrative costs. In countries where people with disabilities are over represented among the poor, a means test can effectively allow poor people with disabilities to access the disability pension (Mitra, 2005). Despite a provision in the Namibian National Pensions Act for means testing, it has not been used due to foreseen administrative challenges of estimating incomes, especially in rural areas given the role subsistence economy and the nature of the extended family (World Bank, 1995). In view of the high administrative costs and complexities of means testing, some

provinces in South Africa have resorted to community-based targeting in the form of assessment panels to determine applicants who are eligible for disability grants.

2.6.3 Assessment panel approach

While means testing by administrators and government officials is complex and costly, especially in developing countries, the community may be in a better position than program administrators to determine eligibility for disability pension (Simchowitz, 2004; Swartz & Schneider, 2006). The use of a community assessment panel could potentially reduce the complexity and cost of disability targeting (Gooding & Marriott, 2007). Some provinces in South Africa use assessment panels to determine eligibility for disability grants in view of a concern that a district surgeon makes the final decision on eligibility without meeting an applicant in person (CASE, 2005). Arguably if the assessment panels are adequately trained and monitored, they may well be more capable of identifying those most in need of disability pension (Gooding & Marriott, 2007).

The assessment panel may, but is not required to, have medical practitioners as part of their composition. Assessment panels may have flexible membership but should include: a senior social security official; a rehabilitation therapist; a disability sector or a reputable member of the community (for example, a priest), the chief magistrate, or a person who is familiar with the community and its circumstances; and a member from the medical fraternity, such as a doctor, or specialist doctor, if necessary (Gooding &

Marriott, 2007; Mutasa, 2010). The panellists are required to evaluate information and determine eligibility for disability pensions.

Since the panellists are members of the same community as that of the disability grant applicants they (the panellists) are able to observe applicants over a long period of time. The panellists are therefore more competent to detect 'invisible' disabilities compared to medical practitioners who undertake a quick assessment. A mixed panel of representatives benefits from the diverse experience and insights of the different professional and community backgrounds of the panel members. Arguably, this method offers applicants a fairer and more reliable service while reducing corruption (Swartz & Schneider, 2006). In addition this approach may allow for the use of locally relevant, appropriate, and transparent definitions of disability which may differ from those in western medical models (Erb & Harris-White, 2002).

The introduction of assessment panels was perceived as a move closer to the social model approach which takes into account environmental and social barriers faced by people with disabilities. However, this more flexible and context-specific process has its own challenges (Mitra, 2005). In some provinces there is considerable variation in practices of assessment panels when awarding disability grants which brings to the fore questions on equity (Simchowitz, 2004). Furthermore, there are no detailed uniform criteria for assessment, leading to uncertainty and variability between individuals in the eligibility criteria and interpretation thereof.

In some cases an assessment panel fails to include medical or rehabilitation staff yet a medical evaluation is an essential baseline for determining eligibility for disability pension (Zeitzer, 2002). Without any medical baseline, the system becomes subject to political and financial corruption and perceived as unfair and subjective. The result is reported to be a loss of control, the absence of a consistent set of rules for assessment and a high degree of subjectivity (Steele, 2006; Swartz & Schneider 2006; Whitworth et al., 2006).

Furthermore, assessment panels based on cultural norms can be discriminatory depending on some cultural practices and stigma (Howell, 2001). Community-based targeting that pertains to disability is unlikely to work in communities where persons with disabilities are socially excluded (Mitra, 2005). Many people want their medical status to be private thus the effectiveness of using the assessment panel approach could be limited if, for example, the panel included their neighbours.

2.7 FACTORS ASSOCIATED WITH DETERMINING ELIGIBILITY FOR DISABILITY PENSION

Clarity on the factors that differentiate between approval and rejection for disability pension promotes transparency and fairness on the part of medical practitioners or administrators involved in assessments for disability pension (Gooding & Marriott, 2007). This is also vital to protect against abuse of the disability pension facility by non-qualifying applicants. Several factors, such as age, gender, poverty and unemployment,

educational level, previous occupation, social class, body system affected, percentage of disability and functional abilities, can be considered when using the previously discussed approaches for determining eligibility for disability pension.

Old **age** has been documented in developed countries as a factor associated with approval of disability pension. Presumably this is due to the association of old age and chronic medical conditions and reduced chances of finding employment especially between the age of 50 and 60 years (Govender, 2009; Kivimaki et al., 2007; Mitra, 2010). These findings correspond with disability trends in developed countries where age is closely and positively associated with disability (Eide et al., 2003). However, in Southern Africa (including Namibia) there is a relatively even distribution of disabilities across age categories (Eide, Loeb, Van Rooy & Fuller, 2001). This phenomenon may give a different association between age and disability pension eligibility.

Literature on the association between **gender** and eligibility for disability pension show mixed results. In some countries females have higher chances of receiving disability pension while in other countries males have statistically greater risk for receiving disability pension. Kavimaki et al. (2007) found the risk for disability pension to be higher in women compared to men in Norway. Furthermore, Borg (2001) also found the relative risk of being granted disability pension higher among females compared to males: 27.0% of female applicants were approved for disability pension while only 14.0% of male applicants were approved.

A study on the predictors of disability pension among Danish men and women revealed that there was a higher disability pension rate among women compared to men (Albertsen, Lund, Christensen, Kristensen & Villadsen, 2007). However, some studies in developing countries show that males and females are equally likely to be on disability pension (Mitra, 2010). The percentage distribution of people with disabilities in Namibia is almost equal between males and females: males =50.6% and females =49.4% (Government of the Republic of Namibia, 2003). However, no studies have been done to find the association between gender and approval/ rejection for disability pension in Namibia.

Poverty and **unemployment** have been identified as important factors for people to apply for disability pension. It is known that people of low socioeconomic status have worse health status and higher health care requirements than people of high socioeconomic status because of many diseases associated with poverty (Beckman, Hakansson, Rastam, Lithman & Merlo, 2006). Therefore, they have a higher probability of having disability and eventually being in need of a disability pension (Kroskstad et al., 2002; Jelsma et al., 2008). The disability pension has been documented as more prevalent in low socioeconomic groups and among the unemployed (Albertsen et al., 2007).

A study done in South Africa reveals that many disability pension applicants displayed no medical condition or disability; instead they only had financial needs (Govender,

2009). However, when all of the participants were asked directly they mentioned a medical condition as the reason to apply for disability pension even though the medical practitioners could not find proof of the existence of such medical conditions or impairments. Destitute people tend to explore a wide variety of means of survival; application for disability pension is one of the options (Aliber, 2001).

Generally low **education** levels are associated with receiving disability pension. In terms of this study educational levels are divided into five levels: those who have never attended school; those who ended their education at primary school level, junior and secondary school levels, respectively; and those who attended tertiary education institutions, such as a college or university. Level of education has remained a predictor of disability pension, the particular attenuator in this association being a low intelligence quotient (IQ) level (Johansson, Leijon, Falkstedt, Farah & Hemmingsson, 2011). Disability pension recipients were found substantially less educated and three times more likely to be illiterate compared to non-recipients of disability pension (Mitra, 2010). Bruusgaard, Smeby and Claussen, (2010) found a dramatic increase in the prevalence of persons granted disability pension with decreasing years of education across all levels of education.

Type of **previous occupation** has been documented as a factor associated with eligibility for disability pension. In terms of this study types of previous occupation are divided into four categories: those who have never been employed; those who were in

unskilled employment; skilled employment; and professional employment. In their study Mansson, Rastam, Eriksson and Israelsson (1998) reflect that the chances of being granted disability pension was higher among disability pension applicants who had the least skilled previous occupation. The cumulative incidence of disability pension according to a previous occupation was higher for unskilled (17.0%), followed by semiskilled (11.0%) and 6.0% for professional occupations, respectively. Furthermore, the Relative Risk (RR) for being granted a disability pension was 2.5 among the unskilled category and 1.6 among the semiskilled and skilled. Those who had no previous occupational history were found to have a higher RR of receiving disability pension (Kivimaki et al., 2007).

Former employees in work places with high employee development and supplementary training programs have a lower risk of receiving disability pension compared to former employees at work places without such programs (Albertsen et al., 2007). Other previous occupation-related factors that have been associated with an increased risk for disability pension include: heavy work, work in uncomfortable positions, long working hours, noise at work, and repetitive muscle strain. Psychosocial work environmental factors include: mental job strain, non-stimulating work, substantial complexity, low decision latitude, high demands, lack of social support from supervisors, and low skill discretion (Albertsen et al., 2007).

Social class as depicted by the area where the person with disability resides and its **socioeconomic characteristics** also seem to affect an individual's likelihood of receiving a disability pension (Johnell et al., 2006). Socioeconomic characteristics relevant to this study refer to the disability pension applicants' earning levels in terms of enabling them to provide for their own maintenance. Low social class has been associated with approval for disability pension (Govender, 2009; Kroskstad et al., 2002). In their analysis Kroskstad et al. (2004) established that people residing in the intermediate and most deprived areas had an increased relative risk of receiving a disability pension compared to people residing in more affluent areas. Members of a given ethnic group with disabilities tend to identify themselves, and be identified by others, on the basis of specific characteristics (Beckman et al., 2006). They share a number of economic, social, and cultural characteristics in addition to a common geographic origin and language; they exhibit a related probability of receiving disability pension.

Injuries, infections and non-communicable diseases have been documented as some of the **causes** of disabilities among disability pension applicants (Kivimaki et al., 2007). However, there is lack of literature on the association between the cause of disability and the decision to approve or reject disability pension applications. Scarcity of such literature could be as a result of greater focus being placed on the effect of the disability on a person's ability to work and earn a living rather than what caused the disability (Hussey et al., 2003).

In most countries, **musculoskeletal conditions and mental disorders** are the two diagnostic groups that are most often associated with receiving disability pension (Kivimaki et al., 2007; Layard, 2006). Back pain diagnoses have been documented as recurrent and one of the main diagnoses behind disability pension eligibility (Borg, Hensing & Alexanderson, 2004). In developing countries HIV/AIDS significantly contributes to inability to work thereby raising the need for disability pension especially in settings with inadequate medication and nutrition (de Paoli et al., 2010). In Namibia an HIV positive status is no longer a guarantee that one will receive a disability pension (Maletsky, 2005). However, the association between HIV/AIDS and determination of eligibility for disability pension in practice has not been documented in the Khomas Region.

Physical and cognitive functional abilities are assessed to determine eligibility for disability pension. These mentioned functional abilities will determine capacity in performance of Activities of Daily Living (ADLs) by disability pension applicants. However, in some studies results reflect that there is no association between degree of difficulty in both physical and cognitive functional domains and the eventual outcome of approval or rejection of disability pension (Govender, 2009; Kroskstad et al., 2002). In South Africa it has also been found that people receiving disability pension do not necessarily have limitation in some physical and/or cognitive functional domains (Govender, 2009).

The physical and cognitive functional components listed on the Namibian medical report for disability pension can be viewed as less comprehensive compared to the functional areas that are considered in other countries that have adopted the use of the ICF as a guide for the assessment of eligibility for disability pension (Guthrie et al., 2001). The ICF gives a wide range of functions and how they can be measured. It also provides and defines ADLs that can be assessed with some degree of objectivity. The responses on the Namibian disability pension application form are either 'yes' or 'no' and are restrictive when assessing physical and/or cognitive functions (Altman & Barnartt, 2006). Instead, a measurement of difficulty to perform a function can be better understood if it is rated as being, for example, mild; moderate; severe or complete (WHO, 2001).

Percentage of disability or scoring of impairments can be used to classify or establish levels of disability when determining eligibility for disability pension. In some countries numerical scores, or points, are used to determine eligibility for disability pension. In Australia impairments tables are used and applicants who have impairments of 20 points or more are eligible for the disability support pension (Australian Government, 1991).

According to Swedish legislation, people whose work capacity is permanently reduced by at least 25.0% as a result of physical or mental illness or impairment are eligible for disability pension (The National Insurance Board, 2002). In India, in order to qualify for a disability certificate a person must have a physical examination by a medical

practitioner and be considered 'disabled' by at least 40.0% of 'normal' physical or mental capacity (Whitworth et al., 2006). However, in India there is no clear guidance for medical assessors; implementation of the disability test is difficult and subjective. There is also evidence suggesting that this widens the space for frequent use of bribes within the system as people seek to ensure that their applications are approved (Pellissery, 2005; Whitworth et al., 2006).

In Mauritius eligible citizens for disability pension are those who are certified by a medical board as either permanently or substantially incapacitated to work by 60.0% of expected functional level (Madotyeni, 2000). In some of South Africa's provinces the reports from the district medical officer attempt to reflect the level of disability suffered by the individual as a percentage. Where the report reflects more than 50.0% disablement the person is entitled to receive a disability grant (Guthrie et al., 2001).

In Namibia the medical report for disability pension requires the medical practitioners to state the percentage of disability. However, there are no guidelines on what percentage of disability should determine eligibility of an applicant. Moreover, since there is no standard or scale used to estimate percentage of disability medical practitioners use their discretion. This may expose the process to bias, prejudice, and corruption. The association between percentage of disability and eligibility for disability pension has not been documented in Namibia.

The probability of obtaining a disability pension may depend on other types of factors that are operating on different levels (Suominen et al., 2005). It is known that a patient's ability to communicate information and articulate his/her health and/or socioeconomic needs influence the provision of health care and disability pension (Ostlund, Borg, Wide, Hensing & Alexanderson, 2003). Decisions to grant disability pension may also be based on a combination of many factors which may individually not guarantee an approval. It is therefore essential for all previously discussed factors to be considered collectively when determining an applicant's eligibility for a disability pension (Kroskstad et al., 2002).

Most of the studies focus on describing factors associated with approval for disability pension. According to the principles of justice, transparency, and fairness, it is also imperative to identify the particular factors associated with rejection of disability pension applications. This will not only help those who are rejected to understand the reasons why they were not eligible but will also empower those who want to appeal against the rejection of their applications. Furthermore, such information is also helpful for educating potential applicants about what to expect during the disability assessment as well as the basis of the outcome decision of their application for disability pension.

2.8 SUMMARY

This chapter provided a review of literature on defining disability, disability and poverty, disability pension, approaches for determining eligibility for disability pension

and the factors associated with eligibility for disability pension. Literature shows that disability assessments remain a complex domain. Clear eligibility criteria for disability pension, as well as transparent decision making, remain a priority focus (WHO, 2011). Several factors have been reportedly linked with eligibility for disability pension. However, there are some factors listed on the medical report for disability pension in Namibia whose association with approval or rejection for disability pension has not been documented elsewhere. Chapter 3 describes the research methodology and design used in this study.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 INTRODUCTION

Chapter 2 provided an overview of the literature review and conceptualization of the study. The current chapter focuses on the research methodology and design used in this study. The purpose of this study was to explore and describe characteristic factors of approved and rejected disability pension applications, and to identify factors associated with rejection of disability pension applications in the Khomas Region. To address the purpose of the study a quantitative, analytic, case-control study design is described. The population, sample and sampling used in this study are described. The data extraction form, validity and reliability, procedures for data collection, and data processing, are also described. Ethical considerations that were followed in this study are outlined in this chapter.

3.2 RESEARCH DESIGN

Quantitative research is a formal, objective, systematic process in which numerical data are utilized to obtain information about the world (Carter, 1996). In this study, a quantitative, analytic, case-control design based on a record audit was used to determine the association between variable factors and disability pension eligibility outcomes. Numerical data were used to descriptively describe the factors characterizing disability pension applications. Quantitative analytic research designs aim to determine the

relationship between an independent variable and a dependent or outcome variable in a population (Wakefield, & Fleming, 2009). For this study the relationship between various factors and approval or rejection for disability pension need to be determined.

Analytical study designs are used when investigating the association between an outcome and possible causes or exposure factors. Cohort studies and case-control studies are examples of analytical studies (Stommel & Wills, 2004). For this study a case-control design is relevant since use is made of the cases and controls regarding the outcome of approval or rejection of disability pension applications. However, there is a need to determine the association between various factors and the outcome: approval or rejection of disability pension applications.

Case-control study designs compare cases and controls. Cases are those subjects with a particular attribute; controls are subjects without the particular attribute (Mann, 2003). In this study the cases are the rejected disability pension applications and the controls are the approved disability pension applications. The aim of case-control studies is to compare exposure factors to outcomes. Some of these exposure factors are: the body system affected, diagnosis, percentage of disability to outcome of disapproval of disability pension application (Thompson & Dowding, 2009). Possible predictors of an outcome can be identified through this method. The aforementioned exposure factors are compared to the outcome of either approval or rejection of disability pension applications. Furthermore, a case-control study design can be used to determine the

relative importance of predictor variables in relation to the outcome of approved or rejected disability pension applications (Mann, 2003). Case-control studies only establish associations between variables without manipulating them. In addition, case-control studies are useful in generating hypotheses which may need further testing by stronger experimental designs (Jekel, 2007).

This study was based on the records of disability pension applications. Therefore the completed disability application forms were reviewed. The association between the outcome (approval or rejection) and independent variables (factors on the medical report for disability pension) was determined without manipulating the variables – hence this is a case-control study design. Furthermore, this research paradigm is positivistic in nature, meaning that objective, quantifiable measures and techniques allow a researcher to attach meaning to the quantified research results. This research paradigm reflects a pure scientific model with measures of validity, reliability and extrapolation to similar research populations.

3.3 RESEARCH METHOD

3.3.1 Population

A research population is the entire group of people about which information is collected and to which the results of the research can be generalized. The target population for this study includes records of disability pension applications in the Khomas Region. Only

disability pension applications reviewed by the Khomas Region Chief Medical Officer (CMO) between 1 January 2008 and 31 December 2010 were included as the target population. As stated above records of rejected disability pension applications constitute the cases, while approved disability pension applications constitute the research control group.

3.3.2 Sample and sampling

A sample is a sub-set of a population that represents the whole population from which it has been extracted. Sampling is the process of selecting units, such as people, records or organizations from a population of interest so that by studying the sample, the results may fairly be generalized to the population from which they were chosen (Trochim, 2000). Simple random sampling can be used to extract the required sample size from the population in a case-control study design. However, for this study sampling was not done because the retrieved records matched the estimated sample size as revealed subsequently.

The sample size for this study was estimated using Epi Info version 5.3.1 statistical package sample size calculator for 95.0% confidence interval, 80.0% power, a ratio of 1:4 (case: controls), 35.0% expected frequency of exposure for priority socio-demographic, medical and functional characteristic factors in the controls and an odds ratio of 1.5. Therefore, the estimated sample size according to the Epi info sample size calculator is 260 cases and 1 040 controls, respectively. The retrieved data yielded 267

rejected and 1114 approved records, respectively, for the period 1 January 2008 to 31 December 2010. Of all the retrieved disability pension applications, 18 approved and seven rejected were found to be either distorted or had significant data elements missing and as such were not included in this study. Therefore, subtracting the excluded applications gives a total 1096 approved applications and 260 rejected applications that were included in this study.

The estimation according to the Epi-info of 260 rejected records matches the total number of the population for the rejected applications for disability pension. The estimation according to the Epi-info of 1040 for the approved records is lower than the number of 1096 for the population for the approved applications for disability pension. Therefore, all the retrieved records that were complete were included in this study since the total retrieved records were in the range of the estimated sample size. Hence, the cohort of all retrieved records was included in this study to meet the estimated sample size requirements derived from Epi Info version 5.3.1 thus no sampling was done. Figure 3.1 shows the schematic diagram of the selection process of the study population and sample, excluding the distorted records and those with missing significant data elements.

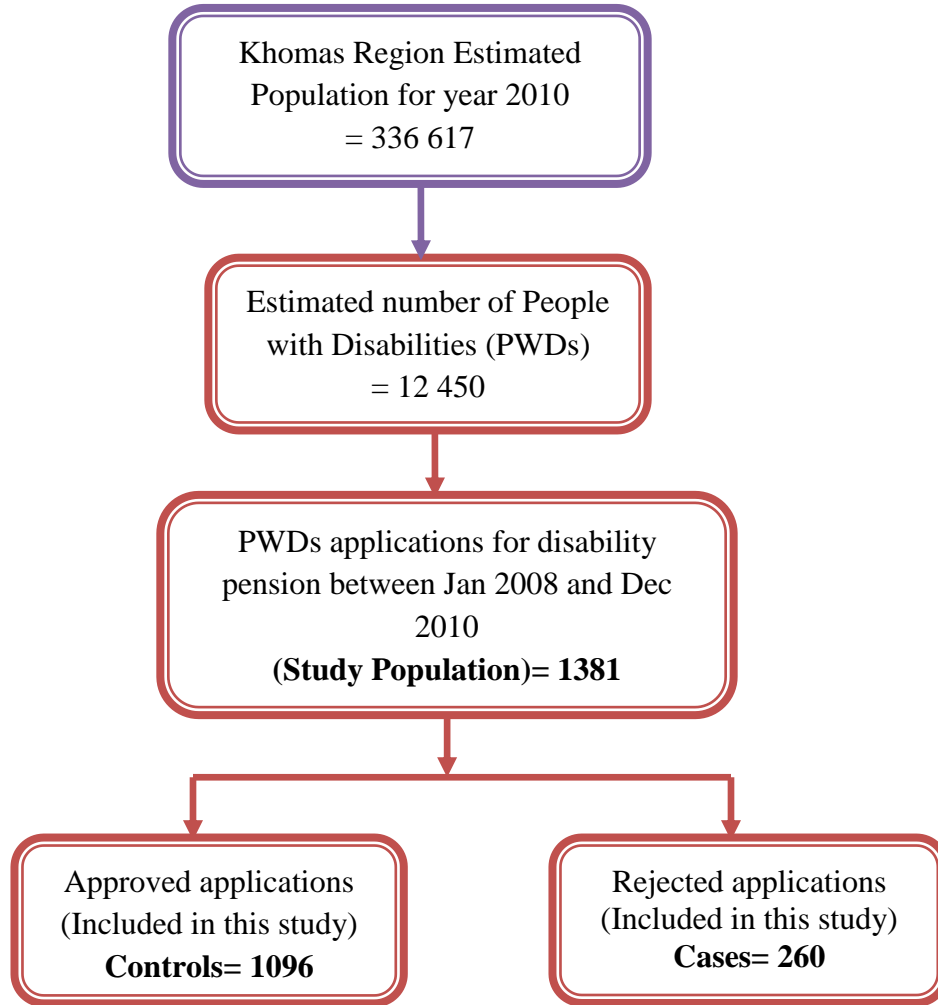


Figure 3.1 Schematic diagram of the study population selection process

3.4 THE DATA EXTRACTION FORM

The medical report for disability pension was used to identify data elements (also referred to as variables in this study) that could be collected for this study. A data extraction form (Annexure G) was developed to extract desired data elements directly from the medical report for disability pension. The variables of interest were categorized into socio-demographic factors, medical factors and work capacity factors. The socio-

demographic factors include: age; gender; income; education level and occupational history. Medical factors include: body system affected; diagnosis; type of disability; nature of disability; cause of disability; percentage of disability and effects of disability on life expectancy. Work capacity factors include: functional abilities; physical and psychological capacity with respect to work.

3.5 PILOT OF THE DATA EXTRACTION FORM

A pilot study was conducted to develop, to adapt, or to check the feasibility of techniques for gathering data and to determine the reliability of measures (Hopkins, 2000). In addition the pilot study was done to check the feasibility of collecting data using the data extraction form, to adapt the data extraction form and ensure reliability of the data extraction form. Ten completed disability pension application records were selected at random from the sampling frame. These records were not excluded from the study firstly because the information on the record does not change unlike when human subjects are being used where responses or circumstances are anticipated to change when pilot subjects are included in the actual study (Peat, Mellis, Williams, & Xuan, 2002). Secondly the records were included in the study to avoid a sample size less than the calculated estimate for the cases. Variables were extracted onto the data extraction forms to assess if the information on the medical report for disability pension could be captured exhaustively.

The researcher realized that some data elements were constantly missing from the processed medical report for disability pension and these were: duration of previous employment; results of other investigations; job motivation; working habits; and speed of production. The data elements that were constantly missing were excluded from the data extraction form.

3.6 VALIDITY AND RELIABILITY OF THE DATA EXTRACTION FORM

Validity and reliability determine the precision of the research instrument in providing results that can be generalized to a population (Hopkins, 2000). Both validity and reliability are related and have a continuum relationship (Trochim, 2000). Research should be tested for validity and reliability. Improving validity and reliability is useful for reducing errors in research.

Possible errors in case-control studies can be random errors and systematic errors. Random errors result in low precision of the epidemiological measure. The later could be due to imprecise measuring or too small sample sizes. To decrease random errors the sample size has to be sufficiently large. Furthermore, confidence intervals can be used to quantify the degree of random error. Systematic errors or bias cause low validity of the epidemiological measure. This could be due to selection bias, information bias or confounding factors (Hassan, 2006). Selection bias was not addressed in this study because no sampling was done. Systematic errors can be decreased by using the same selection criteria for the samples and clear definition of terms as well as good measuring

methods, restriction of the study, matching and using multivariate regression to account for confounders in analysis (Pearce, 2005).

3.6.1 Validity

Validity refers to the overall ability of the research method used to answer the research question. Fraenkel and Wallen (2006) define validity as referring to the appropriateness, correctness, meaningfulness and usefulness of the inferences researchers make based on the data collected. For this study content validity is relevant because the important variables from the disability pension application forms should be included in the data extraction form. To ensure content validity, the researcher extracted variables directly from the original medical reports for disability pension. The medical reports for disability pension are official records used by medical practitioners to document findings after assessing disability pension applicants and the CMO's decision on eligibility for disability pension. Furthermore, experts' comments on important variables to be included on the data extraction form were obtained from medical practitioners involved in disability assessments.

Data were extracted from the processed disability pension applications in the offices of the pension officers for the Khomas Region. By using records recall bias is prevented, thus increasing validity (Hassan, 2006). All records included in the study depicted a final decision by the CMO namely, approved or rejected. To decrease confounding, the final stage of data analysis was done using multiple logistic regression analysis.

3.6.2 Reliability

Reliability refers to the consistence of the measurement techniques used and how replicable the measures are on a retest (Burns & Grove, 2005; Hopkins, 2000). A data collecting tool is considered reliable if it produces consistent results over repeated testing. Reliability also refers to how well the data collection tool measures the attributes it is designed to measure (Rindskopf, 2001). The data extraction form was piloted and this revealed that there was consistency on the variables collected from the disability pension application forms. The sample size for this study was sufficient in numbers thus increasing reliability.

3.7 DATA COLLECTION

Data collection is the precise, systematic gathering of information relevant to the research purpose or specific objectives, questions, or hypothesis of a study (Burns & Groove, 2005). The use of existing records is an acceptable research source and an important source for researchers in health (Polit & Beck, 2004). For this study data were gathered using a data extraction form. Thus the approach of using a data extraction form is appropriate for this study as the required data elements were extracted directly from the available disability pension applications. Data were directly extracted from the completed medical reports for disability pension that were completed between January 2008 and December 2010. The names and identity numbers of the disability pension applicants were not included on the data extraction form. The outcome decision of approval or rejection was obtained from the last page of each medical report for

disability pension where there is a decision made by the CMO as well as an official date stamp and signature.

Disability pension applications were stored in the office of the Khomas Region pension officers according to the pay-points in the region. Access to the records is restricted since only the pension officers had access to the data storage. Therefore, the researcher was provided with manageable batches of about 150 records per day throughout the data collection period. The incumbent pension officers provided the researcher with office space. The researcher designated two days per week for data collection: 27 June 2011 to 26 July 2011. All data extraction forms were allocated with an identity code labeling them as A1 up to A1096 for the approved applications and D1 up to D260 for the rejected applications.

3.8 DATA PROCESSING

Analysis of data is a process of inspecting, cleaning, transforming, and modeling data with the goal of highlighting useful information, suggesting conclusions, and supporting decision-making (Ardagna & Zhang, 2010). All variables that were captured on the data extraction forms were entered on Epi Info version 5.3.1 statistical package for analysis. This package was selected since it enables a wide range of data analysis including descriptive statistics and statistical calculations such as Chi-square tests, Odds Ratios (OR), Confidence Intervals (CI) and regression analysis. This statistical package also enables redefining and coding of variables to explore and analyze different relationships

between the variables and outcomes, which is according to the research design and purpose of this study. Furthermore, this statistical package was locally available and readily available for use.

Descriptive statistics permit researchers to describe, summarize and make sense of a particular set of data (Johnson & Christensen, 2004). For this study descriptive statistics were used to describe the socio-demographic and medical factors that characterize the disability pension applications. The distributions of the variables that describe the characteristic factors among the approved and rejected disability pension applications are presented mainly in numerical data and bar graphs. This is the first part of the analysis.

The second part of the analysis focused on results of statistical analysis, using Odds Ratios, Confidence Intervals and Chi-square values. The Odds Ratio is a relative measure of risk, that tells how much more likely it is that someone who is exposed to (or possessing a certain) factor under study will develop the outcome as compared to someone who is not having the same exposure factor (Westergren, Karlsson, Andersson, Ohlsson, & Hallberg 2001). For this study, rejection for disability pension is the outcome; the exposure factors are the socio-demographic factors, medical factors and work capacity factors listed on the medical report for disability pension.

If the Odds Ratio is equal to one then there is no association between the factor and rejection for disability pension. If it is greater than one it means there is a positive association between the factor and rejection of application for disability pension. If it is less than one then there is a negative association between having the factor and being rejected for disability pension (Westergren et al., 2001).

The Chi-square test is used to determine whether there is a significant difference between the expected frequencies and the observed frequencies in one or more categories. When a calculated Chi-square p-value is less than an arbitrary value for example $p < 0.05$; there is a significant association (Pearce, 2005). The confidence interval is a range of values around a measurement that conveys how precise the measurement is. A 95.0% confidence interval means that one would expect 95.0% of the interval estimates to include the population parameter. Wider confidence intervals in relation to the estimate itself indicate decreased reliability while narrower confidence intervals indicate that the estimated value is relatively stable thus increased reliability (Van Blerkom, 2009).

Odds Ratios were generated and reported on for the association between decision to reject disability pension and individual variable factors. The 95.0% Confidence Intervals were calculated for the Odds Ratios and a p-value of 0.05 on a Chi square test was used to determine significance of association between each variable factor and rejection for disability pension.

In research statistical analysis can be used to describe the association between multiple factors and the outcome decision through a multiple logistic regression analysis (Guido, Winters, & Rains, 2006). In the final stage of the analysis in this study, a multiple variable logistic regression was done to identify factors associated with the outcome of approval or rejection of disability pension applications. The purpose of multiple logistic regression analysis is to isolate the relationship between an exposure variable and the outcome variable from the effects of one or more other variables or confounders (Allison, 1999).

3.9 SUMMARY

Chapter 3 presented the research methodology and design used in this study to achieve the research purpose. The study population, sample and sampling, compilation of the data extraction form its pilot, validity, and reliability, were described. Data collection and data processing were also discussed. Chapter 4 presents the results of the study and discussion.

CHAPTER 4

ANALYSIS OF DATA

4.1 INTRODUCTION

The previous chapter focused on the research design and methodology of this study. In this chapter the results of the study are presented and discussed. Both descriptive statistics and statistical analyses for significance of association are used to present the findings. Initially the participation rate among the study population is presented. Descriptive statistics are then used to present the characteristic factors of applications that were approved and those applications that were rejected for disability pension in the Khomas Region during the period under study. Odds Ratios (OR), Confidence Intervals (CI), and Chi-square p-values results are used to show significance and strength of positive or negative association between exposure factors and rejection of application for disability pension. Results of the multiple logistic regression analysis are also presented.

4.2 PARTICIPATION RATE AMONG THE STUDY POPULATION

A total of 260 cases and 1096 controls were included in this study. Twenty-five (25) applications could not be included in the study as indicated in Chapter 3 (p.68). Figure 4.1 shows the study profile of the cases that were included in the study and those that were excluded from the study.

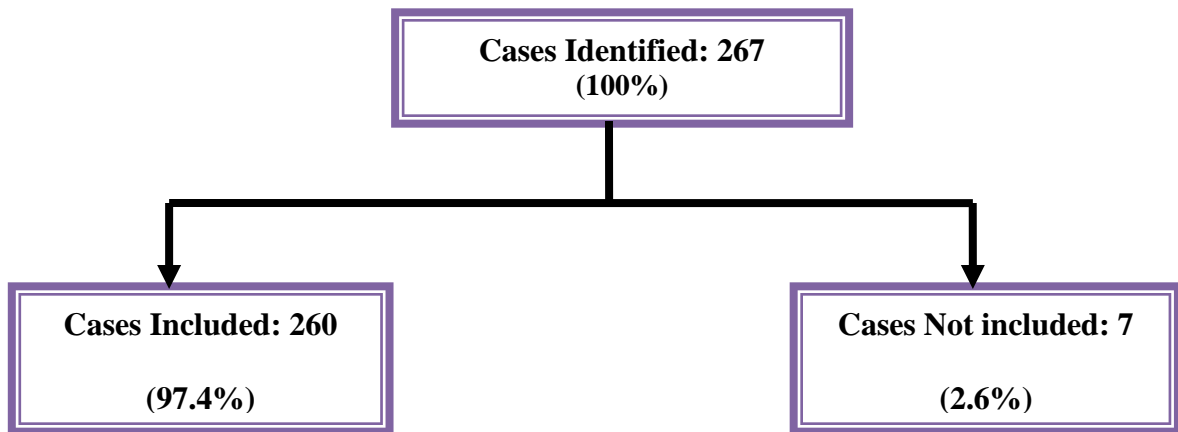


Figure 4.1: Compilation of the study cases

Figure 4.2 shows the compilation of the control groups included in the study and those that were excluded from the study.

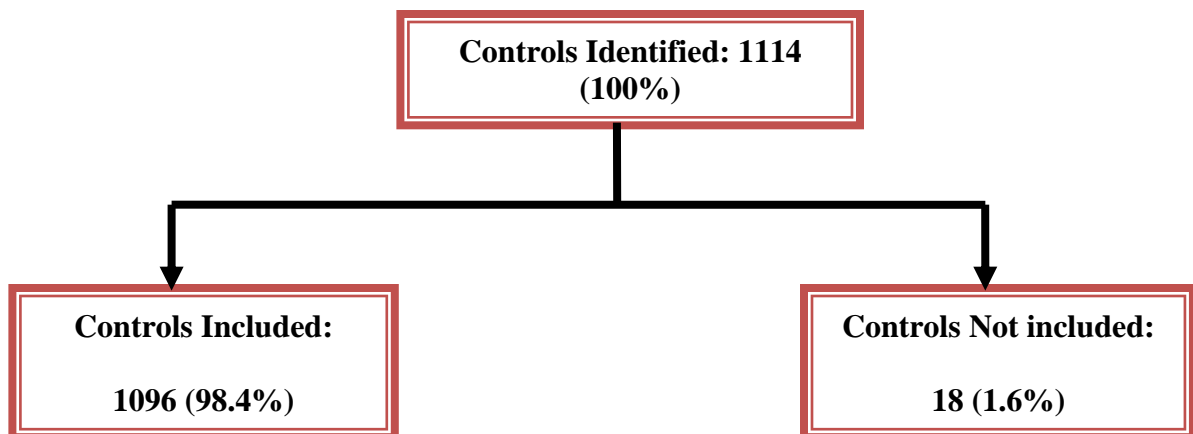


Figure 4.2: Compilation of the study controls

The seven records from the cases and 18 records from the controls could not be included in the study due to one or more of the reasons below:

- some pages were missing from the medical report

- many data elements were missing from the medical report
- significant parts of the medical report were distorted or illegible

4.3 DESCRIPTIVE RESULTS OF DATA ANALYSIS AND DISCUSSION

In this section descriptive statistics are used to present the results on the socio-demographic and medical factors characterizing approved and rejected applications for disability pension in the Khomas Region during the period 1 January 2008 to 31 December 2010. Firstly, tabulated results are presented numerically in terms of frequencies and percentages (see subsections 4.3.1 and 4.3.2). A graphic format is used in the subsequent sub-sections to present the qualifying and disqualifying factors that transpired from disability pension applications among the cases and controls individually, followed by discussions on each factor.

4.3.1 Socio-demographic characteristic factors on approved and rejected applications

Table 4.1 presents the frequency and percentage distribution of the study sample by priority socio-demographic characteristic factors as extracted from the disability pension applications. The socio-demographic factors presented in this section are: gender, age, educational level, occupational level, type of occupation presently suitable for applicant, and ability of applicant to provide income for his or her own maintenance. The results in this table reflect that the socio-demographic factors that characterize the approved and rejected disability pension applications are: male gender, old age, lower educational

level, no previous occupation, no suitable occupation for applicant and an in ability to economically provide for one's maintenance.

Table 4.1 Frequency and percentage distribution of total study sample by priority socio-demographic characteristic factors

Characteristic Factor	Categories	Frequency (Number)	Study sample Percent (%)
Gender	Female	633	46.7
	Male	723	53.3
	Total	1356	100
Age	17-20	71	5.2
	21-30	260	19.2
	31-40	344	25.4
	41-50	306	22.6
	51-59	375	27.6
	Total	1356	100
	Highest education level	No formal education	513	37.9
Primary school		363	26.8
Junior secondary		215	15.9
Senior secondary		239	17.7
College/University		23	1.7
Total		1353	100
Previous occupation	None	817	61.3
	Unskilled	328	24.6
	Semi-skilled	164	12.3
	Professional	23	1.7
	Total	1332	100
Suitable employment	None	471	36.6
	Settlement scheme	89	6.9
	Sheltered employment	430	33.4
	Light work	178	13.8
	Open labour market	119	9.2
	Total	1287	100
Applicant's ability to provide for own income	Unable to provide	1061	78.6
	Able to provide	289	21.4
	Total	1350	100

4.3.2 Medical characteristic factors on approved and rejected applications

Table 4.2 presents the frequency and percentage distribution of total study sample by priority medical characteristic factors as extracted from the disability pension applications. The medical factors presented are: affected body system, cause of disability, duration of disability, percentage of disability, progression of disability, possible intervention to restore function, and effects of disability on the life expectancy of the applicant. The table on the next page reflects that the medical factors that characterize the approved and rejected disability pension applications are as follows: affected musculoskeletal body system, permanent disability, disabilities with unknown causes, disability that will worsen, disabilities with no possible further intervention to restore work ability, and disabilities that do not affect life expectancy of the applicants.

Table 4.2 Frequency and percentage distribution of total study sample by priority medical characteristic factors

Characteristic Factor	Categories	Frequency (Number)	Study sample Percent (%)
Body system affected	Cardiovascular system	91	5.5
	Respiratory system	94	5.6
	Alimentary system	21	1.3
	Urinary system	7	0.4
	Nervous system	345	20.6
	Musculoskeletal system	569	33.9
	Mental functions	270	16.1
	Other body systems	279	16.6
	Total	1676	100
Cause of disability	Disease (non-communicable)	244	18.0
	Genetic/Congenital	245	18.1
	Injury	305	22.5
	Unknown	343	25.4
	Total	1353	100
Duration of disability	Temporary	93	6.9
	Permanent	1208	89.2
	Unknown	53	3.9
	Total	1354	100
Percentage of disability	Lower (5%-70%)	439	54.4
	Higher (71%-100%)	368	45.6
	Total	807	100
Progression of disability	Improve	50	3.7
	Constant	540	40.0
	Worsen	606	44.9
	Unknown	154	11.4
	Total	1300	100
Possible intervention to restore function of applicant	Appliance (Assistive device)	68	5.1
	Medication	242	18.0
	Rehabilitation	87	6.5
	Surgery	60	4.5
	None	885	65.9
	Total	1342	100
Effects of disability on applicant's life expectancy	No effect	697	52.2
	Reduce	575	43.0
	Unknown	64	4.8
	Total	1336	100

4.3.3 Gender distribution among the cases and controls

Figure 4.3 shows the gender distribution among the cases and controls in this study.

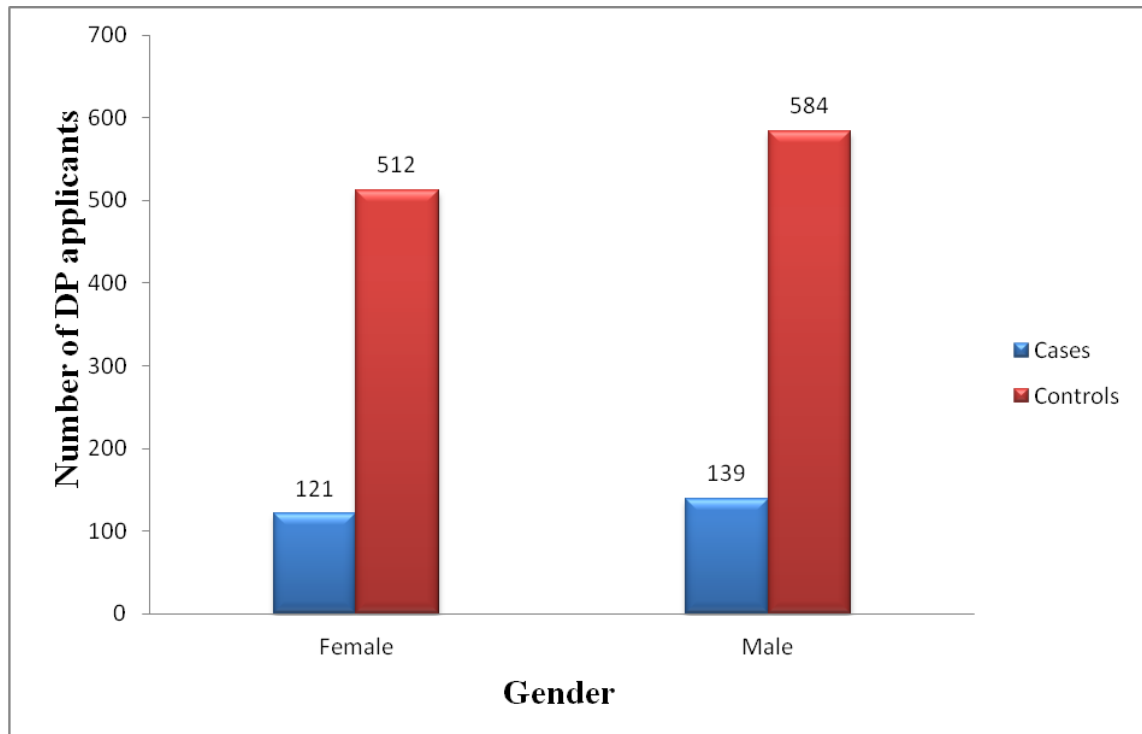


Figure 4.3: Gender distribution among the cases and controls (n= 1356)

The results reflect that there were more males than females who applied for disability pension during the period covered in this study: 723 (53.3%), and 633 (46.7%), respectively. This distribution follows the national gender distribution among people with disabilities in Namibia (Government of the Republic of Namibia, 2003).

4.3.4 Age group distribution among the cases and controls

Figure 4.4 shows the age group distribution among those approved and rejected for disability pension.

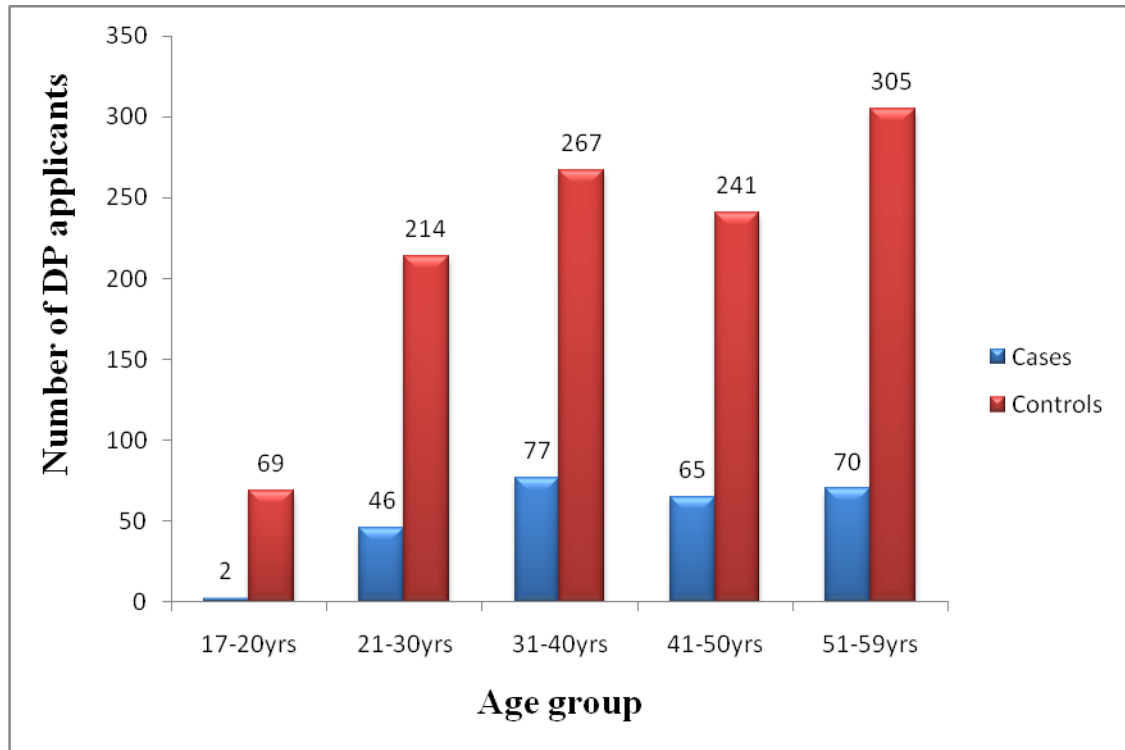


Figure 4.4: Age group distribution among the cases and controls (n=1356)

The data presented in this figure reveal that older age groups comprised the most applications for disability pension in the Khomas Region. The 51-59 years age group had the most applicants 375 (27.7%) while the 17-20 years age group had the least applicants 71 (5.2%) for disability pension. These findings are supported by the literature which shows that since older age is more associated with chronic medical

conditions and limited ability to work this leads to the need for disability pension (Eide et al., 2003; Govender, 2009).

4.3.5 Educational level distribution among the cases and controls

Educational levels were divided into five categories namely: (none) those applicants who never attended school, (primary) those applicants who attended school from grade one to grade seven, (junior secondary) those applicants who attended grades eighth and ninth, (senior secondary) those applicants who attended grade 10 to grade 12, and (tertiary) those applicants who attended college and/or university level.

Figure 4.5 shows the educational level distribution among the cases and controls.

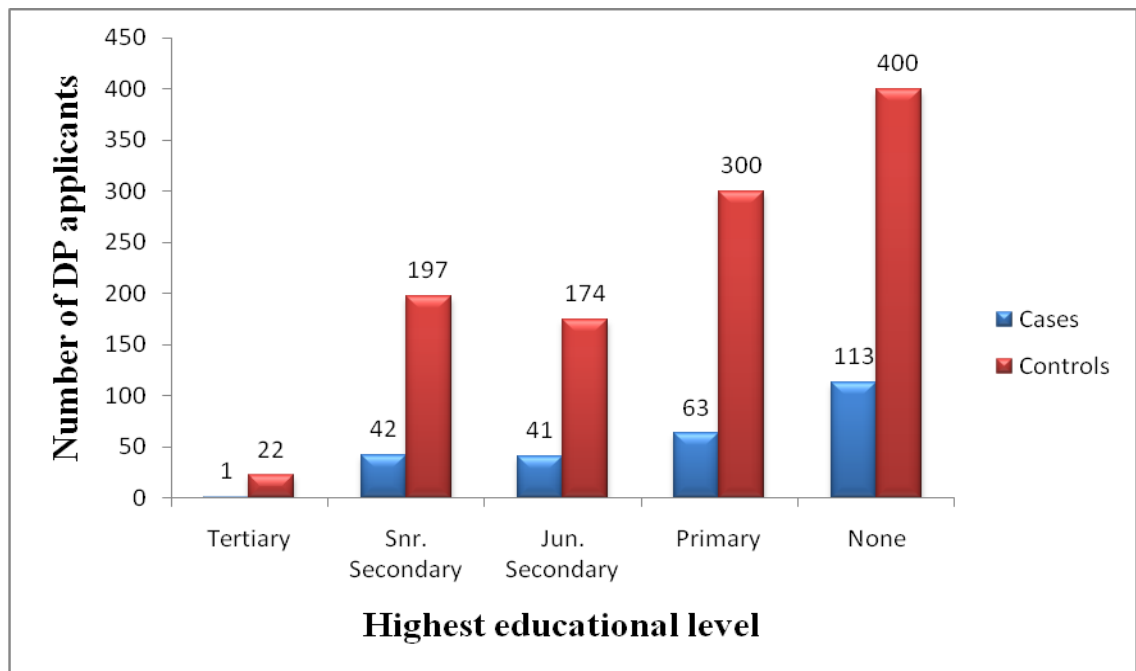


Figure 4.5 Educational level distribution among the cases and controls (n=1353)

According to the results presented in Figure 4.5 the lowest number of applications were for persons who had a tertiary education representing 1.7% (n=23) of all applicants. The majority of the applicants for disability pension only had primary education or had never attended school, namely 64.7% (n= 876). This group constitutes the majority of the applications regarding the educational level of cases and controls. Low education level seems to be common among disability pension applicants not only in the Khomas Region but also among disability grant applicants in both developed and developing countries, such as Sweden and South Africa, respectively (Johansson et al., 2011; Govender, 2009; Mitra, 2010).

Possible explanations might be that people with disabilities may not have access to education due to inaccessible school environments, social exclusion or impairments that hinder learning (Gooding & Marriott, 2007; Mitra, 2005). Consequently, without education the chances of a person getting employment are reduced. Applying for disability pension in order to obtain some form of income becomes an option to alleviate poverty (Aliber, 2001), even though the person may not be truly 'disabled' as per definition.

4.3.6 Previous occupational level distribution among the cases and controls

Previous occupational levels were divided into four categories: professional (those who were employed in jobs that require a diploma or degree qualification, such a nurses and engineers); semiskilled (those who were previously in jobs that require some basic

training, such as drivers and carpenters); unskilled (those who previously worked in general labor/menial jobs, such as cleaners and handymen); none (those who had never had a job). Figure 4.6 shows the previous occupational levels for the cases and controls.

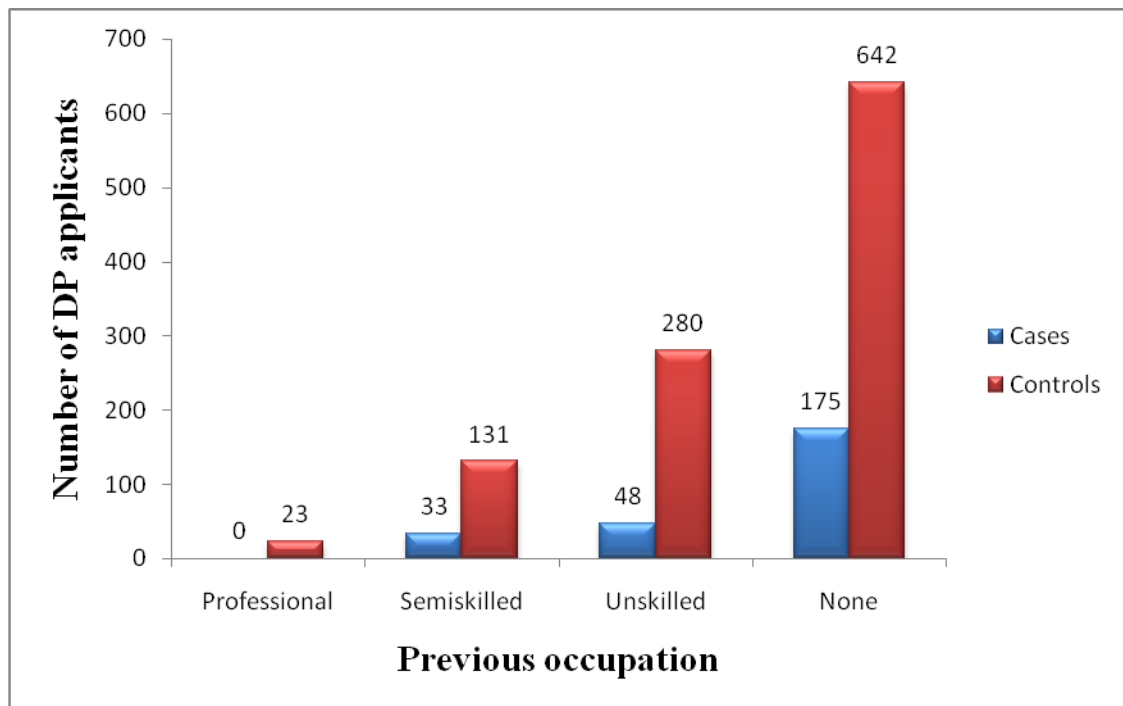


Figure 4.6: Previous occupational level distribution among the cases and controls (n= 1332)

The results show that smallest category of applicants were those who had previous professional employment (1.8%). The majority of disability pension applicants had no previous occupation (61.3%). They were followed by those previously employed in semiskilled jobs (12.3%) and those who were in unskilled employment (24.6%). These results conform to the international patterns that show that more disability pension

applications are among the unskilled as well as those with no previous occupation (Kivimaki et al., 2007; Mansson et al., 1998).

It is also important to note that the response to the question on previous occupational history may not be reliable because an evaluating medical practitioner may not be able to confirm the response. Since some applicants may believe that mentioning involvement in a job could reduce their chances of getting approval for disability pension means that some would rather not mention any previous or even current occupation (de Paoli et al., 2010). This could deceptively show higher numbers of applicants with no previous work history. However, such higher numbers of applicants with no previous employment also confirms the findings of higher unemployment levels among people with disabilities in Namibia (Eide et al., 2001).

4.3.7 Distribution of affected body systems among the cases and controls

The results in Figure 4.7 show the distribution of affected body systems among the cases and controls. The musculoskeletal system was the most frequently affected system among the disability pension applicants, followed by the nervous system and mental functions. These findings are in accord with international findings particularly for musculoskeletal and mental functions being the commonly affected systems among disability pension applicants (Kivimaki et al., 2007; Layard, 2006).

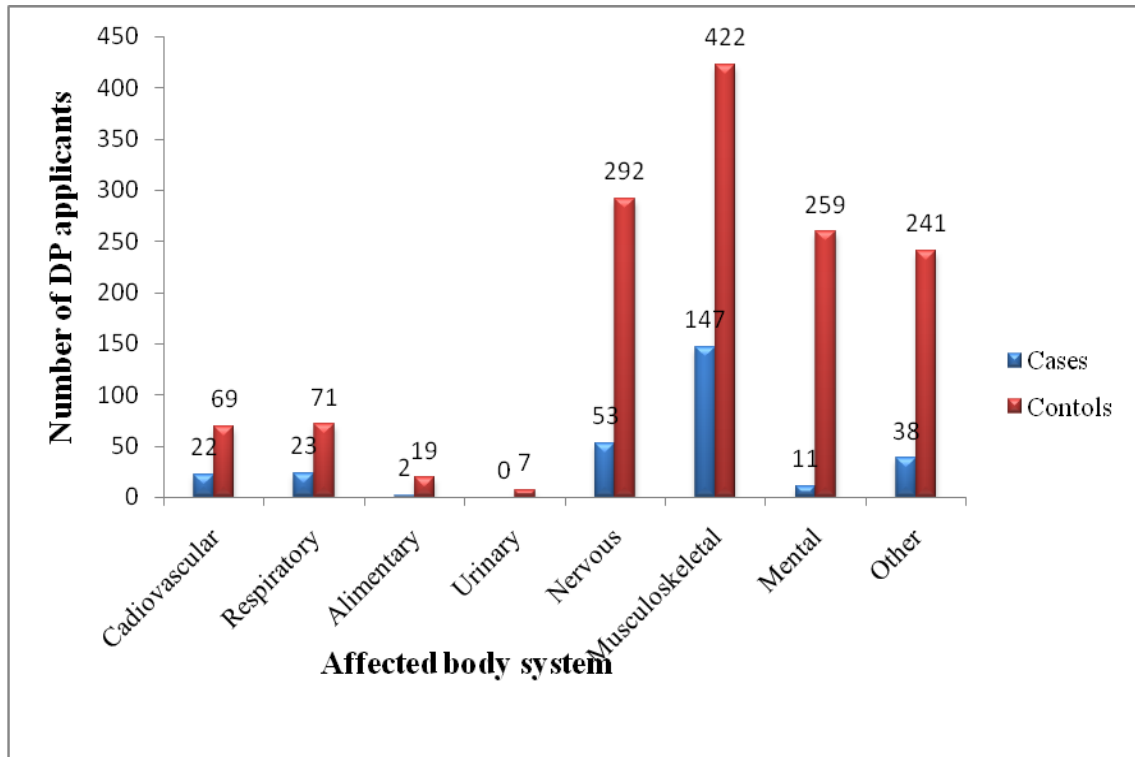


Figure 4.7: Distribution of affected body systems among the cases and controls (n=1676)

Disabilities that were linked to visual impairment and HIV/AIDS related conditions were often classified under the ‘other system’ affected category. Some applicants had more than one affected system since an individual can be affected with impairments in more than one body system (Frieg & Hendry, 2001). For example, many injuries to the nervous system will automatically affect the musculoskeletal system.

4.3.8 Frequency of diagnoses among the disability pension applicants

The top ten diagnoses among the applicants in order of priority were schizophrenia (97), HIV related conditions (93), visual impairment (86), mental retardation (learning disabilities) (83), epilepsy (78), stroke (64), fracture of lower limbs (60), peripheral nerve injuries (PNI) (57), back pain (54), and osteoarthritis (46). However, it is important to note that if the important Namibian communicable diseases of TB and multiple drug resistant (MDR) TB were to be combined they would replace osteoarthritis in the top ten diseases. For this study TB and MDR TB are not combined. Figure 4.8 on the next page shows the frequencies of diagnoses among the applicants for disability pension between January 2008 and December 2010. However, only the top ten diagnoses were presented in terms of their distribution among the cases and controls in Figure 4.9.

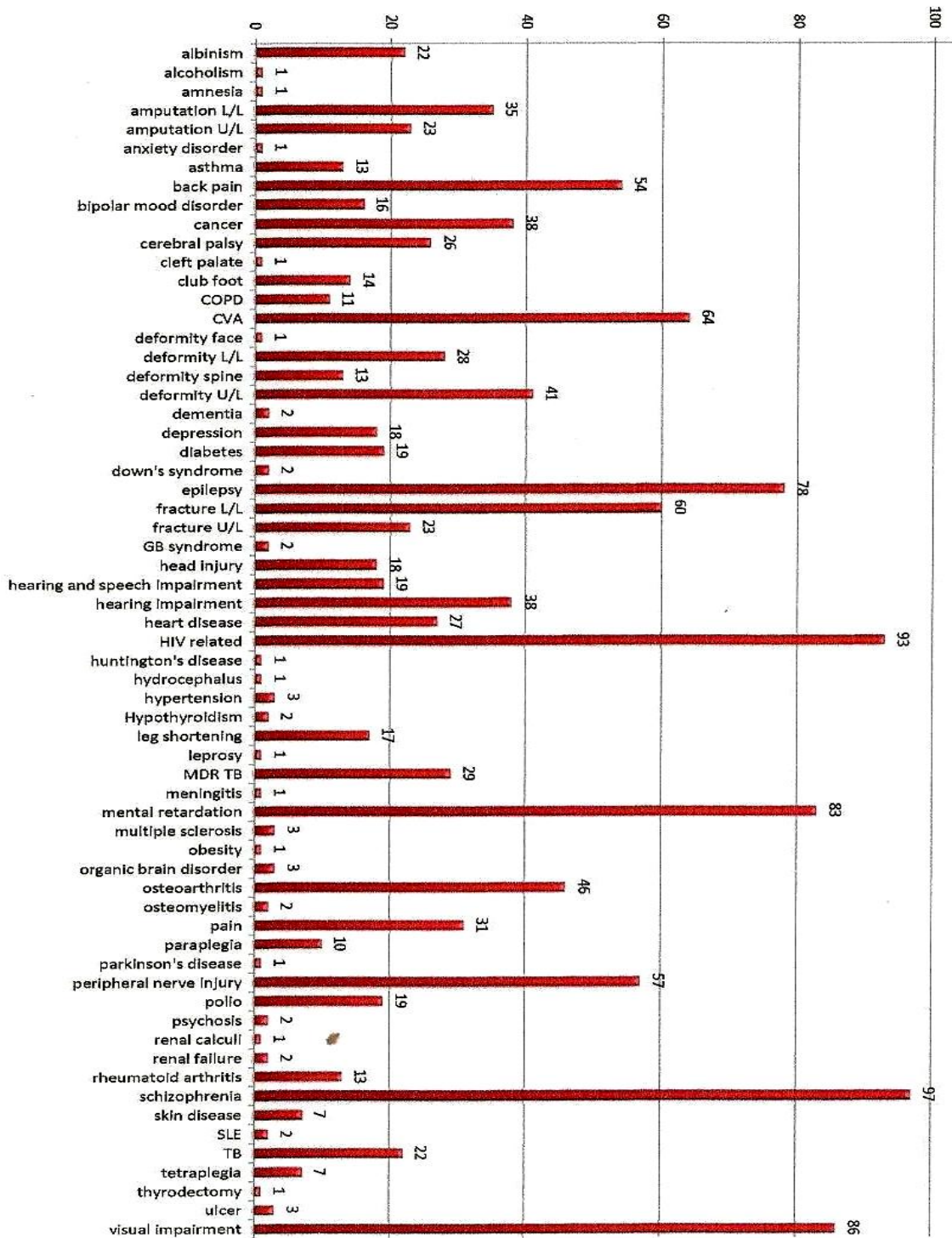


Figure 4.8. Frequency of diagnoses among the disability pension applicants (n=1356)

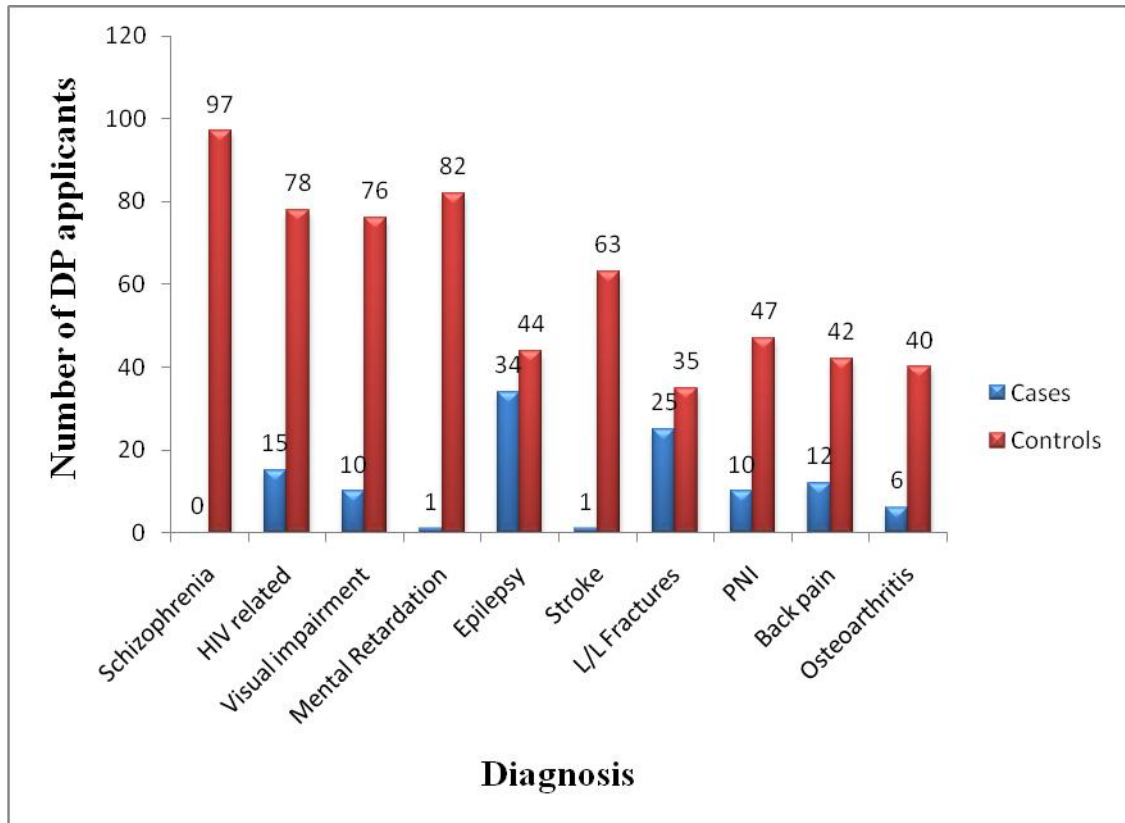


Figure 4.9: Distribution of the top ten diagnoses among the cases and controls

Results of the study reflect that all applications with a diagnosis of schizophrenia were approved (100.0%). Less than 2% of the applicants with stroke and mental retardation (learning disabilities) failed to get their applications approved. On the other hand 16.0% of the applicants with HIV related conditions were rejected for disability pension which means that having an HIV related condition does not mean automatic eligibility for disability pension as is usually perceived by general society. This shows conformity of the Khomas Region with the ministerial directives of removing automatic disability pension for HIV positive applicants in Namibia (Maletsky, 2005). Applicants with epilepsy and lower limb fractures had the highest percentage of rejections: 43.0% and

41.0% respectively. It was also noted that some medical practitioners classified epilepsy as mental functions being affected while others classified it as the nervous system being affected. Such variations in classification highlight differences in understanding of this disability among medical professionals and the community at large resulting in a high rejection of applications with this diagnosis.

4.3.9 Distribution of the causes of disability among cases and controls

The causes of disability among disability pension applicants were classified into five categories namely; injury, infection, genetic/congenital, disease (non-communicable) and unknown as shown in Figure 4.10.

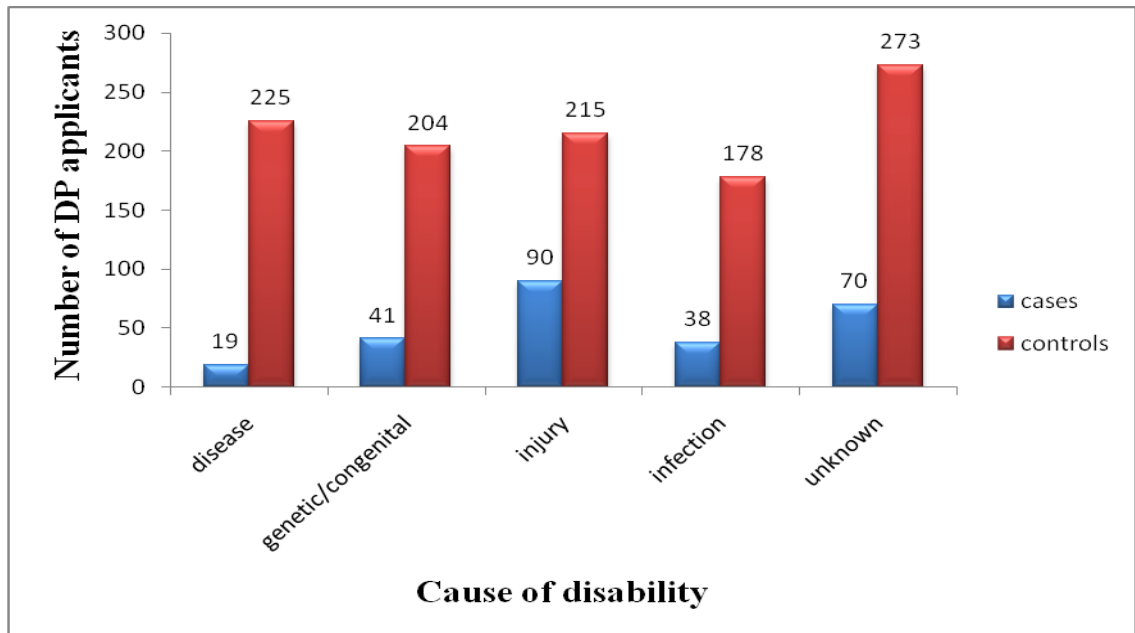


Figure 4.10: Distribution of the causes of disability among cases and controls (n=1353)

According to the results the majority of the applicants had disabilities with unknown causes which were mainly attributed to mental illnesses. Disabilities caused by injury had the highest percentage of rejected applications 90/302 (29.5%) followed by those with unknown causes 70/273 (20.4%). The smallest percentage of rejected applications was for disabilities caused by non-communicable diseases 19/225 (7.8%). Injuries, infection, and non-communicable diseases, are well documented as the most common causes of disability among disability pension applicants (Kivimati et al., 2007).

When Epi Info is used to analyze the relationships between diagnoses and cause of disability the following results are obtained: injuries were the causes of disabilities of the majority of the applicants. Disabilities with a genetic/congenital cause mainly included mental retardation (learning disabilities), schizophrenia, congenital malformations and sensory impairments. HIV and TB were the main infections leading to disability. Back pain was the third common diagnosis caused by injury. However, more back pain cases were caused by non-communicable diseases. It was noted that visual impairments were the most frequent diagnosis among disabilities caused by non-communicable diseases.

4.3.10 Distribution of the duration of disability among cases and controls

Duration of disability was divided into three groups: temporary; permanent; and unknown. Figure 4.11 shows the distribution of duration of disability among cases and

controls.

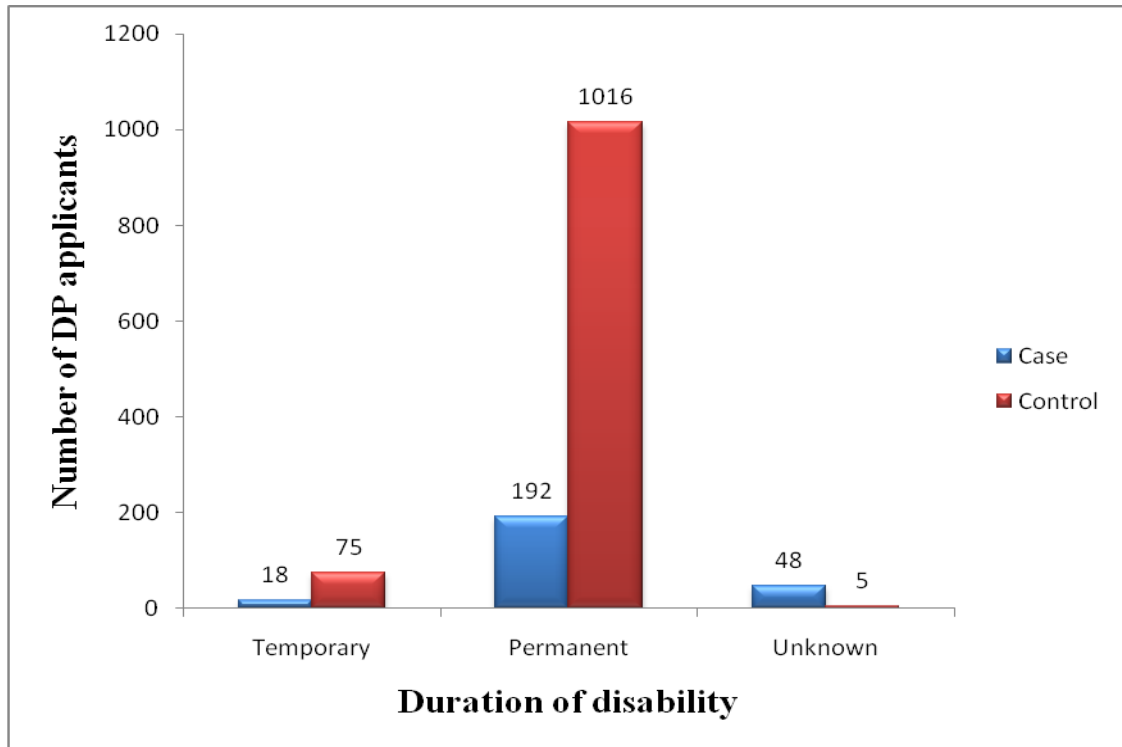


Figure 4.11: Distribution of the duration of disability among cases and controls (n= 1354)

Applicants with permanent disability were the majority (89.2%), followed by those with temporary disability (6.9%) and the least number of applications were from applicants who had disabilities with unknown duration (3.9%). This result is supported by regional and international literature which show that disability pension is mostly allocated to those applicants who are permanently unable to work (Mitra, 2005; Whitworth et al., 2006).

4.3.11 Distribution of progression of disability among cases and controls

Progression of disability was divided into four categories: improve (disability will improve); constant (disability will remain unchanged); worsen (disability will get worse); and unknown (the way disability will change with time is unknown). Figure 4.12 shows the distribution of progression of disability among cases and controls.

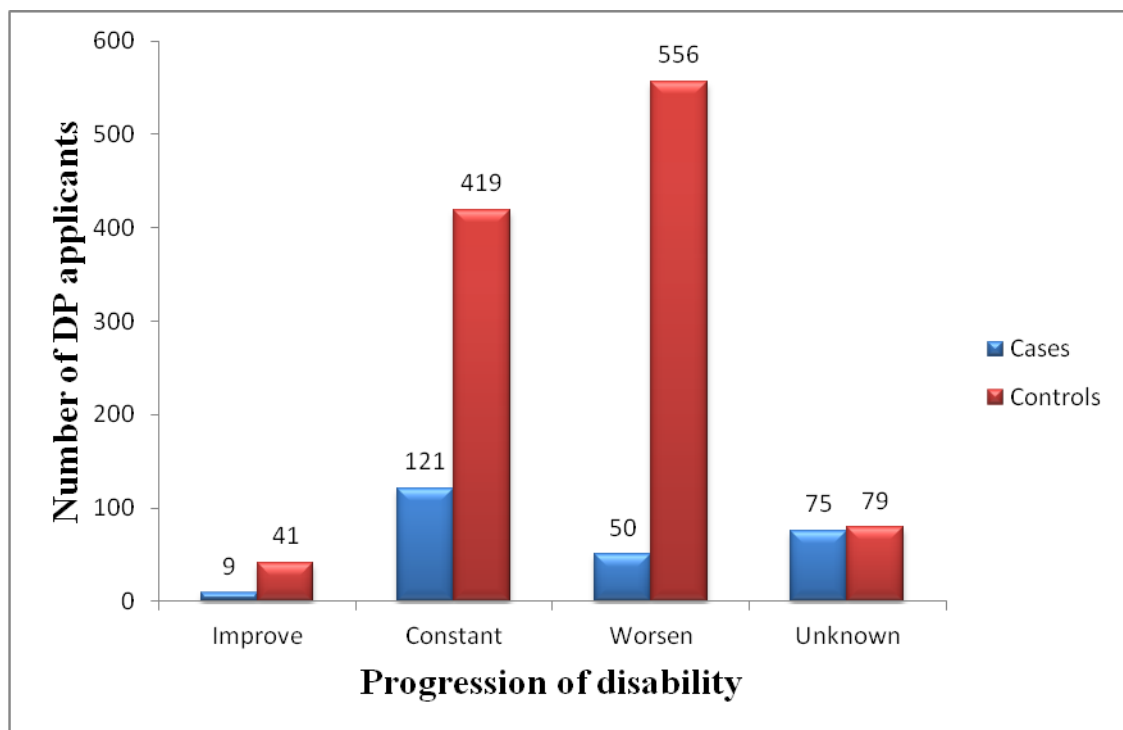


Figure 4.12: Distribution of progression of disability among cases and controls (n= 1350)

Results reflect that 3.7% of the applicants had disabilities that could improve, 40.0% had constant disabilities, 44.9% had disabilities that could worsen and 11.4% had unknown progression. Applicants with disabilities that were projected to worsen were the majority and had the least percentage of rejections 50/606 (8.3%), while those with

disabilities with an unknown progression had the highest percentage of rejections 75/154 (48.7%). Among the applicants whose disability was projected to improve 41/50 (82.0%) got approval for disability pension. The approval to receive disability pension for people who have potential to recover and be able to work can be viewed as a work disincentive especially if there is potential loss of employment through for example layoff (Mutasa, 2010). As a result such applicants would rather rely on the disability pension and not seek employment.

4.3.12 Possible interventions to restore work ability among the cases and controls

The possible interventions for improving the functioning of the disability pension applicants were divided into five categories: appliances (assistive devices); medication; rehabilitation (physiotherapy, occupational therapy, speech and language therapy and psychological services); surgery; and none. Figure 4.13 depicts the interventions that could possibly improve the work ability of the disability pension applicants.

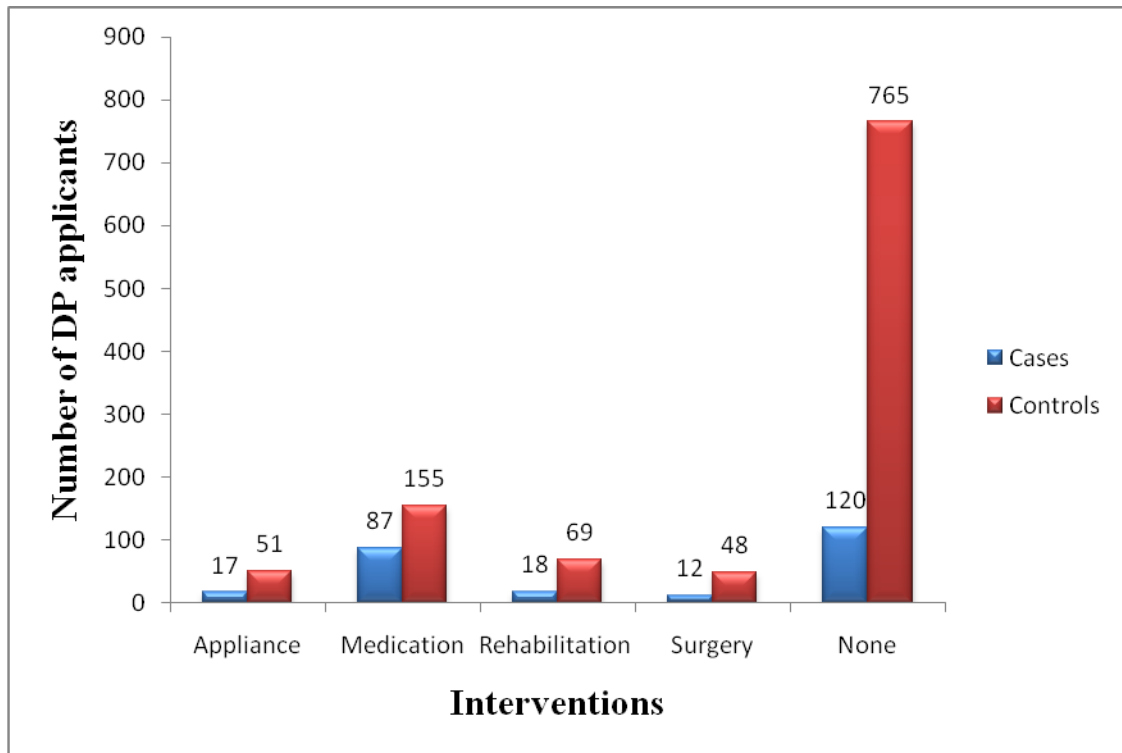


Figure 4.13: Possible interventions to restore work ability among the cases and controls (n=1342)

The majority (66.0%) of the applicants had disabilities that could not be improved by any intervention. Eighteen percent (18.0%) needed medication; 6.5% needed rehabilitation; 5.0% needed appliances, and 4.5% required surgery. These results show a predominantly medical approach towards interventions targeting people with disabilities; the focus being on the person and his/her impairments and not considering other interventions such as work environment adaptations, livelihoods and empowerment (de Kleijn-De Vrankrijker, 2003; Shakespeare, & Watson, 1997).

4.3.13 Suitable employment settings among the cases and controls

The types of employment considered suitable for applicants by the medical practitioners were divided into 5 categories namely; none, settlement scheme, sheltered employment, light work and open labor market according to the responses given on the medical reports. Figure 4.14 shows the suitable employment settings among the cases and controls

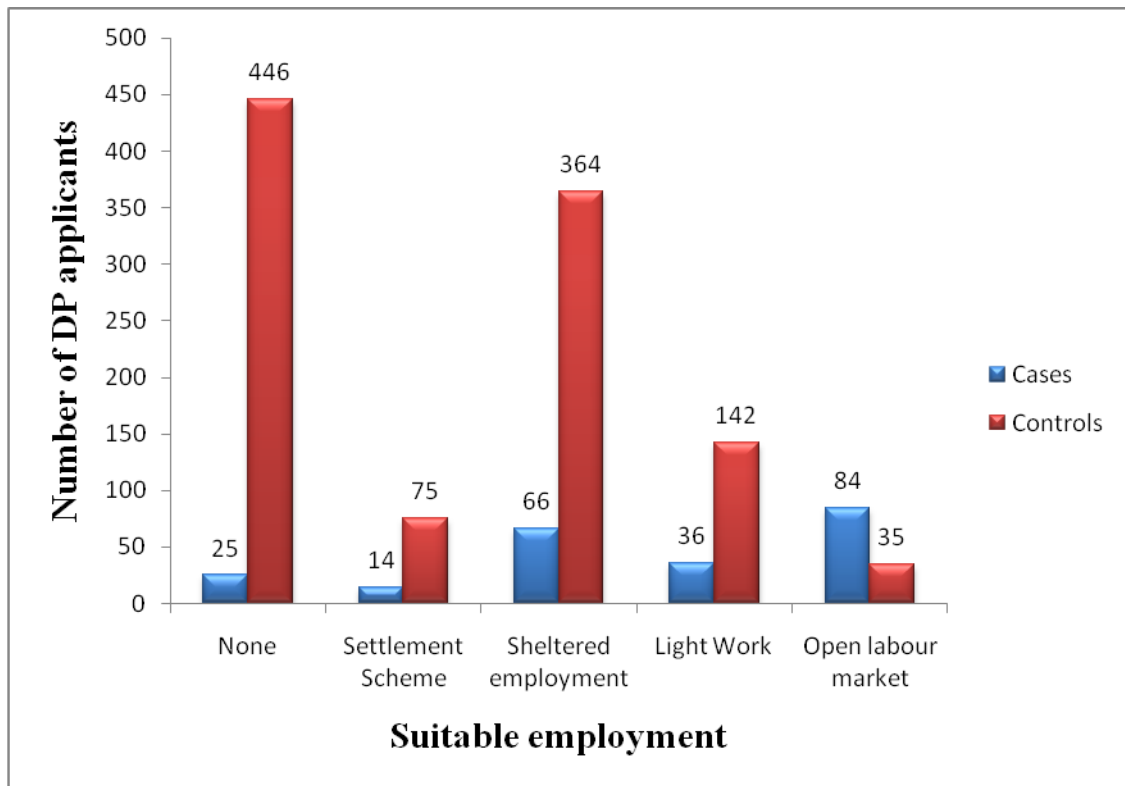


Figure 4.14: Suitable employment settings among the cases and controls
(n=1287)

Disability pension applicants who were considered not fit for any type of employment setting were classified in the 'none' and 'settlement scheme' categories, and these were 44.0% of all the applicants. The remainder of applicants (56.0%) could do some form of work as they were classified under the other three employment categories: sheltered employment; light work; and open labour market. This finding corresponds with the results of a study that reveals that most people with severe physical and intellectual impairments are capable of some form of labour activities (Medeiros et al., 2006). It was found in this study that there was higher percentage of rejection for disability pension in the open labor market employment category. Contrary to the stipulation of the National Pensions Act (Act of 1992), some applicants 35/119 (29.0%) who were identified as suitable for open labour market were approved for disability pension in the Khomas Region. This does not conform to the stipulation of the National Pensions Act (Act 10 of 1992), which states that:

Disability pension is paid to any person who, owing to any physical or mental disability, is incapable to obtain from any employment or the practicing of any profession or trade, or from the rendering of any service, the means needed to enable him or her to adequately provide for his or her own maintenance, and has attained the age of 16 years and below 60 years (Government of the Republic of Namibia, 1992b, p.3).

4.3.14 Ability to adequately provide for personal maintenance among the cases and controls

Figure 4.15 shows the distribution of applicants in the cases and control groups who were found to either be able to adequately provide for their own maintenance or not able to do so. Seventy-nine percent (79.0%) of the applicants were unable to adequately provide for their own maintenance. This finding concurs with other findings in the reviewed literature indicating that poverty is a major factor behind application for disability pension in Africa (Aliber, 2001; Beckman et al., 2006; Govender, 2009).

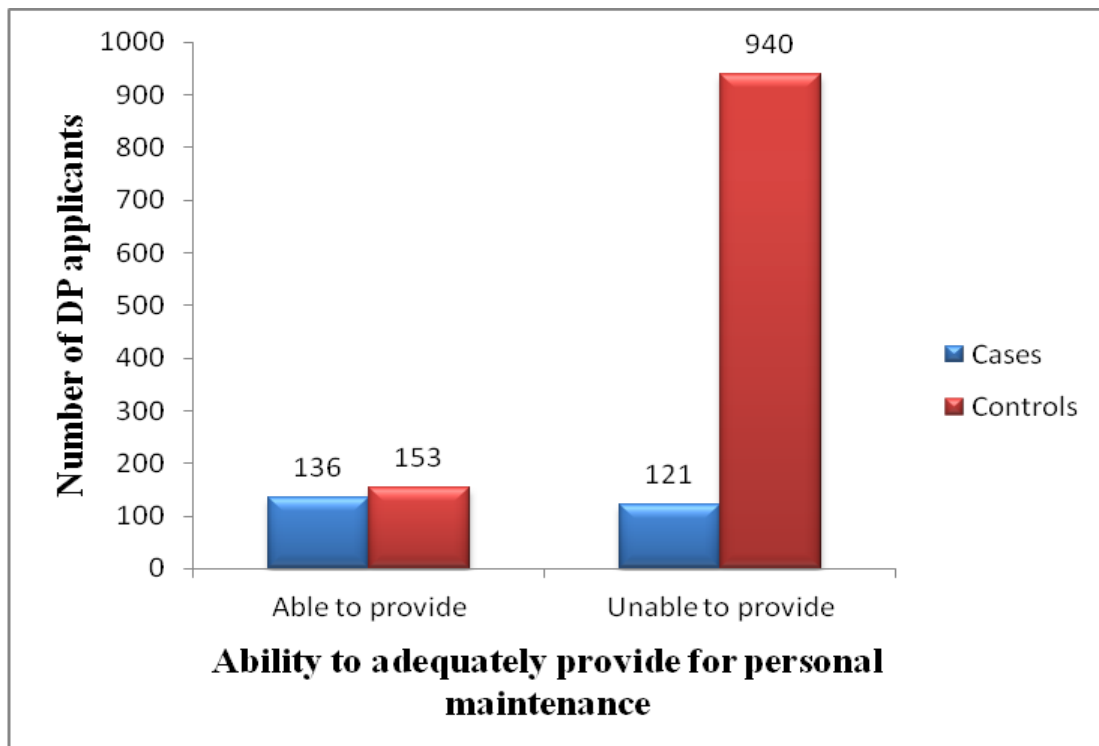


Figure 4.15: Ability to adequately provide for personal maintenance among the cases and controls (n=1350)

To some extent the findings also highlight the vicious poverty-disability cycle (Emmett, 2006). In the category of those who were able to provide for their own maintenance 136/289 (47.0%) of the applications were rejected and 121/1062 (11.0%) in the category that could not provide for their own maintenance were rejected disability pension. This is evidence that there is no means testing approach being implemented in Khomas Region even though to some extent the economic well being of applicants can be evaluated during assessment for disability pension.

4.3.15 Effects of disability on life expectancy among the cases and controls

The effects of disability on life expectancy were divided into three categories: reduced; no effect; and unknown. Figure 4.16 shows the effects of disability on the life expectancy among the cases and controls.

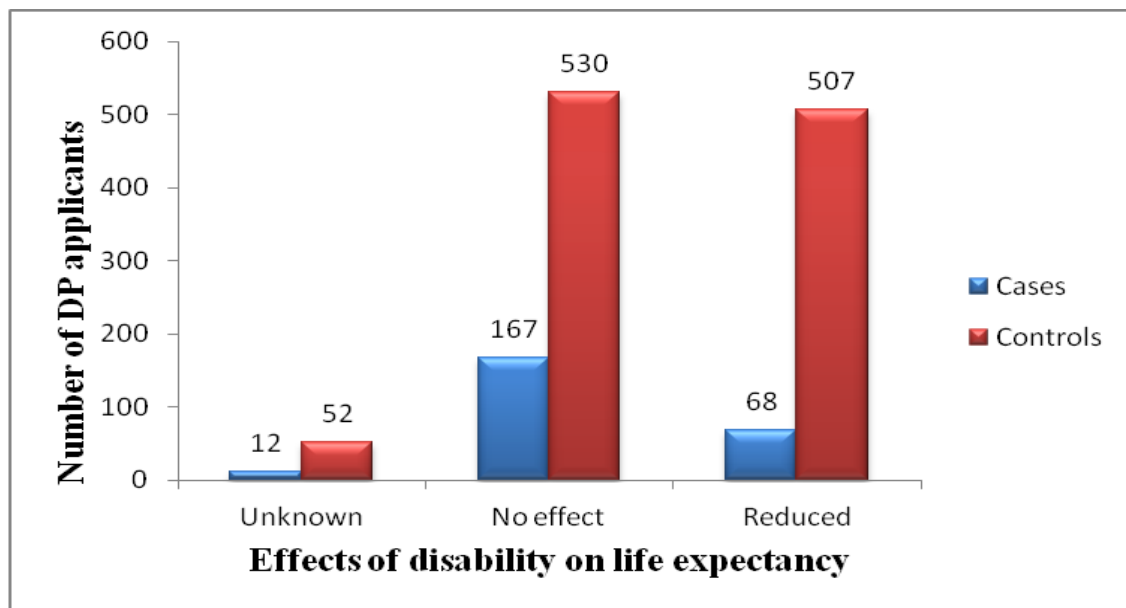


Figure 4.16: Effects of disability on life expectancy among the cases and controls (n=1336)

Interpretation of the presented data reveals that more applicants 697/1336 (52.0%) had disabilities that medical practitioners regarded as not affecting life expectancy. They were followed by those with reduced life expectancy as 575/1336 (43.0%) and those with disabilities with an unknown effect on life expectancy as 64/1336 (5.0%). In terms of the presented data in the above figure of the three categories, the highest percentage of applications that was rejected for disability pension was in the 'no effect' category 167/697 (24.0%).

4.4 STATISTICAL ANALYSIS RESULTS OF THE STUDY AND DISCUSSION

In this section statistical analysis results on the association between the variable factors and the outcome decision for disability pension applications are presented and discussed. The results of statistical analysis on the significance of association between each individual factor and rejection for disability pension applications are presented using p-values, Odds Ratios (OR) and Confidence Intervals (CI) for each factor.

The explanation on interpretation of the results to reach a conclusion on association between variable factors and the outcome at 95.0% CI is as follows:

If $p < 0.05$ it means there is an association between the factor and the CMO's decision to reject the application for disability pension.

If $p > 0.05$ it means there is no association between the factor and the CMO's decision to reject the application for disability pension.

If $OR=1$ it means there is no association between the factor and the CMO's decision to reject the application for disability pension.

If $OR>1$ it means that variable has a positive association with rejection of the application for disability pension.

If $OR <1$ it means that variable factor has a negative association with rejection of disability pension application.

If CI crosses 1 this means there is no statistical significance.

4.4.1 Association between gender and rejection of disability pension application

The statistical analysis results in Table 4.3 show that there is no association between gender of the applicant and the CMO's decision to reject application for disability pension in the Khomas Region. Results of the three parameters indicate that there is no association as described as follows: ($p=0.959$) which is >0.05 ; ($OR =0.99$) almost 1; and CI (0.75-1.30) crosses 1. These findings show similarities in developing countries as opposed to developed countries in which males have higher odds of receiving disability pension (Mitra, 2010).

Table 4.3 Association between gender and rejection of disability pension application

Gender	Cases	Controls	Odds Ratios (OR)	95% Confidence Interval (CI)	p-value	Conclusion
Female	121	512	0.99	0.75-1.30	0.959	No association
Male	139	584				

4.4.2 Association between age and rejection of disability pension application

In order to determine whether younger age is associated with rejection of disability pension application, the applications were divided into two age categories above and below the median age of 41 years: younger (< 41 years) and older (41 years and older). In the results shown in Table 4.4 the age factor had $p=0.362$ and CI (0.87- 1.49), this shows that there is no significant association between the younger age category of applicants and rejection for disability pension.

Table 4.4 Association between age and rejection of disability pension application

Age	Cases	Controls	Odds Ratios (OR)	95% Confidence Interval (CI)	p-value	Conclusion
<41years (Younger)	133	595				No association
41years+ (Older)	127	501	1.13	0.87- 1.49	0.362	

4.4.3 Association between level of education and rejection of disability pension application

Results in Table 4.5 show the association between level of education and rejection of disability pension application. Among the different categories of highest levels of education the 'none' category is the only educational factor positively associated with the decision to reject disability pension applications in the Khomas Region. This conclusion is reached by considering that ($p=0.037$) is <0.05 , (CI=1.02- 1.76) does not cross 1 and (OR=1.34) showing a positive association. There is no association between rejection of disability pension application and the following educational factors since all their p-values are (> 0.05); primary education ($p=0.303$), junior secondary ($p=0.966$), senior secondary ($p=0.489$) and tertiary education ($p=0.069$).

Table 4.5: Association between educational level and rejection of disability pension application

Highest educational level	Cases	Controls	Odds Ratios (OR)	95% Confidence Interval (CI)	p-value	Conclusion
No education	113	400				Significant positive association
Other levels	147	696	1.34	1.02- 1.76	0.037	
Primary school	63	300				No association
Other levels	197	796	0.85	0.63- 1.16	0.304	
J. Sec School	41	174				No association
Other levels	219	922	0.99	0.68- 1.44	0.966	
Sec. School	42	197	0.88	0.61- 1.27	0.489	No association
Other levels	218	899				
Tertiary level	1	22	0.19	0.02- 1.40	0.069	No association
Other levels	259	1074				

4.4.4 Association between affected body system and rejection of disability pension application

Table 4.6 shows results of the statistical analysis on the association between affected body system and rejection for disability pension in the Khomas Region. There is no statistically significant association between rejection of disability pension application

and the following body systems being affected which have p-values >0.05 : cardiovascular; respiratory; alimentary; and urinary. Affected musculoskeletal system is a factor positively associated with rejection of disability pension applications in the Khomas Region as this system is two times more than when any other body systems are affected (OR= 2.07). Mental functions affected and nervous system affected, are negatively associated with rejection of disability pension applications with OR of 0.14 and 0.71, respectively. The category 'other system affected' is also negatively associated with rejection for disability pension with an OR of 0.61. The category 'other systems affected' refers to those conditions that medical practitioners could not classify under the previously listed body systems for example most visual impairment were classified under this category.

Table 4.6: Association between affected body system and rejection of disability pension application

Body system affected		Cases	Controls	Odds Ratios (OR)	95% Confidence Interval (CI)	p-Value	Conclusion
Cardiovascular system affected	Yes	238	1027	1.38	0.834- 2.269	0.210	No association
	No	22	69				
Respiratory system affected	Yes	237	1025	1.40	0.8574-2.2892	0.177	No association
	No	23	71				
Alimentary system affected	Yes	258	1077	0.44	0.1017 -1.8985	0.258	No association
	No	2	19				
Urinary system affected	Yes	260	1089	-	-	0.196	No association
	No	0	7				
Nervous system affected	Yes	207	804	0.71	0.5068- 0.9807	0.037	Significant negative association
	No	53	292				
Musculoskeletal system affected	Yes	113	673	2.07	1.5778 -2.7279	0.000	Significant positive association
	No	147	422				
Mental functions affected	Yes	249	837	0.14	0.0768 -0.2653	0.000	Significant negative association
	No	11	259				
Other system affected	Yes	222	855	0.61	0.4184 -0.8815	0.008	Significant negative association
	No	38	241				

4.4.5 Association between cause of disability and rejection of disability pension application

Table 4.7 shows the statistical analysis results for the association between cause of disability and rejection for disability pension. There is a positive significant association between injury as a cause of disability and rejection of disability pension application. Disability pension applicants with disabilities caused by injury are two times more likely to be rejected for disability pension compared to applicants with any other cause of

disability with OR=2.17. Non-communicable disease for example, arthritis as a cause of disability is negatively associated with rejection of disability pension applications with $p=0.000$; CI (0.19-0.50) and OR=0.31.

Table 4.7: Association between cause of disability and rejection of disability pension application

Cause of disability	Cases	Controls	Odds Ratios (OR)	95% Confidence Interval (CI)	p-value	Conclusion
Injury	90	215	2.17	1.61- 2.92	0.000	Significant positive association
Other	170	881				
Infection	38	178	0.88	0.60- 1.29	0.520	No association
Other	222	918				
Genetic	41	204	0.82	0.57- 1.18	0.284	No association
Other	219	892				
Non-communicable disease	19	225	0.31	0.19- 0.50	0.000	Significant negative association
Other	241	871				
Unknown	70	273	1.11	0.82- 1.51	0.502	No association
Other causes	190	823				

4.4.6 Association between duration of disability and rejection of disability pension application

Table 4.8 shows results of statistical analysis of the association between duration of disability and rejection of disability pension applications in the Khomas Region. There

is a positive association between having a disability with unknown duration and rejection of disability pension application. An applicant with a disability of an unknown duration is 49 times more likely to be rejected for disability pension compared to someone with a temporary or permanent disability. The results show that having a permanent disability is negatively associated with rejection for disability pension with $p=0.000$; CI(0.16- 0.32) and OR=0.22.

Table 4.8: Association between duration of disability and rejection of disability pension application

Duration of disability	Cases	Controls	Odds Ratios (OR)	95% Confidence Interval (CI)	p-value	Conclusion
Temporary	18	75	1.01	0.60- 1.73	0.963	No association
Other	242	1021				
Permanent	192	1016	0.22	0.16- 0.32	0.000	Significant negative association
Other	68	80				
Unknown	48	5	49.40	19.44- 126	0.000	Significant positive association
Other	212	1091				

4.4.7 Association between progression of disability and rejection of disability pension application

Table 4.9 shows the results of statistical analysis on the association between progression of disability and rejection of disability pension applications. The results show that there is a positive association between having a disability with an unknown disability

progression and rejection of disability pension application in the Khomas Region. Odds Ratio of 5.22 indicates that applicants with unknown disability progression are five times likely to be rejected for disability pension compared to other categories of disability progression. A significant positive association between disabilities that are constant in progression and rejection of disability pension application also exists with OR=1.41. On the other hand there is a negative association between disabilities that will worsen and rejection of disability pension application in the Khomas Region with OR=0.23. There is no association between rejection of disability pension application and having a disability that will improve.

Table 4.9: Association between progression of disability and rejection of disability pension application

Progression of disability	Cases	Controls	Odds Ratios (OR)	95% Confidence Interval (CI)	p-value	Conclusion
Unknown	75	79	5.22	3.67- 7.43	0.000	Significant positive association
Other	185	1017				
Constant	121	419	1.41	1.07- 1.85	0.014	Significant positive association
Other	139	677				
Improve	9	41	0.92	0.44- 1.92	0.830	No association
Other	251	1055				
Worsen	50	556	0.23	0.17- 0.32	0.000	Significant negative association
Other	210	540				

4.4.8 Association between percentage of disability and rejection of disability pension application

Sixty percent (60.0%) of applicants were given a percentage for their disability. The disability percentages ranged from 5.0% to 100.0%. The median disability percentage among all applicants who were allocated a disability percentage is (70.0%). The percentages of disability were divided into two categories: percentages below the median (disability percentage less than 70.0%) and those equal to or higher than the median (disability percentage equal to or above 70.0%). Table 4.10 shows the results of the statistical analysis of association between lower disability percentage and rejection of disability pension application in the Khomas Region. The result shows a positive association between lower disability percentage and rejection of disability pension application. An applicant with a disability percentage below 70.0% has about 14 times more chances of being rejected for disability pension compared to an applicant with a disability percentage equal to or above 70.0%.

Table 4.10: Association between percentage of disability and rejection of disability pension application

Percentage of disability	Cases	Controls	Odds Ratios (OR)	95% Confidence Interval (CI)	p-value	Conclusion
<70.0%	114	325				Significant positive association
70.0% +	9	359	13.99	6.98- 28.04	0.000	

The fact that 40.0% of applicants were not given a percentage of disability indicates that a disability percentage is not necessarily required when determining eligibility for disability pension in the Khomas Region. Possibly some medical practitioners are not allocating a percentage of the applicants' disabilities due to the absence of a guiding tool for measuring disability percentage in the Khomas Health Directorate. The absence of a guiding tool for determining disability percentage is not unique to the Ministry of Health and Social Services in Namibia. According to literature some countries do not have a guiding tool for determining disability percentage whereas other countries do have the tools for determining disability percentage for disability pension applicants (Whitworth et al., 2006).

4.4.9 Association between intervention needed to restore work ability and rejection of disability pension application

Table 4.11 shows results of statistical analysis on the association between possible interventions needed to restore work ability of the applicant and rejection of disability pension application. There is a positive association between a need for medication to restore work ability of the applicant and rejection of disability pension application. Applicants who required medication for restoration of their work ability were three times more likely to be rejected for disability pension compared to applicants in need of other interventions to restore work ability (OR=3.00). The absence of any possible intervention to restore work ability of an applicant is negatively associated with rejection of disability pension application with OR=0.37. No association was found between

rejection of disability pension applications and being in need of rehabilitation, appliances (assistive devices) or surgical interventions.

Table 4.11: Association between intervention needed to restore work ability and rejection of disability pension application

Intervention needed	Cases	Controls	Odds Ratios (OR)	95% Confidence Interval (CI)	p-value	Conclusion
Appliance	17	51	1.43	0.81- 2.53	0.210	No association
Other	243	1045				
Medication	87	155	3.00	2.24- 4.16	0.000	Significant
Other	173	941				positive association
Rehabilitation	18	69	1.11	0.65- 1.89	0.710	No association
Other	242	1027				
Surgery	12	48	1.06	0.55- 2.02	0.868	No association
Other	248	1048				
None	120	765	0.37	0.28- 0.49	0.000	Significant
Other	140	331				negative association

4.4.10 Association between suitable employment setting and rejection of disability pension application

Table 4.12 shows the results of statistical analysis on the association between an employment setting that is suitable for an applicant and rejection of disability pension application. There is a significant negative association between being unfit for any form of employment setting and rejection of disability pension application with a CI of (0.10-0.24). The results show a significant positive association between being fit to work in the open labor market and being rejected for disability pension. The result shows that an applicant who is fit for open labour market employment is 14 times more likely to be rejected for disability pension compared to other categories. This result validates a clear difference among the cases and controls with regards to being suitable to work in the open labour market in the current procedure for determining eligibility for disability pension in the Khomas Region. Being unfit for any employment setting and being fit for sheltered employment are negatively associated with rejection for disability pension with OR of 0.16 and 0.68, respectively.

Table 4.12: Association between suitable employment setting and rejection of disability pension application

Suitable employment	Cases	Controls	Odds Ratios (OR)	95% Confidence Interval (CI)	p-value	Conclusion
None	25	446	0.16	0.10- 0.24	0.000	Significant negative association
Other	235	650				
Light work	36	142	1.08	0.73- 1.60	0.702	No association
Other	224	954				
Settlement	14	75	0.77	0.43- 1.40	0.393	No association
Other	246	1021				
Sheltered employment	66	364	0.68	0.50- 0.93	0.015	Significant negative association
Other	194	732				
Open labor market	84	35	14.47	9.46- 22.14	0.000	Significant positive association
Other	176	1061				

Even though suitable employment settings for the applicants is divided into two categories, namely: ‘none’ and ‘settlement’ (those who cannot do any form of work), and ‘light work’, ‘sheltered employment’, and ‘open labour market’ (those who can do some form of work), there is a significant association between being able to do some form of work and rejection for disability pension: $p=0.000$, $OR= 4.59$ and $CI =3.14-6.74$. This result shows that applicants who are able to do some form of work are more than four times likely to be rejected for disability pension.

4.4.11 Association between available functional abilities of applicant and rejection of disability pension application

The results in the Tables 4.13, to 4.15 present the association between functional abilities and rejection of disability pension applications. The abilities are presented with respect to general functioning, physical ability and psychological ability respectively. The statistical analysis shows a positive association between having normal physical and psychological functions, and rejection of disability pension application with all having p-values of zero. For the majority of the listed abilities in the respective tables, there are six to seven times more chances of an application being rejected if the ability is normal compared to abnormal functions. Higher ORs were present for personal care abilities and ability to follow instructions. An applicant with normal personal care is 18 times more likely to be rejected for disability pension compared to applicants with abnormal personal care. In addition an applicant who is able to follow instructions is 10 times more likely to be rejected for disability pension compared to those who lack this ability.

Table 4.13: Association between general functioning of applicant and rejection of disability pension application

Abilities present		Cases	Controls	Odds Ratios (OR)	95% Confidence Interval (CI)	p-value	Conclusion
Mobility	Normal	171	468	2.603	1.942- 3.493	0.000	Significant positive associations
	Abnormal	88	627				
Conduct own affairs	Normal	229	566	7.134	4.714- 10.855	0.000	
	Abnormal	30	529				
Personal care	Normal	250	660	18.308	9.037- 38.455	0.000	
	Abnormal	9	435				

Table 4.14: Association between physical ability of applicant and rejection of disability pension application

Physical abilities present		Cases	Controls	Odds Ratios (OR)	95% Confidence Interval (CI)	p-value	Conclusion																																																																																						
Seating	Yes	236	634	7.48	4.80- 11.66	0.000	Significant positive associations																																																																																						
	No	23	462					Standing	Yes	191	337	6.33	4.66- 8.58	0.000	No	68	759	Walking	Yes	188	300	7.03	5.19- 9.52	0.000	No	71	796	Balance	Yes	174	287	5.77	4.31- 7.73	0.000	No	85	809	Climbing	Yes	166	251	6.01	4.50- 8.03	0.000	No	93	845	Endurance	Yes	170	261	6.11	4.56- 8.18	0.000	No	89	924	Coordination	Yes	206	491	4.79	3.46- 6.63	0.000	No	53	605	Fine motor	Yes	216	475	6.57	4.63- 9.30	0.000	No	43	621	Hand grips	Yes	218	469	7.10	4.98- 10.12	0.000	No	41	626	Posture	Yes	213	450	6.65	4.73- 9.35
Standing	Yes	191	337	6.33	4.66- 8.58	0.000																																																																																							
	No	68	759					Walking	Yes	188	300	7.03	5.19- 9.52	0.000	No	71	796	Balance	Yes	174	287	5.77	4.31- 7.73	0.000	No	85	809	Climbing	Yes	166	251	6.01	4.50- 8.03	0.000	No	93	845	Endurance	Yes	170	261	6.11	4.56- 8.18	0.000	No	89	924	Coordination	Yes	206	491	4.79	3.46- 6.63	0.000	No	53	605	Fine motor	Yes	216	475	6.57	4.63- 9.30	0.000	No	43	621	Hand grips	Yes	218	469	7.10	4.98- 10.12	0.000	No	41	626	Posture	Yes	213	450	6.65	4.73- 9.35	0.000	No	46	646						
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Table 4.15: Association between psychological ability of applicant and rejection of disability pension application

Psychological abilities present		Cases	Controls	Odds Ratios (OR)	95% Confidence Interval (CI)	p-value	Conclusion																																														
Following instructions	Yes	245	686	10.43	6.00- 18.13	0.000	Significant positive associations																																														
	No	14	409					Concentration	Yes	237	608	8.65	5.50- 13.60	0.000	No	22	488	Communication	Yes	238	587	9.83	6.19- 15.60	0.000	No	21	509	Monotonous work	Yes	230	603	6.48	4.33- 9.71	0.000	No	29	493	Criticism	Yes	227	560	6.79	4.60- 10.01	0.000	No	32	536	Social appearance	Yes	229	563	7.23	4.85- 10.77
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Social appearance	Yes	229	563	7.23	4.85- 10.77	0.000																																															
	No	30	533																																																		

4.4.12 Association between ability to adequately provide for personal maintenance and rejection of disability pension application

The results in Table 4.16 show the results of statistical analysis on the association between ability of applicant to provide for his/her personal maintenance and rejection of disability pension application. There is a positive association between ability to provide for one's personal maintenance and rejection of disability pension application. The odds

of being rejected if an applicant can provide for his/her personal maintenance is about seven times that of an applicant who cannot (OR=6.9).

Table 4.16: Association between ability to adequately provide for personal maintenance and rejection of disability pension application

Ability to adequately provide for personal maintenance	Cases	Controls	Odds Ratios (OR)	95% Confidence Interval (CI)	p-value	Conclusion
Can provide	136	153	6.90	5.067- 9.415	0.000	Significant positive association
Cannot provide	121	940				

4.4.13 Association between effects of disability on life expectancy and rejection of disability pension application

Results in Table 4.17 present the statistical analysis results of the association between effects of disability on life expectancy and rejection of disability pension applications. There is a significant positive association between having a disability that does not affected life expectancy and rejection of disability pension application: an applicant with a disability that does not affect life expectancy is almost two times more likely to be rejected (OR=1.92). There is a significant negative association between having a disability that reduce life expectancy and rejection of application for disability pension (OR=0.41).

Table 4.17: Association between effects of disability on life expectancy and rejection of disability pension application

Effects of disability on life expectancy	Cases	Controls	Odds Ratios (OR)	95% Confidence Interval (CI)	p-value	Conclusion
Unknown	12	52	0.97	0.51- 1.85	0.930	No association
Other	248	1044				
No effect	167	530	1.92	1.45- 2.54	0.000	Significant positive association
Other	93	566				
Reduced	68	507	0.41	0.30- 0.56	0.000	Significant negative association
Other	192	589				

When the category of disabilities with an unknown effect on life expectancy is removed from the analysis which results in two remaining categories namely (unaffected and reduced); applicants with unaffected life expectancy are two times more likely to be rejected for disability pension compared to those with a reduced life expectancy since $OR=2.35$. The results is of the other two parameters are $p=0.000$, and $CI (1.71-3.23)$.

4.5 RESULTS OF THE MULTIPLE LOGISTIC REGRESSION

This section presents the results of the multiple logistic regression analysis which is the last part of the statistical analysis. All variables were assessed on their individual association with rejection of disability pension application in section (4.4). A multiple logistic regression model was fitted to account for confounders and find the factors significantly associated with the outcome of approval or rejection of disability pension

application when all the factors are combined with each other. A standard p-value of 0.2 was used as the criteria for inclusion of variable factors into the final model. A multiple logistic regression model produced the table in Annexure H. Factors with p-values less than 0.05 are significantly associated with the outcome decision of approval or rejection for disability pension in the Khomas Region. When the factors are simultaneously considered the following show a significant association with the outcome decision of approval or rejection of disability pension applications:

- ❖ Type of work (employment setting) suitable for applicant
- ❖ Personal care capacity
- ❖ Possible intervention to improve work ability of the applicant
- ❖ Percentage of disability
- ❖ Mental functions affected

4.6 SUMMARY

This chapter covered the presentation and discussion of the results of the study. Factors were described and discussed with regard to their frequency and percentage distribution among approved and rejected disability pension applications, and their statistical significance of association with rejection for disability pension in the Khomas Region. Results of a multiple logistic regression analysis were presented to identify a group of factors that were significant in determining approval or rejection of disability pension

applications when all the factors were simultaneously considered. The following factors were positively associated with rejection of disability pension applications in the Khomas Region during the period of the study:

- ❖ No previous education
- ❖ No previous occupation
- ❖ Musculoskeletal system affected
- ❖ Disability caused by injury
- ❖ Disability with unknown duration
- ❖ Disability percentage below 70.0%
- ❖ Disability with unknown progression
- ❖ Disability that is constant
- ❖ Disability that can be improved by medication
- ❖ Normal functioning capacity with respect to work
- ❖ Fit for open labour market employment
- ❖ Able to adequately provide for own maintenance
- ❖ Unaffected life expectancy.

The following factors were found negatively associated with rejection of disability pension applications in the Khomas Region during the period of study; therefore these factors are associated with approval of disability pension applications:

- ❖ Unskilled previous occupation
- ❖ Nervous system affected

- ❖ Mental functions affected
- ❖ Disability caused by non-communicable diseases
- ❖ Permanent disability
- ❖ Disability that will worsen
- ❖ Absence of possible intervention to improve work ability of applicant with disability
- ❖ Unfit for any type of employment
- ❖ Reduced life expectancy

The multiple logistic regression analysis showed that factors that are significantly associated with approval and rejection of disability pension applications in the Khomas Region during the period of study considering a p-value of 0.05 are: type of employment setting suitable for applicant; personal care capacity; possible intervention to restore work ability of the applicant; percentage of disability and mental functions affected. Chapter 5 provides conclusions, recommendations and limitations of this study based on the findings.

CHAPTER 5

CONCLUSIONS, RECOMMENDATIONS AND LIMITATIONS OF THE STUDY

5.1 INTRODUCTION

In Chapter 4 results of this study were presented and comparatively discussed with identified local, regional and international literature. Conclusions drawn from the study are presented in Chapter 5. Recommendations are then formulated and presented within the local context. Limitations of this study, with regards to data sources and literature are highlighted.

5.2 CONCLUSIONS

The purpose of this study is to explore and describe characteristic factors of approved and rejected disability pension applications, and to identify factors associated with rejection of disability pension applications in the Khomas Region. To reach the purpose, two objectives were formulated focusing firstly on describing the socio-demographic and medical factors that characterize approved and rejected disability pension applications in the Khomas Region and secondly on the association between the identified characteristic factors and rejection of disability pension applications in the Khomas Region. The conclusions that are based on the objectives are presented below.

5.2.1 Conclusions with regard to the first objective

First Objective: To describe socio-demographic and medical factors that characterize approved and rejected disability pension applications in the Khomas Region

To meet the first objective information on the characteristic factors of disability pension applicants was extracted from the completed disability pension applications using a data extraction form. Collected data were analyzed using Epi info version 5.3.1 statistical package to find the distribution of the characteristic factors among approved and rejected disability pension applications.

Conclusions: The study confirms universal phenomena that low education, a history of unemployment, and lack of income are factors that characterize disability pension applicants (Govender, 2009). It was found in this study that there were higher percentages of rejection for disability pension in the Khomas Region are among disability pension applicants who had no education; no employment history; an adequate income as well as those capable of working in the open labour market employment setting. The study found that the following disability pension applicants usually have their applications approved: those who have higher educational levels; those who were previously employed in professional jobs; and younger applicants.

The findings reveal that the most affected body systems among disability pension applicants are: musculoskeletal system, nervous system, and mental functions

respectively. Chronic conditions such as schizophrenia, HIV related conditions, visual impairment, and mental retardation, featured prominently among the disability pension applicants. The study found that the percentage of rejected applications was greater for persons with disabilities with unknown duration or progression, especially epilepsy, and those in need of medication to restore their work ability. The study found that the percentage of approved applications was higher amongst those applicants who had: an affected urinary system; mental functions affected (especially schizophrenia); and conditions that will worsen. This group of approved applicants included those whose work ability could not be restored by any type of intervention.

Medical practitioners regarded the majority of the health conditions among disability pension applicants as not affecting their life expectancy. A predominantly medical model is being used to determine interventions needed to restore work ability of disability pension applicants. The majority of disability pension applicants are capable of performing some form of productive labour activities, especially in sheltered employment. Some disability pension applicants who were considered fit for open labour market, by assessing medical practitioners, are receiving disability pension. However, statistically there is a significant difference between the approved and rejected applications with regard to being suitable for open labour market employment.

5.2.2 Conclusions with regard to the second objective

Second Objective: To identify factors that are significantly associated with rejection of disability pension applications in the Khomas Region.

A case- control design was used to achieve this objective. The cases were the applicants who were rejected and the controls were those that were approved for disability pension. To further analyze the results from the first objective, statistical tests for significance of association were conducted at 95.0% Confidence Intervals to determine the evidence of association between each factor and the outcome decision of rejection for disability pension. Results of the Odds Ratios, p- values and Confidence Intervals determined the associations. Finally a multiple logistic regression analysis was done to find the association between the variable factors and the outcome decision to reject or approve disability pension applications when multiple factors are involved.

Conclusions: It was found that a significant positive association exists between rejection for disability pension and the following factors individually: no education; no previous occupation; disabilities caused by injury; lower percentage of disability; disabilities with unknown duration; fit for open labour market; and unaffected life expectancy. On the other hand the following factors were negatively associated with rejection of disability pension applications: disabilities caused by non-communicable diseases; unaffected musculoskeletal system; permanent disability; and disability which did not have any possible interventions to restore work ability of the applicant.

When all factors were combined and simultaneously analyzed then the multiple logistic regression analysis showed that there is an association between approval and rejection of disability pension applications and the following factors: type of employment setting fit for applicant; personal care abilities; mental functions affected; possible intervention to restore function; and percentage of disability.

5.3 RECOMMENDATIONS

Several recommendations emanated from the study. Possible stakeholders who could act on these recommendations include; Ministry of Health and Social Services, Ministry of Labour and Social Welfare, Ministry of Education, the disability movement, and the community at large.

5.3.1 Recommendations for the Ministry of Health and Social Services

- A policy and guidelines should be developed to guide assessments for disability pension to ensure harmonization and integration of assessment for disability pension with the administration of the pension. This should be in collaboration with the Ministry of Labour and Social Welfare. The time frame should be within the next one or two financial years to be in keeping with the ministerial strategic plan.

- In order to reduce the inclusion errors in which people suitable for open labour market receive disability pension, there is a need to develop a standardized comprehensive objective assessment tool which is researched in collaboration with

the Ministry of Labour and Social Welfare. It is ideal for the assessment tool to be based on the ICF which has a sound theoretical basis for measuring impairments in body structure, body function, activity limitations and participation restrictions. Furthermore the (ICF) may provide an appropriate conceptual structure to balance the medical and social approaches for assisting people with disabilities rather than the current purely medical model being used in the Khomas Region. This could also contribute to the transparency and legitimacy of the disability pension scheme since such schemes are open to constant criticism about their capacity to select the right people for a pension (de Boer et al., 2008). Furthermore, the reasons for rejections should be clear (Medeiros et al., 2006). Further consultations and collaboration could be done with South Africa, in which some provinces are currently developing disability assessment procedures.

- Since disability is not only a medical problem there should be involvement of other stakeholders involved in determining eligibility for disability pension. The Khomas Region has the highest number of state-employed allied health professionals, such as occupational therapists, physiotherapists, social workers, and psychologists. It would therefore be noble to establish procedures that emphasize interdisciplinary evaluation of disability pension applicants. This is relevant when considering that functional assessments and social issues are not the fields of expertise of medical practitioners hence involvement of other allied health professionals would mean that applicants are provided a fair evaluation. The respective Primary Health Care and

Social Services Directorates can play a leading role regarding this recommendation in the next financial year.

- Implement on-going training for medical practitioners and allied health professionals involved in assessments for disability pension in terms of disability assessment protocols and tools in the Khomas Region. This task can be done by the CMO annually to ensure a mutual understanding of the terms used on the disability pension application forms and their interpretation. Voipio (2006) argues that one of the key means of achieving efficient, co-ordinated and sensitive administrative systems is to invest substantial resources in the training of personnel involved.
- Medical practitioners could be provided with a list of operational definitions of elements on the current disability pension application for example, what is referred to as mobility versus walking. This could be done by the CMO in consultation with other healthcare providers. The process can be repeated whenever the elements on the disability pension application form are changed.
- A guide to estimate percentage of disability or impairment is needed to help medical practitioners comfortably estimate the given percentage of disability since medical practitioners frequently leave out this question on the medical report.

- A rating scale should be used for each task which shows the extent of difficulty in performing the task, such as walking, instead of 'yes' or 'no' responses to an assessment of an applicant's capacity to perform work.
- To reduce complex assessments and delays in processing of some disability pensions, a chronic illnesses list, based on the Australian model, should be developed for Namibia to identify clinically confirmed conditions that could be eligible for the disability pension. For example, schizophrenia with a more than 50.0% degree of debilitation even with medication. The Directorate of Tertiary Health Care can play a leading role in this task which can be included in their five year plan.
- To prevent injuries a prevention strategy, based on the WHO guidelines, should be developed since injuries were the highest known cause of disability among disability pension applicants. The ministry through National Level Disability Prevention and Rehabilitation Division in collaboration with MVA Fund and National Road Safety Council could collaborate in this task.
- Maternal and child health program in the Ministry should collaborate with the Disability Prevention and Rehabilitation Division to developing strategies for disability prevention during pregnancy and to reduce congenital disabilities since disabilities with genetic or congenital causes were found to be significantly high in

this study. This can be tackled through joint annual planning among the responsible program officers.

- Community Based Rehabilitation (CBR) should be strengthened, particularly the empowerment components. Sheltered employment or protected workshops can be introduced to empower many disability pension applicants who are able to work in sheltered employment. Through CBR, health promotion can be done to educate society on eligibility for disability pension to enable potential applicants to be better prepared for the assessments. This would minimise unnecessary applications and improve transparency of the process (de Boer et al., 2008).

5.3.2 Recommendations for the Ministry of Labour and Social Welfare

- A review of the current disability pension application form should be initiated in order to add other significant environmental and social factors with well defined parameters when assessing disability. Such a review could follow the international shift from only relying on a purely medical approach of determining eligibility for disability pension to include social and human rights components.
- A social assistance strategy could be developed to remove environmental and attitudinal barriers for people with disabilities who can work thus enabling their integration into mainstream society, and to provide disability pension only to those who cannot permanently provide for themselves financially.

- A consideration should be given to the principles of equity by introducing at least two levels of payment for disability pension depending on the severity of disability rather than the current flat rate. This is because disability levels differ even among those who are approved for disability pension, some can manage personal care while others need 24 hour care.

- For people with profound disabilities who depend on a care-giver, a care-giver allowance could be introduced. South Africa and Australia are examples where such systems are functioning well. Currently in Namibia if a care-giver is a family member, for example, then he/she is usually not able to work for a living. However, home-based care is not always done in a professional manner due to lack of care-giver skills and the level of care is often at a very low standard. In addition home-based care leads to isolation of recipients of care from social interaction. In view of these disadvantages of such care it would be preferable to provide day-care centers, community houses, and protected employment workshops, in order to enable more professional care for disability pension recipients within their communities.

- In accordance with the African Union's Livingstone Declaration, a reliable long term funding for social protection should be ensured considering the ever increasing number of applicants for disability pension. Developmental partners and government could collaborate to ensure a sustainable budget.

- As the numbers of disability pension applicants continue to increase, there will be need to introduce well researched ways to conduct some form of means testing that is less costly. The National Pensions Act of 1992 already has a provision for a means test to be introduced.

- A database with user friendly software that allows easy retrieval of information that is not only based on pay points may improve efficiency in handling data within and between the Ministry of Labour and Social Welfare and the Ministry of Health and Social Services. The officers responsible for information and technology in the Ministry of Labour and Social Welfare could execute this task in the next financial year.

5.3.3 Recommendations for the Ministry of Education

- A review of the capacity of special schools can be done by this ministry. Options for education should be provided for learners who because of their impairments are unable to cope with main stream education. Special education should be strengthened for individuals who have lesser learning ability so that they can receive relevant skills training, to prepare them for certain non-academic jobs. Introduction of skills training curricula and specially trained teachers for such learners can go a long way in educationally empowering individuals with disabilities, especially mental retardation (learning disabilities) who are the seriously excluded from education and employment.

- A school placement policy guiding enrolment of learners with disabilities in mainstream school should be developed. Inclusive education should be strengthened to enable school placement assessments for children with disabilities to be done by professionals, such as occupational therapists, speech and language therapists and clinical/child psychologists for children with disabilities who attain the school going age.

5.3.4 Recommendations for the disability movement

- People with disabilities should mobilise themselves into recognised Organizations for People with Disabilities (OPDs) and engage in advocacy for accessible systems. Quarterly outreaches to their communities could be implemented to provide information and awareness about the disability pension program.
- OPDs should actively participate in the development of ‘fair’ criteria for disability pension eligibility once the Ministry of Health and Social Services initiates the process. This could ensure that processes of determining eligibility for disability pension are effective and responsive to the needs of people with disabilities as recommended by the UN convention on the rights of persons with disabilities.
- Non-Governmental Organizations (NGOs), faith based organizations, and civil organizations, should complement the government’s social support to people with disabilities through provision of other necessities such as assistive devices; vouchers

to access services; and income generating activities. This could be achieved through action plans that purposely target people with disabilities.

5.3.5 Recommendations for future research

- There is a need to research the effects of language difficulties and cultural differences between medical practitioners and disability pension applicants when determining eligibility for disability pension.
- Future research could be undertaken to determine the impacts of the disability pension program on the lives of people with disabilities who are receiving disability pension.
- The situation of people with epilepsy need further research to establish its prevalence and the reasons why high percentages of disability pension applicants with epilepsy are being rejected for disability pension.
- Empowerment options for people with disabilities in Namibia could be researched in order to guide policy directions.
- Local studies on the effects of different types of disabilities on life expectancy could provide results that could better inform the medical practitioners to judge the effects of different disabilities on the life expectancy of people with disabilities in Namibia.
- Studies to find out disability targeting inclusion and exclusion could be conducted.

- Further research to determine factors that differentiate applicants who are approved for disability pension for short term and those for permanent disability pension.

- The impact of rejection for disability pension on the lives of disability pension applicants who are rejected for disability pension could be researched in future by following up the people whose applications were rejected for disability pension.

5.4 LIMITATIONS OF THE STUDY

5.4.1 Limitations with regards to data sources

Secondary data sources were used in this study. The researcher had no control on how the original data were collected. Other data elements could have been interpreted differently by medical practitioners who completed the medical reports for disability pension. Another challenge for this study was that some data elements were missing from the records. To counteract this, those records with significant data elements missing were excluded from the study.

5.4.2 Limitation with regards to literature

There is great scarcity of local studies on factors associated with eligibility for disability pension thus the literature review focused more on international studies.

5.5 CONCLUDING REMARKS

The study has managed to describe the factors characterizing disability pension applications and those factors currently associated with approval and rejection of disability pension applications in the Khomas Region. Therefore the overall aim and objectives of this study have been achieved.

It is concluded that factors associated with determination of eligibility for disability pension in the Khomas Region follow the international trends. However, there is room for much improvement particularly pertaining to the factors captured by the current disability pension application form. The proposed recommendations could contribute towards the development of clear eligibility criteria for disability pension. This will ensure fair and holistic disability assessments culminating in needs oriented interventions for all people with disabilities.

6.0 REFERENCES

African Union. (2006). *Social protection – a transformative agenda: The Livingstone Call for Action Intergovernmental Conference*. Livingstone: AU and the Government of Zambia.

Albertsen, K., Lund, T., Christensen, K.B., Kristensen, T.S., & Villadsen, E. (2007). Predictors of disability pension over a 10-year period for men and women. *Scandinavian Journal of Public Health*, 35, 78–85.

Aliber, M. (2001). *Study of the incidence and nature of chronic poverty and development in South Africa: An overview*, Background paper 3. Manchester: Chronic Poverty Research Centre.

Allison, P.D. (1999). *Logistic Regression Using the SAS System: Theory and Application*. Cary NC: Statistical Analysis System.

Altman, B.M., & Barnartt, S.N. (2006). International views on disability measures: *moving toward comparative measurement*. San Diego: Elsevier.

Ardagna, D., & Zhang, L. (Eds.). (2010). *Run time models for self managing systems and applications*. Geneva: Springer Basel.

Association for Health and Environment Development, (2004). *Prevention early detection and management of childhood disabilities: Training manual for primary health care physicians*. Cairo: Association for Health and Environment Development.

Australian Government, (1991). *Social Security Act 1991*. Retrieved September 20, 2011 from <http://www.comlaw.gov.au/Series/C2004A04121>

Barrientos, A., & P. Lloyd-Sherlock (2002), “*Non-Contributory Pensions and Social Protection Paper*”, *Issues in Social Protection*. Geneva: International Labour Organization.

Beckman, A., Hakansson, A., Rastam, L., Lithman, T. & Merlo, J. (2006). The role country of birth plays in receiving disability pension in relation to patterns of health care utilisation and socioeconomic differences: a multilevel analysis of Malmo, Sweden. *BioMed Central Public Health*, 6(71), 1186- 1471.

Benitez-Silva, H., Buchinsky M., and Rust J. (2004). *How Large are the Classification Errors in the Social Security Disability Award Process?* NBER working paper10219. Cambridge: National Bureau of Economic Research.

Borg, K. (2001). Predictive factors for disability pension — An 11-year follow up of

young persons on sick leave due to neck, shoulder, or back diagnoses. *Scandinavian Journal of Public Health*, 29(2), 104-112.

Borg, K., Hensing, G., & Alexanderson, K. (2004). Risk factors for disability pension over 11 years in a cohort of young persons initially sick-listed with low back, neck, or shoulder diagnoses. *Scandinavian Journal of Public Health*, 32, 272–8.

Braithwaite, J., & Mont, D. (2008). *Disability and Poverty: A Survey of World Bank Poverty Assessments and Implications*. Social Protection Discussion paper No. 0805. Washington DC: The World Bank.

Bruusgaard, D., Smeby, L., & Claussen, B. (2010). Education and disability pension: A stronger association than previously found. *Scandinavian Journal of Public Health*, 38(7), 686-690. doi: 10.1177/1403494810378916

Burns, N. & Grove, S.K. (2005). *The practice of nursing research: conduct, critique and utilization*. 5th ed. Arlington: Saunders

Carter, D.E. (1996). *Quantitative Research: The research process in Nursing*. London: Blackwell Science.

Chowdhury, J. (2005) *Disability and Chronic Poverty: An Empirical Study on Bangladesh*. Oxford: Oxford University.

Cocchiarella, L., & Lord, S., J. (2001). *Master the AMA Guides Fifth: A Medical and Legal Transition to Guides to the Evaluation of Permanent Impairment*, Chicago: American Medical Association.

Community Agency for Social Enquiry. (2005). *Investigation into the Increase in Uptake of Disability and Care Dependency Grants since December 2001*. Pretoria: Research for the National Treasury and the Department of Social Development, Community Agency for Social Enquiry.

de Boer, W.E.L., Donceel, P., Brage, S., Rus, M., & Willems, J.H.B.M, (2008). Medico-legal reasoning in disability assessment: A focus group and validation study. *BioMed Central Public Health*, 8(335).
doi:10.1186/1471-2458-8-335

de Kleijn-De Vrankrijker, M. W. (2003). The long way from the International Classification of Impairments, Disabilities, and Handicaps (ICIDH) to the International Classification of Functioning, Disability and Health (ICF). *Disability and Rehabilitation*, 25, 561–564.

de Koker, C., Waal, L. and Vorster, J. (2006). *A profile of social security beneficiaries in South Africa*. Pretoria: Datadesk.

de Paoli, M.M., Gronningsaeter, A.B., & Mills, E.A., (2010). *HIV/AIDS, the disability grant and ARV adherence*. Summary (FAFO- report 2010:28). Oslo: Fafo Research Foundation.

Devereux, S., Marshall, J., MacAskill, J. and Pelham, L. (2005) *Making cash count HelpAge International*. United Kingdom: Institute of Development Studies, Save the Children.

Devereux, S. (2001). *Social pensions in Namibia and South Africa*. Discussion paper 379 England: Institute of Development Studies.

Dube, A. K. (2005). *The role and effectiveness of disability legislation in South Africa*. South Africa: Disability Knowledge and Research.

Eide, A. H., Nhiwathiwa, S., Muderedzi, J. & Loeb, M. E. (2003). *Living conditions among people with activity limitations in Zimbabwe. A representative regional survey*. SINTEF Report STF78A034512. Oslo: SINTEF Unimed NIS Health & Rehabilitation.

- Eide, A. H., Loeb, M. E., Van Rooy, G., Fuller, B. (2001). *Living conditions among people with disabilities in Namibia. Pilot study*. SINTEF Report STF78 A014502. Oslo: SINTEF Unimed NIS Health & Rehabilitation.
- Elliott, T., Kurylo, M., & Rivera, P. (2002). Positive growth following an acquired physical disability. In C. R. Snyder & S. Lopez (Eds.), *Handbook of positive psychology* (pp. 687–699). New York: Oxford University Press.
- Ellis, F. Devereux S. & White P. (2009). *Social Protection in Africa*. UK: Edward Elgar Publishing.
- Elwan, A. (1999) *Poverty and Disability: A Survey of the Literature*, Social Protection Discussion Paper Series, No. 9932, Washington, D. C: The World Bank.
- Emmett, T. (2006) *Disability, poverty, gender and race: a South African Agenda*. South Africa: Child, Youth, Family and Social Development Research Programme of The Human Sciences Research Council.
- Erb, S. & Harriss-White, B. (2002) *Outcast from social welfare: adult disability, incapacity and development in rural South India*. Bangalore, India: Books for Change.

- Erb, S. & Harris-White, B. (2001). *The economic impact and developmental implications of disability and incapacity in adulthood in a village study from S. India*. Cambridge: Downing College.
- Freedman, V.A., Martin, L.G., & Schoeni, R.F. (2002). Recent trends in disability and functioning among older adults in the United States: a systematic review. *Journal of the American Medical Association*, 288, 3137-3146.
- Fraenkel, J.R. & Wallen, N.E. (2006). *How to design and evaluate research in education*. (6th ed.). Boston: McGraw-Hill.
- Frieg, A., & Hendry, J., A. (2001). Disability profile of grant recipients in a semi-rural area in South Africa. *South African Journal of Physiotherapy*, 57(2), 755-765.
- Gooding, K. (2006). *Poverty and Blindness: A Survey of the Literature*. West Sussex Sightsavers International.
- Gooding, K. & Marriott, A. (2007). *Social assistance and disability in developing countries*. West Sussex: Sightsavers International.
- Gooding, K., & Marriott, A. (2009). Including persons with disabilities in social cash transfer programmes in developing countries. *Journal of International*

Development, 21, 685–698. doi: 10.1002/jid.1597

Govender, T. (2009). The profiles of disability grant applicants in Bishop Lavis, Cape Town. South Africa. *Family Practice Journal, 51*(3), 228-236.

Government of the Republic of Namibia. (1991). *National Population and Housing Census*. Windhoek: National Planning Commission.

Government of the Republic of Namibia. (1992a). *Debates of the National Assembly, Vol. 9*, Windhoek: Author.

Government of the Republic of Namibia. (1992b). *National Pensions Act, 1992*. Windhoek: Author.

Government of the Republic of Namibia. (1995). *Disability and rehabilitation in Namibia. Vol. 1: A national Survey*. Windhoek: Ministry of Lands Resettlement and Rehabilitation.

Government of the Republic of Namibia. (1997a). *National Policy on Disability*. Windhoek: Ministry of Lands Resettlement and Rehabilitation.

Government of the Republic of Namibia. (1997b). *Integrated Poverty Reduction*

Strategy for Namibia. Windhoek: National Planning Commission.

Government of the Republic of Namibia. (1998). *Basic State Grant Amendment Act (draft)*, Windhoek: Ministry of Health and Social Services.

Government of the Republic of Namibia. (2002). *National Poverty Reduction Action Programme 2001-2005*, Windhoek: National Planning Commission.

Government of the Republic of Namibia. (2003). *National Population and Housing Census*. Windhoek: National Planning Commission.

Government of the Republic of Namibia. (2006). *Republic of Namibia Population Projections*. Windhoek: National Planning Commission.

Gronvik, L. (2007). The fuzzy buzz word: conceptualisations of disability in disability research classics. *Sociology of Health and Illness*, 29, 750-766.

Guernsey, K., Nicoli, M., & Ninio, A. (2007). *Convention on the Rights of Persons with Disabilities: Its Implementation and Relevance for the World Bank*. Social Protection discussion paper NO. 0712. Washington, D.C: World Bank

Guido, J.J., Winters, P.C., & Rains, A.B. (2006). *Logistic Regression Basics*. New York:

University of Rochester.

Guthrie, T., Proudlock, P., Sait, W., Linders, P., Gcaza, S., Thompson, P. & van Noordwyk, N. (2001). *Social Security Policy Options For People With Disabilities In South Africa: An International And Comparative Review*. Cape Town: Child Health Policy Institute and The South African Federal Council on Disability.

Hashimoto, S., Kawado, M., Seko, R., Murakami, Y., Hayashi, M., Kato, M.,...Tsuji, I. (2010). Trends in disability-free life expectancy in Japan, 1995–2004. *Journal of Epidemiology*, 20, 308-312.

Hassan, E. (2006). Recall Bias can be a Threat to Retrospective and Prospective Research Designs. *The Internet Journal of Epidemiology*, 2(3), 4-4.

Honeycutt, T., & Mitra, S. (2005). *Learning from Others: Temporary and Partial Disability Programs in Nine Countries*. Illinois: Disability Research Institute.

Hopkins, W. G. (2000). *Quantitative Research Design*. Otago: University of Otago.

Howell, F. (2001). Social Assistance: Theoretical Background in Ortiz, I. (ed.) *Social*

Protection in Asia and the Pacific. India: Asian Development Bank.

Hughes, B., & Paterson, K. (1997). The Social Model of Disability and the Disappearing Body: Towards sociology of impairment. *Disability and Society*, 12(3), 325-340.

Hurst, R. (2003). The international disability rights movement and the International Classification of Functioning Disability and Health. *Disability and Rehabilitation*, 25, 572–576.

Hussey, S., Hoddinott, P., Wilson, P., Dowell, J. & Barbour R. (2004). Sickness certification system in the United Kingdom: qualitative study of views of general practitioners in Scotland. *British Medical Journal*, 328(88), 35-40.

Inter-Regional Inequality Facility, (2006). *Social Grants in South Africa*. Policy Brief 1. Pretoria: Overseas Development Institution.

International Monetary Fund, (2006). *Namibia: Selected Issues and Statistical Appendix*. IMF Country Report No. 06/153. Washington D.C: Author.

Jarvholm, B., & Olofsson, C. (2002). *Insurance Medicine*. Lund: Student Literature.

Jekel, J.F. (2007). *Epidemiology, biostatistics and preventive medicine*. Philadelphia: Saunders.

Jelsma, J., Maart, S., Eide, A., Toni, M., & Loeb, M. (2008). Who gets the disability grant in South Africa? An analysis of the characteristics of recipients in urban and rural areas. *Disability & Rehabilitation*, 30 (15), 1139-1145.

Johansson, E., Leijon, O., Falkstedt, D., Farah, A., & Hemmingsson, T. (2011). Educational differences in disability pension among Swedish middle-aged men: role of factors in late adolescence and work characteristics in adulthood. *Journal of Epidemiology and Community Health*, doi:10.1136/jech-2011-200317

Johnell, K., Mansson, N.O., Sundquist, J., Melander, A., Blennow, G., & Merlo, J. (2006). Neighborhood social participation, use of anxiolytic-hypnotic drugs and women's propensity for disability pension: a multilevel analysis. *Scandinavian Journal of Public Health*, 34(1), 41-48.

Johnson, B. & Christensen, L. (2004). *Educational research: quantitative and qualitative approaches*. Boston: Allyn & Bacon.

Karlsson, N.E., Carstensen, J.M., Gjesdal, S., & Alexanderson, K.A.E.

(2008). Risk factors for disability pension in a population-based cohort of men and women on long-term sick leave in Sweden. *European Journal of Public Health, 18*(3), 224–231.

Kivimaki, M., Ferrie, J.E., Hagberg, J., Head, J., Westerlund, H., Vahtera, J., & Alexanderson, K. (2007). Diagnosis-specific sick leave as a risk marker for disability pension in a Swedish population. *Journal of Epidemiology and Community Health, 61*, 915–920. doi: 10.1136/jech.2006.055426

Kroskstad, S., Johnsen, R., & Westin, S. (2002). Social determinants of disability pension: a 10 year follow-up of 62 000 people in a Norwegian county population. *International Journal of Epidemiology, 31*, 1183-1191.

Kroskstad, S., Magnus P., Skrondal, A., & Westin, S. (2004). The importance of social characteristics of communities for the medically based disability pension. *European Journal of Public Health, 14* (4), 406-412.

Lax, M.B., Manetti, F.A., & Klein, R.A. (2004) Medical evaluation of work-related illness: evaluations by a treating occupational medicine specialist and by independent medical examiners compared. *International Journal of Occupational & Environmental Health, 10*, 1-12.

Layard, R. (2006). The case for psychological treatment centres. *British Medical Journal*, 332, 1030–2.

Levine, S., Van der Berg, S., & Yu, D. (2009). *Measuring the impact of social cash transfers on poverty and inequality in Namibia*. Stellenbosch Economic Working Papers: 25/09. South Africa: Bureau for Economic Research.

Loeb, M., Eide A. H., Jelsma J., Toni M., & Maart S. (2008). Poverty and disability in Eastern and Western Cape Provinces, South Africa. *Disability & Society*, 23(4), 311-321.

Maletsky, C. (2005, July 25). *Government Scraps AIDS Disability Grants: Government Has Dropped A Bombshell By Withdrawing Disability Grants To People Living With HIV-AIDS*. The Namibian, pp.1

Madotyeni, Z. (2000). *An Overview of Social Welfare Provision Of Britain, Germany, Hong Kong and Mauritius*. Prepared for National Workshop on Social Assistance for Children with Disabilities and Chronic Illnesses, Cape Town.

Mann, C.,J, (2003). Observational research methods. Research design II: cohort, cross sectional, and case-control studies. *Emergency Medical Journal*, 20, 54-60. doi:10.1136/emj.20.1.54

Mansson, N. O, & Rastam, L. (2001). Self-rated health as a predictor of disability pension and death--a prospective study of middle-aged men. *Scandinavian Journal of Public Health*, 29(2), 151-158.

Mansson, N.O., Rastam, L., Eriksson, K.F., & Israelsson, B. (1998). Socioeconomic inequalities and disability pension in middle-aged men. *International Journal of Epidemiology*. 27 (6)1019-1025. doi: 10.1093/ije/27.6.1019

Medeiros, M., Diniz, D. & Squinca, F. (2006). *Cash benefits to disabled persons in Brazil: An analysis of the BPC Continuous Cash Benefit programme*. Working Paper No 16, International Poverty Centre. United Nations Development Programme.

Meershoek, A, Krumeich A, & Vos R. (2007). Judging without criteria? Sickness certification in Dutch disability schemes. *Sociology of Health and Illness*, 29, 497-514.

Ministry of Health and Social Services. (2010). *Public Health Facilities*. Retrieved from

<http://www.healthnet.org.na/facilities.html>

Mitra, S. (2005). *Disability and Social Safety Nets in Developing Countries*. Washington D.C: Social Protection World Bank.

Mitra, S. (2009), Temporary and Partial Disability Programs in Nine Countries: What can the United States Learn from Other Countries? *Journal of Disability Policy Studies*, 20(1), 14-27.

Mitra, S. (2010). *Disability Cash Transfers in the Context of Poverty and Unemployment: The Case of South Africa*. New York: Fordham University.

Mohapatra, C.S. (2004). *Poverty and Disability In India*. Paper for the Workshop on Disability Management in India - Challenges and Perspectives, 4 – 5 March 2004

Mont, D. (2007). *Measuring Disability Prevalence*. Social Protection discussion paper NO. 0706. Washington, D.C: World Bank.

Mpofu, E., & Oakland, T. (2010). *Rehabilitation and Health Assessment Applying ICF Guidelines*. New York, NY: Springer.

Mutasa, G. (2010). *The Disincentive Effects of Disability Grant on Labour Supply in South Africa: A Cohort Analysis*. Cape Town: Development Policy Research Unit (DPRU) School of Economics University of Cape Town.

Old-Age and Survivors Insurance and Disability Insurance Trustees. (2004). *The 2004 Annual Report of the Board of the Trustees of the Federal Old-Age and Survivors Insurance and Disability Insurance Trust Funds*, Washington D.C: Author.

Ostlund, G.M., Borg, K.E., Wide, P., Hensing, G.K., & Alexanderson, K.A. (2003). Clients' perceptions of contact with professionals within healthcare and social insurance offices. *Scandinavian Journal of Public Health*, 31(4), 275-282.

Overland, R., Overland,S., Johansen, K.,N. & Mykletun, A, (2008). Verifiability of diagnostic categories and work ability in the context of disability pension award: A survey on "gatekeeping" among general practitioners in Norway. *BioMed Central Public Health*, (8)137, 1-9.

Pearce, N. (2005). *A Short Introduction to Epidemiology*, 2nd ed. Wellington: Centre for Public Health Research.

Peat, J., Mellis, C., Williams, K. & Xuan W. (2002), *Health Science Research: A Handbook of Quantitative Methods*, London: Sage.

Pellissery, S. (2005). *Process deficits or political constraints? Bottom-up evaluation of non-contributory social protection policy for rural labourers in India*. CPRC Working Paper 54 St Cross College, Oxford.

Perenboom, R.J., Van Hertem, L.M., Boshuizen, H.C., & Van Den Bos, G.A. (2004).

Trends in disability- free life expectancy. *Disability and Rehabilitation*, 26, 377-386.

Peterson, D. B., & Elliott, T. R. (2008). Advances in conceptualizing and studying disability. In S. Brown & R. Lent (Eds.), *Handbook of counseling psychology* (4th ed., pp. 212–230). New Jersey: Wiley.

Peterson, D. B., & Threats, T. T. (2005). Ethical and clinical implications of the International Classification of Functioning, Disability and Health (ICF) in rehabilitation education. *Rehabilitation Education*, 19, 129 –138.

Polit, D.F. & Beck, A.G. (2004). *Nursing research: principles and methods*. 7th ed. Philadelphia: Lippincott.

Regional Network for Equity in Health in Southern Africa. (2005). *Equity in Health*

Care in Namibia Towards needs-based allocation formula. EQUINET

Discussion Paper Number 26. Windhoek: Author.

Rindskopf, D. (2001). *Reliability: Measurement.* International Encyclopedia of the Social and Behavioral Sciences, Pergamon: Oxford

Sagner, A. (2000). "Ageing and social policy in South Africa: historical perspectives with particular reference to the Eastern cape," *Journal of Southern African Studies*, 26(3), 523–553.

Samson, M. (2006). *Furthering national action to realize commitments to social transfers in Africa.* Presentation at breaking the poverty cycle: securing rights to cash benefits for older people and children through national commitments and community action. World Congress on Social Protection and Social Inclusion, 4th October, Lisbon, Portugal.

Samson, M., MacQuene, K., & van Niekerk, I. (2006). *Social Grants, South Africa, Policy Brief 1.* London: Overseas Development Institute.

Shakespeare, T., & Watson, N. (1997). "Defending the Social Model." *Disability and Society*, 12(2), 293-300.

- Simchowitz, B. (2004), *Social security and HIV/AIDS: assessing “disability” in the context of ARV treatment*. CSSR Working Paper No. 99.
- Smart, J. (2005). The promise of the International Classification of Functioning, Disability & Health (ICF). *Rehabilitation Education, 19*, 191–199.
- Soanes, C. (2007). *South African Pocket Oxford Dictionary*. (3rd ed.). Cape Town: Oxford.
- Soderberg, E., & Alexanderson, K. (2005). ‘Gatekeepers in sickness insurance’ - a systematic review of the literature on practices of social insurance officers. *Health and Social Care in the Community, 13(3)*, 211-223.
- South African Social Security Agency. (2011). *You and your grants 2011/12*. Pretoria: Author.
- Spanjer, J., Krol, B., Brouwer, S., Popping, R., Groothoff, J.W., & van der Klink, J.J.L. (2010). Reliability and Validity of the Disability Assessment Structured Interview (DASI): A Tool for Assessing Functional Limitations in Claimants. *Journal of Occupational Rehabilitation, 20(1)*, 33–40.
- Steele, M. (2006). *Report on incentive structures of social assistance grants in South*

Africa. Pretoria: Government of South Africa.

Stommel, M., & Wills, C. (2004). *Clinical research: concepts for advanced practice nurses*. Philadelphia: Lippincott Williams & Wilkins.

Streiner, D.L., & Norman, G.R. (1995). *Health measurement scales. A practical guide to their development and use. 2nd edn.* Oxford: Oxford University Press.

Subbarao, K. (1998). *Namibia's Social Safety Net; Issues and Options for Reform*. Washington DC: The World Bank.

Suominen, S., Gould, R., Ahvenainen, J., Vahtera, J., Uutela, A., & Koskenvuo, M. (2005). Sense of coherence and disability pensions. A nationwide, register based prospective population study of 2196 adult Finns. *Journal of Epidemiology and Community Health, 59(6)*, 455-459.

Swartz, L. & Schneider, M. (2006). *Tough Choices: disability and social security in South Africa*. Pretoria: Social Development Research Programme of the Human Sciences Research Council.

Szymendera, S. (2004), Public Disability in the United States, in Honeycutt and Mitra (eds). *Learning from Others: Temporary and Partial Disability Programs in Nine Countries*. Illinois: Disability Research Institute.

The National Insurance Board. (2002). Disability Pension according to the law on National Insurance Act. Stockholm, Sweden: Author.

Thompson, C. & Dowding, D. (2009). Essential decision making and clinical judgment for nurses. London: Elsevier.

Thomas, P. (2005). *Mainstreaming Disability in Development: India Country Report*. DFID: London. United Nations. Undated. Relationship between Development and Human Rights. Retrieved from <http://www.un.org/disabilities/default.asp?id=33>

Trochim, W. (2000). *The Research Methods Knowledge Base, 2nd Edition*. Cincinnati, OH: Atomic Dog.

United Nations. (1993). *Standard rules on the equalization of opportunities for persons with disabilities*, New York: Author.

United Nations. (2006). *Convention on the Rights of Persons with Disabilities*. New

York: Author.

Van Blerkom, M. L. (2009). *Measurement and statistics for teachers*. New York: Roultege.

van der Westhuizen, C. & van Zyl, A. (2002). *Obstacles to the Delivery of Social Security Grants. Budget Brief, 110*. Budget Information Service, Institute for Democracy in South Africa.

Voipio, T. (2006) *Breaking the poverty cycle: Security rights to cash benefits for older people and children through national commitments and community action*. World Congress on Social Protection and Inclusion, 4 October, Lisbon, Portugal.

Wahlstrom, R., & Alexanderson, K. (2004). Physicians' sick listing practices. *Scandinavian Journal of Public Health*, 32(5), 222–255.

Wakefield, A. & Fleming, J. (2009). *The SAGE dictionary of policing*. London: SAGE.

Watermeyer, B., Swartz, L., Lorenzo, T., Schneider, M., & Priestly, M. (2006). *Disability and social change: A South African agenda*. Cape Town: Human Sciences Research Council Press.

Westergren A., Karlsson S., Andersson P., Ohlsson O., & Hallberg I. R. (2001). Eating difficulties, need for assisted eating, nutritional status and pressure ulcers in patients admitted for stroke rehabilitation. *Journal of Clinical Nursing, 10*, 257-269.

Whitworth, A., Wright, G. & Noble, M. (2006). *A Review of Income Transfers to Disabled and Long Term Sick People in Seven Case Study Countries and Implications for South Africa*. Oxford: University of Oxford.

Wind, H., Gouttebauge, V., Kuijer, P.P., Sluiter, J.K., & Frings-Dresen, M.H.W. (2009). Effect of Functional Capacity Evaluation information on the judgment of physicians about physical work ability in the context of disability claims. *International Archives for Occupational Environmental Health, 82*(9), 1087–1096. doi: [10.1007/s00420-009-0423-8](https://doi.org/10.1007/s00420-009-0423-8)

World Health Organization. (2001). *International Classification of Functioning, Disability and Health (ICF)*. Geneva: Author.

World Health Organization. (2002). *Injury: a leading cause of the global burden of disease*. Geneva: Author

World Health Organization. (2005). *Preventing chronic diseases: a vital investment.*

WHO global report. Geneva: Author.

World Health Organization. (2008). *The global burden of disease.* Geneva: Author.

World Health Organization. (2009). *Global status report on road safety: time for action.*

Geneva: Author.

World Health Organization. (2011). *World Report on Disability.* Geneva:

Author. Retrieved July, 1, 2011 from:

http://www.who.int/disabilities/world_report/en/index.html

Willmore, L. (2001). *Universal Pensions in low-income countries.* Initiative for Policy

Dialogue, Oxford: Institute of Ageing.

Wolfson, A.M., Doctor, J.N., & Burns, S.P. (2000). Clinician judgments of functional

outcomes: how bias and perceived accuracy affect rating. *Archives of Physical*

Medicine & Rehabilitation, 81, 1567-1574.

World Bank. (1995). *Namibia, public expenditure review.* Washington DC: Author.

World Bank. (2007). *People with Disabilities in India: From Commitments to*

Outcomes. Washington DC: Author.

Yeo, R. & Moore, K. (2003). Including disabled people in poverty reduction work: Nothing about us without us. *World Development Journal*, 31(3), 571-590.

Ydreborg, B., Ekberg, K., Nilsson, K. (2007). Swedish social insurance officers' experiences of difficulties in assessing applications for disability pensions—an interview study. *BioMed Central Public Health Journal*, 7, 128.


Zaidi, A. & Burchardt, T. (2003). Comparing Incomes When Needs Differ: Equivalisation for the Extra Costs of Disability in the UK, CASE paper 64. London: London School of Economics.

Zeitzer, I. (2002). The challenges of disability pension policy: Three western European case studies of the battle against the numbers. In E. Fultz & M. Ruck (Eds.), *Reforming worker protections: disability pensions in transformation*. Geneva: International Labour Organization.

Zheng, X., Chen, G., Song, X., Liu, J., Yan, L., Du, W.,...Zhang, J. (2011). Twenty-year trends in the prevalence of disability in China. *Bulletin of the World Health Organization*, 89, 788-797.
doi: 10.2471/BLT.11.089730

ANNEXURES

ANNEXURE A: MEDICAL REPORT FOR DISABILITY PENSION FORM



REPUBLIC OF NAMIBIA
MINISTRY OF LABOUR AND SOCIAL WELFARE

DIVISION SOCIAL WELFARE
MEDICAL REPORT FOR DISABILITY PENSION

N.B. This report must be completed and signed only by a District Surgeon or Government Medical Officer

PERSONAL PARTICULARS OF APPLICANT

SURNAME		DATE OF BIRTH		SEX	
FIRST NAMES		IDENTITY NUMBER			
HIGHEST EDUCATIONAL QUALIFICATIONS					
PREVIOUS WORK	NATURE OF DUTIES	FROM	TO		

Precise and clear wording is necessary. Terms such as "may", "might", probable" etc. should be avoided.

MEDICAL REPORT

Give the salient features of the history of the disability as elicited from the person being examined.

1

All official correspondence must be address to the Permanent Secretary

MEDICAL EXAMINATION

Are there any signs of disease? Indicate with a cross.

(a) Cardio-vascular system	Yes No	(b) Respiratory system	Yes No
(c) Alimentary system	Yes No	(d) Urinary system	Yes No
(e) Nervous system	Yes No	(f) Muscle-skeleton system	Yes No
(g) Mental Health	Yes No	(h) Other system	Yes No
(i) Results of any laboratory or other special investigations which the examining medical officer considered necessary in respect of the eyes, blood, urine, sputum, etc.		Yes No	

If a cross appears under "Yes" furnish **FULL DETAILS** thereof.

(j) Indicate in precise terms the nature of the **FUNCTIONAL DISABILITY** found to exist.
(Please note that a clinical-pathological diagnosis such as hypertension or diabetes mellitus does not necessarily imply significant functional disability)

2. Opinion as to the cause of the disease, injury of disability

3. Opinion as to present disability

(a) Is the present disability (indicate with and "X")	Temporary	Permanent
(b) If temporary, state duration	.....	.....
(c) Percentage disability	.....	.....

4. Will the disability increase or decrease?

.....

.....

5. Opinion as to whether any appliance/operation/treatment, and/or extended leave would render the person fit for efficient discharge of her/his duties.

.....

6. Patient's work capacity (Indicate with an X)

(a) Functioning of patient:

	Normal	Abnormal
Mobility
Conduct own affairs
Personal care

If a cross appears under "abnormal" furnish particulars

.....

.....

(b) Job motivation:

.....

.....

(c) Working habits:

.....

.....

(d) Physical capacity with respect to work:

	Yes	No		Yes	No
Work while seated	Working requiring	.....	.....
Work while standing	course co-ordination	.....	.....
Work while moving	Work requiring fine skills	.....	.....
Work requiring balance	Work requiring handgrips	.....	.....
Work requiring climbing	Work involving usual	.....	.....
Physical endurance	posture	.....	.....

If a cross appears under "no" furnish particulars.

.....

.....

(e) Psychological ability with respect to work:

	Yes	No		Yes	No
Ability to follow instructions	Work that is monotonous	.....	.....
Ability to concentrate	Can deal with criticism	.....	.....
Ability to work under pressure	Work requiring social	.....	.....
Work requiring communication	appearance	.....	.....

If a cross appears under "no" furnished particulars.

.....

.....

(f) Speed of production:

7. If person concerned is not totally unfit for work, state whether he/she is fit for:

Open Labour Market	Sheltered Employment	Bettlement Scheme	Light Work

8. Are you of the opinion that the applicant owing to physical or mental disability is unfit to obtain from any service, employment or profession, the means needed to enable him/her to provide adequately for his/her maintenance?

Yes No

9. Opinion as to whether the disability will effect the normal life expectancy.

DATE

DISTRICT SURGEON/GOVERNMENT
 MEDICAL OFFICER

FOR THE USE OF THE MINISTRY OF HEALTH AND SOCIAL SERVICES ONLY

CLASSIFICATION OF DISABILITY

DISABILITY PENSION: RECOMMENDED

DISAPPROVED

TIME PERIOD: TEMPORARY

DURATION..... PERMANENT

DATE:

PERMANENT SECRETARY
 MINISTRY OF HEALTH AND
 SOCIAL SERVICES

ANNEXURE B: UNIVERSITY OF NAMIBIA APPROVAL LETTER

UNIVERSITY OF NAMIBIA

Private Bag 13301, 340 Mandume Ndemufayo Avenue, Pionierspark, Windhoek, Namibia



FACULTY OF MEDICAL AND HEALTH SCIENCES

**Letter of permission:
Post graduate students**

To: Post graduate students
From: Dr K. Hofnie-//Hoëbes

Date: 7 June 2011

Dear Student: Mr T. Chichaya (Student number: 201027011)

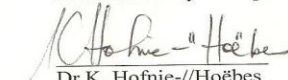
The post graduate studies committee has approved your research proposal.

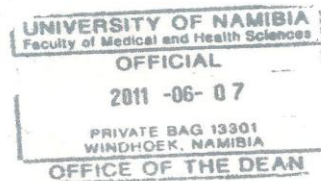
Factors associated with approval and rejection of disability pension applications in Khomas region

You may now proceed with your study and data collection.

It may be required that you need to apply for additional permission to utilize your target population. If so, please submit this letter to the relevant organizations involved. It is stressed that you should not proceed with data collection and fieldwork before you have received this letter and got permission from the other institutions to conduct the study. It may also be expected that these organizations may require additional information from you.

Please contact your supervisors on a regular basis.


Dr K. Hofnie-//Hoëbes



ANNEXURE C: REQUEST TO THE MINISTRY OF HEALTH AND SOCIAL SERVICES FOR PERMISSION TO CONDUCT STUDY

Mr. KAHIJORO K. KAHUURE
Permanent Secretary
Ministry of Health and Social Services
Private Bag 13198
Windhoek

13 June 2011

Dear Mr. Kahuure

RE: REQUEST FOR PERMISSION ACCESS RECORDS TO CONDUCT RESEARCH

I am an employee in the ministry of Health and social services in the PHC Directorate and currently studying for a Master of Public Health Degree with the University of Namibia. As part of the fulfillment of the requirements of my studies I am supposed to carry out a research. My research title is "**Factors associated with approval and rejection of disability pension applications in Khomas Region**" using a case control study design.

My research proposal has been approved by the University of Namibia post graduate studies committee. I am therefore requesting for permission to use records provided by the medical practitioners on the disability pension application forms. Completed disability application forms in the offices of the Chief Medical officer and pension officers for Khomas Region for the period 1 January 2008 to 31 December 2010 will be considered.

The significance of the study is that results can bring clarity on factors used by decision makers to decide who is eligible for disability pension in Khomas Region. Findings from the study can provide information for educating potential applicants for disability pension about eligibility which could save patients and hospital services time and money. Furthermore findings of this study could highlight areas for policy improvement and guideline development with regards to determining eligibility for disability pension to ensure that disability pensions are granted accordingly.

A copy of my full proposal, data extraction form and approval letter from the University of Namibia have been attached for your consideration.

Yours sincerely



Tongai. F. Chichaya

PHC Block B' Office 32; Office Tel: 061 203 2805; Cell: 0813629235

ANNEXURE D: MINISTRY OF HEALTH AND SOCIAL SERVICES
APPROVAL LETTER

9 - 0/0001



REPUBLIC OF NAMIBIA

Ministry of Health and Social Services

Private Bag 13198
 Windhoek
 Namibia

Enquiries: Ms. E.N. Shaama

Ministerial Building
 Harvey Street
 Windhoek

Ref.: 17/3/3

Tel: (061) 2032510

Fax: (061) 227786

E-mail: eshaama@mhss.gov.na

Date: 30 June 2011

OFFICE OF THE PERMANENT SECRETARY

Mr. T. Chichaya
 P.O. Box 50738
 Bachbrecht

Dear Mr. Chichaya

Re: Factors associated with approval and rejection of disability pension application in Khomas region

1. Reference is made to your application to conduct the above-mentioned study.
2. The proposal has been evaluated and found to have merit.
3. **Kindly be informed that permission to conduct the study has been granted under the following conditions:**
 - 3.1 The data to be collected must only be used for completion of your MPH Degree;
 - 3.2 No other data should be collected other than the data stated in the proposal;
 - 3.3 A quarterly report to be submitted to the Ministry's Research Unit;
 - 3.4 Preliminary findings to be submitted upon completion of study;
 - 3.5 Final report to be submitted upon completion of the study;
 - 3.6 Separate permission should be sought from the Ministry for the publication of the findings.

Yours sincerely,


MR. K. KAHURE
PERMANENT SECRETARY



"Health for All"

ANNEXURE E: REQUEST TO THE MINISTRY OF LABOUR AND SOCIAL WELFARE FOR PERMISSION TO CONDUCT STUDY

**To: The Permanent Secretary
Ministry of Labour and Social Welfare
Private Bag 19005
Khomasdal**

Date: 17 June 2011

Dear Mr. P. Mwatile

**RE: REQUEST FOR PERMISSION TO USE COMPLETED DISABILITY PENSION
APPLICATION FORMS TO CONDUCT RESEARCH.**

I am a Senior Health Program Administrator for Community Based Rehabilitation in the Ministry of Health and Social Services in the Primary Health Care Directorate and currently studying for a Master of Public Health Degree with the University of Namibia. As part of the fulfillment of the requirements of my studies I am supposed to carry out a research. My research title is **“Factors associated with approval and rejection of disability pension applications in Khomas Region”** using a case control study design.

My research proposal has been approved by the University of Namibia post graduate studies committee. I am therefore requesting for permission to use the completed disability pension application forms in the offices of the pension officers for Khomas Region for the period 1 January 2008 to 31 December 2010. Another request has already been submitted to the Research Committee in the Ministry of Health and Social Services for permission to collect the data recorded by doctors.

The significance of the study is that results can bring clarity on factors used by decision makers to decide who is eligible for disability pension in Khomas Region. Findings from the study can provide information for educating potential applicants for disability pension about eligibility which could save patients and hospital services time and money. Furthermore findings of this study could highlight areas for policy improvement and guideline development with regards to determining eligibility for disability pension to ensure that disability pensions are granted fairly.

A copy of my full proposal, data extraction form and approval letter from the University of Namibia have been attached for your consideration.

Yours sincerely



Mr. Tongai F. Chichaya
MoHSS, PHC Directorate; Block B' Office 32
Office: 061 203 2805; Cell: 0813629235 Fax: 061 245155

ANNEXURE F: MINISTRY OF LABOUR AND SOCIAL WELFARE

APPROVAL LETTER

FROM : MINISTRY OF LABOUR

FAX NO. : +264 61 252463

01 Jul. 2011 10:44AM P 1



REPUBLIC OF NAMIBIA

MINISTRY OF LABOUR AND SOCIAL WELFARE

Tel: (061) 2066111

P/Bag 19005

Fax: (061) 212323 / 252463

32 Mercedes Street

Enquiries: A.E Biwa

Windhoek, Khomasdal

NAMIBIA

23 June 2011

Mr. Tongai F. Chichaya
 Ministry of Health and Social Services
 Private Bag 13198
 WINDHOEK

Subject: Requested Permission to conduct research at Khomas Regional Office.

1. Your letter dated 17 June 2011 bears reference.
2. The Ministry of Labour and Social Welfare acknowledges receipt of your request to make use of completed Disability application forms at the Khomas regional office to be used in your research.
3. The Ministry has pleasure in informing you that it is more than willing to make the requested information available to you.
4. It would be appreciated if you could furnish this office with an appropriate date and time that would befit you to commence with your research.
5. It would be appropriate if you could contact Mr. A.E Biwa Deputy Director of the Directorate Social Welfare at Tel: 2066209 in connection with the aforementioned.
6. In the event that you need any additional information, please do not hesitate to contact us at the above numbers.

All official correspondence must be address to the Permanent Secretary

FROM : MINISTRY OF LABOUR

FAX NO. : +264 61 252463

01 Jul. 2011 10:44AM P 2

Yours Sincerely



PETER M. ATILE
PERMANENT SECRETARY

All official correspondence must be address to the Permanent Secretary

ANNEXURE G: DATA EXTRACTION FORM**DATA EXTRACTION FORM**

1. GENDER	
2. AGE	

3. HIGHEST EDUCATIONAL LEVEL	None	Primary	Junior Sec	Senior Sec	University/ collage

4. BODY SYSTEM AFFECTED	YES	NO
Cardiovascular system		
Respiratory system		
Alimentary system		
Urinary system		
Nervous system		
Musculoskeletal system		
Mental functions		
Other system		

5. DIAGNOSIS	
---------------------	--

6. CAUSE OF DISABILITY	Injury	Infection	Genetic/biological	Disease	Unknown

7. DURATION OF DISABILITY	Permanent	Temporary	Unknown

8. PERCENTAGE OF DISABILITY	
------------------------------------	--

9. PROGRESSION OF DISABILITY	Constant	Improve	Worsen	Unknown

10. POSSIBLE INTERVENTION TO IMPROVE FUNCTION	Appliance	Medication	Rehabilitation	Surgery	Unknown

OF APPLICANT					
11. FUNCTIONING ABILITY OF APPLICANT		Normal	Abnormal		
Mobility					
Conducting Own Affairs					
Personal Care					

12. PHYSICAL CAPACITY WITH RESPECT TO ABILITY TO WORK	YES	NO
Seating		
Standing		
Walking		
Balance		
Climbing		
Endurance		
Coordination		
Fine motor skills		
Handgrips		
Usual posture		
13. PSYCHOLOGICAL ABILITY WITH RESPECT TO ABILITY TO WORK	YES	NO
Following instructions		
Concentration		
Communication		
Monotonous work		
Dealing with criticism		
Social appearance		

14. TYPE OF WORK FIT FOR APPLICANT	Open labour market	Sheltered employment	Light work	Settlement scheme	None

15. APPLICANT UNABLE TO ADEQUATELY PROVIDE FOR HIS/HER OWN MAINTANANCE	YES	NO

16. EFFECTS OF DISABILITY ON LIFE EXPECTANCY	Reduced	No change	Unknown

17. DECISION BY CHIEF MEDICAL OFFICER	Approve	Reject

