



**SINTEF Health Research**

Address: Pb 124, Blindern  
NO-0314 Oslo  
NORWAY  
Location: Forskningsveien 1  
NO-0373 Oslo  
Telephone: +47 73 59 03 00  
Fax: +47 22 06 79 09  
  
Enterprise No.: NO 948 007 029 MVA

# SINTEF REPORT

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**Living Condition among People with Disabilities in Mozambique: a National Representative Study**

AUTHOR(S)  
**Arne H Eide and Yusman Kamaleri**

CLIENT(S)  
**Norwegian Federation of Organizations of Disabled People**

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ABSTRACT

This research report provided results from the study of living conditions among people with functional limitation in Mozambique. Two comparative studies of different indicators of living conditions were carried out. These studies include: (i) first, a comparative study of households with and without family member(s) with functional limitation and (ii) second, a comparative study of individuals with and without functional limitation.

The Mozambique study was undertaken in 2007 – 2008.

KEYWORDS	ENGLISH	NORWEGIAN
GROUP 1	<b>People with disabilities</b>	
GROUP 2	<b>Living conditions</b>	
SELECTED BY AUTHOR	<b>Functional limitation</b>	
	<b>ICF</b>	
	<b>National study</b>	



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## ABSTRACT

A National, representative household survey among people with disabilities was carried out in Mozambique in 2007 – 2008. This was a collaboration project between the Federation of People with Disabilities in Mozambique (FAMOD) and SINTEF, with the National Statistical Office (INE) as an important partner. The study was funded through the Norwegian Federation of Organizations of Disabled People (FFO) and supported by Southern Africa Federation of the Disabled (SAFOD).

The study in Mozambique follows similar studies in Namibia, Zimbabwe, Malawi and Zambia, and is part of an effort to establish a Regional data base on the situation for disabled people in Southern Africa. A participatory approach is the hallmark of the study, and FAMOD has been the coordinating and implementing body in Mozambique, controlling all stages of the research process. Important stakeholders in the disability field were involved during design development, and individuals with disabilities were trained and employed as enumerators and partly as supervisors in the study.

Sampling was carried out by INE, using the National sampling frame in Mozambique. A number of Enumeration Areas (EAs) were drawn and visited two times; firstly a screening procedure based on questions about activity limitations was carried out to identify individuals with disabilities. Secondly, the interviewers visited the same EAs to carry out full interviews with the head of the household and the individual with disability in all identified households. In addition, interviews were also carried out in

the households next to those identified during the screening. The study thus comprises a sample of households with disabled members as well as control households without disabled members.

The overall finding in the study is that individuals with disabilities and their households experience lower levels of living as compared to their non-disabled counterparts or households without disabled members. Indicators such as education, employment, economy, access to information revealed that there was a difference between the two groups. A systematic difference between genders was found where females with disabilities scored lower on the main indicators of level of living. There are furthermore demographic differences indicating that individuals with disabilities found it was difficult to establish their own family and be independent of the household they grew up in.

Individuals with disabilities in Mozambique largely become disabled early in life, many from birth and due to health problems. Improved health care for mother and child could have prevented many of these functional problems. There is a substantial gap in service delivery in that many do not get services that they need. The largest gap was found for educational services and vocational training, followed closely by assistive devices and welfare services.

Although 10 – 20 % state accessibility problems at home, accessibility is a bigger problem outside the households, with many important public and private offices and facilities not being accessible for a large group of individuals with disabilities. Close to half report that hotels, work places,

post offices and banks are inaccessible. To some extent this may reflect gaps in supply and quality of assistive devices that is also revealed through this study.

The study reveals that many individuals with disabilities need and receive a great deal of assistance from other members of their household. There are furthermore indications that many individuals are excluded from full participation in the household. Another indication of restrictions in social participation is the low awareness among individuals with disabilities about disabled peoples' organizations.

The self-reported information given in the current survey offers different measures of severity that are analysed together. Need for services is regarded as the most severe problem, followed by assistance in daily life activities, overcoming activity limitations, and lastly overcoming restrictions in social participation. This may be regarded as a logical "severity hierarchy" as the first on the list need to be in place to ensure the next level, and so forth. Optimal social participation for an individual requires to a large extent that necessary adaptations and assistance is in place. The study further reveals that mobility, domestic life and learning/knowledge domains are the activity limitations and participation restrictions that individuals have most difficulties with. These should thus be given priority by DPOs, International Organisations and Governments when intervention is planned for.

# PREFACE 1

(Alexander M. Phiri – Director General, SAFOD)

This report on Living Conditions among People with Disabilities in Mozambique is being launched barely less than two years after the United Nations adopted the Convention on the Rights of Persons with Disabilities. Article 31 of the Convention, which came into force on 3 May 2008, points to the importance of statistics and data collection on disability. In this Article, all UN member states are being called upon to collect appropriate information, including statistical and research data, to enable them to formulate and implement policies to give effect to the present Convention. Article 8 of the same Convention is on Awareness raising. The Article is committing all UN member states to adopt immediate, effective and appropriate measures to:

- Raise awareness throughout society, including at the family level, regarding persons with disabilities, and to foster respect for the rights and dignity of persons with disabilities;
- Combat stereotypes, prejudices and harmful practices relating to persons with disabilities, including those based on sex and age, in all areas of life; and
- Promote awareness of the capacities and contributions of persons with disabilities.

The study on the Living Conditions among people with Activity Limitations in Mozambique, and the use of data from the study to raise awareness on disability, is clear testimony of what can be done when governmental and non – governmental organisations work in partnership towards realization of the letter and spirit of the UN Convention on the Rights of Persons with Disabilities.

The project, funded by the Norwegian Government through SAFOD's main partner FFO (Norwegian Federation of Organisations of People with Disabilities), brought together a number of committed people and organisations who worked very hard against many difficulties to complete the study. Individuals and organisations that need special mention here, and to whom we give our thanks, are the Federation of People with Disabilities in Mozambique (FAMOD), the Institute for Research Studies at Edouardo Mondlane University in Maputo, Central Statistical Office (CSO) in Mozambique, the Mozambican Government through the Ministry responsible for people with disabilities, Dr Farida Gulamo and Mr Elias J. David of ADEMO (Association of the Physically Disabled in Mozambique), and the specialized Norwegian institution that was given the responsibility to conduct the study, SINTEF Health Research. A special gratitude to the late Mr. Justino Januario who was instrumental in the initial stages of implementation, and to Mr. Manuel Lazaro for doing the bulk of the work involved in the coordination of the study.

Similar studies have been carried out in Zimbabwe, Malawi, Namibia, and Zambia, through a joint partnership of FFO, the Norwegian Government and the Southern Africa Federation of the Disabled (SAFOD). This type

of partnership is a model of good practice that can be used by other governmental and non – governmental organisations to not only undertake research on disability but to also empower people with disabilities through application of research findings.

It is hoped that by the end of 2012 all SAFOD member countries will have carried out their studies on the Living Conditions of People with Disabilities. Thanks to the Norwegian Government and other partners for their support.

## PREFACE 2

(Elias J. David, Medical Doctor and Disability Activitivist, President of FAMOD and ADESU<sup>1</sup>)

The publication of this book, *Living Conditions among People with Disabilities in Mozambique*, is of great importance to the country, to people with disabilities and to the scientific community.

In general, the realization of this research, besides having provided new necessary information systematically, it has also provided a clearer perception of the legitimacy to promote and defend the rights of people with disabilities. Consequently, allowing for improvement of education and other benefits for people with disabilities.

As a result, with enthusiasm we have the privilege to receive the initial research work that explored and studied the living conditions of people with disabilities in Mozambique.

Whenever a new research is launched, it might uncover different aspects which could be beyond the common knowledge. These aspects are important since they give us extra information about the condition, geographic localization, socio-economic situation and vulnerability or strength of the person with disabilities.

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<sup>1</sup> The Association of Disabled Higher Education Students

This research constitutes the first of its own that was realized with total involvement of people with disabilities in the country and serves as an instrument that will stimulate attitudes change in the society and be able to accept that: **if a person with disabilities is an error, it is the society that is wrong, thus we live in the wrong society. It is urgent that the situation is changed so as to guarantee a good future for new generations.**

The publication of this book marks a new era for people with disabilities in Mozambique. We are certain that the findings from the research on living conditions of people with disabilities will be useful to inform the society as a whole and specifically to the community of the disabled people. Findings from the study also provide knowledge to the community of professionals and educators as well as researchers and hopefully stimulate more interest to conduct research in the field.

We would like to thank the following:

- SINTEF Health Research, especially it's representative Prof. Arne H. Eide, for the help and advices given along the research work and documentation;
- The Norwegian Federation of Organizations for Disabled People (FFO) and the Atlas Alliance for the financial help that allowed the realization of the first steps in this area of research;
- The team from Southern African Federation for Disabilities (SAFOD) represented by Mr. Alexander Phiri (General Director) for their patience and unconditional collaboration;

- Dr Olimpio Zavale from National Institute of Statistics (INE) for the research work that he developed and carried out together with authors that led to the realization of this work.
- Community leaders who played an important role as sources of information;
- Associations of People with Disabilities for their marvellous collaboration;
- Last but not least, we say thanks to facilitators, namely Mitchel Loeb, Yusman Kamaleri and Geir Tyrmi for their excellent collaboration

# ACKNOWLEDGEMENTS

(Arne H. Eide and Yusman Kamaleri, SINTEF)

We are as SINTEF researchers proud to present the results from the study on living conditions among people with disabilities in Mozambique. This study follows similar studies in Zimbabwe, Namibia, Malawi, and Zambia, and represents one important element in a regional data base on disability.

SINTEF has collaborated with Southern Africa Federation of the Disabled (SAFOD) and the Norwegian Federation of Organisations of Disabled People (FFO) on these large, representative surveys since the turn of the century. Both FFO and SAFOD leadership should be credited for promoting research and alliances between researchers and Disabled Peoples' Organizations (DPOs). – and also for continuing to do so in a long-term strategic perspective. It is particularly promising that SAFOD under the leadership of Alexander Phiri, the Director General of SAFOD, now has embarked on a long-term SAFOD Research Program and that the experience and data from the studies on living conditions form an important basis for this program.

The studies in Southern Africa have been strongly influenced by a participatory perspective on research. This implies that the DPOs have been in control of all aspects of the studies. It is our strong belief that this

has increased the quality and in particular the relevance of the studies – and also that this has given many positive spin-offs to the organisations and for individuals with disabilities that all in all have contributed and continue to contribute to strengthen the position of Disabled Peoples Organizations in this part of the world. This is a key to improvement of the situation for individuals with disabilities in general, and in particular in low-income countries.

In Mozambique, FAMOD has been the instrumental body for the implementation of the study. Different persons have been involved. Sadly, the first key person in this, Mr. Justinho Januario of AJODEMO/FAMOD, died in a tragic accident as the study was about to take off. Mr. Manuel Lazaro of ADESU/FAMOD who took over the role as co-ordinator of the study has done a great effort to pull the survey through all its different phases. A tribute also to the current leadership of FAMOD, represented by Dr. Elias J. David and Dr. Farida Gulamo, who has been very supportive and interested and also directly involved in the running of this large and complex project.

It is also important for us to mention and give a special thanks to Mr. Olimpio Zavalo from the Central Statistical Office (INE) who has been strongly involved in all technical aspects of the survey, and as a member of the Reference Group.

We thank all members of FAMOD and in particular those who did the groundwork during data collection. It is our hope that this study will contribute in different ways to improve the situation for those who have contributed with their time and information to the research, namely the disabled people of Mozambique.

Oslo, 07.01.09.

Arne H. Eide  
Professor, Project Manager

Yusman Kamaleri  
Ph. D., Research scientist



# 1. INTRODUCTION

(Dr. Farida Gulamo)

## 1.1. Mozambique

Mozambique is localized in Southern Africa, along the India Coast, sharing borders with Swaziland and South Africa to the south, Zimbabwe, Zambia and Malawi to the west and Tanzania to the north.

It has a surface area of 799.380 square kilometres, with an inter-tropical climate characterised by hot temperatures accompanied by rains. It is dry during summer and dry and cool in winter.

Mozambique has an estimated population of 20 million people and a population density of 25 inhabitants per square kilometres. One third of this population is found in urban areas and two thirds live in rural areas practicing subsistence crop farming as their main source of income. People who live along the coast and along principal rivers are dedicated to fishery, when those in the interior zones are dedicated to crop farming, extraction of semi precious minerals such as coal and natural gas.

Following data that was collected in 2003, the illiteracy rate was of 53.6%. According to data collected in 2005, the Per Capita Income was of

USD347. Mozambique is among the ten lowest on the Human Development Index.<sup>2</sup>

Mozambique was a colony of Portugal for 500 years, and gained independence on 25 June, 1975. Portuguese is the official or administrative language, but there are 16 local languages, differing from province to province.

The country has 128 districts of which some are municipalities, and 11 provinces namely; Niassa, Cabo Dlgado, Nampula, Zambezia, Tete, Manica, Sofala, Inhambane, Gaza, Maputo province and Maputo city. The capital city of Mozambique is Maputo city found in the extreme southern part of the country.

The province of Tete possesses the biggest dam of the country, which is also among the biggest dams in Africa. It provides hydro-electric energy of Cabora Bassa that is consumed locally and also exported to some neighbouring countries. The country also produces precious timber, salt, prawns, cotton, cashew nuts, fish, tea, coco and natural gas for local consumption and export.

Mozambique has adopted PARPA – Plan for Reduction of Absolute Poverty, which is a flexible instrument adjusted annually through mid-term

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<sup>2</sup> The Human Development Index (HDI) is a comparative measure of [life expectancy](#), [literacy](#), [education](#) and [standards of living](#) for [countries](#) worldwide. It is a standard means of [measuring well-being](#), especially [child welfare](#). It is used to distinguish whether the country is a [developed](#), a [developing](#) or [an under-developed country](#), and also to measure the impact of economic policies on quality of life. HDI is estimated and reported by United Nations Development Program (UNDP).

financial control of the country's socio-economic plan as well as the government's general budget. The socio-economic plan and the general budget are government instruments prepared and approved after every five years. PARPA II of 2006 to 2009's objective is to reduce the level of poverty from 54% in 2003 to 45% in 2009. The strategy to promote economic growth and poverty reduction is set up through human and capital organization for economic development. State focus is directed towards the functions of social institutions through individual capacity building and creating conditions for income generation for the well being of citizens.

Mozambique is one of the countries in Southern African seriously affected by HIV/AIDS. HIV/AIDS affects the lives of millions of people from all walks of life. In its second strategic plan of 2005, PEN II, the National Council for HIV/AIDS Combat (CNCS) defined seven priority areas of intervention, namely; prevention, advocacy, stigma, treatment, mitigation, investigation and national coordination. This plan proposes to respond to local necessities and preoccupations and orient actions of communication in the country in an integrated and systematic form as well as coordinated implementation. Implementation of this strategy calls for the involvement of Forums of partners with aid from USAID.

Combating against HIV/AIDS is based on development of concrete operational plans at provincial level, respecting regional differences, context and local resources. The communication forums created in provinces include involvement of district administrators, traditional leaders and community representatives in priority actions and coordinated

activities, sharing better practices as well as learned lessons. These activities involve top government officials and various important figures including presidential initiative led by His Excellency the president of the republic. This initiative creates conditions for wider communication coverage on Mozambique's socio-cultural references.

Currently, throughout Africa, there is a campaign about disability and HIV/AIDS and Mozambique, represented by FAMOD, is a member of the steering committee. Within the communication process, there is a necessity for change at community level as well as at family level including individual behaviour.

There are various actions by the social community that have to be undertaken in the national urgency, such as;

- the creation of community dialogue for local solutions;
- participation of local and religious leaders, well informed and proactive in the fight against HIV/AIDS;
- a sound dialogue between traditional and modern medical healers;
- participation of youths as the engine for change; and
- specific communication strategies for vulnerable groups.

Social services were created to help in bringing suitable change through public and private institutions, NGOs and civil society organisations which play important roles, operating through networks created in a way that makes their services stronger, more efficient and relevant in changing the current situation of the HIV/AIDS pandemic. There are action programs in various sectors including health, education, higher learning institutions,

Ministry of Women and Social Welfare, civil society, private sectors, among others.

A good amount of research work is being done in order to obtain information to develop contents and appropriate messages and the use of correct channels so as to reach the public beneficiary or the target.

Presently, FAMOD is part of a Work Commission which has elaborated and submitted to the Assembly of the Republic of Mozambique (in the area of Commissions of Social Issues) the issue of gender and environment, and the issue of Justice and Legality to the Commission of Human Rights, and a project on law that protects all citizens; HIV/AIDS positive or those infected by HIV/AIDS including the disabled. A new law is soon to be adopted, resulting from initiatives by National Council for HIV/AIDS Combat (CNCS) together with various NGO networks, associations of people living with HIV/AIDS, Forum of associations of people with disabilities, Association of Traditional healers, Ministry of Health, Ministry of Women and Social Welfare, Syndicate for Mozambican workers, foreign NGOs and help from United Nations Agents intervening in the area of HIV/AIDS.

## **1.2. General vision of the background of disability**

There are about 500 million people with disabilities throughout the world following data from the World Action Program (UN 1983). About 80% of them live in developing countries and the incidence of incapacity was estimated at about 6 to 7%, reaching 10% in other countries (data provided by World Health Organisation – WHO).

The greatest percentage of disabled people live in isolated rural areas. Their problems become more complex, given the condition that most of them live in extreme poverty. They live in areas where medical services are scarce or non-existent. In most under-developed countries like Mozambique, existing resources are not sufficient to detect in time and prevent the situation from getting worse as well as providing rehabilitation services.

Though people with disabilities are considered to be enjoying the same rights and possessing equal opportunities as non-disabled people, their life is made difficult by the physical and social barriers which limit their participation within the society. Because of these barriers, millions of children and adults are segregated and degraded.

The World Program of Action (UN 1993) defends the rights of people with disabilities and encourages that they participate directly in activities of societies where they live. This participation integrates them in the life and socio-economic development of their families and sharing their rights and obligations with others, as well as enjoying liberty and responsibility that others have. This signifies equality in society which basically observes the necessities of human beings, like equality in importance and realization of disabled people's necessities, incorporating them in planning, development and distribution of resources in a way that each one has equal share.

If there was consideration of disabled people, this would mean inclusion in development plans of their respective countries. There are physical, economic, social and cultural barriers in relation to the disabled, which close them from access to various systems/activities in their communities, which are available to others who are not disabled.

Someone with disabilities is denied opportunities that are generally available in the community, and which are necessary in life, such as family life, education, employment, accommodation, financial and personal security, participation in social group activities, religious activities, intimacy and sexual relations, as well as access to public institutions and freedom of movement in their day-to-day life.

Total participation of people with disabilities will be possible when integrated in the society. For this to happen, it is necessary to remove physical and social barriers existing in different societies. The social barriers include segregation and discrimination as demonstrated by poor services delivery to the disabled, among others. The same barriers make the disabled stay isolated and segregated from those who are not disabled. The negative attitudes of the society affect social, moral and intellectual development of people with disabilities. Some of these attitudes are or can be worsened by attitudes of family members of the disabled.

Negative attitudes and oppression of feelings and rights of the disabled were denounced as from the early 70s, but little has changed up to now, in various countries of the world, including Mozambique.

All problems related to people with disabilities cited in this document are common in Mozambique, where a majority of the disabled have very little or no formal education, and with little or no information about access to existing services. It is because they live in extreme poverty and are isolated.

Associative movements in Mozambique started in the late 80s, with the birth of the first Association of Disabled people of Mozambique. The Association has social integration of disabled people as its work strategy, and fighting for defence of the rights of the disabled as its vision.

It is through associative movements that the process of transformation of the existing situation is being realised. Great changes were seen with the introduction in the Constitution of the Republic, of an article that defends equality of rights, and in 1999, a National Policy for Disabled People was approved by the Cabinet Council. The same has not yet been revised and approved by the General Assembly of the Republic. A National Plan for the area of disability, 2006 was passed by the Cabinet Council of Ministers.

With the approval of the African Decade of Persons with Disabilities (1999 – 2009), Mozambique was selected as one of the African countries to implement the decade. This selection was a result of the growth of associative movement in the country and its fight to defend the rights of members.

On 30 March, 2007, Mozambique was one of the first countries to sign the International Convention of Human Rights specifically for the disabled. This International Convention has not yet been revised by the General Assembly of the Republic.

### **1.3. The concept of disability**

There are many ways of defining disability, of which some may lead to confusion. During the 70s, organisations of disabled people and some professionals made a strong combat against the terminology that was used during the time. The new concept focuses on limitations experienced by people with disabilities, the design and structure of the surrounding environment and the attitudes of people in general.

Currently, because of developments achieved, disability is seen as a process involving a series of different elements of cooperation between an individual and the various social levels. Although the World Health Organisation's first classification (International Classification of Impairments, Disability, and Handicap - ICIDH (WHO 1980)) did include social and environmental aspects, it was heavily criticised for its medical and individualistic bias. The recent classification (International Classification of Functioning, Disability and Health (ICF) (WHO 2001)) attempts to incorporate social and environmental aspects in a psychosocial model of disability. The changes from ICIDH to ICF reflects the discourse on disability during this time period and the increasing support to a social model of disability. While ICF attempts to combine a medical and a social model, activity limitations and restrictions in social

participation has become the new core concepts in the definition of disability.

Many years ago, disabled persons were exterminated just because they presented certain different/abnormal aspects. With the passage of time, there were some changes in relation to the treatment that the disabled received, including from their proper families, from super protectionism to people deserving charity.

In many parts of the world in general and Mozambique in particular, disabled persons continue facing discrimination, subjected to mockery as well as pejorative commentaries and they are segregated by the society. Due to emerging associations of and for the disabled as well as access to new communication and information technologies, people in urban areas are becoming aware of changes taking place in various countries. Some studies were carried out and results demonstrated that lack of accessibility, lack of employment, transport, health services, culture, and education among others, are results of segregation.

Currently the society and associative movements fight for inclusion of the disabled at all levels of the society. Disabled people who are qualified can help in developing new ideas and be trainers of public opinion and show that they deserve loving and being loved. Disabled people with professional training have clear and special capacities to be integrated in the job market.

It is important that policies and special legislation are defined in a way that protects the disabled. Discrimination against the disabled has been an integral issue along history. Pejorative descriptions were used such as; deformed, deaf mute, imperfect, idiots, mentally retarded, paralytic, lame, monsters, crippled, blind, invalid, etc.

## 2. DESIGN AND METHODS

(Olimpio Michael Zavale, INE<sup>3</sup>)

### 2.1. Introduction

This chapter presents the methodology used for the design and selection of sample of households for the survey.

The living condition survey among people with disability in Mozambique is a representative study that seeks to understand and characterize the living conditions of disabled people and assist in the design, monitoring and implementation of policies on disability in Mozambique. The sample of the Living condition Survey is a sub sample of the master sample derived from the National Census of Mozambique and the methodology is the same as the master sample methodology. A master sample is a sample from which sub-samples can be selected to serve the needs of more than one survey or survey round, and it can take several forms. A master sample with simple and rather common design is one consisting of Primary Sampling Units (PSUs), where the PSUs are Enumeration Areas (EAs). The sample is used for two-stage sample selection, in which the second-stage sampling units (SSUs) are housing units or households.

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<sup>3</sup> National Statistical Office

## **2.2. Estimation Domain**

The sample is the entire territory of Mozambique. The units of analysis for the sample are households and their members. The survey does not consider the residents of collective housing like hospitals and prisoners and homeless persons, which together represent only 0.35% of total population. The estimation Domain includes:

- National
- Provincial

## **2.3. Scope of the survey**

The scope of the survey in terms of topics covered is to a large extent guided by similar studies that were conducted in Malawi, Zambia, Namibia and Zimbabwe between 2001 and 2006 (Eide & Loeb 2006a; Loeb & Eide 2004; Eide et al. 2003a; 2003b;) . A continuous process of consultation with Disabled People Organizations in Mozambique, Governmental Organizations and other key stakeholders on disability issues, has helped shape the scope of the survey. As such, the survey only includes agreed upon topics of policy relevance. In broad terms, the survey includes two questionnaires:

1. Household level - A set of core indicators of living conditions for all permanent members of the household
2. Individuals level – This include:

- i. The Activity and Participation Matrix drawn from the International Classification of Functioning, Disability and Health (ICF) (WHO 2001).
- ii. A detailed Disability Questionnaire

A separate screening instrument was applied during identification of individuals with disabilities. All research instruments applied in the survey are found in the appendices of this report.

The survey employs two survey instruments for data collection namely, the household questionnaire including screening questions for disabilities and a detailed Disability Questionnaire including ICF based scales on Activity Limitations and Restrictions in Social Participation for those members of the households identified with such limitations.

The generic household questionnaire covers the following topics:

- Demography and Disease burden
- Education and Literacy
- Economic activities of household members
- Reproductive Health of Females aged 12 to 49 years
- Household amenities and housing conditions
- Household access to facilities
- Household asset ownership including land
- Household Income and it's main source
- Household food production
- Household monthly Expenditure and rankings
- Death in the households

The detailed Disability Questionnaire covers the following topics:

- Activity Limitations and Participation restrictions
- Environmental factors
- Awareness, need and receipt of services
- Education and employment
- Assistive devices and technology
- Accessibility in the home and surroundings
- Inclusion in family and social life
- Health and general well-being

## **2.4. Sample Design and Coverage**

Household samples in Mozambique are normally selected in several sampling stages. The sampling units used at the first stage are called primary sampling units (PSUs). They are areas demarcated for census enumeration areas (EAs). The second stage consists of a sample of secondary sampling units (SSUs) selected within the selected PSUs. The last-stage sampling units in a multistage sample are called ultimate sampling units (USUs). A sampling frame - a list of units from which the sample is selected - is needed for each stage of selection in a multistage sample. The sampling frame for the first-stage units must cover the entire survey population exhaustively and without overlaps, but the second-stage sampling frames would be needed only within PSUs selected at the preceding stage.

The survey is designed to cover 400 Standard Enumeration Areas (SEAs) across the 11 provinces or approximately 4500 non-institutionalised private households residing in the rural and urban areas of Mozambique. The survey was carried out for a period of 30 - 45 days using a cross sectional sample. This sample is nationally and regionally efficient and is expected to yield reliable estimates at provincial, location and national levels.

## **2.5. Sample Size Determination**

For the majority of human population based studies, the minimum sample requirement assuming Simple Random Sampling (SRS) is 400 observation units. However, this sample size does not take into account the complexity of the sample design. Adjusting the SRS sample with an appropriate design effect factor as well as response rate yields the ideal sample. The design effect - the ratio of the variance of a statistic with a complex sample design to the variance of that statistic with a simple random sample or an unrestricted sample of the same size - is a valuable tool for sample design. A design effect represents the combined effect of a number of components such as stratification, clustering, unequal selection probabilities, and weighting adjustments for non-response and non-coverage.

Rather than simply importing an overall design effect from a previous survey, careful consideration should be given to the various components involved. This survey has adopted the factor of 2.2 to estimate the sample

requirement for a province. Therefore, the ideal sample size would be around 4500 households countrywide.

## **2.6. Sample Stratification and Allocation**

The sampling frame used for the survey will be developed from the 1997 census of population and housing.

The master sample PSUs are often stratified into the main administrative divisions of the country (provinces) and within these divisions, into urban and rural parts. Other common stratification factors are urbanization level (metropolitan, cities, towns, villages) and socio-economic and ecological characteristics.

The allocation of master sample PSUs to strata could take different forms:

- Allocation proportional to the population in the strata
- Equal allocation to strata
- Allocation proportional to the square root of the population in the strata

Mozambique's Master sample is allocated to the strata proportionally to the population (number of persons or households) in the strata. Table 1 presents the number of households according to census in 2007 and Table 2 presents the sample allocation for this study.

**Table 1: Number of households according to Census 2007**

Province	Number of household				
	Total	Urban		Rural	
Mozambique	3634562	956896	26,3%	2677666	73,7%
Niassa	189925	38558	20,3%	151367	79,7%
Cabo Delgado	336497	49994	14,9%	286503	85,1%
Nampula	794431	182556	23,0%	611875	77,0%
Zambezia	726298	99977	13,8%	626321	86,2%
Tete	267986	35749	13,3%	232237	86,7%
Manica	202203	53764	26,6%	148439	73,4%
Sofala	275792	111249	40,3%	164543	59,7%
Inhambane	259444	52011	20,0%	207433	80,0%
Gaza	228297	53384	23,4%	174913	76,6%
Maputo Província	174887	100852	57,7%	74035	42,3%
Maputo Cidade	178802	178802	100,0%	-	-

## 2.7. Sample Selection

The survey employed a two-stage stratified cluster sample design whereby during the first stage, 400 SEAs was selected with Probability Proportional to Estimated Size (PPES) from all 11 provinces. The size measure was taken from the frame developed from the 1997 census of population and housing. During the second stage, 20 households were

systematically selected from total number of households expected to be residing in the selected SEAs. For the purposes of this survey, half of the households were those identified with persons with activity limitations. The survey is designed to provide reliable estimates at provincial and national levels.

**Table 2: Sample allocation**

Province	Total		Urban		Rural	
	EA	Household	EA	Household	EA	Household
Mozambique	400	4500	173	2275	127	2225
Niassa	31	354	12	152	12	202
Cabo Delgado	37	410	12	152	16	283
Nampula	37	420	15	172	13	222
Zambezia	37	410	12	152	16	283
Tete	37	410	12	152	16	283
Manica	31	354	12	152	12	202
Sofala	38	415	21	273	8	142
Inhambane	34	394	12	152	14	243
Gaza	34	394	12	152	14	243
Maputo Província	40	425	23	303	7	121
Maputo Cidade	45	415	33	440		

## 2.8. Selection of Standard Enumeration Areas (SEAs)

The SEAs in each stratum will be selected as follows:

- (i) Calculate the sampling interval (I) of the stratum, in this case the Rural-Urban stratum.

$$I = \frac{\sum_i M_i}{a}$$

Where:

$\sum_i M_i$  = is the total stratum size

$a$  = is the number of SEAs allocated to the stratum

- (ii) Calculate the cumulated size of the cluster (SEA)
- (i) Calculate the sampling numbers  $R, R+I, R+2I, \dots, R+(A-1)I$ , where  $R$  is the random start number between 1 and  $I$ .
- (ii) Compare each sampling number with the cumulated sizes.

The first SEA with a cumulated size that was greater or equal to the random number was selected. The subsequent selection of SEAs was achieved by comparing the sampling numbers to the cumulated sizes of SEAs.

## 2.9. Selection of Households

The survey commenced by listing and stratifying all the households in the selected SEAs into the activity limitation and non-activity limitation strata.

For the purposes of the survey, a maximum of 10 households was selected from each stratum, yielding a cluster take ( $B_{opt}$ ) of 20 households.

The selection of households from the 2 strata was preceded by assigning fully responding households sampling serial numbers. The circular systematic sampling method was then employed to select households.

$$\text{Let } N = nk,$$

Where:

$N$  = Total number of households assigned sampling serial numbers in a stratum

$n$  = Total desired sample size to be drawn from a stratum in an SEA

$k$  = The sampling interval in a given SEA calculated as  $k=N/n$ .

## 2.10. Organisation of the Survey

The survey was implemented by 11 teams of roughly 5 Data collectors, 1 driver and 1 supervisor.

## 2.11. Data Collection

Data collection was conducted by way of personal interviews using 2 semi-structured questionnaires. The first survey instrument was used to collect general living conditions data pertaining to the household being

enumerated. The second questionnaire was employed firstly to collect data on activity limitations and restrictions in social participation (ICF matrix) and secondly to collect detailed information from household members identified with various activity limitations and disabilities. In addition to these instruments, a listing form was initially used to list all households in the selected SEA into the 2 explicit strata.

## 2.12. Estimation Procedure

### i. Sample weights

The sample was based on 1997 Census of population. The total of population according to census in 1997 and projections for 2008 are presented in Table 3. This information is important for weighting process.

**Table 3: Population from Census 1997 and projection in 2008**

Province	1997	Projection 2008
Niassa	808,572	1,084,682
Cabo Delgado	1,380,202	1,717,430
Nampula	3,063,456	3,958,899
Zambézia	3,096,400	3,967,127
Tete	1,226,008	1,635,773
Manica	1,039,463	1,441,654
Sofala	1,368,671	1,755,825
Inhambane	1,157,182	1,476,750
Gaza	1,116,903	1,391,944

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Maputo	830,908	1,125,167
Maputo Cidade	987,943	1,298,806
<b>Total</b>	<b>16,075,708</b>	<b>20,854,057</b>

Due to the disproportionate allocation of the sample points to various strata, sampling weights were required to correct for differential representation of the sample at national and sub-national levels. The weights of the sample are in this case equal to the inverse of the product of the two selection probabilities employed above.

Therefore, the probability of selecting an SEA was calculated as follows:

$$P_{hi}^1 = \frac{a_h M_{hi}}{\sum_i M_{hi}}$$

Where:

$P_{hi}^1$  = the first selection probability of SEAs

$a_h$  = The number of SEAs selected in stratum h

$M_{hi}$  = The size (in terms of the population count) of the  $i^{\text{th}}$  SEA in stratum h

$\sum_i M_{hi}$  = The total size of the stratum h

The selection probability of the household was calculated as follows:

$$P_{hi}^2 = \frac{n_{hi}}{N_{hi}}$$

Where:

$P_{hi}^1$  = the second selection probability of the household

$n_{hi}$  = the number of households selected from the  $i^{\text{th}}$  SEA of  $h$  stratum

$N_{hi}$  = Total number of households listed in a SEA

Therefore, the SEA specific sample weight was be calculated as follows:

$$W_i = \frac{1}{P_{hi}^1 \times P_{hi}^2}$$

$W_i$ , which is the inverse of the product of the 2 selection probabilities, is called the PPS sample weight. Since there were 2 strata in every selected SEA, the PSU selection probability has to be multiplied with separate stratum specific household selection probabilities. Therefore, the number of weights in each SEA is 2.

## ii. Estimation Process

In order to correct for differential representation, all estimates generated from the survey data are weighted expressions. Therefore, if  $y_{hij}$  is an observation on variable  $Y$  for the  $h^{\text{th}}$  household in the  $i^{\text{th}}$  SEA of the  $j^{\text{th}}$  stratum, then the estimated total for the  $j^{\text{th}}$  stratum is expressed as follows:

$$Y_{jT} = \sum_{i=1}^{a_j} W_{ij} \sum_{h=1}^{n_j} Y_{hij}$$

Where:

$Y_{jT}$  = the estimated total for the  $j^{\text{th}}$  stratum

$i = 1$  to  $a_j$ : the number of selected clusters in the stratum

$h = 1$  to  $n_j$ : the number of sample households in the stratum

The total estimate for the 18 rural-urban strata was obtained using the following estimator:

$$Y_T = \sum_{j=1}^{mj} Y_{jT}$$

Where:

$Y_T$  = the national total estimate

$j = 1$  to  $m_j$ : the total number of strata (In this case  $m_j=18$ )

## 2.13. Operational definition of functional limitation

The analyses of functional limitation in this study relies on the work of the Washington City Group on Disability Measurement (<http://www.cdc.gov/nchs/citygroup.htm>) The screening questions used

reflect an understanding of disability in accordance with the ICF (WHO, 2001). The screening questions are as follows:

**The next questions ask about difficulties you may have doing certain activities because of a HEALTH PROBLEM**

	No	Some	A lot	Unable
1 Do you have difficulty seeing, even if wearing glasses?	1	2	3	4
2 Do you have difficulty hearing, even if using a hearing aid?	1	2	3	4
3 Do you have difficulty walking or climbing steps?	1	2	3	4
4 Do you have difficulty remembering or concentrating?	1	2	3	4
5 Do you have difficulty (with self-care such as) washing all over or dressing?	1	2	3	4
6 Because of a physical, mental, or emotional health condition, do you have difficulty communicating, (for example understanding or being understood by others)?	1	2	3	4

For the purposes of this report, functional limitation was defined as answering “some” difficulty with at least TWO activities or “a lot of difficulty/unable” to do any ONE activity above.

### 3. RESULTS

(Yusman Kamaleri)

The results are presented in two sub-chapters:

1. Results from the study on level of living conditions, comparing individuals with and without functional limitation as well as households with and without member with functional limitation; and
2. Results from the detailed activity limitation survey that specifically address the situation of persons identified with functional limitation. This section includes a separate analysis of questions dealing with activity limitation and participation.

Through out this section, an abbreviation “WFL” and the term “Control” will be used interchangeably with people or households with/without functional limitation. The abbreviation “WFL” refers to individuals with functional limitation or households with member(s) with functional limitation. The term “Control” refers to individuals without functional limitation or households without any member with functional limitation.

Sampling weight was implemented in the analyses whenever appropriate to account for the differences in the population in the different provinces. In addition, the data were also stratified into rural and urban areas in some of the analyses. In the presentation of the results, confidence interval (CI) is provided whenever appropriate to give an estimated range

of values which is likely to include an unknown population parameter based on the study sample.

The table below provides an overview of number of households and individuals included in the data collection.

**Table 4: An overview of number of households and individuals in the study**

Groups	Households	Individuals
WFL	622 (26.4%)	666 (5.8%)
Control	1737 (73.6%)	10735 (94.2%)
<b>Total</b>	2359	11401

Almost one-third (26%) of the total households have one or more individuals with functional limitation while 6% (n=666) of the total individuals participated in the study have functional limitation. Bearing in mind the methodological issues involved in estimating prevalence (Eide & Loeb 2006b; Loeb, Eide & Mont 2008) this is the estimated prevalence of disability in Mozambique in this study (95 % CI = 5.4 – 6.5).

An overview of the proportion of females and males respondents is presented in Table 5.

**Table 5: An overview of the proportion of respondents by gender**

Groups	Female	Male
WFL	307 (5.3%)	346 (6.5%)
Control	5481 (94.7%)	4972 (93.5%)
<b>Total<sup>1</sup></b>	<b>5788 (52.1%)</b>	<b>5318 (47.9%)</b>

<sup>1</sup>The total is different than the total for individual due to missing data

The proportion of females and males in the WFL group was almost the same; 5.3% and 6.5% respectively. An almost equal proportion of females and males was also shown in the control group.

The table below presents an overview of mean age between genders among the responders.

**Table 6: An overview of mean age by gender**

Groups	Female		Male	
	Mean age	95% CI	Mean age	95% CI
WFL	34.7	31.5 – 38.0	35.8	32.8 – 38.8
Control	20.7	20.0 – 21.1	20.7	20.1 – 21.2
<b>Total</b>	<b>21.1</b>	<b>20.6 – 21.6</b>	<b>21.6</b>	<b>21.1 – 22.2</b>

Both females and males in the WFL group had high mean age compared to the control group; 34.7 versus 20.7 for females and 35.8 versus 20.7 for males.

### 3.1. Results from the study on level of living conditions

#### i. Size of households

The table below presents the mean size of households between WFL and control in the different provinces.

**Table 7: Mean size of households**

Province	Households size			
	WFL households		Control households	
	Mean	95% CI	Mean	95% CI
Niassa	5.3	4.5 – 6.1	4.9	4.5 – 5.4
Cabo Delgado	4.6	3.9 – 5.4	3.9	3.6 – 4.2
Nampula	4.8	3.8 – 5.7	4.7	4.3 – 5.0
Zambèzia	4.7	4.2 – 5.1	5.0	4.6 – 5.3
Tete	4.2	3.3 – 5.0	4.5	4.1 – 4.8
Manica	6.2	4.8 – 7.6	5.6	5.0 – 6.1
Sofala	5.1	4.2 – 6.0	5.2	4.7 – 5.7
Inhambane	4.1*	3.6 – 4.6	5.1	4.7 – 5.5
Gaza	4.6	3.9 – 5.2	5.1	4.6 – 5.5
Maputo Provincial	5.4	4.7 – 6.0	4.7	4.3 – 5.1
Maputo Cidade	6.0	5.5 – 6.6	5.8	5.4 – 6.1
<b>Total</b>	4.9	4.6 – 5.1	4.8	4.7 – 5.0

CI = Confidence Interval

\*  $p < 0.01$

Analyses of households' sizes for WFL and control in the different provinces showed that significant difference was only found in Inhambane province with slightly large household size among the control group compared to the WFL. Nevertheless, there was no significant difference in the size of households between the two groups in the whole country.

## ii. Age of members in the households

Mean age of households in the WFL and control in the different provinces is presented in the table below.

**Table 8: Mean age of members in the households**

Province	Mean age of households			
	WFL households		Control households	
	Mean	95% CI	Mean	95% CI
Niassa	17.8	13.8 – 21.8	15.4	13.6 – 17.3
Cabo Delgado	28.5	24.2 – 32.9	26.8	24.6 – 28.9
Nampula	23.5	18.0 – 29.0	19.8	18.2 – 21.4
Zambèzia	20.3	17.4 – 23.3	18.7	17.4 – 20.0
Tete	23.0*	15.8 – 30.3	15.6	13.2 – 18.1
Manica	17.3	13.4 – 21.2	17.7	15.5 – 19.8
Sofala	25.9**	21.1 – 30.7	19.5	14.5 – 21.5
Inhambane	24.6*	20.0 – 29.2	18.8	16.8 – 20.8
Gaza	23.2	18.9 – 27.5	24.8	22.3 – 27.1
Maputo Provincial	21.1	18.2 -24.0	20.5	18.1 – 22.9

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	Mean age of households			
	WFL individuals		Control individuals	
Maputo Cidade	25.9	23.4 – 28.3	24.0	22.7 – 25.3
<b>Total</b>	<b>22.4**</b>	<b>20.9 – 23.9</b>	<b>20.2</b>	<b>19.5 – 20.8</b>

CI = Confidence Interval

\*  $p < 0.05$

\*\*  $p < 0.01$

Significant difference in the mean age of households between WFL and control was found in Tete, Sofala and Inhambane provinces with mean age of household in the WFL group was higher than the control group. The difference in the mean age of household in the whole country was also statistically significant ( $p < 0.01$ ). The WFL households had higher mean age compared to the control households. Even though the difference was not significant in the other provinces, there was a tendency that the mean age of household was higher in the WFL compared to the control except in the Gaza province; 23.2 for the WFL household and 24.8 for the control household.

Table 9 presents the analyses of mean age for individuals in WFL and control groups. The results revealed that in all provinces, except Cabo Delgado, individuals with functional limitation had higher mean age compared to individuals without functional limitation. In general, individuals with functional limitation in Mozambique had mean age of 35 years old while those without functional limitation had mean age of 21 years old.

**Table 9: Mean age of individuals in WFL and control group by province**

Province	Mean age of individuals			
	WFL individuals		Control individuals	
	Mean	95% CI	Mean	95% CI
Niassa	33.2**	25.3 – 41.1	19.1	17.9 – 20.3
Cabo Delgado	28.1	21.2 – 34.9	23.6	22.2 – 25.1
Nampula	34.8*	25.6 – 43.9	20.2	19.0 – 21.4
Zambèzia	33.5**	29.2 – 37.8	19.4	18.5 – 20.4
Tete	39.6**	30.8 – 48.4	18.4	17.1 – 19.7
Manica	27.3*	21.5 – 33.1	17.6	16.3 – 18.9
Sofala	41.2**	35.1 – 47.3	19.1	17.6 – 20.5
Inhambane	39.6**	33.5 – 45.7	20.9	19.8 – 21.9
Gaza	42.2**	35.8 – 48.6	26.0	24.6 – 27.4
Maputo Provincial	38.8**	32.9 – 44.6	21.8	20.7 – 22.9
Maputo Cidade	34.9**	30.0 – 39.7	24.3	23.5 – 25.1
<b>Total</b>	<b>35.3**</b>	<b>33.1 – 37.5</b>	<b>20.6</b>	<b>20.2 – 21.0</b>

CI = Confidence Interval

\*  $p < 0.01$

\*\*  $p < 0.001$

### iii. Dependency ratio in the households

Another measure of the structure of households is the dependency ratio. This is a measure of the portion of a population which is composed of dependents (people who are too young or too old to work). The dependency ratio is equal to the number of individuals aged below 15

years or over 65 years divided by the number of individuals aged 15 to 64 years. A rising dependency ratio is of concern to countries with quickly aging populations, since it becomes difficult for pensions systems to provide for this older, non-working population. A rapidly growing population with a high fertility rate will mean a relatively large proportion of the population consists of children who are dependent on the land and their families for sustenance.

A dependency ratio of 1.0 means there is one working-age person for each dependent in the family (e.g. a family of four with two adults and two children). Dependency ratios over 1.0 indicate a burden on the wage earners in the family and dependency ratios under 1.0 are indicative of less burden. It indicates the economic responsibility of those economically active in providing for those who are not. Table 10 presents the results of the analyses for mean dependency ratio in the different provinces and in Mozambique as a whole.

Results on the dependency ratio showed that in general there were no differences between the WFL and control households in Mozambique. However, analyses of the different provinces showed that the control households in Sofala had slightly higher dependency level compared to WFL households and the difference was statistically significant ( $p < 0.05$ ).

**Table 10: Mean dependency ratio in the households by province**

Province	Mean of dependency ratio			
	WFL households		Control households	
	Mean	95% CI	Mean	95% CI
Niassa	1.7	1.0 – 2.4	1.2	0.9 – 1.4
Cabo Delgado	0.8	0.6 – 1.1	0.9	0.7 – 1.0
Nampula	1.1	0.7 – 1.5	0.9	0.8 – 1.1
Zambèzia	0.8	0.6 – 1.0	0.8	0.7 – 1.0
Tete	1.1	0.7 – 1.5	1.0	0.8 – 1.2
Manica	1.1	0.7 – 1.6	1.3	1.0 – 1.6
Sofala	0.8*	0.5 – 1.0	1.1	0.9 – 1.3
Inhambane	1.0	0.7 – 1.2	1.1	0.9 – 1.2
Gaza	0.9	0.5 – 1.3	1.1	0.9 – 1.3
Maputo Provincial	1.2	0.9 – 1.4	0.9	0.8 – 1.1
Maputo Cidade	0.8	0.6 – 0.9	0.7	0.6 – 0.8
<b>Total</b>	0.9	0.8 – 1.0	1.0	0.9 – 1.0

CI = Confidence Interval

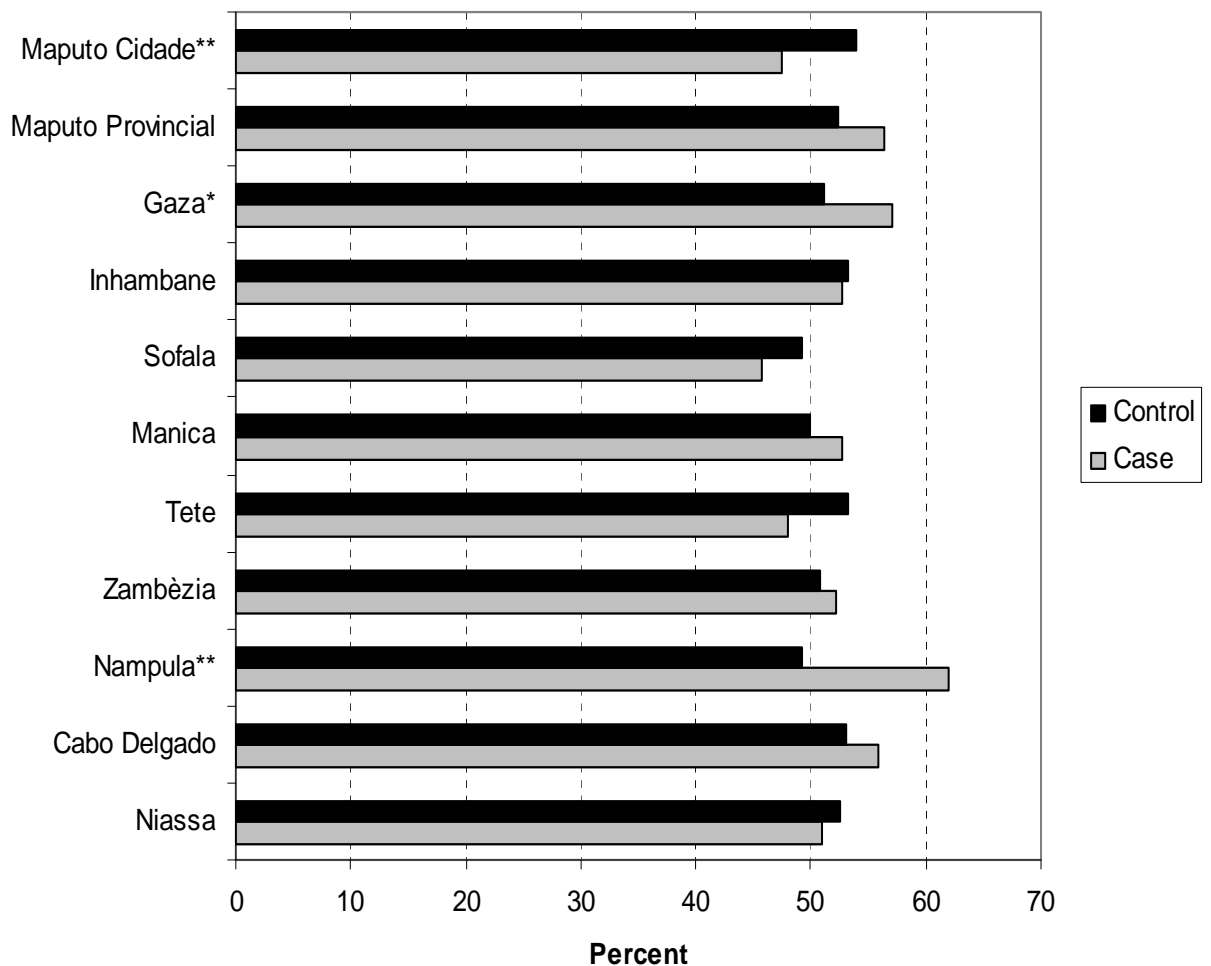
\*  $p < 0.05$

#### iv. Gender distribution

Concerning gender distribution, 52% of the members in the WFL and control households were females; the WFL households had 1578 females and control households had 4357. Detailed analyses of the different provinces showed that the proportion of females between the WFL and control households was significantly different in three provinces; Maputo

Cidade ( $p < 0.01$ ), Gaza ( $p < 0.05$ ) and Nampula ( $p < 0.01$ ) provinces. In Nampula and Gaza provinces, the number of females in the WFL households was significantly higher than the control. On the other hand, the number of females in the control households was significantly higher than the WFL households in Maputo Cidade. The proportion of females in the WFL and control households by the different provinces is presented in Figure 1 below.

**Figure 1: Female proportion in the household by provinces**



## **v. Household standard**

Household standard was measured by two different types of questions. These include:

1. Questions on household possession – the questions assessed the possession of different items in the household. The items ranged from basic items such as baskets or cooking utensils to expensive items such as refrigerator, washing machine or tractor. There were 37 items being asked with ‘yes-no’ answer. The highest score i.e. 37 represents the best household standard possessing all the items. The household standard decreased as the total score decreased.
2. Question on main source of water – the water source ranged from piped water inside the house to unprotected well. Those who claimed that they had piped water inside the house scored highest i.e. 7 while individuals with unprotected well or stream as their water source scored lowest i.e. 1.

Comparison between households in WFL and control groups on the possession of different items in general showed that household in the control group possessed more items, i.e. better household standard, compared to WFL group ( $p < 0.001$ ). However, analyses of the household standard among the different provinces showed that only four provinces had significantly different standard of household between the WFL group and control group. These provinces were Nampula, Zambèzia, Gaza and

Maputo Cidade. In these provinces, the household standard in the WFL group was lower than the control group. The different household standard was not significant in the other provinces. Nevertheless, the results illustrated that there was a slight tendency that households standard in the WFL group was slightly less than the control group. This is presented in table 11.

**Table 11: Household standard: household possession by provinces**

Provinces	Households possession				
	WFL		Control		
	Mean	95%CI	Mean	95%CI	
Niassa	7.3	6.3 - 8.4	7.7	7.1 - 8.2	
Cabo Delgado	6.7	5.9 - 7.4	7.0	6.6 - 7.3	
Nampula	5.8**	4.6 - 6.9	8.5	8.0 - 9.1	
Zambèzia	8.0*	7.2 - 8.8	9.3	8.5 - 10.2	
Tete	6.4	5.3 - 7.6	6.3	5.8 - 6.9	
Manica	8.6	7.4 - 9.7	9.6	8.9 - 10.3	
Sofala	8.4	7.1 - 9.7	8.8	8.1 - 9.6	
Inhambane	6.8	6.1 - 7.5	7.3	6.8 - 7.8	
Gaza	6.0*	5.2 - 6.7	7.1	6.6 - 7.5	
Maputo Provincial	7.8	7.1 - 8.6	8.5	7.8 - 9.1	
Maputo Cidade	8.5*	7.5 - 9.5	9.8	9.3 - 10.3	
<b>Total</b>	<b>7.41</b>	<b>7.04 - 7.79</b>	<b>8.24</b>	<b>8.01 - 8.46</b>	

CI = Confidence Interval

\*  $p < 0.05$

\*\*  $p < 0.001$

With regards to the main source of water, household in the control groups in general scored slightly higher than the WFL group but the difference was just on the border line to be statistically significant ( $p=0.059$ ). Analyses of the different provinces showed that WFL household in Zambèzia had lower household standard than the control household with regards to main water source ( $p < 0.01$ ). The table below presents the mean and confidence interval (CI) of the score.

**Table 12: Household standard: main source of water by province**

Provinces	Main water source			
	WFL		Control	
	Mean	95%CI	Mean	95%CI
Niassa	3.5	3.2 - 3.7	3.5	3.3 - 3.6
Cabo Delgado	3.1	2.7 - 3.5	3.0	2.9 - 3.1
Nampula	3.4	2.8 - 4.1	4.1	3.9 - 4.3
Zambèzia	3.7*	3.5 - 4.0	4.2	4.0 - 4.4
Tete	3.5	3.1 - 3.9	3.5	3.3 - 3.7
Manica	3.5	3.0 - 3.9	3.4	3.3 - 3.5
Sofala	4.2	3.8 - 4.6	4.0	3.7 - 4.3
Inhambane	3.5	3.3 - 3.8	3.7	3.5 - 3.9
Gaza	4.1	3.7 - 4.4	3.9	3.7 - 4.1
Maputo Provincial	4.1	3.8 - 4.4	4.1	3.9 - 4.3
Maputo Cidade	5.8	5.6 - 6.1	6.0	5.9 - 6.1
<b>Total</b>	<b>3.8</b>	<b>3.6 - 3.9</b>	<b>3.9</b>	<b>3.8 - 4.0</b>

CI = Confidence Interval

\*  $p < 0.01$

## vi. Results based on random sample selection

Due to the large imbalance in the number of people belonging to the WFL and control groups (i.e. 5% versus 95% respectively), a random selection of the members in the control group was conducted, i.e. random sample selection. This is to justify the analyses comparing the WFL and control groups of the different variables to illustrate the situation of people belonging to the two different sample groups. In the following analyses, the WFL and control groups consist of 622 individuals each. Comparison considering the different provinces would not be possible due to the small number in both groups. An overview of the sample size, i.e. WFL and control group, is presented in Table 13 and 14 below.

**Table 13: Overview of the WFL group**

Age	Female	Male	Missing	<b>Total</b>
< 15 yrs	45	61	3	109
> 14 yrs	166	224	7	397
Missing	67	46	3	116
<b>Total</b>	278	331	13	622

**Table 14: Overview of the random sample: Control group**

Age	Female	Male	Missing	<b>Total</b>
< 15 yrs	109	108	10	227
> 14 yrs	157	171	5	333
Missing	36	25	1	62
<b>Total</b>	302	304	16	622

## vii. Civil status

Civil status for individuals at the age of 15 years and above was analyzed and the result is presented in Table 15. The difference in civil status between WFL and control was statistically significant ( $p < 0.001$ ). There were three times as many members in the WFL group who were widower compared to control group and twice who were divorced or separated.

**Table 15: Civil status for individuals who were 15 years old and above**

Civil status	WFL (n=298)		Control (n=363)	
	n	%	n	%
Never married	93	25.6	109	36.6
Married <sup>a</sup>	103	28.4	81	27.2
Consensual union	80	22.0	81	27.2
Divorced/separated	31	8.5	13	4.4
Widowed	55	15.2	14	4.7
Other	1	0.3	0	0.0

<sup>a</sup>"Married" includes married officially, religiously or traditionally

Detail analyses of different genders on civil status revealed that among the individuals with functional limitation, the proportion between WFL and control groups among those who were widowers was tremendously imbalance in females compared to males. The proportion of female widowers in the WFL group was almost fifth-fold higher than that of female widowers in the control group. A wider gap was also shown among those living in consensual union where the percentage of females in control group was two-fold higher than that of females in the WFL

group. Similar gap was not seen between males in the WFL and control groups. Nevertheless, there were more males in the WFL group who were married or living in a consensual union compared to males in the control group. This was the opposite of the situation of females in the WFL and control groups. The difference between the WFL and control groups for females was significant at 0.001 while for males this difference was significant at 0.05. This is presented in the table below.

**Table 16: Civil status for individuals who were 15 years old and above by gender**

Civil status	Male (%)		Female (%)	
	WFL n=207	Control n=154	WFL n=150	Control n=140
Never married	25.1	40.9	25.3	32.1
Married <sup>a</sup>	39.1	31.2	14.0	23.6
Consensual union	27.1	24.0	14.7	30.0
Divorced/separated	5.3	2.0	13.3	7.1
Widowed	3.4	2.0	32.0	7.1

<sup>a</sup>"Married" includes married officially, religiously or traditionally

### **viii. Education**

The table below presents the percentages of school attendance among individuals aged 15 years and above. The results show a slight discrepancy in the proportion between the individuals in the WFL and control group related to school attendance. A higher proportion was shown for individuals who had never attended school in the WFL group

compared to the control group. Despite the low percentage of attending school, individuals in the WFL group had higher proportion of leaving school. The difference between the WFL and control groups pertaining school attendance was statistically significant ( $p < 0.001$ ).

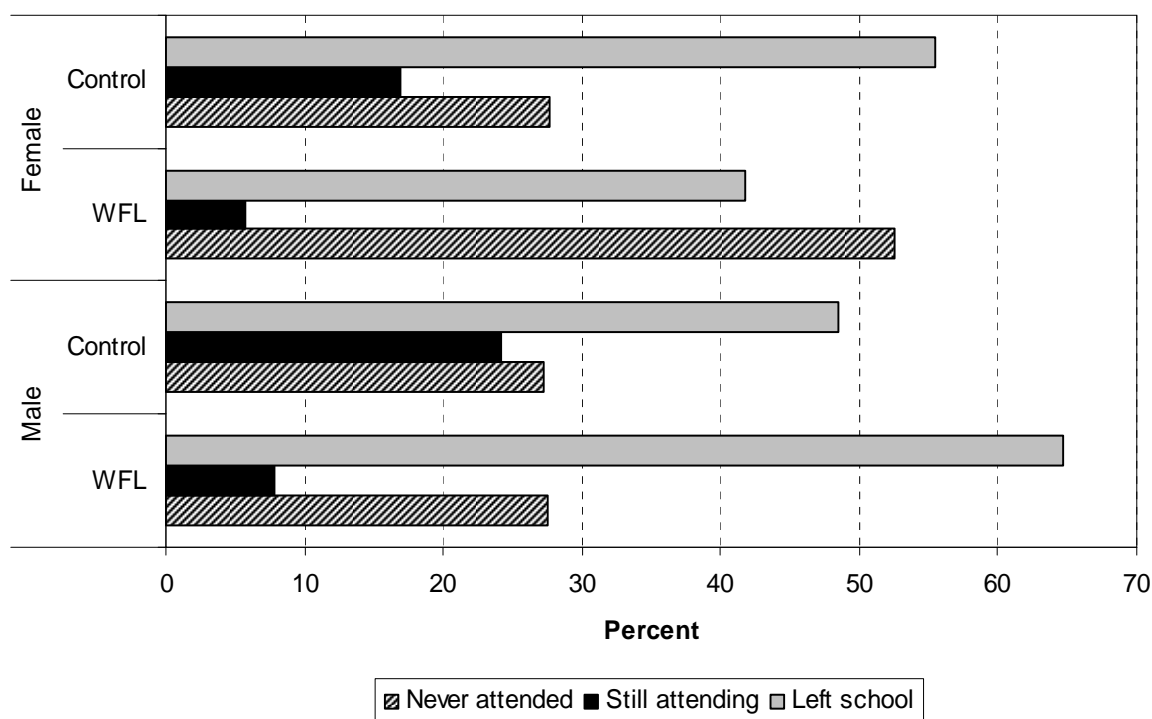
**Table 17: School attendance for individuals 15 years old and above**

School attendance	WFL (n=382)		Control (n=314)	
	n	%	n	%
Never attended	145	38.0	86	27.4
Still attending	26	6.8	65	20.7
Left school	211	55.2	163	51.9

Comparison of males and females in the WFL and control groups showed that females in the WFL group had the highest proportion of those who had never attended school (53%) and the proportion was almost two-fold higher than that of female in the control group as well as males of both groups. On the other hand, males in the WFL group had the highest proportion of those who left school (65%). This is presented in Figure 2.

Similar analyses were also conducted among individuals who were below 15 years old (Table 18). The proportion of those who had never attended school was more than twice in the WFL group compared to control; 43% and 19% respectively. The difference in school attendance between WFL and control group was statistically significant ( $p < 0.001$ ). The results are presented in Table 18.

**Figure 2: School attendance (15 years old and older)**



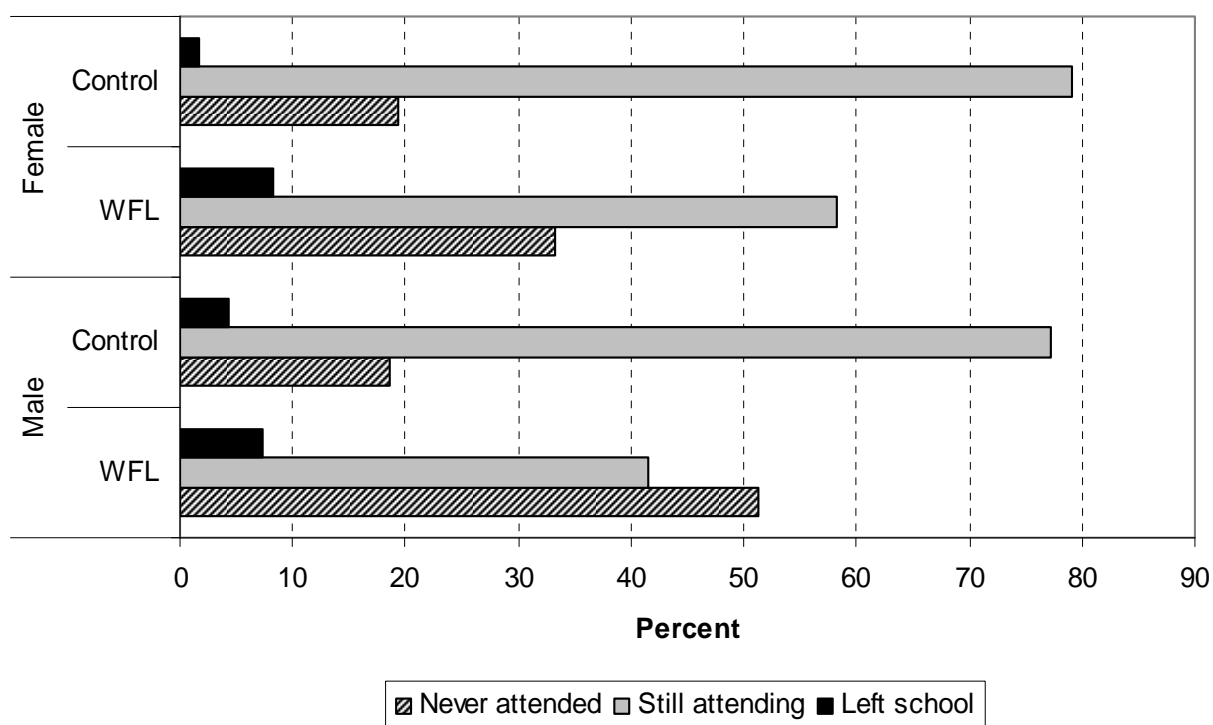
**Table 18: School attendance for individuals below 15 years old**

School attendance	WFL (n=79)		Control (n=138)	
	n	%	n	%
Never attended	34	43.0	26	18.8
Still attending	38	48.1	108	78.3
Left school	7	8.9	4	2.9

A detail analysis of school attendance according to genders for individuals below the age of 15 years old showed that the proportion of males and females with functional limitation who never attended school

was higher than males and females without functional limitation (19% for both males and females). It is interesting to note that among individuals with functional limitation, there were more males who never attended school compared to females; 51% versus 33%. This is presented in Figure 3 below.

**Figure 3: School attendance (< 15 years old)**



Responders were also asked on their literacy by asking if they can write in any languages. Table 19 presents the result of those at the age of 15 years and above who were still attending or had had attended schools (n=465). The proportion of individuals in the WFL group who could not write was higher than the control group (24% versus 15%). Almost one-

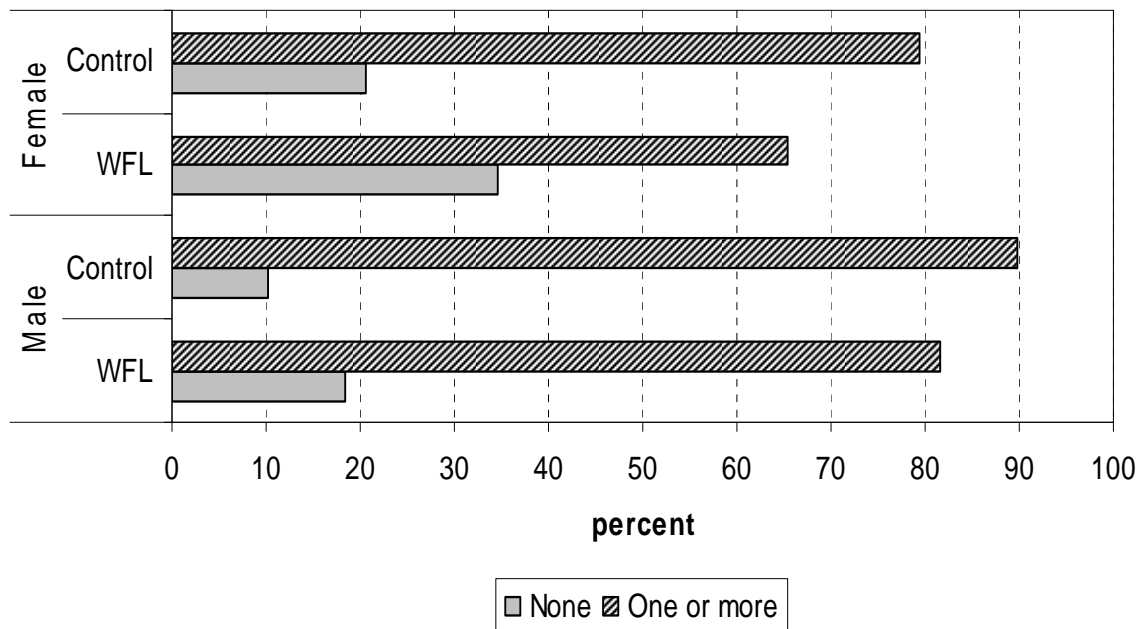
forth of the individuals in the WFL group could not write while there was only slightly less than one-sixth who could not write were in the control group. This difference was statistically significant ( $p < 0.02$ ).

**Table 19: Languages written: respondents of 15 yrs old and above who were attending or had had attended school**

Language written	WFL (n=237)		Control (n=228)	
	n	%	n	%
None	56	23.63	34	14.91
One or more	181	76.37	194	85.09

Detailed analysis of the gender difference on language written illustrated that more females in the WFL who could not write in any language compared to females in the control group ( $p < 0.03$ ). On the other hand, even though the difference between males in the WFL group and control group in relation to language written was not significant statistically ( $p = 0.06$ ), there was a tendency that more males in the WFL group who could not write compared to males in the control group. This is presented in Figure 4.

**Figure 4: Language written for individuals of 15 years old and older who were attending or had had attended schools**



### ix. Employment status

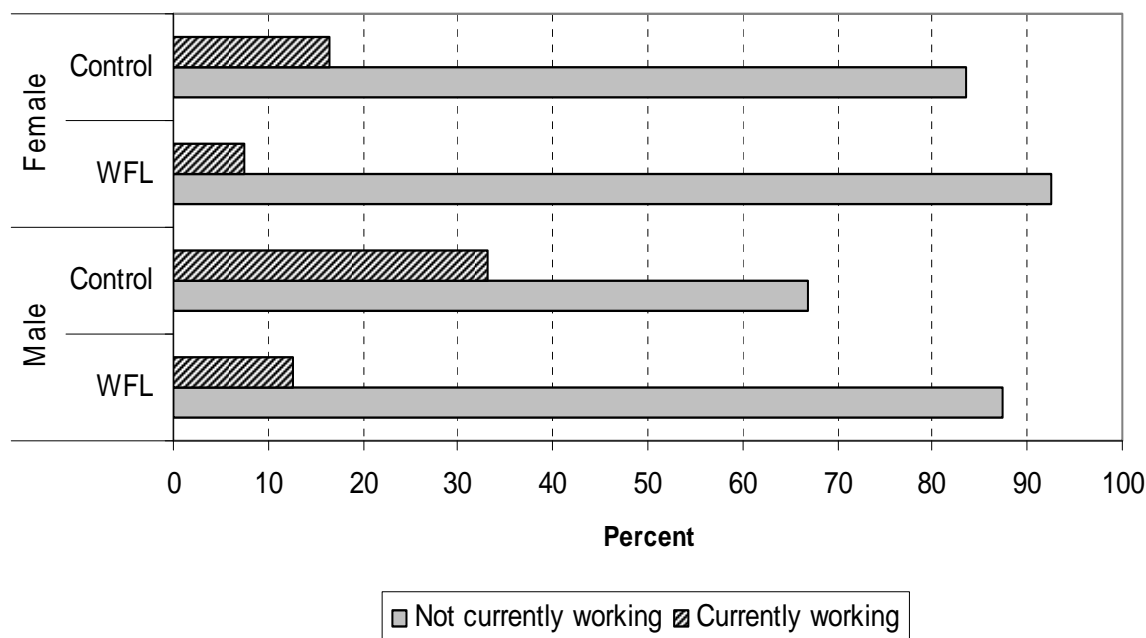
Table 20 presents the employment status among persons between the economically active ages of 15 – 65 years (n=645). The result illustrated the difference in proportion of employment status between the WFL and control groups. The proportion of persons with functional limitation who were currently working was significantly less than the persons without functional limitation ( $p < 0.001$ ).

**Table 20: Employment status (15 – 65 years old)**

Employment status	WFL		Control	
	n	%	n	%
Currently working or Returning to work	31	10.8	69	25.8
Not currently working	257	89.2	199	74.3

Detail analysis of employment status according to genders showed that the proportion of females with functional limitation was the highest among those who were not currently working. This is illustrated in the figure below.

**Figure 5: Employment status by gender**



It is important to note that the high unemployment figures reported here may be explained by differences in the questions that were used to elicit data on employment. The results produced here refer to formal employment (with an employer) or contractual employment including seasonal labour and not self-employment or work at home.

## x. Skills

It was however shown that among the same group of potentially economically active persons 15 – 65 years of age, 16% (n=45) of those with functional limitation had acquired some skills formally or informally, compared to 13% (n=37) of the person without functional limitation (Table 21). Though the difference was not statistically significant (p=0.49), this is most likely a reflection of what is offered to children/person with functional limitation, i.e. skills training is (more) common in the special education services for person with functional limitation.

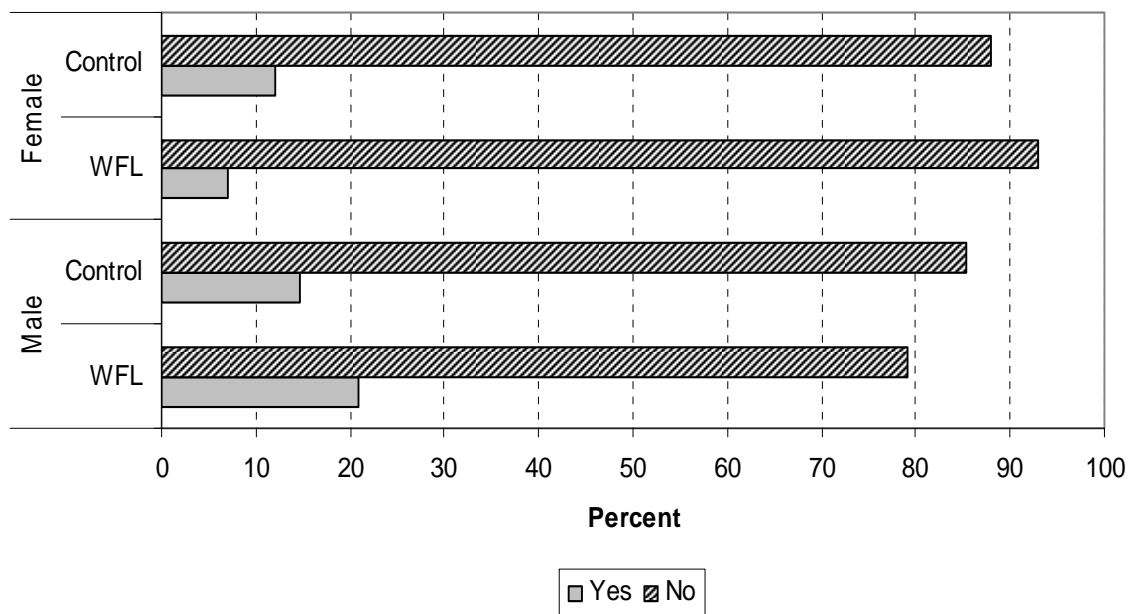
**Table 21: Skills (15-65 years old)**

Skills (15-65 yrs old)	WFL		Control	
	n	%	N	%
Yes	45	15.5	37	13.4
No	246	84.5	239	86.6

By gender no significant differences were observed with respect to functional limitation and possession of skills. Nevertheless, there was a tendency that more males in the functional limitation (21%) than males in

the control group (15%) had acquired some form of skill. On the other hand, an opposite picture was seen among females where fewer females with functional limitation (7%) had some form of skills compared to females without functional limitation (12%). This is illustrated in the figure below.

**Figure 6: Skills by gender**



Detail analyses on employment status among those aged 15 to 65 years old who acquired some form of skills (n=89) revealed that only about one-tenth of persons with functional limitation who had skills were currently working. Among individuals without functional limitation who had some skills, slightly more than half (51.4%) were currently working. The difference between WFL and control group was statistically significant ( $p < 0.001$ ). This is presented in table 22.

**Table 22: Employment status (15 – 65 years old)**

Employment	WFL		Control		Total	
	n	%	n	%	n	%
Yes	6	11.5	19	51.4	25	28.1
No	46	88.5	18	48.7	64	71.9

**xi. Communication and information**

Access to the different forms of communication and information was measured by asking questions on the availability and accessibility of telephone, radio, television, internet, banking facilities, newspaper, post office and library. Each question has ‘yes-no’ answer and the sum of the score derived a scale on the accessibility of communication and information. The scale has a possible range from 0 (completely not available and not accessible) to 8 (completely available and accessible). The results are presented in the table below.

**Table 23: Communication and information**

Individuals	n	Mean	SD	95% CI	
WFL	622	0.84	1.63	0.71	- 0.97
Control	622	1.25	1.97	1.10	- 1.41

The results showed that individuals with functional limitation had significantly less access to the different forms of communication and information compared to individual without functional limitation;  $t=4.0$ ,  $df=1242$ ,  $p<0.001$ . With regards to gender difference in the WFL and control group, both genders had the same mean score and standard deviation (SD) in their respective group reflecting the overall mean and SD as in the table above.

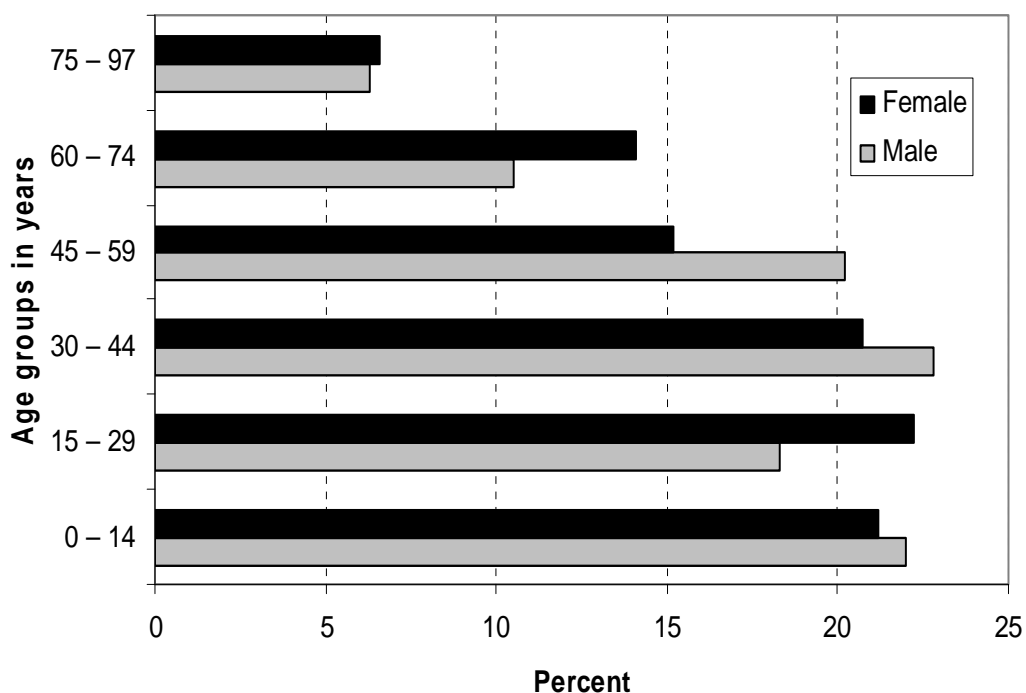
### **3.2. Results from the study of individuals with functional limitation**

Based on the operational definition for functional limitation as stated in the methodology, there were 666 persons (5.8%) of the total study sample ( $n=11401$ ) identified as individuals with functional limitation. Among them, 46% were females.

Thirty six households (5.8%) had more than one member with functional limitation. However, the registered data do not discriminate information on functional limitation between or among the other WFL members in the household. Therefore, the individuals with functional limitation who were members in these households were excluded in the analyses involving demographic information. Nevertheless, these households ( $n=36$ ) were included in the other analyses.

Figure 7 presents the proportion of the age groups and genders of persons identified as having functional limitation from the screening questionnaire.

**Figure 7: Age profile for persons with functional limitation**



In the WFL group, there were more females in the lower and higher age groups while more males in the middle age groups. However the difference between males and females in the WFL group was not statistically significant ( $p < 0.55$ ).

**Table 24: Distribution of type of functional limitation**

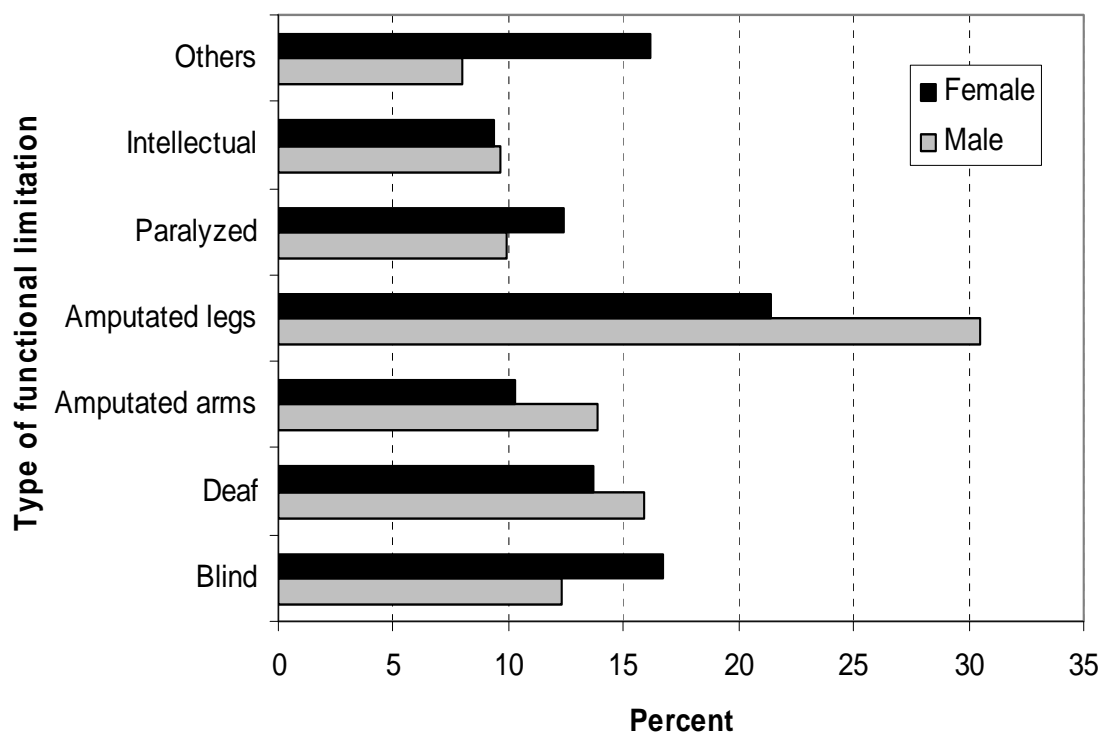
Types of functional limitations	n	%
Blind	77	12.4
Deaf	81	13.1
Amputated arms	66	10.7
Amputated legs	145	23.4
Paralyzed	62	10.0
Intellectual	54	8.7
Others	62	10.0
Did not respond	72	11.6
<b>Total</b>	<b>619</b>	<b>100.00</b>

Table 24 above presents the different types of functional limitation among the responders in the WFL group. Despite being categorized in the WFL group after the condition on the screening questions, three persons reported that they did not have any of the functional limitations listed above. More than one-fifth of the responders (23%) have amputated legs.

Figure 8 is the presentation of distribution of the type of functional limitation according to gender. The difference between females and males in the WFL group regarding the different types of functional limitation was statistically significant ( $p < 0.01$ ). The results illustrates that males were over representative among those who had amputated legs or arms and those who were deaf. On the other hand, there were slightly

more females in the WFL group who were blind, paralyzed or having other types of functional limitation.

**Figure 8: Distribution of type of functional limitation**



The causes of functional limitation were also recorded and categorized into seven categories. The number of individuals and their proportion to the total WFL group are presented in Table 25. Half of the individuals with functional limitation (52%) reported that their functional limitation was due to sickness. However, no medical verification of the type of sickness was recorded. More than one-fifth (24%) reported that their functional limitation was originated at birth.

**Table 25: Overview of the causes of functional limitation**

Causes of functional limitation	n	%
Birth	132	23.7
Sickness	289	52.0
Mine or war	38	6.8
Military services	10	1.8
Work accident	25	4.5
Airplane accident	22	4.0
Other causes	40	7.2
<b>Total</b>	<b>556</b>	<b>100</b>

An attempt was made to record the awareness of the individuals with functional limitation of the different services that are currently available in the country and at the same time determine whether they are in need of these same services or if they had received any of the services listed.

The types of services include:

- MR - Medical rehabilitation
- AD - Assistive devices services
- ES - Educational services
- VT - Vocational training
- CP - Counselling for person with disability
- CF - Counselling for parent/family
- WS - Welfare services
- HS - Health services
- TH - Traditional healer/faith healer

**Figure 9: Services – aware of, in need or received**

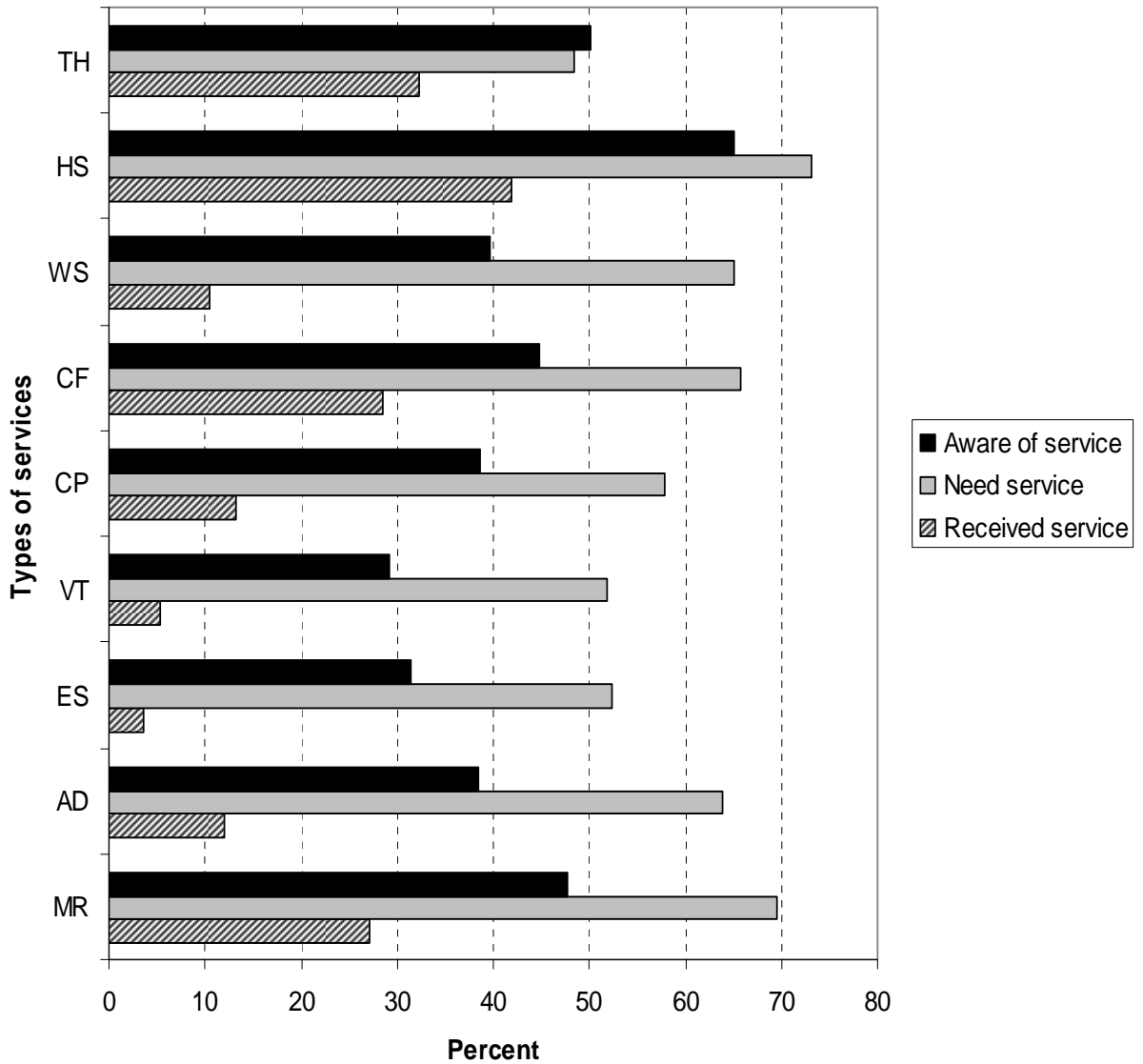


Figure 9 illustrates the proportion of the services that individuals with functional limitations either aware of, in need of or had received. With the exception of health services and traditional healer/faith healer less than

half of the individuals in the WFL group were aware of the different types of services available. Vocational training and educational services were the least that people with functional limitation were aware of their availability; 29% and 31% respectively. Nevertheless, for all the services except traditional healer/faith healer, more than half of the individuals with functional limitation expressed that they were in need of the services. Health services and medical rehabilitation were the services that were most needed; 73% and 70% respectively.

People with functional limitation were also asked if they received the services. Figure 9 also illustrated the relationship between the amount of individuals who were aware of the services and who received them. Vocational training and educational services were reported to be the least in the rank of the services received by people with functional limitation reflecting their rank in the awareness of the services. On the other hand, health services was the most received services (42%) mirroring the highest proportion of services that people with functional limitation were aware of. However, regardless of the different provinces in Mozambique, less than half of the individuals in the WFL group received the available services.

Detail analyses of the gap between individuals who were in need of the different services and receiving of the services were also conducted. The results are presented Table 26.

**Table 26: Gap analysis: the percentage of NOT receiving the services among people who were in need of the services**

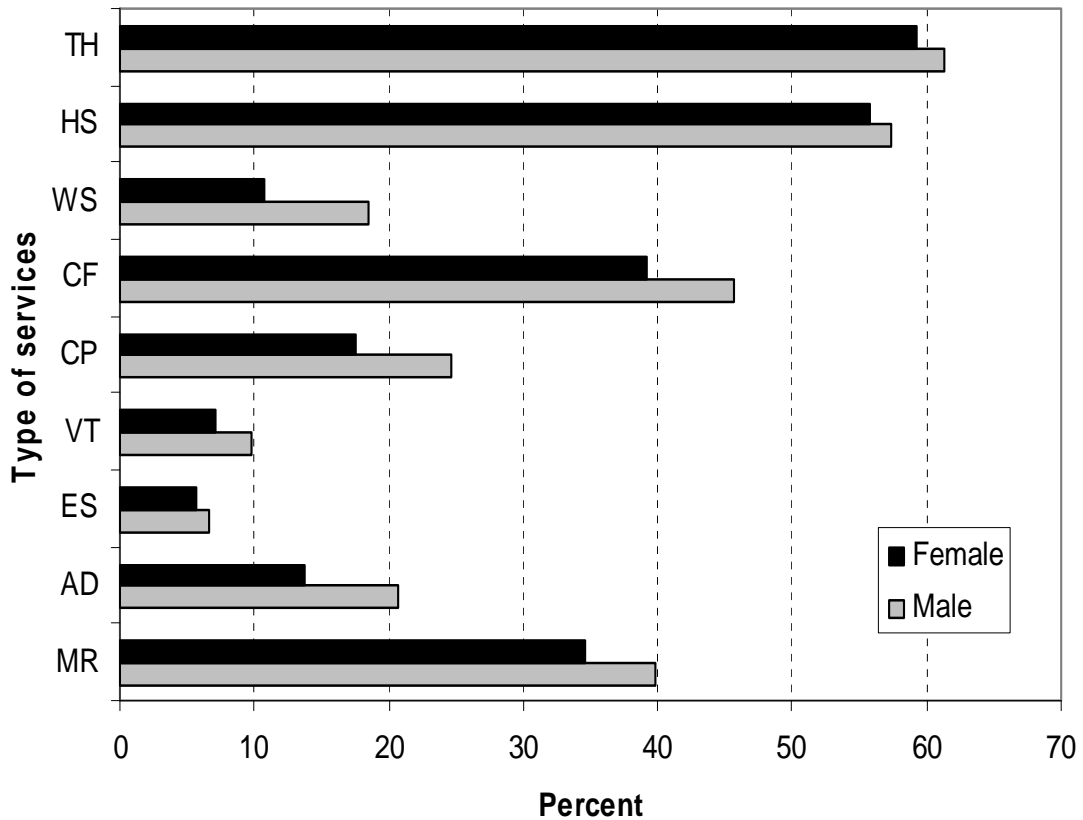
Type of services	n <sup>1</sup>	Total gap (%)
Medical rehabilitation	377	62.3
Assistive devices services	341	82.4
Educational services	281	94.0
Vocational training	272	92.0
Counselling for person with disability	309	78.3
Counselling for parent/family	348	57.5
Welfare services	346	85.0
Health services	394	43.2
Traditional healer/faith healer	237	38.8

<sup>1</sup>The number of individuals in the WFL groups who reported that they were in need of the services

The results showed that less than one-tenth of people who were in need of vocational training and educational services received the services. Other services that also have a noticeable wider gap include assistive devices services, counselling for person with disability and welfare services: 82%, 78% and 85% respectively.

Figure 10 is the presentation of gap analysis according to gender.

**Figure 10: Gap analysis by gender**



Generally, there was no difference in the proportion of females and males with functional limitation in the gap analysis except welfare services ( $p < 0.05$ ). There were more males with functional limitation who were in need of the welfare services and who did not receive the service compared to females (19% males vs. 11% females).

## **i. Education**

Among individuals with functional limitation whose age were registered, 379 persons (74.9%) were 18 years old and above. They were asked if they had ever received any formal primary education. Almost half of them (48.8%) claimed that they had received any formal primary education but only 4 persons received tertiary education. Concerning gender difference, there were significantly ( $p < 0.01$ ) more males (55%) who had received formal primary education compared to females (40%). Information on individuals in the WFL group who were below 18 years old could not be analyzed because 88% did not answer the question.

Very few actually reported being refused entry to a regular or special school due to being functionally limited. It is, none the less, worth noting that 28 persons (9%) were refused entry to regular pre-school, 39 (13%) were refused regular primary school and 13 (5%) were refused regular secondary school. In addition, 8 persons (3%) were refused entry into a special class or school because of their functional limitation.

## **ii. Employment status**

There were 397 persons (78.5%) who were at the age of 15 years and above. They were asked about their employment status which includes currently employed, have been employed before, never been employed or homemaker. The result is presented in Table 27 below:

**Table 27: Employment status for individuals who were 15 years old and above**

Employment status	n	%
Currently employed	22	5.54
Have been employed before <sup>1</sup>	97	24.4
Never been employed	201	50.6
Homemaker	28	7.1
Did not respond	49	12.3
<b>Total</b>	<b>397</b>	<b>100</b>

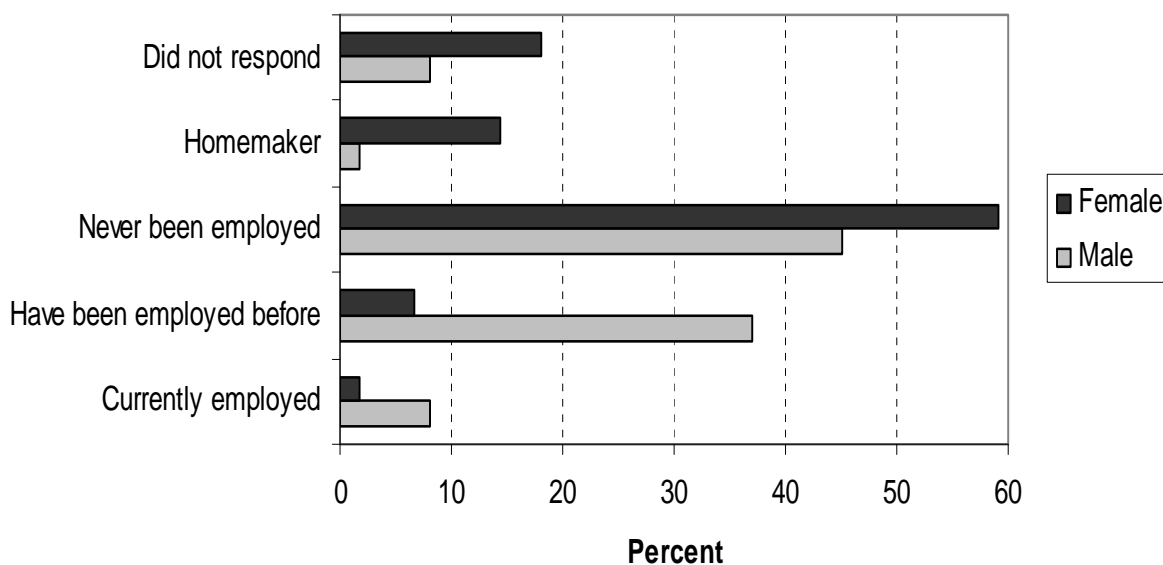
<sup>1</sup>Not currently working but had been previously employed

Half of the individuals with functional limitation who were 15 years old and above had never been employed. Among those who were not currently working but had been previously employed; 24% had terminated employment because of their functional limitation while 15% stopped working due to retrenchment or cut backs of employees. They were also asked if they received social security, a disability grant or any other form of person. Only 16% (n=52) claimed that they received such economical support.

Analysis of employment status according to gender showed that there was a statistical significant difference ( $p < 0.001$ ) in the employment status between males and females. This is presented in Figure 11. Among individuals with functional limitations there were more females who had

never been employed. This represents about 60% of the female responders who were at the age of 15 years and above.

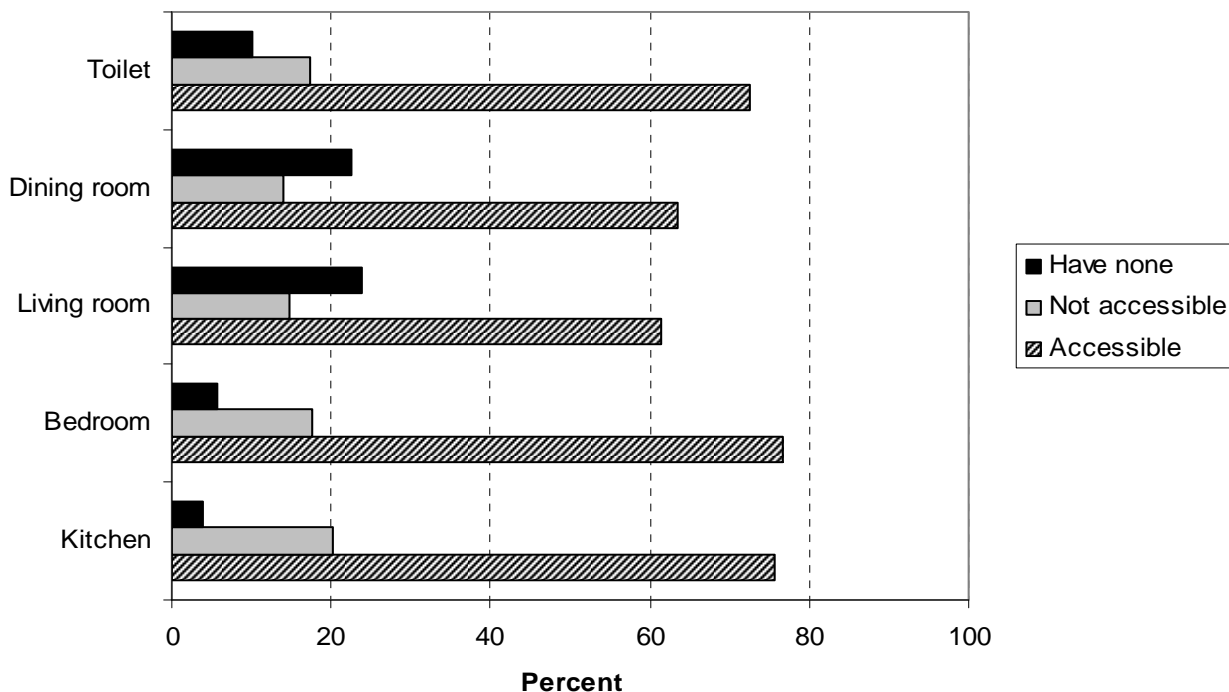
**Figure 11: Employment status by gender**



### iii. Accessibility

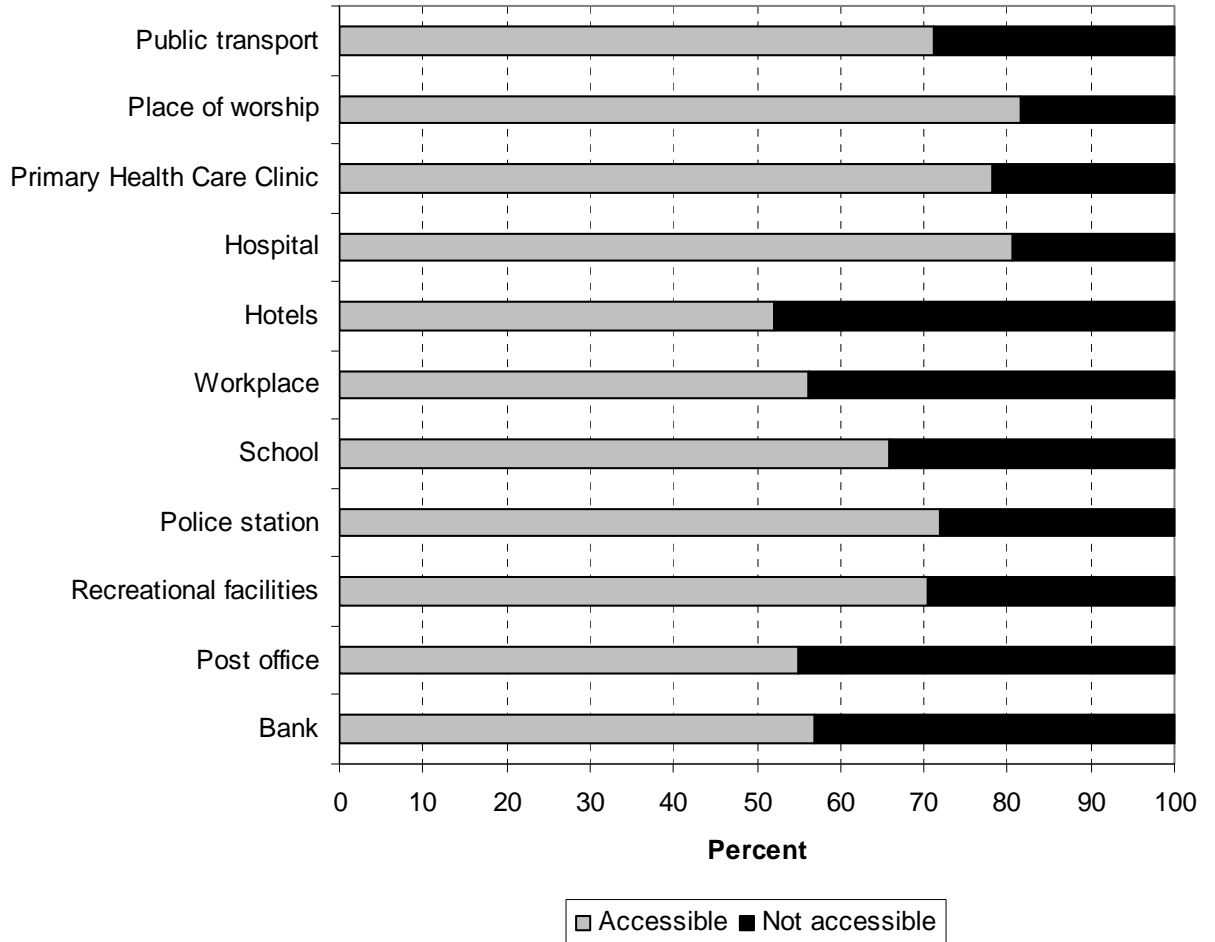
Result from the analysis of accessibility at home is shown in Figure 12. Generally accessibility in the home does not seem to be a problem. It can be claimed from the data presented here that the majority of those who have the room or facility mentioned also have access to that room or facility. Overall 10% claimed that they did not have toilet facility in their home (i.e. answered “have none” to the question).

**Figure 12: Accessibility at home**



The individuals with functional limitation were also asked about the accessibility of various places from their home. Analysis of the data included only when these various places were available and that they were used by the people with functional limitation. Figure 13 presents the findings. The figure shows that these various places were accessible by more than half of the individuals with functional limitation. Nevertheless, the accessibility of hotels, workplace, bank and post office was just slightly above 50%. Place of worship was highly accessible and only 18% claimed that the place was not accessible from their home.

**Figure 13: Accessibility from home**



**iv. Technical Aides and Assistive Devices**

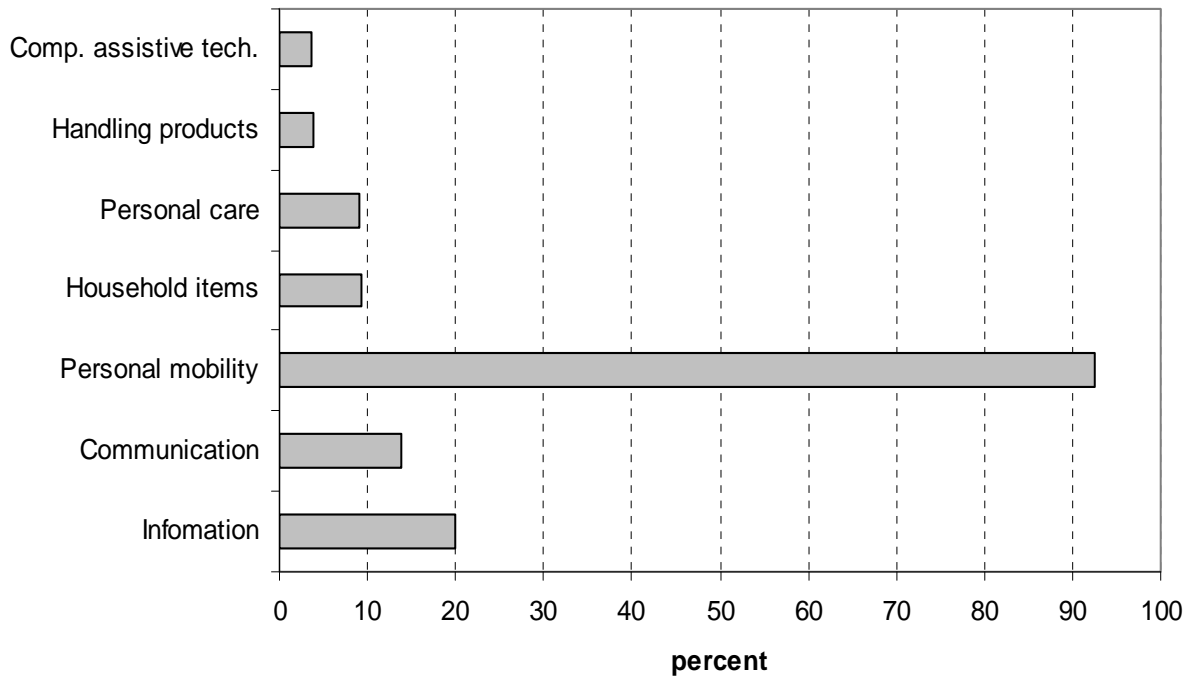
Respondents were also asked if they used assistive devices and among those who responded to the questions (n=537), 107 (19%) persons with functional limitation reported that they were using assistive devices. Among them, more males who used assistive devices compared to females; 22.4% and 14.2% respectively. The difference between genders

related to the use of assistive devices was statistically significant ( $p < 0.01$ ).

They were also asked about the types of assistive devices they were using. These devices were categorized into;

- i. Computer assistive technology  
An example includes keyboard for the blind.
- ii. For handling products and goods  
Examples include gripping tongs, aids for opening containers or tools for gardening.
- iii. Personal care and protection  
Examples include special fasteners, bath and shower seats, toilet seats raiser, commode chairs, safety rails or eating aids.
- iv. Household items  
Examples include flashing light on doorbell, amplified telephone or vibrating alarm clock.
- v. Personal mobility  
Examples include wheelchairs, crutches, walking sticks, white cane, guide or standing frame.
- vi. Communication  
Examples include sign language interpreter, fax, portable writer or computer.
- vii. Information  
Example include eye glasses, hearing aids, magnifying glass, telescopic lenses/glasses, enlarge print or Braille.

**Figure 14: Types of assistive device(s) in use**



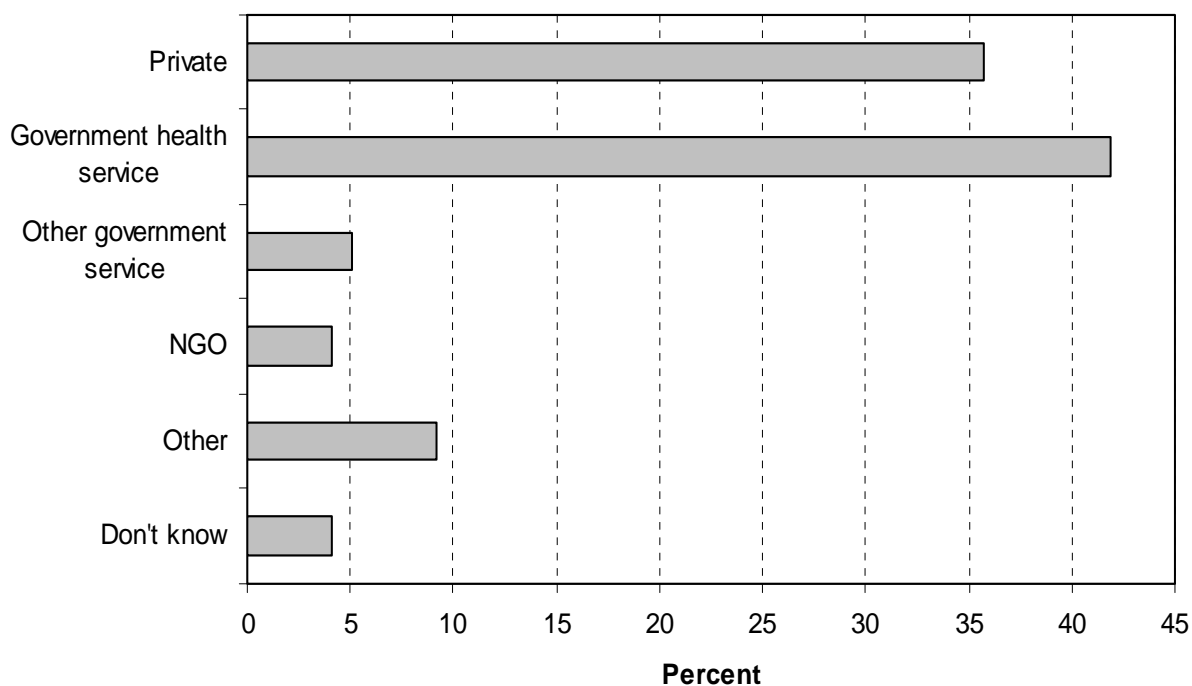
The result as presented in Figure 14 showed that assistive device related to personal mobility is the type of device mostly in use (93%) among people with functional limitation. Detail analyses of people who answered “a lot” and “unable” to the question “Do you have difficulty walking or climbing steps?” and “Do you have difficulty seeing, even when wearing glasses?” showed that 95% of those with difficulty walking and 83% of those with difficulty seeing were using an assistive device related to personal mobility. On the other hand, individuals who answered “a lot” and “unable” to the question “Do you have difficulty with self-care such as washing all over or dressing?”, 33% were using assistive devices related to household items but none were using assistive devices related to

personal care and protection. About 45% of those who have difficulty seeing were using assistive devices related to information but none with difficulty hearing were using similar assistive device.

When asked if the assistive device in use was in a good working condition, 56% answered “yes”.

Sources where the assistive devices were acquired were also recorded. Only about one-sixth answered the question and the result is presented in Figure 15 below.

**Figure 15: Sources of assistive device(s)**



Government health service and private were the main sources where people with functional limitation acquired their assistive devices; 42% and 36% respectively. Other government service (not health) and Non-governmental organizations (NGO) representing 5% and 4% respectively.

In addition, half of those using personal mobility devices (51%) had received at least some guidance or instructions for use but more than one-third (34%) received no information or help on how to use or maintain their assistive device.

#### **v. Role within the household and family**

The results presented under this topic are obviously dependent on numerous factors; among them the sex and age of the person with functional limitations and the severity of their functional limitations. The analyses are based on the portion of the sample that did not classify the activity as “not applicable”; the basis, or denominator, for the calculations is the number of persons with functional limitation who answered either “yes”, “no” or “sometimes” on the different type of assistance they needed in daily life activities. The results are presented in Table 28.

**Table 28: Assistance needed in daily life activity**

	Yes/always		Sometimes	
	n	%	n	%
Dressing	126	27.3	52	11.3
Toileting	113	24.4	67	14.4
Bathing	126	26.2	59	12.6
Eating/feeding	92	20.3	42	9.3
Cooking	264	60.3	58	13.2
Shopping	247	56.4	85	19.4
Moving around	139	29.6	88	18.8
Finances	137	44.5	50	16.2
Transport	179	41.7	110	25.6
Studying	40	21.7	19	10.3
Emotional support	314	65.7	87	18.2
Other	33	40.7	16	19.8

The range of percentages of assistance needed for the different daily life activities lies between 20% - 66% for “yes” or always and 9% - 26% for “sometimes”. Emotional support, cooking and shopping were the assistance that the people with functional limitation always needed the most; 66%, 60% and 56% respectively.

**Figure 16: Assistance needed in daily life activities by gender**

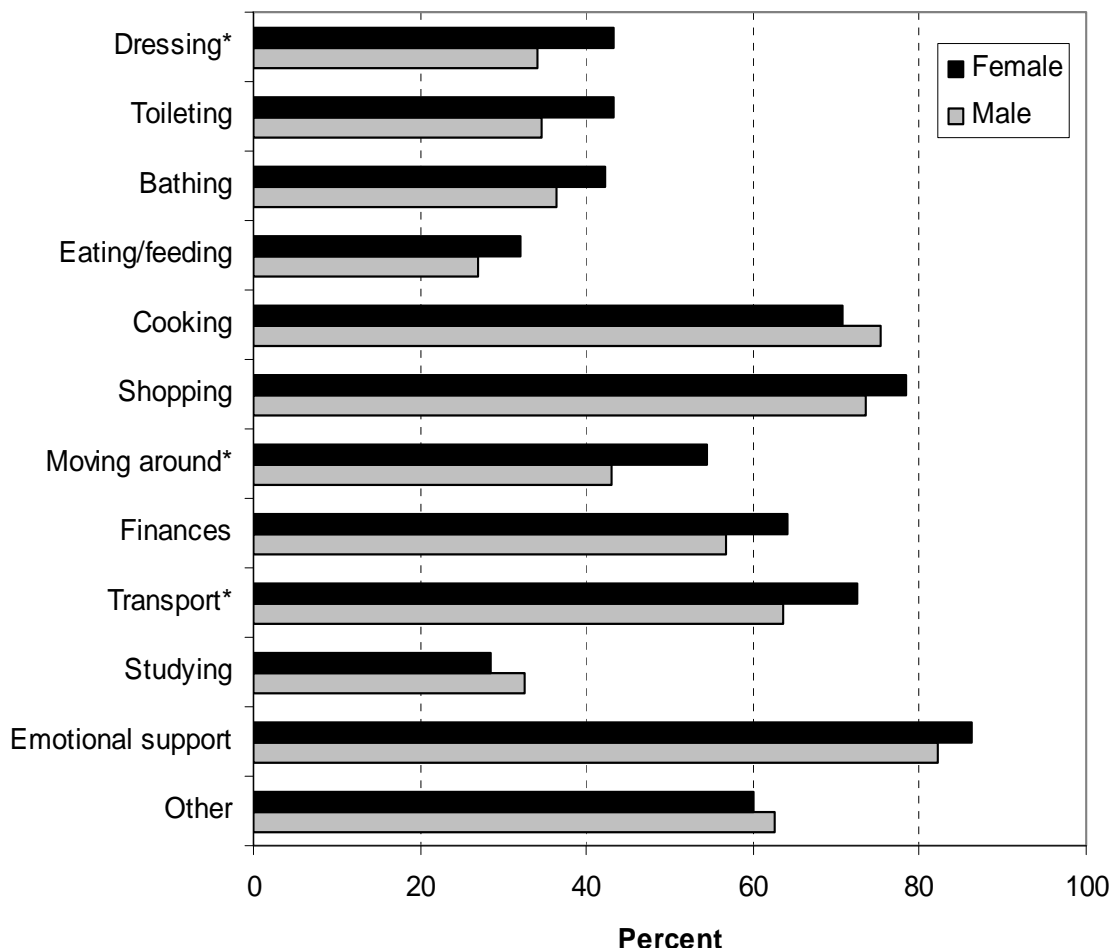


Figure 16 above shows the assistance needed in daily life activities combining “always” and “sometimes” for the different genders. Significant difference ( $p < 0.05$ ) was seen in three daily activities; dressing, moving around and transport. Females needed more assistance compared to males in these daily activities. Even though the other daily activities did not show statistically significant difference between genders, the pattern of the distribution illustrates that there was a tendency for females in need

of more assistance in daily activities compared to males except in cooking and studying.

Involvement in the family life was also analyzed and results are presented below. While the majority of those questioned were involved at least sometimes in different aspects of family life, it is worth noting that as many as 41% were not included or taking part in their own traditional ceremonies and 13% did not involved in the family events.

**Table 29: Involvement in family life**

Measure of involvement	n	Yes (%)	Sometimes (%)	No (%)
Do you go with the family to events?	555	65.2	12.8	13.0
Do you feel involved and part of the family?	555	79.3	5.8	5.1
Does the family involve you in conversations?	550	81.1	6.4	3.8
Does the family help you with daily activities?	552	80.1	6.7	4.4
Do you appreciate it that you get this help?	532	81.4	4.0	5.3
Did you take part in your own traditional ceremonies?	553	43.4	5.7	40.7

In addition, of those 15 years old and older, 14% were not consulted about making household decisions and 29% were not part of the

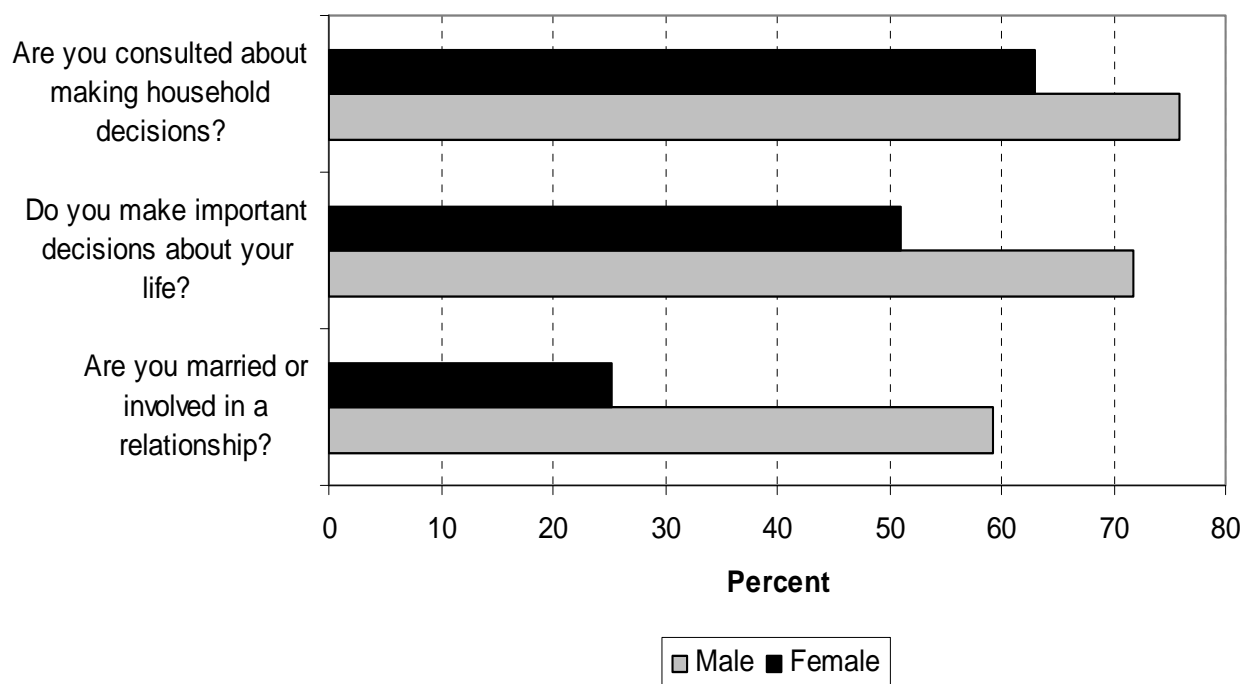
decision-making process concerning their own lives. Certain of these findings may be related to the type of the severity of the disability in questions, but it is, nonetheless, worth noting the results.

**Table 30: Involvement in family life for those 15 years old and over**

Measure of involvement	n	Yes (%)	Sometimes (%)	No (%)
Are you consulted about making household decisions?	361	70.6	9.7	13.9
Do you make important decisions about your life?	347	63.7	7.2	28.5

Detailed analyses of some of the involvement measures in family life comparing different genders show that involvement of females in making household decisions or decision for own lives were less compared to males. These differences were statistically significant ( $p < 0.05$ ). Individuals with functional limitation who were 15 years old and older were also asked if they were married or involved in a relationship. The proportion of males who answered “yes” to the question was two-fold of the proportion of females. The difference was also statistically significant ( $p < 0.05$ ). This is presented in Figure 17.

**Figure 17: Involvement in family life – Individuals with functional limitation 15 years old and older by gender**

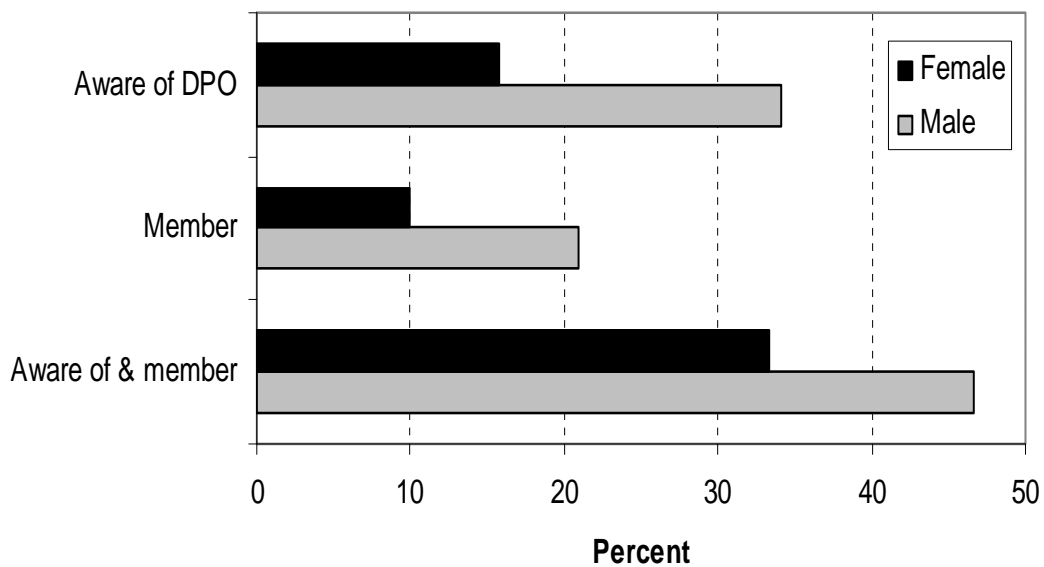


**vi. Awareness about Organizations for people with disabilities (DPO)**

People with functional limitation were also asked if they were aware of the existence of any organization for people with functional limitation (DPO) that can bring their voice to the forefront. About one-fourth (26%) of the individuals being asked were aware of the DPO. Questioned if they were member of a DPO, only 16% answered “yes”. However, among those who were aware of the DPO (i.e. 26%), less than half (44%) were member of a DPO.

A detailed analysis between genders regarding the awareness and membership to a DPO is presented in Figure 18. The percentage of males compared to females related to awareness and membership in a DPO was about two-fold. The difference was statistically significant at 0.001 level. On the other hand, even though there was slightly more males than females who were aware of and a member of a DPO, the difference between genders was not statistically significant ( $p=0.19$ ). We could assume that membership to a DPO was very much influenced on the awareness of the existence.

**Figure 18: Knowledge and membership of DPO by gender**



## **vii. Defining severity**

### Measures of Activity limitations and Participation restrictions

A good deal of information has been collected during the survey that could be used to define the severity of a person's situation with respect to their functional limitation. We have seen so far an assessment of an individual's needs for services, and an assessment of daily activities that a person may need help in accomplishing (see Figure 9 on need for services and Table 28 on need for assistance). Based on the items listed in these figures, simple scores can be constructed by adding up the number of services one needs or the number of daily activities one always or sometimes needs help in accomplishing, to indicate the severity of a person's situation. The more services needed: the worse off that person is; or the more help needed in doing daily tasks: the worse off that person is.

In addition, we have applied the ICF matrix (WHO 2001) to map an individual's activity limitations and participation restrictions according to nine different domains: sensory experiences, basic learning & applying knowledge, communication, mobility, self-care, domestic life, interpersonal behaviours, major life areas and community, social & civic life (see Appendix). For each of the 43 activities under these nine domains the degree to which an individual is capable of carrying out that activity without assistance (activity limitations) is recorded on a scale from "0" (no difficulty) to "4" (unable to carry out the activity). In the same manner the person's performance in their current environment (participation restrictions) is also recorded on a scale from "0" (no problem) to "4"

(unable to perform the activity). By adding up an individual's responses to each of the 43 items a single activity limitation score and a single participation restriction score is developed. In addition nine subscales are constructed by adding the individual items under each of the nine domains.

The characteristics of the scales and overview of the mean scores as well as severity score in the WFL group are presented in the tables below. Severity score is the percentage of mean score divided by the maximum possible score (i.e. highest possible severity) of the respective scales. High percentage elucidates a high severity.

**Table 31: Main severity scales**

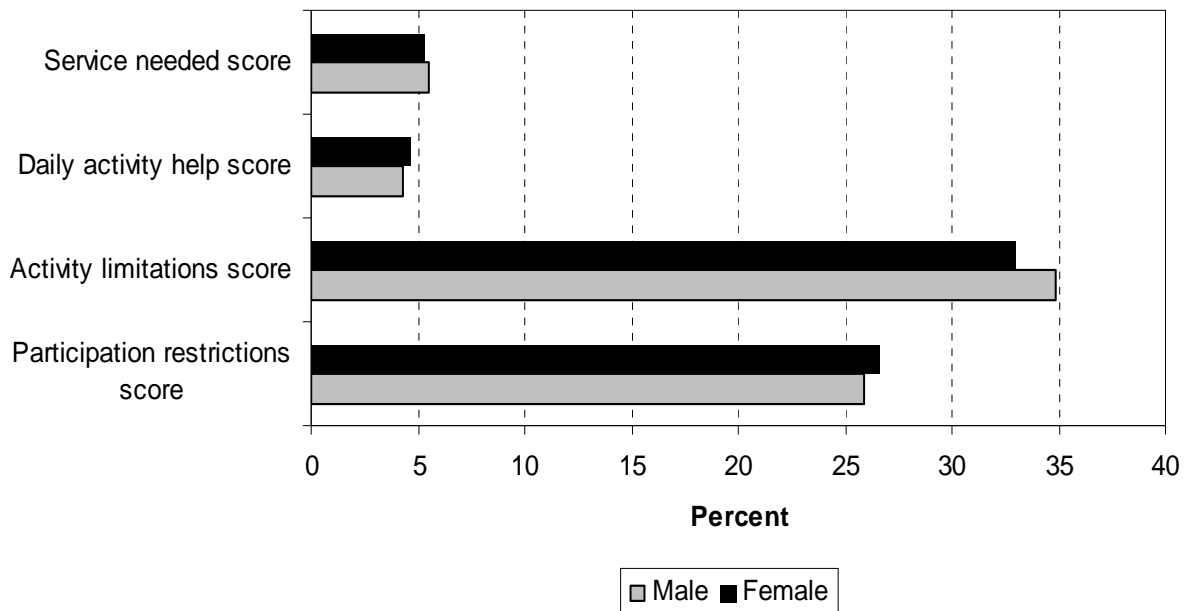
Severity scales	Maximum possible score	n	Mean score	Severity (%)
Service needed score	9	483	5.4	60
Daily activity help score	11	519	4.5	41
Activity limitations score	172	541	34.3	20
Participation restrictions score	172	537	26.6	15

Of the four main severity scales, service needed scale has the highest severity scores (60%) among the people with functional limitation. Participation restriction scale has the lowest severity score with 15%. It is interesting to note that participation restriction scores are lower than

activity limitation scores. This is an indication that a person's capacity to perform activities in general – without assistance – (i.e. their activity limitations) is more severe than their actual performance (participation restrictions). This is perhaps as might be expected, and is a reflection that many people with functional limitation will have had at least some opportunity to adapt to their environments through for example the assistance of others or the use of different forms of assistive technology.

Comparison between genders in the WFL group showed that none of the main severity scores were significantly different between males and females. Although activity limitation score seems to differ between genders, the difference was not statistically significant. This is presented in the figure below.

**Figure 19: Mean scores on severity scales by gender**



Activity limitation score is a measure of an individual's capacity to carry out everyday activities in the nine domains without any form of assistance. The nine domains in the activity limitation score and maximum possible score of each domain as well as the mean scores and severity in the WFL group are presented in the table below.

**Table 32: Activity limitation score: Nine domains**

Domains	Maximum possible score	n	Mean score	Severity (%)
Sensory experience	8	556	1.4	18
Learning & knowledge	20	564	3.9	20
Communication	16	562	2.7	13
Mobility	40	563	11.3	28
Self-care	20	562	3.3	17
Domestic life	20	565	4.6	23
Interpersonal behaviours	20	565	2.5	13
Major life areas	12	561	2.1	18
Community & social life	16	565	2.4	15

Mobility, domestic life and learning/knowledge were the domains that have the highest severity scores; 28%, 23% and 20% respectively. On the other hand, interpersonal behaviours and communication were the domains that have the lowest severity score with 13% of each.

Participation restriction score measures an individual's ability to participate in the nine domains activities in their current environment (home, work or school). The nine domains in the participation restriction score and maximum possible score of each domain as well as the mean scores and severity in the WFL group are presented in the table below.

**Table 33: Participation restriction score: Nine domains**

Domains	Maximum possible score	n	Mean score	Severity (%)
Sensory experience	8	555	1.1	14
Learning & knowledge	20	559	3.2	16
Communication	16	560	2.2	14
Mobility	40	560	8.5	21
Self-care	20	560	2.4	12
Domestic life	20	564	3.4	17
Interpersonal behaviours	20	564	2.2	11
Major life areas	12	560	1.7	14
Community & social life	16	564	1.8	11

Corresponding to the activity limitation score, the highest severity score was found in mobility, domestic life and learning/knowledge domains; 21%, 17% and 16% respectively. The lowest severity score was in the interpersonal behaviours and community/social life.

## 4. DISCUSSION

(Arne H. Eide)

This study in Mozambique follows similar studies in Namibia (2001-2002), Zimbabwe (2001-2002), Malawi (2003 - 2004..) and Zambia (2005 - 2006). The current study in Mozambique thus constitutes part of a Regional program that will establish the first generation of data on the situation for people with disabilities in low-income contexts. The collaboration between researchers and DPOs in these studies forms a core element in a long-term capacity building program to support and contribute to the strengthening of SAFOD, both regionally and through the National affiliations. Through a participatory approach, the National DPOs have been responsible for the co-ordination and implementation of the studies including design development, data collection and application. This exercise has given valuable experience and insight into research, and a capacity building program parallel to the study has provided the DPOs with skills for applying research.

The participatory approach in these studies including the one currently finalized in Mozambique, has turned out to be very positive experiences for both DPOs and researchers. Fundamentally this concerns a shift in the balance of power between researchers and DPOs. To what extent this has been achieved in this study may of course be a matter of discussion, but certain features of the collaboration has been particularly conducive for a participatory approach. This includes the role of SAFOD and FFO, with FFO as formal owner of the project and thus in a decision

making position. In Mozambique FAMOD has controlled the cash flow as well as communication between the involved parties. It is argued that a participatory approach increases the relevance of the research, it promotes ownership over the results on the side of the DPO, and thus motivation and application.

As this was the fifth study on living conditions among people with disabilities in Southern Africa, the design from previous studies was presented for important stakeholders and decisions made on the basis of a workshop organized by FAMOD. Important inputs were however made during the workshop, and the final design reflects the discussions.

Mozambique is a poor country with weak infra structure in particular in rural areas, and level of illiteracy is high. People with disabilities worked alongside non-disabled from INE as interviewers during data collection. Recruitment of interviewers was done by FAMOD and INE, and SINTEF provided extensive training for those who were recruited. It may be that language barrier and insufficient training and/or organizing of data collection has had some impact on the quality of data. Some problems with the data have affected possibilities for comparison between groups. And, fewer individuals with disabilities were identified during screening than planned for most likely due to too optimistic estimates before sampling. The quality problems are however manageable and do not interfere with the results presented in this report.

Analyses of demographic data reveal that mean size of households with and without disabled members are the same. This differs from the

previous studies in the region where households with disabled members were larger than the controls. It was on the other hand found that mean age of individuals with disabilities is higher than among the non-disabled individuals, and that mean age of the two household types reflects this difference. The mean age differences indicate that individuals with disabilities tend not to establish their own household, or they move out of their original household much later than non-disabled individuals. This is taken as an indication that households take care of their disabled children and cater for their needs also into adulthood. An alternative angle to this is that individuals with disabilities remain in the family they were born into and find their role in life within this context, contributing according to functional level. Neither the statistics on dependency ratio nor mean size of households confirm that households with disabled members struggle with an extra burden. The female proportion in households with disabled members is however significantly higher than in the control households, possibly indicating that women in the households take on the additional duties.

A possible explanation for the above demographic details may be found in the data on civil status. More individuals without disabilities reported not to be married as compared to their disabled counterparts. At least this offers a possible explanation and an indication that many individuals with disabilities are established in a marriage or a consensual union. It may further be that this indicates practical ways of handling disability in this society. Detailed analyses on civil status revealed very clear gender differences in particular among individuals with disabilities. The main findings here are that a) close to one third of disabled women report that

they are widowed, i.e. approximately ten times higher than men in the same group, and b) that the proportion of female widowers among disabled women is almost five times as high as in the control group. The gender difference here is most likely a result of the long civil war in the country, i.e. men were killed as they took part in the war. It is somewhat more problematic to explain the difference between disabled and non-disabled women.

Different types of studies will be necessary to go deeper into the above issue to analyze why Mozambique seems to differ from other countries in the region on some aspects of the role of disabled persons in the households. Further analyses revealed that the majority of disabled individuals take part in family life, with the most frequently mentioned problem related to mobility outside of the house. It is however problematic that some are not consulted in household decisions and that more than one in four individuals with disabilities did not take part in decisions affecting their own lives. Females seem to be less involved in decision making in the household than males.

With regards to the different types of impairments, the results reflect that the country has been hit by a long war, first the fight for independence and later a civil war. Mozambique is particularly hit by a huge number of mines and other explosives that are spread around the country and continue to inflict injuries on the population even in times of peace. Approximately one third of the disabled in this study are amputees. Although there is a gender difference in that more men report to be amputees, the results show that also women are mine victims. War-

related causes for the impairment are given by approximately one in ten. Other than this particularly high proportion of amputees, the impairment profile in the data material is quite similar to other countries in the region with one in four having a sensory impairment and close to one in ten having an intellectual impairment.

The age profile of individuals with disabilities in this study reflects the demographic situation in the country with a high proportion of the population being children and adolescents; more than 20 % of the disabled are less than 14 years old, and 50 % are younger than 29 years. The high percentage of disabled among the youngest (< 14) does however also indicate different causal relations as compared to industrialized countries with the majority of disabled people being in the older age categories. Approximately one in two of the respondents with disabilities state “sickness” as the cause, while another one in four report that they have had their impairment from birth. Other than telling us that the people of Mozambique live in difficult conditions, this is further a strong indication of severe problems with health services in country.

Education is a key indicator on level of living – and also an important component in the disability – poverty relationship (Yeo, 2003). The results show lower attendance rates among individuals with disabilities as compared to non-disabled. This is consistent with findings from other countries in the region. When analyzing by gender among those older than 15 years, it appears that the difference is largely due to a very high non-attendance rate among disabled females. The data however indicates that the highest drop-out rate is found among disabled males.

The corresponding results for those under the age of 15 shows a different picture in that non-attendance is highest among disabled males. This indicates a clear improvement for females with regards to school attendance, while there may be an opposite development for disabled males.

While attendance rate is not a quality measure, direct questions about literacy can produce information that is relevant for the content of the education offered. The current study shows that fewer disabled individuals can write and that illiteracy is a serious problem in particular among females with disabilities. It is further quite worrying that more than one in ten had been refused entry into pre-school or primary school due their disability and that there were also cases of refusal into secondary education as well as special education. The results demonstrate that the school system in Mozambique does not include everyone in the society and that disabled people have less access to education than non-disabled.

Unemployment is very high in Mozambique; according to this study around one in four is currently working, i.e. they do have a formal employment with an employer. Self employment, work at home, informal sector, etc, are not included. This figure may differ from other official unemployment rates due to the questions asked and should thus not be compared directly. The study has shown a very clear difference between the two groups in that the proportion of disabled individuals who are working is less than half the corresponding proportion among non-disabled. The figure for employment among individuals with disabilities is

even lower in the disability section of the survey, due to different wordings of the questions. Furthermore, the results clearly indicate that functional limitations for many are direct reasons for losing their jobs, which is indicative of lack of workforce protection.

The employment indicator furthermore confirms that females with disabilities are in a particularly difficult situation. Information about skills, which may have been obtained formally or informally, however indicates that individuals with disabilities may have benefited from targeted vocational training. Results do unfortunately further indicate that obtaining skills increases chances for employment among non-disabled but not among individuals with disabilities.

In low-income countries like Mozambique, it is often difficult to obtain good data on household or individual income. This may be due to reluctance to report income, fluctuating and/or unstable income due to seasonal labour or other factors. Household standard (here: possessions and source of water) and access to communication and information has been applied as proxies for income and material standard in this study. The indicator reflecting infra structure (source of water) did not distinguish between the two types of households, which is as expected as the households are all drawn from the same local communities. With regards to possessions and access to communication and information, these are more directly associated with income, and they both contribute to confirm that households with disabled members have a lower material standard as compared to the control households.

Lack of services for individuals with disabilities is a major factor in maintaining the disability – poverty circle (Yeo & Moore 2003; Wolfensohn & Bourguignon 2004). The majority of individuals with functional limitations who could profit from some kind of service do not receive any, either because of lack of awareness or because services are not offered to large population groups. In Mozambique it was found that for many types of relevant services, one third or more of individuals with disabilities were simply not aware of the services and what they could offer. Interestingly, lack of awareness seems to be part of the explanation for the “service gap”, i.e. the gap between the need for service and the actual service delivery (service received). The service gap reflects the level of awareness, i.e. less awareness goes together with larger service gap. Reducing the service gap is thus a matter of both increasing awareness and the actual production of services. The gender differences found in that females report smaller “gaps” than their male counterparts, may in part be explained by lower awareness of relevant services among men.

It is worth noting that the services with the biggest gaps are largely the types of services that could have helped in establishing some form of economic activity. The services with the smallest gap are on the other hand more “clinical” and linked up with either the traditional or the modern health services system. This invites a discussion on the future profile of services for disabled people in this particular context. Individuals with disabilities do, as non-disabled, need more than basic health services to become self-supporting.

Accessibility is primarily a problem outside the home, although close to one in five report problems in this area. Between 20% and 45% report that they have accessibility problems outside the home. Accessibility is thus an important issue for individuals with disabilities in Mozambique and represents an important obstacle for active participation at home or outside the home for many individuals. Accessibility problems either exclude individuals from participating or make them dependent on assistance from others.

Availability of technical devices is also highly important for reducing activity limitations and restrictions in social participation – such equipment thus has a huge potential in breaking the disability – poverty circle. In the current data material, approximately one in five reported that they use an assistive device, with males reporting significantly more use than females. It is further worth noting that assistive devices for improving personal mobility are the type of devices mostly in use. Assistive devices related to personal care and work in the household were rare, eye glasses were used by less than half of those who reported sight problems, and none of those reporting hearing problems used a device to improve hearing. It is thus suggested that there is a mobility bias in delivery of assistive devices in this population, or rather that it is within this area (mobility) that the supply side has been focusing without taking responsibility for the range of devices needed in any population. It is however also worth noting that there are indications in the data material that the services actually delivered in this area, i.e. largely mobility related devices, may have serious quality problems due to lack of information and maintenance.

Contrasting the above results on assistive devices with the reported assistance needed in daily life activities demonstrates that the alleged bias in supply of mobility devices does not reflect the needs among individuals with disabilities in this context. Assistance is needed in a range of daily life activities where assistive devices for personal care as well as household activities could have played an important role. It is important however to take note of the fact that emotional support is ranked as number 1 in the overview of assistance needed. This corresponds to findings from other countries in the Region, and implies a real challenge to existing health and community services.

While the situation for individuals with disabilities in low-income contexts like Mozambique calls for resources and involvement from Government as well as the private sector, it is nevertheless the case that self-organization of individuals with disabilities is necessary to achieve substantial progress. DPOs already play an important role in Mozambique and in the region as a whole. Awareness of this and recruitment of members is thus crucial. In the current data material it was found that one fourth of the respondents with a disability were aware of any DPO and that one in six was a member already. Membership was closely associated with awareness. Males were more inclined to be aware of and to be a member of a DPO. The results clearly indicate the need for increased awareness about DPOs and the role they can play to support individuals as well as to gather support for increased attention to improve the situation for individuals with disabilities.

It is not unproblematic to distinguish between individuals with disabilities and those without disabilities (Loeb, Eide & Mont 2008). Another critical issue in disability statistics is severity, i.e. measuring how serious a functional limitation is for an individual. Clearly, there are many different ways of doing this, and we do not aim here to test different measures. The self-reported information given in the current survey offers however different measures of severity that are analysed together. Need for services is regarded as the most severe problem, followed by assistance in daily life activities, overcoming activity limitations, and lastly overcoming restrictions in social participation. This may be regarded as a logical “severity hierarchy” as the first on the list need to be in place to ensure the next level, and so forth. Optimal social participation for an individual requires to a large extent that necessary adaptations and assistance is in place.

Considering the different domains within the ICF matrix further reveals that mobility, domestic life and learning/knowledge domains are ranked as the most severe, i.e. these are the activity limitations and participation restrictions that individuals have most difficulties with. These should thus be given priority by DPOs, International Organisations and Governments when intervention is planned for.

## 5. CONCLUSIONS AND RECOMMENDATIONS

This study has established a first generation of statistical information about disabled people in Mozambique. Results clearly demonstrate the difference in the living conditions between individuals with disabilities and those without. In addition, there are large gaps in services and other types of support and adaptations that hamper full social participation for individuals with disabilities. The study has demonstrated that disabled women experience double discrimination, and that the majority of disabled individuals in Mozambique are children, adolescents and young adults.

It is recommended that this report is utilized:

- i) to increase awareness about disability in Mozambique among disabled people as well as non-disabled
- ii) as a support for targeted interventions within the different life areas covered by the report
- iii) by the Government to improve services and human rights for disabled people
- iv) as a tool for FAMOD and other DPOs in their struggle to strengthen the voice of disabled people in Mozambique

It is further recommended that the results from this study be considered, together with other relevant sources, as a basis for defining the situation for disabled people in Mozambique and agreeing on a path for the future. It is suggested that DPOs, Government, researchers and other stakeholders in this field together attempt to use the opportunity given by the availability of comprehensive information about disability in the country.

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## 7. Appendix

## ACTIVITY AND PARTICIPATION MATRIX

<p><b>ACTIVITY LIMITATIONS:</b>  <b>How difficult is it for you to perform this activity <u>without any kind of assistance at all?</u></b>                      (That is, without the use of any assistive devices – either technical or personal).</p> <p><b>PARTICIPATION RESTRICTIONS:</b>  <b>Do you have any difficulty in performing this activity in your current environment?</b>                      (*<i>Current environment</i> refers to the surroundings in which you live, work, and play etc for the majority of your time).</p>	<p><b>Activity limitation score</b>                      (A measure of Capacity)</p> <p>0 no difficulty                      1 mild difficulty                      2 moderate difficulty                      3 severe difficulty                      4 unable to carry out the activity</p> <p>8 not applicable                      9 not specified (level not known)</p>	<p><b>Participation restriction</b>                      (A measure of Performance in current environment)</p> <p>0 no problem                      1 mild problem                      2 moderate problem                      3 severe problem                      4 complete problem (unable to perform)</p> <p>8 not applicable                      9 not specified (level not known)</p>
<b>1a. SENSORY EXPERIENCES</b>		
a. watching/looking/seeing		
b. listening/hearing		
<b>1b. BASIC LEARNING &amp; APPLYING KNOWLEDGE</b>		
a. learning to read/write/count/calculate		
b. acquiring skills (manipulating tools, painting, carving etc.)		
c. thinking/concentrating		
d. reading/writing/counting/calculating		
e. solving problems		
<b>2. COMMUNICATION</b>		
a. understanding others (spoken, written or sign language)		
b. producing messages (spoken, written or sign language)		
c. communicating directly with others		
d. communicating using devices (phone/typewriter/computer/SMS)		
<b>3. MOBILITY</b>		
a. staying in one body position		
b. changing a body position (sitting/standing/bending/lying)		
c. transferring oneself (moving from one surface to another)		
d. lifting/carrying/moving/handling objects		
e. fine hand use (picking up/grasping/manipulating/releasing)		
f. hand & arm use (pulling/pushing/reaching/throwing/catching)		
g. walking		
h. moving around (crawling/climbing/running/jumping)		
i. using transportation to move around as a passenger		
j. driving a vehicle (car/boat/bicycle/or riding an animal)		
<b>4. SELF CARE</b>		
a. washing oneself		
b. care of body parts, teeth, nails and hair		
c. toileting		
d. dressing and undressing		
e. eating and drinking		

(Continued on next page)

**ACTIVITIES & PARTICIPATION Matrix** *(Continued)*

	<b>Activity limitation</b>	<b>Participation restriction</b>
<b>5. DOMESTIC LIFE</b>		
a. shopping (getting goods and services)		
b. preparing meals (cooking)		
c. doing housework (washing/cleaning)		
d. taking care of personal objects (mending/repairing)		
e. taking care of others		
<b>6. INTERPERSONAL BEHAVIOURS</b>		
a. making friends and maintaining friendships		
b. interacting with persons in authority (officials, village chiefs)		
c. interacting with strangers		
d. creating and maintaining family relationships		
e. making and maintaining intimate relationships		
<b>7. MAJOR LIFE AREAS</b>		
a. going to school and studying (education)		
b. getting and keeping a job (work & employment)		
c. handling income and payments (economic life)		
<b>8. COMMUNITY, SOCIAL AND CIVIC LIFE</b>		
a. clubs/organisations (community life)		
b. recreation/leisure (sports/play/crafts/hobbies/arts/culture)		
c. religious/spiritual activities		
d. political life and citizenship		