Examing Occupational Hazards and Lifestyle Diseases-related Disability in Fiji: A case study of Nadi and Lautoka in Western Province

Devina Rachana Devi

A Supervised Research Paper submitted in partial fulfillment of the requirements for the Degree of Masters of Arts in Development Studies

Development Studies Programme
School of Government, Development and International Affairs
Faculty of Business and Economics
The University of the South Pacific
Suva

June, 2012
A DECLARATION

I Devina Rachana Devi, declare that this thesis is an original piece of work done by me. Where other sources have been used, these have been duly acknowledged. Any omission and error or otherwise is my own and the main content of this thesis has not been previously submitted for any degree in any other University.

Signature: _________________
Date: ____________________
Name: Devina Rachana Devi
ID No.S00007665

A Statement by the Supervisor

I confirm that this thesis was prepared under my supervision and is the work of Ms. Devina Rachana Devi except where other sources used have been duly acknowledged.

Signature: _________________
Date: ____________________
Name: Dr. Manoranjan Mohanty
Designation: Associate Professor
ABSTRACT

Disability is one of the most neglected development issues in developing countries especially in the Pacific Island Countries. Because documentation on disability, especially in Fiji, is limited, resource managers regard the issue of disability mainstreaming insignificant. The study focuses on the lifestyle diseases and occupational hazards related disability in Fiji.

The study employed largely a qualitative research approach and analyzed the socio-economic implications of disability in Fiji. The absence of disability incidence registration led to the use of the snowball sampling technique in the selection of respondents in the study. The study found clear linkages between poverty and lower educational attainment. Most of the sample of people with disabilities finds it hard to support themselves economically because they have low education levels and are unemployed. Besides social and economic constraints, the formal institutions offer inadequate social protections to people with disabilities.

The data collated from the survey established a strong correlation between lifestyles and disease and occupational injuries and increasing incidence of disability in Fiji. About 300 amputations are recorded annually for Western Division in Fiji. This survey found also found that diabetes is one of the major contributing factors to increasing incidence of physical disabilities in Fiji.

The study concludes that lifestyle diseases and occupational injuries related disability is on the rise particularly in the Western Division of Fiji and a systematic in-depth study is required to collate disability statistics for policy development and preventive measures.
ACKNOWLEDGEMENTS

It would have been impossible to write this researcher paper without help and guidance from many people.

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Lastly, I offer my thanks and blessings to all of those who supported me in any respect during the completion of the thesis.
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<tr>
<td>ADB</td>
<td>Asian Development Bank</td>
</tr>
<tr>
<td>BMF</td>
<td>Biwako Millennium Framework</td>
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<tr>
<td>BNPL</td>
<td>Basic Needs Poverty Line</td>
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<tr>
<td>CRPD</td>
<td>Convention on the Rights of Persons with Disabilities</td>
</tr>
<tr>
<td>DFID</td>
<td>Department for International Development</td>
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<tr>
<td>DPO</td>
<td>Disabled Persons Organization</td>
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<tr>
<td>EEZ</td>
<td>Exclusive Economic Zone</td>
</tr>
<tr>
<td>ERP</td>
<td>Employment Relations Promulgation</td>
</tr>
<tr>
<td>FA</td>
<td>Family Assistance</td>
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<tr>
<td>FNCDP</td>
<td>Fiji National Council of Disabled Persons</td>
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<tr>
<td>FBoS</td>
<td>Fiji Islands Bureau of Statistics</td>
</tr>
<tr>
<td>GDP</td>
<td>Gross Domestic Product</td>
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<tr>
<td>HDI</td>
<td>Human Development Index</td>
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<tr>
<td>HHD</td>
<td>High Human Development</td>
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<tr>
<td>ICIDH</td>
<td>International Classification of Impairments, Disabilities &amp; Handicaps</td>
</tr>
<tr>
<td>ILO</td>
<td>International Labour Organization</td>
</tr>
<tr>
<td>JICA</td>
<td>Japanese International Corporation Agency</td>
</tr>
<tr>
<td>LDH</td>
<td>Low Human Development</td>
</tr>
<tr>
<td>MDG</td>
<td>Millennium Development Goal</td>
</tr>
<tr>
<td>MDH</td>
<td>Medium Human Development</td>
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<tr>
<td>NCDs</td>
<td>Non-Communicable Diseases</td>
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<td>NGOs</td>
<td>Non-governmental Organization</td>
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<tr>
<td>OHS</td>
<td>Occupational Health Safety</td>
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<tr>
<td>SIDs</td>
<td>Small Island Developing Countries</td>
</tr>
<tr>
<td>SPC</td>
<td>South Pacific Commission</td>
</tr>
<tr>
<td>WHO</td>
<td>World Health Organization</td>
</tr>
<tr>
<td>UN</td>
<td>United Nations</td>
</tr>
<tr>
<td>UNDP</td>
<td>United Nations Development Program</td>
</tr>
<tr>
<td>UNESCO</td>
<td>United Nations Educational, Scientific, and Cultural Organization</td>
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CHAPTER ONE

INTRODUCTION

1.1 Background
Disability\(^1\) is a growing concern especially in the developing countries around the world today. With the notable rapid pace of social and economic development in developing countries, many social issues such as increasing non-communicable diseases, widening poverty, shortage of housing, unemployment and environmental degradation have become major challenges for policy makers.

Over the years, disability has become a pertinent issue as a result of the continuous lobbying from disability rights movements and international policy commitments for more resources and opportunities for people living with disabilities (Metts, 2000).

The United Nations (2008) estimates that approximately 10 per cent of the world's population or some 650 million people have some form of disability and about 80 per cent of the populations with a disability live in developing countries. Disability data are mostly incomparable at national, regional and global level due to different methods and designs used by countries (Handicap International, 2007).

\(^1\) Disability is an umbrella term, covering impairments, activity limitations and participation restrictions. Impairment is a problem in body function or structure; an activity limitation is difficulty encountered by an individual in executing a task or action; while a participation restriction is a problem experienced by an individual involvement in life situations (WHO, 2011).
Table 1.1 shows the total estimated range of global population of people with disabilities in countries categorized under High Human Development\(^2\) (HHD), Medium Human Development (MHD) and Low Human Development (LHD).

**Table 1.1 Estimated Range of Global Population of People with Disabilities**

<table>
<thead>
<tr>
<th>Human Development category</th>
<th>Low estimate number (million )</th>
<th>High estimate number (million )</th>
</tr>
</thead>
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<tr>
<td>High</td>
<td>124.2</td>
<td>124.2</td>
</tr>
<tr>
<td>Medium</td>
<td>93.5</td>
<td>250.2</td>
</tr>
<tr>
<td>Low</td>
<td>17.7</td>
<td>174.7</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>235.4</strong></td>
<td><strong>549.1</strong></td>
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The countries in the medium and low human development categories have higher prevalence of disabilities compared to countries with high human development. The total global disability population is estimated to be between 235.4 million and 549.1 million persons. However, given the inadequacy of existing disability data, various estimates of global disability population have been published (Metts, 2000).

Around the globe, countries spend millions of dollars towards the welfare of people with disabilities. Table 1.2 summarizes the estimated Gross Domestic Product (GDP) lost due to disability annually by HHD, MHD and LHD countries. These data provide an insight into the emerging concern of potential economic burden on countries, if the disability continues to increase in line with the estimated global trend.

---

\(^2\) Countries annually are categorized as HHD, MHD and LHD by using the UNDP using the human development Index (HDI). HDI measures a country's average achievement in three dimensions of human development: knowledge, longevity and standard of living.
Table 1.2  Total Annual loss of GDP due to Disability in HHD, MHD and LHD countries

<table>
<thead>
<tr>
<th>Category of countries</th>
<th>High estimate value US $ (billion)</th>
<th>Low estimate value US $ (billion)</th>
</tr>
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<tr>
<td>High income countries</td>
<td>1,264.3</td>
<td>891.3</td>
</tr>
<tr>
<td>Medium income countries</td>
<td>480.2</td>
<td>338.5</td>
</tr>
<tr>
<td>Low income countries</td>
<td>192.0</td>
<td>135.4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1,936.4</strong></td>
<td><strong>1,365.2</strong></td>
</tr>
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</table>


According to Metts (2000), annual global GDP loss due to disability is estimated to be between US $1.37 trillion dollars and $1.94 trillion dollars. High income countries suffer larger financial loss to disability compared low income countries.

Poverty and disability are closely linked. According to the United Kingdom’s Department for International Development (2000), as many as 50 percent of the disabilities are preventable because they are directly linked to poverty. The people living with disabilities are usually amongst the poorest of the poor and disability adds to the risk of poverty and conditions of poverty increase the risk of disability (Department for International Development, 2000). A two-way relationship does exist between poverty and disability. Both poverty and disability are mutually reinforcing. Their presence in the combination has tremendous capacity to destroy lives of people with impairments.

Lifestyle diseases and occupational accident-related hazards are other potential causes of disability in developing countries (Elwan, 1999).
Globally, nearly 80 percent of global non-communicable diseases (NCDs) related deaths occur in low and middle income countries (WHO, 2011b). NCDs are closely linked to poverty as they have potential socio-economic consequences as a result of increased individual and household impoverishment. This hinders social and economic development. A host of social determinants such as gender, income and education levels expose people to a level of vulnerability to NCD related death (ibid.).

In addition, the occupational hazards are another potential contributor to the high incidence of disability. The occupational hazards and related illnesses also place a huge burden on economies of developing countries. According to an International Labour Organization (ILO) report, the total global lost GDP was 4 percent of the total global GDP (income) of USD 30,000 billion in 2004 due to occupational hazard-related illness (Hamalainen et al., 2004).

This implies that for developing countries the cost incurred and loss of GDP as a result of occupational hazards and related illness can further increase socio-economic costs on the poorest members of the society. The statistical data are very important if countries are to improve and understand occupational health and safety at all levels.

In developing countries, the speed of modernization has outpaced the ability of countries to deal with social problems. With disability becoming a growing concern for policy makers, the demand for resources to cater for the needs of people with disabilities has become a challenge as it has created an extra burden for governments in terms of developing infrastructure, employment and welfare benefits for this disabled population (United Nations, 2011b).
A high proportion of disabilities are preventable (Helander, 1995), as they are either linked to poverty or lifestyle diseases and occupational accidents. This implies that millions of dollars can be saved globally, provided that preventive measures and strategies are undertaken to reduce causes of disability.

In the Pacific context, the definition and concept of disability may differ from one country to another and this often leads to variations in the occurrence of estimates of people living with disabilities. The region also faces problems of lack of data on disability similar to those experienced elsewhere in the largely because of the absence of proper recording and notification systems. However, there is no doubt that disability is increasing every day in the Pacific island countries. Table 1.3 shows the estimated populations of people with disabilities in selected Pacific island countries. Most data were collated from the recent census and surveys taken in the different countries.

Table 1.3 Estimated Population of People with Disabilities in selected PICs

<table>
<thead>
<tr>
<th>Country</th>
<th>Total population</th>
<th>Population with disabilities</th>
<th>Disabled population as proportion of total population. (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cook islands</td>
<td>15,608</td>
<td>356</td>
<td>2.3</td>
</tr>
<tr>
<td>Fiji islands</td>
<td>837,271</td>
<td>11402</td>
<td>1.4</td>
</tr>
<tr>
<td>Kiribati</td>
<td>107,817</td>
<td>3840</td>
<td>3.6</td>
</tr>
<tr>
<td>Tonga</td>
<td>105,916</td>
<td>5397</td>
<td>5.1</td>
</tr>
</tbody>
</table>

Source: Stubbs and Tawake, 2009.

Tonga has a relatively higher proportion of disabled population (5 percent) followed by Kiribati (4 percent). As for Fiji about 1 percent of the total populations have disability. However, the lack of ample statistics and data on people living with disabilities in the Pacific region indicates that it is a neglected area where voices and the plight of disabled people have been ignored.
A person with disability deserves the right to access basic social services, equal employment and educational opportunities just like everyone else irrespective of physical status.

In the Pacific region, compounding forms of discrimination against people living with disabilities are prevalent. As per legislation and policies, Fiji has taken a leading role in providing protection on grounds of disabilities in comparison to other island nations (Jiven and Foster, 2007). Disabled poor people generally tend to be regarded in their own communities as the most disadvantaged, though the figures and statistics on disability and poverty are very sketchy and limited.

The Pacific region is also most disadvantaged in the global economy due to its geographical circumstances, islands being scattered across the vastness of the Pacific Ocean. This region also continues to be challenged by the negative impacts of rapid economic growth and increasing non-communicable diseases. The WHO (Coyne, 2000) stated in the context of prevention and control of diabetes and cardiovascular diseases stated that:

*...the burden experienced in terms of premature mortality; morbidity disability poses major, but unquantifiable, social and economical costs on all societies in the region. No country can afford the existing and projected increased burden of diabetes and cardiovascular diseases.*

Accordingly, the socio-economic costs resulting from disabilities related to NCDs and occupational hazards poses a daunting challenge for Pacific Island countries including Fiji. Relatively few surveys have been undertaken to determine the dimensions, causes and the implications of disability in the region; therefore, it is likely the number of people living with disabilities may double, provided an extensive survey is undertaken to cover inaccessible areas.
For developing countries in the Pacific, disability has created an extra economic burden. The UNDP (1997: 54-55) Fiji Poverty Report states:

....that most disabled adults in Fiji have had a restricted formal education, face very limited employment opportunities, have very few services or facilities to meet their special needs, and only qualify for financial assistance if they are otherwise destitute. Ten percent of the recipients of Family Assistance mainly from social welfare are disabled and another 22 percent are chronically ill. The proportion of disabled person in poor households is higher, over 10 per cent, confirming that having a disabled member puts considerable strain on household’s resources.

This simply highlights the need for mainstreaming disability across all forms of development. However, exception to the studies on disability by Walsh (1999), McGowan (1994), FNCDP survey (2010) and few others, in Fiji’s context, lifestyle disease and occupational hazard related disabilities requires further systematic in-depth study to determine the correlation and implications on the nation as a whole.

Similarly, Fiji has ratified various International Conventions and agreements such as The Biwako Millennium Framework (BMF) for Action towards an Inclusive, Barrier-free and Rights-based Society for all Persons with Disability in Asia and the Pacific and the Convention on Elimination of All Forms of Discrimination against Women (CEDAW). It is apparent that it will be difficult to achieve the targets as per conventions. More is required to bridge the poverty gap amongst the poorest through developing initiatives and policies of action in key areas such as technical educational, vocational training and employment; as well as ensuring that existing services in health and education is available to cater for the needs of children, women and men (young and old) with disabilities.
Disability is a reality in our communities, which needs recognition and collaborative initiative from every individual in our society to reach a stage where scenarios and incidents resulting in disabilities can be prevented. Proper planning and early intervention can help save millions of dollars that government uses in tackling lifestyle diseases and occupational hazards related disability.

1.2 Statement of Research Problem

Given this background on disability and its relationship with poverty, NCDs and occupational related hazards, the crucial questions that arise are: what are the main causes of lifestyle diseases and occupational hazards related disabilities in Fiji? What are their socio-economic implications? What trends can be discussed in the Nadi and Lautoka districts in the Western division of Fiji?

1.3 Rationale

It has been noted that people with disabilities in recent times have been largely invisible or given insignificant recognition in all areas of development processes in Fiji. Firstly, disability has been a neglected area, lacking systematic and in-depth study to determine the plight of disabled people and the socio-economic implications resulting from disabilities for families, communities and the state as a whole.

Secondly, the Fiji National Council for Disabled Persons (FNCDP) national baseline survey 2010 demonstrated that disability population is growing in Fiji and should treated as an issue of concern by stakeholders and policy makers.

Thirdly, lifestyle related diseases have become a focal point of concern for health authorities in Fiji and this may help to explain the apparent increase in disability population and mortality. Occupational hazards are another factor that has contributed to a rise in the disabled population. There has been no in-depth study done to determine the extent and severity of lifestyle disease and occupational hazard related - disability in Fiji.
Fourthly, it is evident that disability-specific activity does not take place in parallel with inclusive development thus lacks integration or mainstreaming. The increasing disability population will constitute an economic burden for the nation as it strives to cater for the needs of this special group. The people living with disabilities are a group most discriminated against, which is clearly evident from the lack of services available for them. The policy areas of employment and health and basic social services need to review factors that have been impediments to the people with disabilities for equal opportunities in terms of employment, education and health.

Fifthly, it is timely that research like this has been undertaken to pave ways for Fiji to improve on the existing initiatives for the disabled community. The provision of new knowledge gathered through this study will also contribute indirectly towards achievement of the Millennium Development Goals (MDGs), the country targets by 2015 as it uses statistics and other information gathered from this study.

Furthermore, this study may contribute to the change in the perception and understanding of people to those who have a disability. It will provide information on how everyone can contribute to reduce all forms of discrimination against people with disabilities. Fiji has ratified various regional conventions, which call for equality for everyone regardless of gender or whether they have any form of disability. There have been cases occurring around the nation, where people with disabilities are often uncounted, their voices are unheard and their rights to development, full participation in training and equality are not granted by stakeholders concerned. People with disability are entitled to the same rights as all other individuals and therefore, all development partners need to include them in the development process.
Finally this study aims to build on existing knowledge that has been accumulated in previous research and surveys with the author’s experience working with people with disabilities. As Fiji has limited data on people with disabilities, studies such as this will establish emerging trends relating to disability and create further interest in others to carry out in-depth study of occupational and illness related disability.

1.4 Research Questions

Having established the research problem, a few central research questions are raised. These research questions are:

- What are the main causes and types of disability in Fiji?
- To what extent do lifestyle diseases and occupational hazards contribute to disability in Fiji?
- What are the socio-economic implications of disability in Fiji?
- What are the policy implications of acquired disability in Fiji?

1.5. Objectives of the Study

The general objective is to examine the lifestyle diseases and occupational hazards related to disability and their socio-economic implications in Fiji. The specific objectives are:

- to identify the main causes and types of disabilities in Fiji
- to study dimension of lifestyle diseases and occupational hazards related to disabilities in the Nadi and Lautoka area in the Western Province of Fiji
- to study the socio-economic implications of occupational hazards and lifestyle related disabilities in the selected province
- to review the existing legislation and policies on acquired disability in Fiji
- to identify the forms of support system available for people with disabilities in Fiji
- to recommend policy issues based on the study findings.
1.6 Source of Data and Methodology

Data and information for this study were obtained from both primary and secondary sources. The primary data was collected from fieldwork survey that was undertaken by the researcher in Nadi and Lautoka districts in Fiji. The fieldwork involved the use of questionnaires and unstructured interviews. The secondary data was derived from various journals, published and unpublished reports from stakeholders including government and non-government organizations, international agencies such as UNDP, ILO, UNESCAP and WHO. In addition, this study also used literature available on the internet. Published articles from newspapers and magazines are also used as secondary data.

The research methodology used was mainly qualitative. However, quantitative data gathered from primary and secondary sources were tabulated and analysed accordingly. A triangulation research methodology was adopted. The field area for this study was Nadi and Lautoka in the Western Division, Fiji. A total of 60 people living with acquired disabilities were selected for this study with two health professionals from the district. The questionnaires and semi-structured interviews were used to collate data during the field survey.

1.7 Organization of thesis

The thesis is divided into six chapters. The first chapter is the introduction, which puts the research into perspective and sets out the background, research problem, research questions, objectives of the study, rationale, and source of data and methodology.

The second chapter provides the conceptual framework entailing the concepts, relevant approaches and theoretical debate relating to the research subject and provides an extensive literature review which identifies gaps in the knowledge of this study.

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3 The research methodology is discussed in detail in chapter three.
The third chapter presents the framework of the research and explains the methodology and the methods employed and units of analysis, source of data, sampling procedures, methods used for data collection, limitations and ethical issues involved in this study.

The fourth chapter provides a background of Fiji and the study area of Lautoka and Nadi. It briefly focuses on the geography, history, population, economy, overview of the services and institution for people with disabilities and so on.

Chapter five discusses the research findings and analysis, making critical judgments relating findings to the literature.

The final chapter presents recommendations based on the findings and the implications of the research to people living with disabilities and policy makers.
CHAPTER TWO

LIFESTYLE DISEASES & OCCUPATIONAL HAZARDS-RELATED DISABILITY: A CONCEPTUAL FRAMEWORK

2.1 Introduction

This chapter focuses on the basic concepts and linkages revolving around lifestyle diseases and occupational hazards related disability. In particular, it discusses the conceptual linkages between poverty, disability, education, employment, urbanization, informal sector, lifestyles disease, gender, malnutrition, and occupational hazards in general and in the context of Small Island Developing State (SIDS) such as Fiji.

This chapter also provides a review of models and approaches relating to the subject. An extensive literature review in this chapter notes various studies relating to the subject undertaken in developing countries, generally in the South Pacific region, with a particular emphasis on Fiji.

2.2 Conceptual Framework and Literature Review

2.2.1 Disability: Definitions and Perspectives

The term “disability” is defined as a restriction or lack (resulting from an impairment) of capacity to perform an activity in the manner or within the range considered normal for a human being⁴ (Disabled World, 2009). Globally, this seems to be the most recommended definition for a standard measure to collate data on disability. However, it is also an evolving concept with definitions being changed with time and people (Bowes and Grace, 2009). Disabled persons differ from each other, though the society

⁴ Disability definition according to the International Classification of Impairments, Disabilities and Handicaps (ICIDH) 1980, (Disabled World, 2009). For this study, disability refers to those who acquired disability through lifestyle disease and occupational hazard in their life time.
views them as a homogeneous group and restricts their full participation in life’s opportunities. Despite the variation in disability definitions, it provides an important insight into different perception, beliefs and attitudes towards disability by any community or society.

Disability is understood as an umbrella term that incorporates the components of impairments, activity limitations and participation restrictions (WHO, 2011a). Descriptions of disability are expressed in diverse ways by different stakeholders and individuals because some may view disability as result of functional incapacity or medical unfitness. Others may perceive disability as a result of the individual’s environment and limitations which people experience that can be modified externally (Rioux, 1996) whilst some authors also view disability as divine justice from a spiritual perspective (Bacquer and Sharma, 1997).

Barton (1996) argues that disability is a form of oppression which involves social restrictions citing cited Oliver’s (1990) argument that all disabled people experience disability as social restriction in support of his definition of disability. Globally, disability definitions continue to vary. Thus existing data on global estimates on disability population and GDP losses due to disability are unreliable. The different perspectives of disability may have contributed to more knowledge on the understanding of the concept that may assist the society to take care of the needs of the people living with disability; however, it has also become a challenge for some societies. For example, in New Zealand, the Maori community has a different perspective on disability compared to the Pakeha community (Bray and Kingi, 2000). This has led to a problem of accessibility of disability support services to the indigenous community because the health system and disability support services are mainly founded and provided from a western medical model and ideology (ibid.).
Currently, there are two competing frameworks for disability analysis developed by reputable organizations. These are: International Classification of Impairments, Activities and Participation (ICIDH-2) developed by WHO and Disability Adjusted Life Year (DALY) by the Harvard School of Public health. The ICIDH-2 is commonly used then DALY because the system includes social, environmental and personal factors into their conceptualization of disability. The assumptions derived from the DALY framework can be misleading and inadequate for measuring the global burden of diseases (Metts, 2000). Figure 2.1 shows the linkages between health conditions and other contextual factors in the ICIDH-2 framework.

**Figure 2.1** Linkages within ICIDH-2 Dimensions

Health conditions (Diseases/disorders)

| Impairment | Activity | Participation |

Conceptual factors: Environmental, Social

Source: WHO, 1997b.

In developing countries, the lack of data on disability is the biggest challenge for policy makers. According to Perry (2002) lack of information on people with disabilities makes them invisible to policy makers. It also becomes a challenge for agencies to compare disability rates collated from national data sources due to differences in definitions, concepts and survey designs. In addition to the varying definitions, the cause structures and contributing factors of disability differ between developing and developed countries (Elwan, 1999).

Illness and injuries are common causes of disability in developing countries and this trend continues to appear in other studies, which indicates possible weakness in the mitigation and preventive measures in dealing with these issues (ibid.).
2.2.2 Models of Disability

The four models on disability are: social, medical, charitable and minority model dominate the literature.

2.2.2.1 Social Model

This model views disability as a problem created socially. It requires collaboration from all members of the society to allow required environmental modifications to enable full participation of the people with disabilities in all areas of social life (Disabled World, 2010).

The social model explains various factors relating to disability such as poverty, prejudice, discrimination, segregation, inadequate education, violation of human rights, and inadequate social infrastructure. Figure 2.2 shows the factors and their linkages to the problem of disability in the society.
Figure 2.2  The Social Model of Disability and its Linkages

It has been noticed that people with disabilities in many societies face difficulties in accessing services due to the poor infrastructure and socio-economic barriers. For example, a person in a wheelchair who wishes to enter a building with a step at the entrance encounters difficulties in entering; however, if a ramp were added to the entrance, the wheelchair user would be able to enter the building. This model sees the society as being responsible for creating problems and but it can also provide solutions to problems faced by people with disabilities.

Disability issues have been with us from early civilization; however, it was in the 1960s that the new movement on disability began to emerge (Campbell and Oliver, 1996).
These are remarkable achievements in the recognition of rights and needs of people with disabilities globally; however, loopholes still exist in the system as Anwar Ibrahim states that:

“While we cannot deny the positive impact that aid and policy reform have had on helping the poorest people around the world emerge from poverty, it would be foolhardy to assume that all is well in the world of development, Goals at the turn of century that were deemed lofty, yet attainable, have fallen by the wayside.” (AccountAbility, 2007)

2.2.2.2 Medical Model

A second model views disability as a problem of the affected person directly caused by factors such as lifestyle diseases, trauma and other health related conditions (Disabled World, 2010). These conditions require medical care and treatment from health professionals.

This medical model of disability tends to view disability as a personal tragedy that has happened to the individual, thus necessitating the need for a cure (Oliver, 1990). This condition provides the opportunity for others to make decisions on the health status of the individual. For example, the medical professionals decide that either the individual needs either to attend the special school or needs to consult a therapist.

Harris and Enfield (2003) have clearly illustrated the different linkages between the disabled individual to the required needs such as care, cure, special transport, special schools, social welfare services, therapist specialist, medical professionals, hospitals and associated conditions.
Though model is commonly used, many sociologists still argue that disability should not be entirely based on a medical perspective. Oliver (1990) argues that disability needs to be seen as more than just a medical problem.

2.2.2.3 Charity Model
A third or charity model simply treats people with disabilities as helpless victims needing care and protection. People living with disabilities mostly depend on philanthropic agencies and religious organizations for support and assistance.
In many situations, governments continue to rely upon such arrangements instead of bringing education and vocational training for persons with disabilities directly under their development agenda. (Disabled World, 2010).

**Figure 2.4 Charity Model of Disability and its Linkages**

![Charity Model of Disability and its Linkages](image_url)


In most developing countries, where resources to meet basic needs of the majority are stretched painfully then, the charity model for disability services provision continues and feature prominently. For example, international agencies such as UNICEF, UNDP, WHO funded project, like special schools, transportation and capacity building training in developing countries.
2.2.2.4 Minority Model

The minority model of disability is not as popular as the medical and social models. It is very similar to the social model, however, though it favours the new socio-political approach and sees disability as a product of interaction between an individual with his/her environment (Hahn, 1998).

2.2.3 Typology of Disability

Most disability classifications based on the WHO ICIDH-2 framework are more robust than to other existing classifications. Globally, the disability types are categorized on the basis of the ICIDH-2 frame. Table 2.1 shows the major disability types commonly used by countries, based on the WHO concept.

Table 2.1 Common Disability Types

<table>
<thead>
<tr>
<th>Disability Type</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensory</td>
<td>This includes, people with hearing and seeing disabilities</td>
</tr>
<tr>
<td>Physical</td>
<td>Includes people with mobility or agility disabilities e.g. cannot walk for 350 metres or people with missing body parts as result of amputations or illness.</td>
</tr>
<tr>
<td>Intellectual</td>
<td>Includes people with intellectual disability for learning difficulties</td>
</tr>
<tr>
<td>Psycho-pathological</td>
<td>Those with mental and emotional disorders. In this case, people find difficulties in communicating with others and often they isolate themselves from others</td>
</tr>
</tbody>
</table>

2.2.3.1 Lifestyle Disease - Related Disability
In recent years, on a global scale, non-communicable diseases (NCDs) have become a leading cause of disability and deaths. Disability is an issue that is intertwined with NCDS as Elwan (1999), highlighted that developing countries have a higher proportion of disability caused by illness and other related factors. This view is supported by the WHO (2011b), which highlights that 63 percent of the total 53 million global deaths in 2008 were due to non-communicable diseases such as cardiovascular diseases, diabetes, cancer and chronic respiratory diseases. The developing countries are more vulnerable to NCDS and their related complexity.

2.2.3.2 Occupational Hazard -Related Disability
Occupational accidents and work related disease have become a major cause of global deaths and potential preventable health problem in working communities (Takala, 2009). In 1999, global estimate of the average fatal death rate were 14 per 100,000 workers (ibid). More than 960,000 workers are likely to be injured at jobs on a daily basis (Hamalainen et al., 2009). This view generates a critical concern about the increasing occupational related accidents with possible incidence of disabilities. A study in New Zealand found that injuries and accidents were one of the major causes of disability with a total of 26 percent amongst the disabled population in New Zealand (Statistics New Zealand, 1998).

Contrary to the estimated global trend on occupational related accidents, the actual data on the prevalence of work related injuries are not reported by all countries (Hamalainen et al., 2009) and this can be attributed to the absence of reporting and notification systems.

2.2.4 Poverty and Disability
Poverty and disability are closely linked in a complex way. Poverty reinforces disability and disability aggravates poverty. More than 400 million people are living with
disabilities in the Asia and Pacific region, with over 40 percent living in poverty-stricken conditions (UNESCAP, 2002). This dimension is likely to increase as most developing countries lack exact data on people living with disabilities. As cited by the United Nations on their fact sheet\(^5\) on Persons with Disabilities, 10 to 20 percent of the poorest countries of the world have an average of poverty line of $1.25 a day with 1.4 billion people in developing countries living in poverty (United Nations, 2011a).

Malnutrition, poor health services, sanitation, and unsafe living and working conditions can result in disabilities, whilst disability can trap people in a lifecycle of poverty. As a result, these factors create barriers for disabled people in areas of education, employment and social activities (Mont, 2007).

Poverty is both a cause and consequence of disability. Disability can reduce the earning power and consumption expenditure, resulting into poverty, whilst the cumulative deprivations of poverty can manifest themselves in disability (Acton, 1983). Disability and poverty seem to be inextricably linked, which is reasonably acceptable considering that disabled people tend to the poorest compared to others in society (ibid.).

However, the linkages between poverty and disability appear to lack systematic examination in both developed and developing countries (Combat Poverty Agency, 1994). The welfare of a person is connected with his/her ability to work and perform various societal roles and in most scenarios; prevailing conditions can restrict a disabled person to carry out their expected roles or work. This often results in poor living conditions and a possible case of disability. Figure 2.5 depicts a vicious cycle of poverty and disability.

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\(^5\) The fact sheet by United Nations gives an global overview on people with disabilities and also important figures and scenarios in the areas of employment, education available on www.un.org/disabilities
The combination of both poverty and disability is fearsome as it has the tremendous capacity to destroy the lives of people with impairments and can impose unbearable burdens on families (Acton, 1983). In probable cases, poor families are unable to meet the medical costs which aggravate infectious diseases/illness resulting in physical or psychological impairments. Access to health services at an affordable cost is essential for the prevention of disability.

Elwan (1999) states that disability mainly stems from preventable impairments associated with communicable, maternal, pre-natal diseases and injuries. Thus, reduction of the contributing factors can help reduce economic burden faced by countries in the implementation of disability rehabilitation programmes and activity such as welfare assistance.

Wasserman (2005) argues that Amartya Sen’s Capability approach explains an individual’s capacity to survive in the society is a failure in the disability context. People with disabilities have been prevented from accessing entitlements available to

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6 Capability approach refers to whereby an individual is provided with an enabling environment where he or she can maximize his/her capacity for survival in society.
other members of the society in the vital areas of health, food, education, employment, others social services and in the decision-making process. The argument has legitimacy because people with disabilities do not have similar opportunities to ordinary people. This also provides the platform for discussions on pathways for equal opportunities in all areas irrespective of colour, race, gender or disability. There are many aspects over which an individual, family, society and nation have control and ability to prevent it from occurring.

2.2.5 Malnutrition and Disability

Malnutrition and disability are interlinked. It remains as a formidable global development challenge. Malnutrition makes the poor less productive thus resulting in poverty, which will affect food intake (The Economist, 2004). In such circumstances, the poor remains poor or become poorer and unhealthy, leading to the increase possibility of acquiring disability. Globally, some 925 million people do not have enough food to eat (FAO, 2010). Proper nutrition is essential for a healthy and well-functioning human body.

Elwan (1999) shares a similar view on malnutrition as a cause of disability as well as increased vulnerability to other disabling disease. For example, a malnourished mother will be more likely to have a low-birth weight baby girl, who is likely to become a stunted adolescent and later a stunted woman. Besides posing risks to her own health, the woman is likely to give birth to underweight and malnourished children (Schroeder, 2001). Thus, the vicious cycle of malnutrition continues, especially among the poorest in the society.

Malnutrition also increases the risk of chronic diseases (Allen and Gillespie, 2001). Chronic diseases are one of the contributing factors to increasing disability incidence. Figure 2.6 shows the linkages between malnutrition and disability.
2.2.6 Education, Poverty and Disability

Education, disability and poverty are closely inter-linked. The higher educational levels the lower the prevalence of poverty and disability. Education through awareness and advocacy reduces social and medical related disabilities.

The United Nations cited in their *Fact sheet on Person with Disabilities* that the global literacy rate for adults with disabilities is as low as 3 percent and 19 percent of less educated people have disabilities, compared to 11 percent among the better educated (United Nations, 2011a). It is obvious that through education people acquire knowledge that equips and prepares them to lead a better life. The fact sheet on persons with disabilities further shows that 90 percent of children with disabilities in developing countries do not attend school. The denial of such opportunity further creates a disabling environment for children with disabilities.
In such situations, a vicious cycle of poverty among education, disability and poverty continues. Thus, disabled children with lower levels of education will have no guarantee for employment and will remain poor. For example, in developed countries such as the USA only 35 percent of working age persons with disabilities are working compared to the 78 percent of those without disabilities (ibid.). It indicates the importance of education in attainment of any sort of employment. Figure 2.7 illustrates the vicious cycle that between poverty, education and disability.

**Figure 2.7 Linkages between Education, Poverty and Disability**

Contrary to the historical practice of excluding disabled students from mainstream schools, a new approach towards children with special needs has emerged. The new approach favours special education becoming more inclusive, to improve the attainment of education amongst the students with disabilities (Jonsson and Wiman (2001). Figure 2.8 shows the old approach to special education.
Developing countries are working towards adopting a new approach to special education mainstreaming. This approach can improve the level of educational attainment amongst children with disabilities (Jonsson and Wiman, 2001).

### 2.2.7 Urbanization, the Informal Sector and Disability

The urban growth is a major feature of developing countries. Urbanization and the informal sector are closely linked and also contribute to the vulnerable environment for disability to occur. Urbanization has increased the informal sector activities in urban areas largely absorbing the urban poor (Pernia, 1994). The Harris-Todaro model paradigm shows that rural to urban migrants usually are found to be low wage earners and adding on to the urban poverty level (Pernia, 1994).

In recent times, the informal sector has increased tremendously, comprising of large proportion of the labour force in urban informal activities. Most people who have migrated to towns and cities have established small income generating initiatives for a living. The informal sector offers employment, although it is very irregular, unpredictable and with no guarantee of being a sustainable source of income (Van Ginneken, 1999). The urban informal sector refers to economy which is not part of the formal sector and enterprises that do not pay tax (Mohanty et al., 2003). People who lack a specific trade or employable skill will often find refuge through employment in the informal sector.
The unorganized informal sector lacks proper occupational and health safety (OHS) measures, thus more people are vulnerable to occupational related hazards and become victims of disabilities. In the PICs, government led welfare and social protection system are inadequate to meet the growing challenges (Mohanty, 2011).

Persons with disabilities have the right to decent work, as Nussbaum (2000) states:

… The core idea is that the human being is a dignified free being who shapes his or her own life in co-operation and reciprocity with others rather than being passively shaped or pushed around by the world in the manner of a “flock or “herd” animal. A life that is really human is one that is shaped throughout by these human powers of practical reason and sociability.

The people with disabilities have unique abilities; therefore they should have the right to choose what they would like to undertake based on their abilities rather than being offered low paid jobs based on their disabilities. It is been noted that people with disabilities are often found doing low paid jobs. A good example of how a disabled person used his abilities to become successful is of Steady Eddie, popular comedian with cerebral Palsy. It is been found that urban growth is closely linked to various other social problems such as unemployment, sanitation, health and environmental degradation (Thietlethwaite and Votaw, 1992). This has created a disabling environment for the urban poor and has increased the vulnerability to occupational related hazards and lifestyle related diseases.

2.2.8 Rights-based Approaches to Disability

It is only in the last 40 or so years that disability has gained momentum and has been given importance by scholars and policy makers (Wassermann, 2005). The declaration of the International Year of Disabled People in 1981 was a new chapter in the making of history for people living with disabilities worldwide.
In the Asia and Pacific region, there is lack of data on disability issues (UNESCAP, 2002), which may be a contributing factor for the lack of recognition by the policy makers. Despite the challenges, achievements have been made in the policy areas in the disability field at the regional and global levels. The most notable achievement has been the adoption of the Convention on the Rights of Persons with Disabilities (CRPD) by the United Nations in 2006. Kofi Annan stated that;

*The Convention is a remarkable and forward looking document. While it focuses on the rights and development of people with disabilities, it also speaks about our societies as a whole and about the need to enable every person to contribute to best of their abilities and Potential.* (United Nations, 2006)

There were many other achievements by different institutions around the globe which have taken a lead hand in recognizing People living with disabilities. Table 2.2 shows important international treaties and conventions on disability.

**Table 2. 2: International Treaties and Conventions on Disability, 1971-2008**

<table>
<thead>
<tr>
<th>Year</th>
<th>Name of Treaty/Convention</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>UN adopted the Convention on Rights of Persons with Disabilities</td>
</tr>
<tr>
<td>1993- 2002</td>
<td>Asian and Pacific Decade of Disabled Persons</td>
</tr>
<tr>
<td>1983- 2002</td>
<td>UN Decade of Disabled Persons</td>
</tr>
<tr>
<td>1981</td>
<td>UN International Year of Disabled Persons</td>
</tr>
<tr>
<td>1975</td>
<td>UN Declaration on the Rights of Disabled Persons</td>
</tr>
<tr>
<td>------</td>
<td>-------------------------------------------------</td>
</tr>
<tr>
<td>1971</td>
<td>UN Declaration on the Rights of Mentally Retarded Persons</td>
</tr>
</tbody>
</table>


Despite the ratification of these international UN conventions, disability continues to be neglected across the globe in sectors such as employment and education.

2.2.9 Gender and Disability

Women with disabilities are amongst the poorest because society tends to regard women as second class citizens and being a female with disability, increases their susceptibility of facing more barriers and inequalities in the society (Stubbs and Tawake, 2009).

Women with disabilities are more disadvantaged then men with disabilities in different sectors of development. The lack of accessibility to good quality education is seen as a cause of the differences of income and employment amongst the disabled men and disabled women (Barbuto, 2005).

It has, however, been noted that women with disabilities are less likely than their male counterparts to be employed and more likely to earn less money than their male counterparts when they are employed (O’Harrah, 2004; Traustadottir, 1990). As a result they become a further disadvantaged group in our society. In another study, Boylan (1991) suggests that in developing countries, when a woman becomes disabled she loses her status altogether due to the absence of rehabilitation facilities; thus she becomes totally isolated, immobile and confined to her house. This also restricts her participation in public activities compared to males.
2.3 The Pacific Context

In the Pacific, there are many definitions of disability. The Pacific region does not have a common system of defining and classifying disability. Limited data on disability has also proven to be a challenge for researchers (Stubbs and Tawake 2009). The study by Stubbs and Tawake (2009) used the definition in the Convention on the Protection of the Rights and Dignity of Persons with Disabilities (CRPD) states:

“Persons with disabilities include those who have long-term physical, mental, intellectual or sensory impairments which in interaction with various barriers may hinder their full and effective participation in society on an equal basis with others.”

Gender is another aspect that features strongly in the disabled population across the region. Women and children are most vulnerable to disability (ibid). According to Lene (2004), 53 per cent of disabled population is women in Samoa. As in many countries, the trend is quite similar in Fiji with women accounting for the large proportion of the disabled population. Across the Pacific, women generally face many hurdles in their cause of achieving equity due to cultural and traditional perceptions (ibid.).

Across the Pacific region, health authorities share a common concern on the increasing rates of non-communicable diseases such as diabetes and hypertension (WHO, 2011b). The rapid urbanization and modernization have witnessed a change in dietary patterns of the Pacific Islanders and a possible contributing factor to the increase in lifestyle diseases. Today, the adoption of Western lifestyle by people has come with a price as nations are struggling to combat the illnesses resulting from this way of living. The adoption of a Western lifestyle has contributed to the increase of non-communicable diseases, thus an extra burden is experienced in terms of premature mortality, morbidity and disability (Coyne, 2000).

The national statistics of most Pacific Island nations shows that lifestyle diseases, especially hypertension and diabetes, add to the risk of disability.
The occurrence rates of diabetes in the Pacific are highest in comparison with other Western nations. Throughout the region, lifestyle diseases are becoming a leading health problem (WHO, 1997). The combination of diabetes and injuries can prove to be disastrous by resulting in amputations as a result of poor medical treatments (Mont, 2007). Furthermore, the person’s failure to take adequate care of his conditions can also result in amputations.

It has been estimated that around 2.4 million people in the Pacific are suffering from epidemic lifestyle diseases (WHO, 2011). Table 2.3 illustrates the notable changes in nutrient composition by urban dwellers compared to the traditional way of living across the Pacific (Coyne, 2000).

**Table 2.3 Change in Nutrient Composition of Diets of Volcanic Island dwellers from Traditional to Urban lifestyles**

<table>
<thead>
<tr>
<th>Nutrient</th>
<th>Traditional eating pattern</th>
<th>Urban eating pattern</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cholesterol</td>
<td>Very low intake</td>
<td>enormous increase</td>
</tr>
<tr>
<td>Saturated fat complex</td>
<td>Very low intake</td>
<td>enormous increase</td>
</tr>
<tr>
<td>Salt</td>
<td>Very low intake</td>
<td>substantial increase</td>
</tr>
</tbody>
</table>

Source: Coyne, 2000.

As a result of the change in dietary patterns, the Pacific region is witnessing a rise in the incidence such as non-communicable diseases. The consumption of saturated fatty foods is becoming prevalent and is the most daunting challenge to public health in the Pacific region. Many people continue to lack vital nutrients in their diet despite the abundance of natural traditional local produce, because it is cheaper. People prefer a cheap price even if it increases compromising of quality.
Obesity, a diet related condition, has become prevalent in the region especially amongst the women, contributing to the high incidence of diabetes (SPC, 1998). The lack of physical exercise with the increased intake of fatty foods can be a possible cause for obesity in the region. Policies and strategies have been implemented to reduce lifestyle diseases; however, the ultimate responsibility lies on an individual.

As elsewhere, most injuries and accidents originating from work related incidents are emerging issues in the Pacific region. Table 2.4 illustrates the trend in employment, fatal occupational accidents and fatal work related diseases in selected Pacific island nations.

**Table 2.4 Trend in Employment, Fatal Occupational Accidents and Fatal work related Diseases in selected Pacific island nations**

<table>
<thead>
<tr>
<th>Country</th>
<th>Economically active populations (thousand)</th>
<th>Fatal occupational hazards i.e. deaths</th>
<th>Fatal work related diseases</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Samoa</td>
<td>14</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>Fiji</td>
<td>235</td>
<td>298</td>
<td>298</td>
</tr>
<tr>
<td>PNG</td>
<td>2000</td>
<td>2600</td>
<td>2700</td>
</tr>
<tr>
<td>Solomon islands</td>
<td>27</td>
<td>30</td>
<td>27</td>
</tr>
<tr>
<td>Tonga</td>
<td>35</td>
<td>35</td>
<td>34</td>
</tr>
</tbody>
</table>

Source: Hamalainen et al., 2009  PNG: Papua New Guinea.

Disabilities relating to occupational hazards can be a very expensive affair for Pacific Island nations. For example, in Fiji in 1980, occupational hazards and ill health resulted into a total of annual cost of FJ$70 million, which represented a significant 2.7 percent of the Fiji’s national GDP (ILO, 2002).
However, only limited data are available on occupational hazard-related disability or the exact number of people involved or employed in informal sector in the Pacific countries. Thus it is difficult to establish the relationship between poor people, occupational hazards and increase in disability. Occupational hazards are largely preventable and the statistics on occupational hazards reflects a country’s health and safety performance, thus a country with high incidence rates should evaluate or re-look at their health safety procedures.

2.3.1 Fiji Context

In Fiji, disability definition varies. However, most studies have settled on the WHO standard definition, which differentiates between impairment, disability and handicap. The 2010 FNCDP national baseline survey used the definition from the FNCDP Act 1994, which states:

*Disabled persons mean persons, who as a result of physical, mental or sensory impairment are restricted or lacking in ability to perform an activity in the manner considered normal for human beings.*

The Japanese International Cooperation Agency (2002) also defined disability as loss or limitations of opportunities to take part in the community life on equal terms with others. The JICA (2002) report also cited that Fiji lacks a national registration procedure to provide information on people with disabilities and coordination between the Ministries of Health, Education and Community in the registration or notification of people with disabilities.

Walsh (1999) argues that Fiji lacks a comprehensive study of disability and the 1997 population census data has been used to make references to disabled people and their issues. The Walsh analysis of 1997 Census data on disability indicated the following:

- the disability data from the census cannot be compared with data from other countries such as Australia
the data can be misleading
disability was prevalent amongst the males, young and old
disability types appear differently in rural and urban areas
physical disability was common type of disability featured amongst the population
disabled students are underrepresented in formal education, money and subsistence economy.

McGowan (1994) also highlighted the fact that most of the disabled people are unemployed and they have minimal formal education, poor vocational skills and no mobility equipment. These can be contributing factors towards poverty amongst disabled people. Similar findings as the 1997 census data were revealed by the 2010 FNCDP National Baseline survey, which indicates that Fiji needs an in-depth-study on disability. NCDs and injuries/accidents have been found as major causes of disabilities in Fiji (FNCDP, 2010) and it can be prevented. Amputations are commonly caused by diabetes and injuries.

2.4. Conclusion
This chapter has provided a conceptual and theoretical framework and linkages such as poverty, employment, urbanization and malnutrition, gender relating to lifestyle diseases and occupational related disability in the Pacific region, especially in Fiji. The models of disability provide a better understanding of disability. The chapter also explored the different disability definitions used to measure the prevalence of disability. The brief literature survey showed that the Pacific countries, lack a comprehensive academic study on disability.
CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction
This chapter deals with the research approach and methodology adopted for this study. It provides a general discussion on conceptual methodological approaches, followed by sources of data and research methods and designs used in the study. This chapter also discusses the sampling and sampling size, study area, limitation of research and ethical consideration governing the study.

3.2 Methodological Approaches
The research methodology is defined as a system of rules and methods that facilitate data collection and analysis, provides a theoretical and conceptual approach for understanding the social world (Hart, 1998). There are two paradigms related to research - positivism, and constructivism. Under a positivist approach, a hypothesis is tested under defined conditions predicting reality and a quantitative approach is usually adopted.

A constructivist approach provides multiple mental constructions of the reality and different views are used to understand and reconstruct reality. This also includes social interactions with participants. Furthermore, this research paradigm presupposes that knowledge is maximized when distance between the researcher and the respondents in the study is reduced. This research approach is referred to as qualitative research and is often utilized in the social sciences.
In discussing qualitative research, Merriam (1998) states that:

...qualitative research is an umbrella concept covering several forms of inquiring that helps us understand and explain the meaning of social phenomenon with little disruption of the natural setting.

According to Merriam (1998), qualitative research reveals how people make sense of their own world and what they experience in real world. In this study, the researcher adopted a snow ball sampling technique to gain access to people with disabilities in the study area.

### 3.3 Sources of Data

Primary and secondary sources of data were used for this thesis. The primary data were collected through surveys of people with disability and through observation and informal discussions. Two sets of questionnaires (Appendix 1) were prepared for the surveys undertaken in the study area. One questionnaire was utilized to collect information from people living with acquired disabilities resulting from lifestyle disease and occupational hazard in the study area whilst the second set of unstructured questionnaire was aimed to collect information from the health professionals and officials concerned with disability, especially in the Nadi and Lautoka area in Fiji.

The study also gathered information through secondary sources that included reports from government and non-governmental organizations, regional and international agencies such national baseline surveys and the national census. The sources dealing with the issues of disability, lifestyle diseases, occupational hazards and poverty, education, employment and achievements in the disability were reviewed.

### 3.4 Research Design

This research design for this study consists; of methods of data collection, sampling and methods of research analysis.
3.4.1 Methods of Data Collection

The questionnaires, informal discussions, observations, case studies and photographs were used as the main data-gathering mechanisms for this study. The following section provides a brief account of each of the methods of data collection.

3.4.1.1 Questionnaire

This study used both structured and semi-structured questionnaires. Two sets of questionnaires were designed after a thorough review of relevant literature on the subject of study. The first questionnaire was the most important one as it was for the sample population for this study i.e. people living with disabilities. The 20 questions were structured in the simplest form, most of them giving the respondents a choice of answer. The choices represented the degree of agreement each respondent had on the given question. Some questions were closed and also included short answers to enable the respondents to answer easily.

The second questionnaire was designed to explore the perceptions of health professionals working in the hospitals, particularly those dealing with amputations and other forms of disabilities. The questions were mainly open-ended. This questionnaire was semi-structured to explore disability related data from people working in hospitals.

Two health professional were interviewed for this study. The interview involved questions such as number of amputations done per week, major causes of the amputations, number of occupational hazard related patients seen by the doctors, common types of lifestyle diseases diagnosed and constraints faced by Health authorities.

3.4.1.2 Observation

Observation is an important method of providing first-hand information from the study area.
The researcher used time with people with acquired disabilities and their caretakers during the survey to obtain the first-hand information on the challenges and constraints facing them in their society. This was very helpful as they shared their experiences, which provided a greater understanding of disability community.

This method provided the researcher with more insights about the disability issue and related useful information. These included the attitude of people in the society and elements of discrimination and inaccessibility of services and facilities by people living with disabilities.

3.4.1.3 Photographs and Maps
The photographs are an important tool for visual evidence for readers to see of what was being observed in the field. The researcher used photographs as tools of validating evidence from the field whilst maps were used to provide the location of the study area.

3.4.1.4 Secondary Data
As mentioned previously, secondary sources of data included books, articles from journals and report’s from various government, non-government and international agencies. The reports used for this study included, for example, the National Baseline disability study by FNCDP, Pacific Sisters with disabilities by UNDP. The secondary data provided the researcher a better understanding of issue in the Pacific region, especially in Fiji.

3.4.2 Sampling
Snowball sampling was done for the sample selection. This sampling method is conducted where one needs to gain access to group of people but limited information is available on all members. In order to conduct this sampling strategy, the researcher defined the population first and then gathered others for sample by approaching those available and asking them to nominate others (Bouma & Ling, 2004).
Snowball sampling was most relevant for dealing with populations like people living with acquired disabilities from lifestyle disease and occupational hazard. This form of sampling enabled the researcher to include people in the survey that they would not have known about due to lack of information.

Fiji lacks a system of registration of people with disabilities, thus, the snowball was the most applicable technique as it enabled the researcher to access to disabled people as it is common for one person to know about another person or people in the same vicinity. The president of Western Disabled Association was the main contact person for identification of most people living with disabilities in the Nadi and Lautoka areas. The researcher, with use of snowball sampling was able to locate the disabled people from the few that were identified by the Western Disabled Association.

A total of sixty respondents who were people living with acquired disabilities were asked to participate in the survey. The Nadi and Lautoka were allocated 30 questionnaires each. The participants qualified for sample selection must have acquired disability through illness or occupational hazards; however it did not prevent others from participating in the survey. The respondents were selected from the available information and from the referrals made by people, for example, if person with a disability on completion of the interview, informed the researcher of the others with similar conditions in the vicinity.

Two health professionals from the Nadi and Lautoka hospitals were used for the survey to measure the causes and occurrence of disability in the area.

3.5 Research Analysis

After gathering all the completed questionnaires from the respondents, total responses for each item were obtained and tabulated to draw out the themes according to the individual questions in the questionnaire. This data was then converted into pie charts, other figures and tables for interpretation.
The descriptive words are used to restate what is presented and summarised in the pie chart, table and figures. Identifying relationships, making comparisons and categorising the data and relating it to the literature review, objectives of the study were important aspects of the whole analysis process.

3.6 Study Area
Lautoka and Nadi in the Western Province of Fiji were selected for this study. This is firstly because of the researcher’s interest on the increasing incidence of disabilities resulting from amputation cases and illnesses in the area and secondly, the personal experience of working with people living with disabilities in this areas. Lautoka is the second largest city in Fiji, which is also considered one of the largest in the South Pacific region. It is located on the west of Viti Levu in the heart of Fiji’s sugar cane growing region. It is famously known as the Sugar City with an approximate population of 52,220. Like Lautoka, the district of Nadi is known for sugar cane production. It is also regarded as the fastest growing town in the South Pacific region. Nadi is the third largest town in Fiji with a population of 42,284.

Map 3.1 Map of Western Division, Fiji

![Map of Western Division, Fiji](source.png)

Source: NZ tour maps, 2011.
Sugar and the tourism industry account for most parts of income for Lautoka and Nadi. Fiji’s leading sugar mill is located in Lautoka whilst Nadi is the site of the international airport linking Fiji to outside World and drawing tourists to the area.

### 3.7 Limitations

Unavailability of required official data was one of the major constraints in the study. This puts limitations on systematic generalizations. Cultural values and language constraint between the researcher and the affected iTaukei group were rectified by the use of a translator. Some of the participants were reluctant to give accurate information about their conditions, for confidential reasons. This will limit the amount and quality of data collected for analysis. For checks, different methods of data collection were used such as observation. The study was largely based on questionnaire survey, thus findings cannot be generalised. The respondents were informed prior to interview of the objectives of the research and their rights as a participant in the research, in accordance with ethical guidelines in conducting social research of the University of the South Pacific.

The limited time and financial resources were limiting factors that influenced the researcher to focus on the respondents residing in areas closer to towns. Furthermore, Nadi and Lautoka are limited areas for generalization for disability in Fiji.

### 3.8 Ethical Consideration

As Merriam (1998) writes, all research has to produce valid and reliable knowledge in an ethical manner.

As this study required participation of human respondents, certain ethical issues were addressed for the purpose of ensuring the confidentiality and privacy as well as the safety of the participants. The significant ethical issues that were considered in the research process included consent and confidentiality.
This was achieved through researcher fully explaining all important details of the study, including its aim and purpose. By having these important details, explained the respondents were able to understand the importance of their role in participation in the research. The respondents were also told of their freedom to withdraw their participation if they wished to. The participation was purely based on their willingness or consent. The confidentiality of the participants was also ensured by not disclosing their names or personal information in the research, to prevent any form of discrimination from stakeholders. Relevant details that helped in answering the research questions were included in the questionnaire, to avoid any confusion amongst the respondents.

### 3.9 Conclusions

This chapter presented the background of methodological approaches and research design used in this study, including the data collection methods, the site selection and sampling. Sound methodology and methods used in research provides sound reliable data for analysis. Methods of data analysis, research limitations and ethical considerations involved in this study are also covered in the chapter.
CHAPTER FOUR

A BACKGROUND OF THE FIJI ISLANDS

4.1 Introduction
This chapter provides a brief background on the Fiji Islands including Nadi and Lautoka in which the study was undertaken. It briefly presents Fiji’s geographical, historical, demographic and economic background. This chapter also provides background on the prevalence of disability and related issues in Fiji. The background information provided in this chapter is pertinent to an understanding of the location and setting of the study in the country context.

4.2 The Fiji Islands context
4.2.1 Location and Geography
Geographically, the Fiji Island is located between 174 degrees East and 178 degrees west of longitude and 12 degree South and 22 degrees South latitude. The country consists of approximately 330 volcanic islands of which about a-third are inhabited and vary in size (Map 4.1).

Fiji’s Exclusive Economic Zone (EEZ) covers about a 1.3 million sq.km of the South Pacific. The country’s total land area is 18,333 square kilometres. There are two major islands in Fiji: Viti Levu, where 70 percent of country’s population lives, and Vanua Levu, the second largest island with rest of the population on other smaller islands in the country.
Fiji enjoys a tropical South Seas maritime climate with an annual average temperature of 22 degrees Celsius. The southern and eastern sides of the islands experience up to 304 centimetres (120 inches) of rainfall annually whilst the lowlands on the western portions of each of the main islands are bounded by the mountains and have a well-marked dry season favourable to crops such as sugarcane. Between Novembers and April heavy rain and cyclones usually occur. The country is prone to tropical cyclones and earthquakes. Fiji sits on the Pacific Ring of Fire, a zone where the volcanism and seismic activities are intense.
4.2.1.1 Brief location and Geography of Lautoka and Nadi Area

Lautoka and Nadi are located in the Western side of Fiji on the island of Viti Levu. Lautoka, the second largest city of Fiji, is 24 kilometres north of Nadi and is the second port of entry in Fiji, after Suva.

Nadi is regarded as the fastest growing town in the South Pacific. The town is home to Fiji’s International Airport and a getaway to other Yasawas and Mamanuca islands.

4.2.2 Brief History of Fiji

Some 3500 years ago, the Melanesian and Polynesian settled on the Fijian island. Fiji was known to early explorers as “Viti islands”. In 1874, Fiji was ceded to Great Britain by the high chiefs. Prior to the British Empire, the Fijian people lived in their own communities and engaged in their traditional ways of hunting, gathering and other activities that practised by their ancestors (Go Fiji, 2011).

It is believed that the arrival of first European in Fiji had been accidental. Dutch explorer, Abel Tasman discovered Fiji in 1643 followed by English navigator Captain James Cook in 1774. Around early 19th century, ship wreakers and runaway convicts from Australia were the first Europeans to land and live amongst the Fijian. The name Fiji was first conceived by Captain Cook. The Fijians had called their land “Viti,” but the Tongans called it “Fisi,” and so it was by the differences in foreign pronunciation that the islands are known as Fiji islands (Go Fiji, 2011).

The British had adopted a similar pattern of colonialism in Fiji as in many other British colonies around the globe. The Indian indentured labour was sourced for the spread of agricultural activity mainly the sugar cane farming. Fiji became independent on October 10, 1970 (ibid).

Lautoka was first discovered by Captain William Bligh in 1789 during his heroic voyage to Timor. The colonial era marked a way for infrastructure developments in Fiji.
Since 1970, the population of Lautoka has grown rapidly, with dramatic changes in structure in the last twenty years. In 1974, Nadi was established as a town and other areas followed a similar pursuit.

4.2.3 People

Fiji is a multiracial society, home to iTaukei\(^8\), Chinese, Fijians of Indian descent, Europeans and other Pacific Islanders. iTaukei make up about 56 per cent of the total population whilst Fijian of Indian descent and others make up the remaining 44 per cent. iTaukei, the indigenous inhabitants of Fiji islands, are Melanesians. The Polynesian influence also features among the Melanesian community probably due to the migration and settlement of Tongans in some parts of Fiji in the early days. The People of Indian descent were primarily brought as indentured labourers from India between 1879 and 1916 to work in the sugarcane fields, which was followed by the voluntary movement of Indians to Fiji in the periods of 1920s and 1930s (Go Fiji, 2011).

Most of Fiji's population lives on Viti Levu's coasts. A large concentration of the population is found in greater Suva and in smaller urban centres. The iTaukei live throughout Fiji either in the villages or urban centres, while Fijians of Indians descent reside primarily near the urban centres and in the cane-producing areas of the two main islands. In recent years, the expiry of land leases have led to increase in migration from rural to urban areas especially amongst the Fijians with Indian descent in Fiji.

English, Hindi and Fijian are official languages of the country. Most of iTaukei are Christians, with some two-thirds being Methodist whilst some 77 percent of the Fijians of Indian descent are Hindu, with a further 16 percent being Muslim and 6 percent Christian. There is also a small Sikhs populations living in the Fiji (Fiji Islands Bureau of Statistics, 2008).

\(^8\)iTaukei refers Indigenous Fijians
4.2.4 Demography

4.2.4.1 Trends in Population growth

Fiji has witnessed an increase in population over the past few years. The total population is 860,743, with iTaukei comprising 475,887 and Fijians of Indian descent 315,417 (figure 4.1). According to the 2007 population census, the figures released by the Fiji Islands Bureau of Statistics showed a 9 per cent increase in the total population of Fiji between 1996 and 2007 (Fiji Islands Bureau of Statistics, 2008).

As shown in Figure 4.1 the iTaukei population recorded the highest increase during the 1996-2007 period followed by Fijians of Indian descent and others. There was a notable decline in population of Fijians of Indian descent over the years. It has been seen that overseas migration and low birth rate have largely contributed to the decrease in Indian population in Fiji.

Figure 4.1 Population of Fiji by Ethnic Group

![Population Graph](image)

4.2.4.2 Population Distribution in Rural and Urban Areas

The concentration of economic activities in and around urban centre’s has continued to attract rural dwellers in Fiji to the towns. The 2007 census data indicate that the population of people living in urban areas has increased from 359,495 to 424,846 while the rural population has declined from 415,582 to 412,425 (Fiji Islands Bureau of Statistics, 2008).

Table 4.1 Population Size in Fiji by Area 1996-2007

<table>
<thead>
<tr>
<th>Area</th>
<th>Population</th>
<th>% 2007 population</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1996</td>
<td>2007</td>
</tr>
<tr>
<td>Urban</td>
<td>359,495</td>
<td>424,846</td>
</tr>
<tr>
<td>Rural</td>
<td>415,582</td>
<td>412,425</td>
</tr>
<tr>
<td>Total</td>
<td>775,077</td>
<td>837,271</td>
</tr>
</tbody>
</table>


Table 4.1 shows the urban population growth in Fiji between 1996 and 2007. Urbanization has been occurring over a long period in Fiji. However, it has generated a range of social, environmental concerns and placed pressure on services in urban areas, for example poor water supply and sanitation, informal housing, problem of solid waste disposal and management.

In recent years, urbanization has become one of the critical demographic issues in Fiji. According to the 2007 population census, the proportion of people living in the urban areas has increased from 30 percent in 1960 to 49 percent in 2000, with a further increase up to 51 percent in 2007 (Fiji Islands Bureau of Statistics, 2008). These figures are likely to increase further since economic activities are mainly concentrated in and around the towns and cities which has attracted rural dwellers, especially the young people to move to the urban areas.
The rural to urban drift has given rise to pressure in urban areas and various issues have emerged such as squatters and pressure on services in urban centres. However, urbanization is also seen positively, contributing substantially to national GDP and economic growth.

4.2.5 Economy
Fiji is a middle income developing country. However, it is one of the more developed of the Pacific island economies, with AGDP per capita of US$2,220.00, although it remains a developing country and most vulnerable to changes in the global economy (ADB, 2001). In the midst of progress and development, the small nation of Fiji has faced many political setbacks, which has had huge negative impact on the economy in past 25 years. However, like any other developing nation, it has continued to strive for the betterment of national growth.

For many years, sugar and garments exports were the driving force of the country’s economy; however, neither of these industries was able to compete effectively in the global market due to various factors. The sugar industry was undermined by the phasing out of preferential price agreement with the European Union. The expiry of land leases is another factor that has contributed to the decline sugar cane industry in Fiji. Both of these developments were foreseen but no adequate measures were put in place to counteract or respond efficiently to them.

Fiji’s other important exports include crops such as coconuts, ginger, dalo and yaqona, which brings huge revenue to country. In recent years, the maturity of extensive mahogany timber reserves and mining of copper and bauxite has potential to inject millions of dollars in the local economy.
Fishing is another important industry in Fiji. The Pacific Ocean provides a third of the World’s tuna catch and the country depends on the exports and the revenue generated from fishing licenses paid by the distant countries to access Fiji’s Exclusive Economic Zone.

In recent years, growth in Fiji has been largely driven by a strong tourism industry as it slowly outpaced the sugar industry, which used to be the backbone of Fiji’s economy. The tourism industry expanded rapidly from the early 1980’s and has since become a leading economic activity. The visitors mainly come from Australia, New Zealand, the United States, the United Kingdom and other European and Asian countries.

4.3 Non-communicable Diseases: Types, Trends and Causes

In Fiji, non-communicable diseases (NCDs) such as diabetes, hypertensions, heart disease, high blood pressure, respiratory diseases and cancers, have now replaced infectious and parasitic diseases as the principal causes of mortality and morbidity. Many of these NCDs are thought to relate closely to changes in lifestyle that accompany economic development. There has been a dramatic change in the dietary and physical activity patterns amongst the all races of people, for instance which has been a major contributor to non-communicable diseases in Fiji.

According to the Fiji Food and Nutrition Centre (2008), high blood pressure affects every two in ten the adults over the age of twenty years in Fiji. Obesity and overweight are major health problems throughout Fiji and the Pacific region.

Diabetes, another example of lifestyle disease, is now regarded as one of the major causes of death in the Pacific islands. In the 1980’s a dramatic increase was noted in diabetes related deaths with a high incidence amongst the Fijian of Indian descent (Coyne, 2000). The increasing rates of non-communicable diseases are causing a serious concern for the health authorities in Fiji as they impose a heavy economic burden on the nation.

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9 Obesity occurs when the body accumulates excessive fat in the adipose tissues.
4.3.1 Mortality

The circulatory system diseases are emerging as the major cause of deaths in Fiji. In 2009, about 41 percent of causes of death were circulatory diseases, nutritional and metabolic diseases accounted for 18 percent while neoplasm contributed to 10 percent of the mortality. These statistics indicate that diseases are the leading cause of death in Fiji.

As shown in Table 4.2, diseases related to nutrition and metabolism have contributed to high mortality rates, which indicates the prevalence of unhealthy lifestyles in Fiji.

<table>
<thead>
<tr>
<th>Diseases</th>
<th>% of Mortality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diseases of circulatory system</td>
<td>40.52</td>
</tr>
<tr>
<td>Nutritional and metabolic</td>
<td>18.00</td>
</tr>
<tr>
<td>Neoplasm</td>
<td>10.18</td>
</tr>
<tr>
<td>Parasitic diseases</td>
<td>6.20</td>
</tr>
<tr>
<td>Diseases of respiratory system</td>
<td>5.57</td>
</tr>
<tr>
<td>Injury, poisoning and result of other</td>
<td>4.84</td>
</tr>
<tr>
<td>external causes</td>
<td></td>
</tr>
</tbody>
</table>


4.4 Occupational Health Safety (OHS) in Fiji

Occupational Health and safety (OHS) awareness first emerged in Fiji during the colonial days when British had legislation primarily to control the factories. The OHS Act defines and covers all workplaces. This legislation promotes better people management practice at workplace. The Ministry of Labour and Industrial Relations’ Occupational Health and Safety Section maintains data on reported cases of workplace injuries and workers’ compensation claims. Figure 4.2 shows OHS related injuries during 1998-2001 in Fiji.
In 2001, OHS related injuries increased by 171 compared to the previous year, indicating this as an emerging issue for policy makers and stakeholders in future (Perry, 2002).

**Figure 4.2 Occupational Heath and Safety Injury in Fiji**

![Graph showing occupational health and safety injuries from 1998 to 2001.]

Source: Perry, 2002.

### 4.5 Poverty in Fiji

The 2008-2009 Household income and Expenditure survey found that 31 percent of Fiji’s populations live below the Basic Needs Poverty line (BNPL)\(^{10}\) (Narsey et al., 2010). In rural areas, the incidence of poverty has declined, while poverty continues to increase in rural areas for all ethnic groups, 50 percent for others, 45 percent for Fijian of Indian descent, 42 percent for iTaukei.

In urban areas, Fijians of Indian descent had the highest incidence of poverty at 21 percent compared to 17 percent for iTaukei group. These statistics indicate that Fijians of Indian descent have highest incidence of poverty in rural and urban areas compared to iTaukei (Narsey et al., 2010). Poverty is increasing in rural areas with the Western

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\(^{10}\) BNPL has two components: the food poverty line and the non-food poverty line. The estimated BNPL for all of Fiji is about FJ $175 per week in 2008-09, for a household of 4 adults equivalent (Narsey et al., 2010).
Division had receiving largest share of poverty alleviation resources compared to other divisions in Fiji.

### 4.6 Disability in Fiji: Types and Dimensions

Disability has been a growing concern with trends surfacing from the limited data captured by the 1999 Census and the FNCDP’s 2010 National Baseline survey. Around 12,000 people were found to be living with disabilities, though these numbers are likely to escalate upon an in-depth study and registration of people with disabilities in Fiji. Table 4.3 shows the total estimated population of people living with disabilities in Fiji.

#### 4.6.1 Dimensions of Disability in Fiji

**Table 4.3 People with Disabilities by Gender**

<table>
<thead>
<tr>
<th>Category</th>
<th>Population of disabled</th>
<th>% of the disabled population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Men</td>
<td>6,180</td>
<td>54.20</td>
</tr>
<tr>
<td>Women</td>
<td>5,222</td>
<td>45.80</td>
</tr>
<tr>
<td>Total</td>
<td>11,402</td>
<td>100.00</td>
</tr>
</tbody>
</table>


As shown in table 4.3, the statistics indicate the higher prevalence of disability among the male population in Fiji. Of the 11,402 cases of disabilities in Fiji about 54 percent are males.

Historically, the construction of a single ward to accommodate psychiatric patients in 1884 marked the development of early services for people with disabilities. In the mid-1960s institutions were established to cater for the educational and other related needs for the growing population of children with disabilities.
4.6.2 Geographic Distribution of Disabled Population in Fiji

Beside the advancement in legal approach towards disability in Fiji, there is lack of data on people living with disabilities. However, the recent FNCDP national baseline survey (2010) has revealed an estimated disability population by districts, measures of disability, education and unemployment (FNCDP, 2010). The FNCDP survey (2010) suggests that nearly 1.4 percent people in Fiji are living with disabilities. Table 4.4 shows the disability populations by districts in Fiji.

Table 4.4 Disability Populations by Districts in Fiji

<table>
<thead>
<tr>
<th>District</th>
<th>Total population (thousands)</th>
<th>Total disability population</th>
<th>% of total disabled population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Macuata</td>
<td>72,441</td>
<td>1846</td>
<td>2.54</td>
</tr>
<tr>
<td>Suva</td>
<td>89,202</td>
<td>1647</td>
<td>1.84</td>
</tr>
<tr>
<td>Lautoka</td>
<td>94,873</td>
<td>1130</td>
<td>1.19</td>
</tr>
<tr>
<td>Nadi</td>
<td>63,651</td>
<td>822</td>
<td>1.30</td>
</tr>
<tr>
<td>Kadavu</td>
<td>10,167</td>
<td>707</td>
<td>6.95</td>
</tr>
<tr>
<td>Ba</td>
<td>80,852</td>
<td>636</td>
<td>0.78</td>
</tr>
<tr>
<td>Sigatoka</td>
<td>58,387</td>
<td>617</td>
<td>1.15</td>
</tr>
</tbody>
</table>
Table 4.4 shows that Taveuni district has highest rate of disability with about 19 percent of its population. This is followed by the district of Kadavu with 7 percent, Rotuma 5 percent, Levuka 4 percent and Macuata with 3 percent of people with disabilities of its total population. The lowest incidences of disability were reported in Nausori 0.25 percent and Vunidawa 0.28 per cent and Tailevu district with 0.35 percent. The Nadi and Lautoka districts together had 2.50 per cent disability cases of the population. Fiji still needs in-depth study to capture the precise number of people living with disabilities.

### 4.6.3 Disability Types

In Fiji, the FNCDP survey (2010) found that 14 percent of the disabled populations have congenital disability, which could be caused by heredity and pre-birth complications (FNCDP, 2010). While acquired disability accounts for 49 percent of the total disabled population. These figures are alarming for a small nation with a

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11 Congenital Disability refers to disability that occurs when the unborn baby acquires the disability whilst in the mother’s womb.
population of less than a million. Acquired disability can be prevented. Factors such as sickness, abuse and accidents contribute to the incidence of acquired disability. Figure 4.3 shows the major disability types collated from data from the 1996 Fiji census.

**Fig 4.3 Disability Types in Fiji, 1996**


### 4.6.4 Trends and Causes of Amputations and Disability

In 1996, in Fiji, it was recorded that disability related amputations occurred at a rate of 10 per week (Bolton and McGill, 1999). There has been little study on amputations however the newspapers in Fiji have highlighted that around 300 disability related amputations are done per year (Fiji Times, 2011).

According to the health authorities of Fiji, lifestyle diseases such as obesity, diabetes and high blood pressure account for 80 percent of the deaths in the country and therefore the amputation related to these diseases are likely to increase in future (ibid.).
4.6.5 Disability Policies and Services Providers in Fiji

In the Pacific, Fiji has taken a lead role in recognition and protection of the rights of people living with disabilities. These include:

- Disabled Persons Act (1994) which provides the legal framework for those living with disabilities
- National Policy on Persons Living with a Disability (2008) which is a guiding framework to address the problem of disability in Fiji
- the Social Justice Act 2001, which highlights Schedule of Affirmative Action programs to achieve equity of access by disadvantaged groups, including people with disabilities.

The government continues to serve the people with disabilities through the different Acts and international conventions it has adopted in the area of protection and elimination of all forms discrimination.

4.6.6 National Disability Policy on Persons Living with Disability 2008- 2018

In recent times, disability was invisible in across all forms of development in Fiji. However, the endorsement of the National Disability Policy in 2008 is evidence of commitment from the state towards people with disabilities. This policy provides a framework for addressing disability in Fiji with aims to develop a more ‘inclusive’ society, greater awareness and eradicating all barriers to enable full participation of people with disabilities in the economic and social life (FNCDP and Ministry of Social Welfare, 2008).

The policy will be implemented by FNCDP and Ministry of Social Welfare, Women and Poverty Alleviation in collaboration with other government ministries such as Health, Education and organizations of people with disabilities (DPOs) that provide services to cater to the needs of people living. The policy priorities include the following strategic areas:

- advocacy, awareness, empowerment and statistics
• prevention, Early detection, identification, intervention, rehabilitation and health
• effective education services and programmes
• training and employment
• promotion of rights of disabled women and children
• access to built environment and transport
• provision of housing and community care
• access to information and communications technology
• poverty alleviation, social security and livelihood programmes
• disability sports and recreation
• national institutional coordination networking as well as regional and international cooperation and participation
• Policy monitoring and review and implementation.

The issues of disability also feature in other policies of various government departments such as National Youth Policy of Fiji.

Photograph 4.1 Amputee on Wheel chair

Source: By Researcher, 2010.
4.6.7  FNCDP and Other Disabled Organizations

FNCDP is primarily mandated to serve as a coordinating mechanism on disability matters, formulate national disability policies, develop plans, acquire funds to support disability services, conduct awareness on the disability issues, mainstream disability concerns into government activities and promote disability prevention measures.

As for civil societies, there are almost 26 agencies that are affiliated with FNCDP that continue to create awareness and advocacy on rights of people living with disabilities in Fiji.

Over the decades, disability gained recognition in our societies as special schools were established in main urban centres of Fiji. This was further enhanced with people with disabilities formed organizations to advocate and lobby on issues concerning them. The Fiji Government in its effort to address the needs of growing disability passed the Fiji National Council for Disabled Persons (FNCDP) Act in 1994. This became a remarkable achievement for people with disabilities.

In the past few years, FNCDP has recorded an increase in the number of disability NGOs and agencies affiliated with them. Mohanty (2008) states that a total of 26 disability service organizations are existence in Fiji, such as:

*Fiji Disabled People's Association (FDPA).*  This is a national, cross-disability and self-help organization established in 1980 by persons with disabilities. FDPA is a member of the national assembly of Disabled Peoples’ International (DPI) and presently houses the DPI Oceania Subregion Office.

*Disabled Persons International (DPI) Oceania Subregion.*  This is one of the five subregions of DPI in Asia/Pacific region. The office was established in Suva, Fiji in March 2000. The Oceania Subregion has membership in seven countries including Australia, Cook Islands, Fiji, New Zealand, Samoa, Solomon Islands and Vanuatu.
**Spinal Cord Injury Association.** This organization was established in 1993 to support individuals who became paralyzed as a result of spinal cord injuries.

**United Blind Persons of Fiji (UBP).** UBP was established in 1991 by blind and visually impaired individuals. It advocates on behalf of blind and visually impaired persons in Fiji; to identify, inform, counsel and refer such persons and their families for appropriate services and to provide such services that are otherwise not available to the membership.

**Western Disabled People’s Association.** Established in 1973 to serve the interest and welfare of physically disabled persons in the Western Division of Fiji.

**Counterstroke Fiji,** established in 1988 as the national health support organization is a group which helps people who have suffered strokes.

### 4.6.8 Financial Assistance to Disabled People

The Department of Social Welfare under their family assistance (FA) allowance scheme provides a cash allowance between $60 and $100 on monthly basis to target group such disabled that do not have sufficient means of support and ability to cope. The food voucher is another scheme by the Department of Social Welfare which provides a food voucher worth $30 on a monthly basis to the target groups.

### 4.6.9 Educational Assistance

The special education unit of the Ministry of Education is responsible for coordination and implementation of all special education institutions for the children with disabilities in Fiji. Currently, there are 17 registered Special Education School infrastructures in Fiji. These schools are owned and managed by charitable organizations. Special schools follow the primary education curriculum as well as the special education curriculum for skills development of people with disabilities that was introduced in 1995.

Table 4.5 shows the school names and locations, mainly found in the urban areas, in the various districts.
Table 4.5: Distribution Patterns of Educational Infrastructure for Disability in Fiji

<table>
<thead>
<tr>
<th>Area</th>
<th>Total number</th>
<th>Names</th>
</tr>
</thead>
<tbody>
<tr>
<td>Suva</td>
<td>6</td>
<td>Suva intellectually Handicapped School, Fiji School for the Blind, Hilton special School, Early Intervention Centre Vocational Training Centre, Gospel School for the Deaf</td>
</tr>
<tr>
<td>Nausori</td>
<td>1</td>
<td>Nausori Special Education School</td>
</tr>
<tr>
<td>Sigatoka</td>
<td>1</td>
<td>Sigatoka School for Special Education</td>
</tr>
<tr>
<td>Lautoka</td>
<td>2</td>
<td>Lautoka School for Intellectually Handicapped, Lautoka School for Special Education</td>
</tr>
<tr>
<td>Nadi</td>
<td>1</td>
<td>Nadi Centre for Special Education</td>
</tr>
<tr>
<td>Savusavu</td>
<td>1</td>
<td>Savusavu Handicapped School</td>
</tr>
<tr>
<td>Ba</td>
<td>2</td>
<td>Ba School for Special Education, Veilomani Rehabilitation Workshop</td>
</tr>
<tr>
<td>Rakiraki</td>
<td>1</td>
<td>Ra Society School for the Disabled</td>
</tr>
<tr>
<td>Levuka</td>
<td>1</td>
<td>Levuka School for Handicapped</td>
</tr>
<tr>
<td>Labasa</td>
<td>1</td>
<td>Labasa School for Handicapped</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>17</strong></td>
<td></td>
</tr>
</tbody>
</table>

Source: Government of Fiji, 2005

Walsh (1999) states that levels of education are important indicators of the likelihood of individuals to obtaining better employment. The ministry also provides the vocational education.
Photograph 4.2 Special Students with Disabilities

Source: By Researcher, 2010.

The photograph 4.2 shows the students of Labasa special school during an awareness programme organized by an NGO.

4.7 Conclusions

This chapter has provided an account of the background of Fiji Island mainly on the aspects of history, geography, economy, demography, poverty and non-communicable diseases. It also discussed on the prevalence of disability in the different parts of country and other related areas such the disability policies, special schools, organizations working with disabled people, and assistance provided to people with disabilities.
CHAPTER FIVE

RESEARCH FINDINGS AND ANALYSIS

5.1 Introduction
This chapter provides with findings and analysis of data disability related to lifestyle diseases and occupational hazard. The chapter is divided into two major parts. The first part deals with findings based on organizational and individual survey findings on disability in Fiji. The second part focuses on the analysis of the researcher’s survey findings on lifestyle diseases and occupational hazard related disability in the study area.

5.2 Lifestyle Diseases and Occupational Hazard Related Disability
There has been no comprehensive study to determine the correlation between lifestyle disease and occupational hazard- related disability in Fiji. However, the FNCDP survey and the JICA Country report (2002) have highlighted important data related to both types of disability. The lack of notification and registration is major obstacle in the collation of disability related data as the JICA report (2002) of Country Profile on Disability points out.

5.2.1 Disability Population and Definition
Disability is defined as long term physical, mental, learning, intellectual and sensory impairment, which limits an individual’s participation in everyday life as well as enjoyment of human rights (FNCDP, 2010).

According to the 2007 Fiji population census, the total disability population in the country was 11 402. Walsh (1999) points out that census data is just the “tip of the iceberg” as the reality of disability prevalence is not captured by the census.
Definition of disability varies and this is seen as one of the contributing factor to different data. The Fiji census (1996) identified five types of disability. These are:

- **sight** – where a person is either partially or totally blind
- **intelligence** – when the person has only partial or no control over his mental facility
- **hearing** – where the person is either partially or fully deaf
- **physical** – where the person has no limbs
- **age** – when extreme old age prevents a person from performing the work

According to Walsh (1999) physical disability is the most common type of disability in Fiji. This is followed by mental disability and sight disability. Figure 5.1 shows different disability types in Fiji based on 1996 census data.

**Figure 5.1 Disability Types in Fiji, 2010**

![Bar chart of disability types in Fiji](image)

Figure 5.1 shows the high incidence of physical disability followed by mental and other types of disabilities. Physical disability includes loss of limbs which points a possible correlation of amputations and lifestyle disease such as diabetes and injuries; however, this needs a systematic study.
5.2 1.1 Disability Population in Fiji by Age and Sex

The 1996 census data found that disability common among the males, young and old. This was also evident in the FNCDP 2010 survey report, where more than just half of the disabled population was found to be males. Table 5.1 shows the disability population by sex and age in Fiji.

Table 5.1 Disability Population in Fiji by Age and Sex

<table>
<thead>
<tr>
<th>Age group</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-13</td>
<td>1004</td>
<td>607</td>
<td>1611</td>
</tr>
<tr>
<td>14-40</td>
<td>1810</td>
<td>1331</td>
<td>3141</td>
</tr>
<tr>
<td>41-50</td>
<td>565</td>
<td>471</td>
<td></td>
</tr>
<tr>
<td>50+</td>
<td>2987</td>
<td>2925</td>
<td>5912</td>
</tr>
<tr>
<td>Unknown</td>
<td>405</td>
<td>333</td>
<td>738</td>
</tr>
<tr>
<td>Total</td>
<td>6206</td>
<td>5196</td>
<td>11,402</td>
</tr>
</tbody>
</table>


Table 5.1 shows that total disability population 6,206 males are living with disabilities of the while 5196 females are disabled. The able also shows that disability incidence increases with age group.

5.2.1.2 People with Disability by Ethnicity

The FNCDP 2010 survey report found, that most of the disabled iTaukei 67 percent while Fijians of Indian descent comprised of 30 percent of the disabled population, Rotumans 1 per cent and others 2 percent.

5.2.1.3 People with Disabilities by Marital Status

The largest proportion of people with disabilities are be married (FNCDP 2010). The FNCDP survey stated that 39 percent were married whilst 36 percent were never married.
However, this may change as people may have acquired disability after marriage, because the FNCDP survey was limited to questions of whether single or married, separated, widowed and separated. Therefore, it is difficult to conclude that most disabled people are able to get married because the percentage of married status is quite close to the single status percentage. Figure 5.2 shows the proportion of people with living with disability by marital status in Fiji.

Figure 5.2 Marital Status of Disabled Population in Fiji, 1996

5.2.2 Acquired Disability
The FNCDP 2010 National baseline survey and other studies undertaken in Fiji have highlighted some major causes of acquired disability, and educational and employment differentials amongst the disabled population. The statistics revealed in these studies indicate a concern for the state of welfare of disabled people in Fiji.

5.2.2.1 Causes of Acquired Disability
Sickness and aging, followed by accidents, are identified as major causes of acquired disability. Table 5.2 shows that about 23 percent of persons with disabilities acquired their disability through sickness and 8 percent through aging. Accidents account for about 6 percent of the total incidence of disability.
Table 5.2 Causes of Acquired Disability

<table>
<thead>
<tr>
<th>Cause</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sickness</td>
<td>23.27</td>
</tr>
<tr>
<td>Accidents</td>
<td>5.87</td>
</tr>
<tr>
<td>Aging</td>
<td>8.32</td>
</tr>
<tr>
<td>Abuse</td>
<td>0.56</td>
</tr>
<tr>
<td>Unknown</td>
<td>10.03</td>
</tr>
</tbody>
</table>


Another interesting fact, these data reveal the 10 percent of the unknown causes of the disability. This suggests that percentage due to sickness and accidents are likely to increase depending on availability of clear information from the unknown cases. Lifestyle diseases such as diabetes and hypertension in Fiji have been growing and contribute significantly to acquired types of disability. Besides road and sporting accidents, occupational accidents also contributes to acquired disability types in Fiji.

5.2.2.2 People with Disabilities by Type of Sickness

Sickness has been identified as one of the leading causes of disability in Fiji. The FNCDP 2010 survey found six major types of sickness: diabetes, stroke /hypertension, muscle disorders, lung infection, mental illness and heart diseases. The survey also found that diabetes accounts for 10 percent of acquired disability followed by stroke /hypertensions about 8 percent, Muscle disorders /Arthritis 2 percent and lung infection 1 percent, mental illness 1 percent and heart diseases about 1 percent. Table 5.3 shows the disability by sickness.
Table 5.3 shows Disability by Type of Sickness

<table>
<thead>
<tr>
<th>Type of Sickness</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diabetes</td>
<td>10.4</td>
</tr>
<tr>
<td>Stroke /Hypertension</td>
<td>7.74</td>
</tr>
<tr>
<td>Arthritis /Muscle disorders</td>
<td>1.81</td>
</tr>
<tr>
<td>Lung Infection</td>
<td>1.34</td>
</tr>
<tr>
<td>Mental Illness</td>
<td>0.94</td>
</tr>
<tr>
<td>Heart Disease</td>
<td>0.64</td>
</tr>
<tr>
<td>Unknown</td>
<td>0.41</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>23.28</strong></td>
</tr>
</tbody>
</table>


Table 5.3 shows diabetes and stroke /hypertension as major causes of acquired disability. Both are sickness are at least partially caused by unhealthy lifestyles, thus can be preventable.

5.2.2.3 Disability by Types of Accidents

Accidents are identified as another major cause of acquired disability in Fiji. Home accidents account for about 2 percent of disability by accidents followed by falls1 percent, motor vehicle accidents about 1 percent; about 1 percent of disabilities were caused by workplace accidents. Table 5.4 shows disabilities by type of accidents and accidents based on data collated from the FNCDP 2010 survey as this is most recent work on disability in Fiji.
Table 5.4 Disability by Types of Accidents

<table>
<thead>
<tr>
<th>Type of Accidents</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Home accidents</td>
<td>1.88</td>
</tr>
<tr>
<td>Fall</td>
<td>1.82</td>
</tr>
<tr>
<td>Motor vehicle</td>
<td>1.15</td>
</tr>
<tr>
<td>Workplace</td>
<td>0.62</td>
</tr>
<tr>
<td>Accidents at sea</td>
<td>0.23</td>
</tr>
<tr>
<td>Natural disasters</td>
<td>0.05</td>
</tr>
<tr>
<td>Accidents in institutions</td>
<td>0.04</td>
</tr>
<tr>
<td>Police brutality</td>
<td>0.02</td>
</tr>
<tr>
<td>Sports induced</td>
<td>0.06</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>5.87</strong></td>
</tr>
</tbody>
</table>


5.2.3 People with disabilities by Employment Status

Most disabled people are found to be unemployed. The FNCDP 2010 survey and Walsh’s (1999) analysis of 1996 census data found a similar trend amongst the People with disabilities in Fiji.

The FNCDP 2010 survey found that 89 percent of people with disabilities were unemployed whilst 11 percent were employed (table 5.5).

Table 5.5 People with Disabilities in Fiji by Employment status

<table>
<thead>
<tr>
<th>Status</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employed</td>
<td>11</td>
</tr>
<tr>
<td>Unemployed</td>
<td>89</td>
</tr>
</tbody>
</table>


This data indicates a huge disparity in the employment area for people with disabilities in Fiji.
5.2.4 People with disabilities by Educational status

Most disabled people are uneducated. The FNCDP 2010 Survey found that only 12 percent of people with disabilities were educated while 87 percent were uneducated. This indicates the high illiteracy rate amongst the disabled population. These figures also indicate a close correlation between education and employment i.e. a higher illiteracy rate means a higher unemployment rate. Table 5.6 shows the percentage of people with disabilities by education and employment, based on the data collated from FNCDP 2010 survey.

Table 5.6 People with Disabilities in Fiji by Educational Status

<table>
<thead>
<tr>
<th>Status</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Educated</td>
<td>12</td>
</tr>
<tr>
<td>Uneducated</td>
<td>87</td>
</tr>
<tr>
<td>Not applicable</td>
<td>1</td>
</tr>
</tbody>
</table>


5.2.5 People with Disabilities receiving Assistance and Support

Most disabled people are uneducated and unemployed, thus depend on assistance from government and non-government organizations (NGOs). The FNCDP 2010 survey found that the majority of people with disabilities depend either on charitable bodies or the Social Welfare Department (FNCDP, 2010).

5.3 Survey Analysis

This section includes analysis of responses received from the fieldwork undertaken in Lautoka and Nadi area. For this study purpose, disability is defined as those acquiring disability as a result of lifestyle disease and occupational hazard in their lifetime after birth. This study sample also included few respondent who acquired disability due to illness as they grew older while some were born with one form of disability but acquired multiple disabilities as a result of illness like diabetes in their adult life.
5.3.1 Types of Disability

This sample study found that most people with disabilities suffered from multiple disability which accounts for 45 percent of the disability type, physical disability 38 percent, hearing impairment 8 percent, intellectual impairment 7 percent and blindness account for 2 percent of the disability types. Table 5.7 shows people with major disability types found in the sample included in this fieldwork.

<table>
<thead>
<tr>
<th>Type</th>
<th>Number of incidence</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple</td>
<td>27</td>
<td>45</td>
</tr>
<tr>
<td>Physical</td>
<td>23</td>
<td>38</td>
</tr>
<tr>
<td>Hearing</td>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td>Intellectual</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

Source: Primary Survey, 2011.

This study also found that Lautoka and Nadi hospitals, which are the two major hospitals in the study area, diagnosed the following disability types: Physical impairment, Intellectual impairment, hearing and vision impairment, mental illness and multiple disabilities. These findings also correlate with the disability types found amongst the people with disabilities in this survey. Therefore, these findings indicate that the most common types of disabilities in Western Division of Fiji are multiple and physical disabilities.

5.3.2 Disability Characteristics

5.3.2.1 People with Disabilities by Ethnicity

The study shows that 59 percent of people with acquired disabilities surveyed in Nadi and Lautoka area were Fijian of Indian descent, 38 percent were iTaukei, while 3 percent were others. There are more people with acquired disabilities among the people of Indian descent in Fiji compared to iTaukei.
These findings revealed a transition in the ethnicity trend compared to FNCDP 2010 survey whereby iTaukei consisted of 67 percent of the disability population and Fijians of Indian decent with 30 percent. The following factors possibly attributed to this:

- more Fijians of Indian decent with acquired disabilities live within town and nearby areas as this survey covered the Lautoka and Nadi towns and close by villages

- disability is increasing amongst the Fijians of Indian descent because lifestyle diseases such as diabetes and hypertension are higher among the population of Fijian with Indian decent in Fiji

- strengthening network of the disabled Indian population may have introduced some bias, as the survey was based on snowball sampling. Thus, perhaps the survey captured more Fijians of Indian decent than iTaukei or others.

**Figure 5.3 People with Acquired Disabilities by Ethnicity**

[Diagram showing the distribution of disability by ethnicity with Fijians of Indians Descent at 59%, iTaukei at 38%, and Others at 3%]

Source: Primary Survey, 2011.
This sample study indicates there are more disabled Fijians of Indian decent compared to people of other ethnicity in the two districts; however, more studies are required to determine the emerging trends in other areas of Fiji.

**5.3.2.2 People with Acquired Disabilities by Marital Status**

This sample study found that 38 percent of respondents said they were married, another 37 percent were single while a further 13 percent were widowed, 7 percent divorced and 5 percent were separated. It is to be noted that a large proportion of people with lifestyle and occupational-related disability are unmarried and single individuals. Thus, their living conditions without a family may have been difficult and this group needs more community, state and NGO support.

**Figure 5.4 People with Acquired Disabilities by Marital Status, fieldwork Sample**

![Pie chart showing marital status distribution]

Source: Primary Survey, 2011.

However, this study found that most young people with acquired disability reported themselves as single, whilst most of those who were married are in their forties or fifties. This highlights that they properly acquired disability in their adult life after marriage. Table 5.8 shows the age range of single disabled (never married) persons in this survey.
Table 5.8 Age range of People with Acquired Disabilities by Single Status

<table>
<thead>
<tr>
<th>Age group</th>
<th>Number of disabled persons</th>
<th>% of single disabled population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Below 35 years</td>
<td>20</td>
<td>90.9</td>
</tr>
<tr>
<td>35 and above</td>
<td>2</td>
<td>9.1</td>
</tr>
</tbody>
</table>

Source: Primary Survey, 2011.

These findings further indicate that there may be insecurity amongst young people with disability status and possibly fewer chances of entering into married life. Thus, this is likely to create more burdens for families and state because most single disabled people will turn to depend on them.

5.3.2.3 Acquired Disability Population by Age-Group

Approximately 42 percent of the people with acquired disabilities were youths with the age of below 35 years old, 25 percent were in the age ranges of 36-56 years and 57-76 years while 8 percent were above 77 years of age.

Figure 5.5 Percentage of Acquired Disability Population by Age group, Fieldwork Sample

Source: Primary Survey, 2011.
These findings highlight that a large proportion of people with disabilities are young people in their prime and productive time of life. This indicates possible productivity loss and economic burden as these youths grow older, requiring assistance from families and the state. This trend is most depressing and has serious implications for policy intervention.

As previously mentioned, most young people with disability status are single, and therefore are likely to become more dependent on state and families for care in their old age, if they remain single. The demand for social welfare and protection is also likely to increase.

5.3.2.4 Educational Status of Acquired disability Population
According to the findings 42 percent of people with acquired disabilities surveyed had attained primary education while 38 percent had reached secondary level. The tertiary level accounted for 7 percent of the persons with disabilities while 13 percent had no educational level.

Figure 5.6 Percentage of People with Acquired Disability by Education

Source: Primary Survey, 2011.
The findings indicate that people with disabilities are not well educated as they had reached up to primary and secondary levels of education. It was gathered during the survey that most of the respondents came from poor backgrounds, thus were unable to continue further studies. Most of the respondents were school leavers and were not born with disability status but acquired disability during adulthood.

Education is regarded as critical as key to attaining a better living standard. A higher the level of educational attainment means better economic opportunities and higher paid jobs. These findings clearly show that people with disabilities generally have lower education levels, which can be one possible contributing factor in their unemployment and poverty. Low education status or no education left them to take up low paid hazardous activities for earning their livelihoods, thus exposing them to more chances for occupational accidents and subsequently, disabilities. In another dimension, low educational level leads to poor knowledge on food and nutritional value and deprived lifestyles can lead to a higher incidence of lifestyle related disability.

5.3.3 Measures of Disability
The acquired and congenital are two different measures of disability. However, the acquired disability is further discussed because this was the main focus area of this study.

5.3.3.1 Major Causes of Disability
This study found out that of the number of people surveyed, nearly 20 percent were born with one form of disability and later acquired multiple disabilities due to illness in their adult life while the majority of the respondents acquired disability, which accounted for about 77 percent of the major cause of disabilities. The rest were due to aging and illness.

The main focus of this study was lifestyle illness and work related accidents in their adult life. The high number of people acquiring disability through accidents and illness highlights an emerging problem for Fiji.
As shown in Figure 5.7, lifestyle illness accounts for 41.7 percent of the acquired disability while 35 percent arises through accidents and 3 percent through aging and illness. Acquired disability is largely preventable, thus people have the capacity to avoid the situations/conditions contributing to possible disability.

5.3.3.2 People with Disabilities by type of Illness and Ethnicity

The study of the sample found that of the total disabilities due to illness, diabetes has a high prevalence of disability in Nadi and Lautoka with 37 percent, stroke and hypertension with 3 per cent and about 2 percent unknown. Diabetes is the most common type of lifestyle disease in Fiji today. These findings indicate the close relationship between disability and the incidence non-communicable of diseases such as diabetes, stroke, and hypertension.
Table 5.9 People with disabilities by type of Illness and Ethnicity

<table>
<thead>
<tr>
<th>Illness</th>
<th>Total Number of incidence</th>
<th>No of iTaukei</th>
<th>Fijians of Indian descent</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diabetes</td>
<td>22</td>
<td>9</td>
<td>12</td>
<td>1</td>
</tr>
<tr>
<td>Stroke /Hypertension</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Unknown</td>
<td>1</td>
<td>-</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Total</td>
<td>25</td>
<td>10</td>
<td>14</td>
<td>1</td>
</tr>
</tbody>
</table>

Source: Primary Survey, 2011.

5.3.3.3 People with Disabilities by Type of Accidents
This study found that occupational hazard was the most common type of accident with 57 percent followed, by other forms of accident with 19 percent; motor vehicle accidents with 19 per cent and 15 percent home based accidents.

Table 5.10 Disability by Type of Accidents

<table>
<thead>
<tr>
<th>Type of Accidents</th>
<th>Number of Accidents</th>
<th>% of Accidents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occupational</td>
<td>12</td>
<td>57.14</td>
</tr>
<tr>
<td>Motor vehicle</td>
<td>4</td>
<td>19.0</td>
</tr>
<tr>
<td>Home based</td>
<td>1</td>
<td>4.8</td>
</tr>
<tr>
<td>Others</td>
<td>4</td>
<td>19.0</td>
</tr>
<tr>
<td>Total</td>
<td>21</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Source: Primary Survey, 2011.

Occupational related accidents are found to be very common in the study area with many respondents said to have worked in the informal sector. As shown in table 5.10 other types of accidents constitute of 18 percent of the disability by accidents. The others (19 percent) includes accidents such as sport induced, diving and falls.
These findings indicate possibility of loopholes in the activities of the labour administration in the field of Occupational Health and Safety (OHS). If so; this could be connected possible with increasing disability incidence in Fiji.

5.3.4 Employment Status

This study found out that only 22 percent of people with lifestyle illness and occupational hazard–related disabilities were employed at the time of survey, while the vast majority (78 per cent) was unemployed.
As shown in figure 5.9 most of these disabled people are unemployed. The obvious reason, previously stated, is that most disabled people had attained lower educational level. The combination of lower education status with disabilities severely limits their chances for getting employed, so they remain poor. Their lifestyles, with lower education, poverty, no employment and low category occupations with hazardous conditions makes them vulnerable to physical and intellectual disabilities.
5.3.4.1 Occupation Types

This study found that 85 percent of people with lifestyle illness and occupational hazard-related disabilities in the study sample were involved in informal sector and while 15 percent were working in the formal sector.

Figure 5.10 shows the occupational types of the respondents.

Figure 5.10 Occupation Types of People with Disabilities

Source: Primary Survey, 2011.

The study determined that people with lifestyle illness and occupational hazard-related disabilities were mainly involved in informal sector activities such as begging, working as a house girl, peanut selling, and market vending and so on. However, begging was most common type of activity engaged by the most of the people with disabilities.

It is understood that begging on streets is not the safest way of earning money because it is illegal. Those employed in the informal sector also lack securities such as insurance policy or compensation benefits in incidents of occupational hazards.
Fiji’s *Employment Relations Promulgation* (ERP) states that an employer who employs 50 or more employees may employ physically disabled persons on a ratio of 3 percent of the total number of workers employed. According to this legislative provision people with disabilities can acquire employment with their skills. In this study, it was found that people with disabilities had lower education levels; lacking any significant skill development, they held only low-paid jobs.

### 5.3.4.2 Wages Received by People with Disabilities in Employment

This study found variation in wages between people with acquired disabilities who had higher education attainment and those with lower educational attainments. As mentioned earlier, most of them having primary and secondary education levels are found to be employed in the informal sector with average weekly wages between FJ$60-200, while those employed in the formal sector received $200-400 per week excluding their Fiji National Provident Fund deductions.

This study found that people who had attained tertiary education did receive higher salaries whilst those with secondary and primary education levels had salaries ranging from $60 to $200.00 per week. A person with a disability earning $60.00 per week and receiving no other support may face many hurdles in his/her life to support themselves and their families economically.

### 5.3.4.3 Reasons for Unemployment

This study found that 40 percent of the sample people with disabilities were too old to work while 38 percent were physically unfit to work, 13 percent were facing difficulties in finding suitable jobs and 9 percent were eager to work but no employer was giving them the opportunity to work due to lower their educational level and lack of skills (figure 5.11).
These findings were purely based on each respondent’s own assessment of their ability to perform any type of paid job. It was also noted that some respondents who were willing to work found difficulties in finding suitable jobs or the employers refused to offer them jobs. This shows that employers underestimated the capabilities of people with disabilities and created barriers for them and thus they become marginalized.

This study also highlights that unemployment is a huge problem among the people with acquired disabilities for the following possible reasons: people with disabilities have low education levels and have the mind set of “can’t do anything”; unfit or too old; lack of suitable skills; lack of commitment from employers to employ people with disabilities; and medically unfit to work.

These are a few of the possible barriers that can be summarized from the above findings for the problem of unemployment among the people with disabilities. This marginalized section of people remains under hardships and needs more social protection and assistance.
5.3.4.4 Compensation Payment to injured person

This sample study found that 50 percent of the people with acquired disabilities who were injured at work received some form of compensation while 50 percent were not compensated. The respondents said that employers gave them financial support, which they regarded as compensation. Table 5.11 shows the compensation paid by the employers to the people who were injured at the job site.

<table>
<thead>
<tr>
<th>Type of injury</th>
<th>Compensation</th>
<th>No compensation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occupational</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Motor vehicle</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Total</td>
<td>6</td>
<td>6</td>
</tr>
</tbody>
</table>

Source: Primary Survey, 2011.

As previously mentioned, most of people with disabilities had lower education, thus lack the information and confidence to challenge their employers for compensation. There is also a possibility that working on a casual basis does not provide security such as legal contracts.

5.3.5 Financial Assistance and Support to People with Disabilities

This study found that 38 percent of people with lifestyle illness and occupational – related disabilities received financial assistance from institutions, 36 percent received some from family members and 26 percent received no form of assistance (figure 5.12). The findings indicate that families and institutions play a very important role in the welfare of people with disabilities.
People with disabilities are found to be primarily dependent on family, community and institutions for financial support and assistance because most of them are unemployed and have lower education and skills. However, as mentioned earlier, a majority of people with disabilities are single individuals without any family supports; they are neglected and need assistance and social protection.

This study established that people with disabilities receive assistance both financial and non-financial support from organizations ranging from charitable bodies, such as church, Red Cross society, NGOs such as FNCDP, a government department like Social Welfare and private bodies especially former employers of people with disabilities.

The Department of Social Welfare provides assistance to people with disabilities in two ways. Firstly, financial assistance is given through their family assistance scheme on a monthly basis and assistance through a food voucher scheme.
Secondly, assistance is provided by the Social Welfare department to NGOs like FNCDP and other charitable organizations dealing with disability. Religious organizations such as churches, Red Cross Society and business organizations mainly provide assistance in the form of kind including food, clothes and other stuffs.

5.3.6 People with Disabilities on Medication

This study established that 58 percent of the sampled people with disabilities are on medication and 42 percent are not on any form of medication. In other words, their medication status indicates more than half of the people with disabilities have medical conditions. This also points to extra economic burdens for individuals, families and health authorities to cater for the cost required. Figure 5.13 shows the people with disabilities on medications.

Figure 5.13 People with Disabilities on Medication

![Pie chart showing 58% on medication and 42% not on medication]

Source: Primary Survey, 2011.

As shown in figure 5.13, 42 percent of people with disabilities are not on any form of medication suggesting a better health status amongst them.
However, a vast majority of people are living with disabilities are not in good physical condition and need medication. These groups of people find it hard to engage in any employment, and thus remain poor.

5.3.7 Challenges faced by People with Disabilities

People with disabilities continue to face constraints in their daily lives. This study found that 46 percent of people with disabilities find difficulties in earning a livelihood, 26 percent find difficulties in movement and earning a livelihood, 20 percent faced constraints in moving around, 5 percent encountered other challenges while 3 percent are faced with strained relationships.

Figure 5.14 Challenges faced by People with Disabilities

Source: Primary Survey, 2011.

As shown in figure 5.14 most people with disabilities find difficulties with their livelihoods and movements. This links well with previous highlighted findings on low education levels and high percentage of physical disability. These factors may have contributed to these challenges. It is likely that livelihoods and movement constraints had affected the earnings and thus strained relationships with spouses and partners.
5.3.8 Occupational Related Accidents per Week

The study found out that 10 to 20 occupational related accident cases per week are registered at Nadi hospital, while 5 to 6 cases are reported at Lautoka hospital.

Table 5.12 Occupational related Accidents as per week

<table>
<thead>
<tr>
<th>Hospital</th>
<th>Number of occupational hazard related patients per week (occupational hazards )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nadi</td>
<td>10-20</td>
</tr>
<tr>
<td>Lautoka</td>
<td>5-6</td>
</tr>
</tbody>
</table>

Source: Primary Survey, 2011.

In the past few years Nadi has recorded an increase in the building and construction sector, which has attracted workers from nearby areas. Nadi is regarded as the tourism town of Fiji, attracting a huge influx people from all over Fiji to work in the industry. People engaged in building, construction and the tourism sectors with poor OHS measures face a high probability of occupational hazard-related accidents.

5.3.8.1 Types of Occupational related Accidents /injuries

This study found that Nadi hospital recorded minor injuries such as injuries from cement blocks, whilst Lautoka hospital had recorded serious cases, for example limb injury (crush types), falls and drills.

Table 5.13 Type of Injuries

<table>
<thead>
<tr>
<th>Hospitals</th>
<th>Types of injuries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nadi</td>
<td>Minor injuries for example from cement blocks and timber</td>
</tr>
<tr>
<td>Lautoka</td>
<td>Limb injury (crush types ), falls, drills</td>
</tr>
</tbody>
</table>

Source: Primary Survey, 2011.
As shown in Table 5.13 Nadi recorded only minor injuries because most serious cases in Western Division are referred to Lautoka hospital. Minor injuries are less likely to create serious health problems. However, if the person has diabetes and lacks proper post-care of the injury, the outcome can become serious leading to limb injury and in extreme cases amputation.

5.3.9 Types of Common Lifestyle Diseases Diagnosed by Health Authorities
This study found that diabetes, hypertension, obesity and heart diseases are the most common types of lifestyle diseases diagnosed at Nadi and Lautoka hospitals.

These findings indicate that diabetes and hypertension are the leading lifestyle diseases, especially in the Western Division in Fiji, which can become a contributing factor to other related health problems such as amputations and stroke. In due process this can create a further economic burden on the families, communities and the nation.

The finding from this study uncovers similar trends as found by other studies such as FNCDP 2010 survey. This affirms the credibility of the responses from health authorities on the types of lifestyle cases being diagnosed at their hospitals.

5.3.10 Amputation Cases per Week
This study found that Lautoka hospital performed an average of 10-15 amputation cases per week. Nadi hospital does not have the required facilities to undertake amputations, thus all amputation cases in Western Division are referred to the Lautoka hospital.

As per the findings, 10-15 amputations per week means 40-60 per month, thus 480-720 amputation cases per year are recorded only in western division of Fiji. This signals a serious concern for everyone. The previous findings on the high number of physical disability due to lifestyle disease such as diabetes can be the cause of the high number of amputations performed each week.
5.3.10.1 Causes of Amputations by Sex and Ethnicity

This study also established an interesting trend with amputation cases in the Western division. Surprisingly, it was found that iTaukei (Fijian) females had the highest number of amputation cases in Lautoka hospital, the primarily cause being complications arising out of diabetes.

As stated previously, diabetes is a common lifestyle disease amongst the people in Lautoka and Nadi area. Therefore; these results indicate a possible relationship between incidence of diabetes and number of amputations.

These findings also highlighted that diabetes was the major cause of the amputation and thus disability. Diabetes is a common lifestyle disease and the prevalence of amputations among Fijian women indicates unhealthy lifestyle patterns, especially diet and lack of physical activity. This has linkage with low educational levels and lifestyles.

Women play an important role in controlling the dietary patterns of their families; however with amputations more common among the Fijian females, another problem may be emerging in Fiji. Women are most disadvantaged in our community and increasing amputation cases means more physical disability incidence, thus these women will be further disadvantaged in society.

Disabled people are mostly poor and being women and being disabled, means they are doubly disadvantaged.

5.3.11 Constraints Faced by Health Authorities

This study established that health authorities are faced with various challenges in dealing with care and welfare of people with disabilities. Disability is regarded as an emerging issue in Fiji due to the increasing level of incidence recorded by the public authority.
The constraints faced by the health authorities in Lautoka and Nadi area include among other things such as, sign language as the staff face difficulties in communicating with people with hearing impairment, on-availability of prosthetics, lack of wheel chairs and staff shortage.

Proper care and diagnosis are important to prevent the present trend such as amputation. Box 1 shows the importance of skilled staff and availability of prosthetics in dealing with disabilities.

**Box 5.1 Case Study of Mr Rai**

*Mr Rai was a self-employed carpenter and he was suffering from diabetic conditions. One evening, returning from his hectic day of work, he decided to do some repair works on his roof top. During the repair work, he sustained minor injuries. He visited the hospital the next day for a check-up. He was not happy with service provided by the health authorities and he reminded them for a through check-up.*

*A few years later, the injury sustained during the roof top repair worsened due to the diabetic condition and subsequently led to amputation below the knee of one of his legs. He said that his leg could have been saved if the health authorities had been more vigilant and skilled to deal with minor injuries. He further faced enormous difficulties in getting a prosthetic leg for movement because it was very expensive and was not locally available in Lautoka hospital at that time. He is on a wheel chair and depends on social welfare assistance for his survival.*

Source: Primary Survey, 2011.
5.4 Conclusions

This chapter has discussed the findings related to lifestyle diseases and occupational hazards-related disability in Fiji. The study findings were derived from secondary sources and findings followed by the survey analysis by the researcher, however it lacked probability sample as a result of the study mainly being based on questionnaire survey.

The study highlighted existing and emerging trends and correlations with subjects related to disability such as education, employment, lifestyle diseases, occupational accidents and existing social and protection systems. This chapter also identified the constraints faced by health authorities in dealing with people with disabilities. The lifestyle diseases related disability is on rise, thus policies relating to care of people with disabilities becomes a priority.
CHAPTER SIX

CONCLUSIONS AND RECOMMENDATIONS

6.1 Conclusions
Disability is a growing concern and neglected area in the process of development, especially in developing countries. Disability still remains a problematic issue as most developing countries lack reliable data on disability and even a standard definition. Disability presents various socio-economic challenges. It adds to the risk of poverty and conditions of poverty increase the risk of disability. People with disabilities are the poorest in the society. Disability is a human right issue. In recent years, lifestyles disease and occupational accidents have emerged as contributing factors in the increasing incidence in disability in developing countries as a result of growing urbanization and modernization. These present challenges and opportunities as well.

This study was based on the central objective of investigating the lifestyle diseases and occupational hazards-related disability and their socio-economic implications in Fiji. The study adopted a multi-dimensional approach integrating the economic, social and physical factors affecting disability.

The study mainly used a qualitative approach. However, the research methodology was not only confined to a qualitative one, as data from primary and secondary sources were used, tabulated and analysed quantitatively. This study adopted a triangulation method focusing both qualitative and quantitative approaches. The methods of data collection included questionnaire survey, observation and informal discussions.
A sample of 60 people with disabilities from the districts of Lautoka and Nadi in Fiji was selected using a snowball sampling technique. This sampling technique was employed, as there was no existing registration to locate the people with disabilities in the study area. Furthermore, medical professionals were consulted to gather information on the incidence of amputations and lifestyle diseases and occupation related disability incidence diagnosed at the Lautoka and Nadi Hospitals.

6.1.1 Linkages of Theoretical Approaches to Findings

The four conceptual models that revolved around disability were analyzed. These were social, medical, charitable and minority models.

Fiji lacks accessible infrastructure, employment opportunities and income generating opportunities for people with disabilities. NGOs dealing with disabilities are highly dependent on international organizations for grants to undertake training and activities for people with disabilities. Many argue that disability is not a critical issue amongst other social issues faced by the country.

Amidst these models, it becomes evident from this study that the disability issue in Fiji has inclined more towards social and medical approaches. This is apparent from the increasing lifestyle diseases and occupation- related disabilities. The study found linkages between lifestyle diseases such as diabetes, stroke/hypertension and higher incidence of acquired type of disability in Fiji.

The health authorities have reported an alarming increase in the non-communicable diseases (NCDs) with potential implications on the health system. The change in dietary patterns and lack of physical activities are regarded as major contributing factors for the increasing incidence of non-communicable diseases. Furthermore, the study found that acquired type of disability constitutes a high proportion of the total disability in Fiji. This is one of the highest in the world mainly due to lifestyle diseases especially diabetes and stroke/hypertension.
The study also found linkages between urbanization, informal sector activities and disability. In recent years, the towns and cities have witnessed population growth with the influx of people from rural areas in search of better opportunities. This study found that expiry of land leases and increasing economic activities in the urban areas in Fiji are attracting rural dwellers. Upon arrival in urban areas, most of these rural dwellers engage in informal sector activities for a livelihood. In many cases, their working environment lacks proper OHS measures and social protection systems, thus increases the vulnerability to the accidents-related disabilities.

The study also found strong linkages between poverty and disability. In Fiji, people with disabilities are among the poorest of the society. Poverty manifests into disability and disability reinforces poverty. Poor people are found to have lower education, thus lower paid jobs or no jobs and they continue to live in poor living and health hazards conditions. In most cases, the low paid jobs have no proper OHS measures and no social protection systems. In the event of occupational-related accidents, compensation is not paid by employers. The ‘vicious cycle’ of poverty and disability continues. The study found that poor people in Fiji are more vulnerable to disability by employment, education, dietary and gender status.

6.1. 1 Summary of Broad Findings

The study found that the incidence of disability is increasing in Fiji. Since the 1996 population census the incidence of disability has doubled (Fiji Islands Bureau of Statistics, 2008). Nearly 300 amputations per year in Fiji were registered by the health professionals. This aspect needs a systematic study.

In recent years, the impact of Westernization has contributed to change in dietary patterns in Fiji. More people are becoming dependent on imported foodstuff with a lower nutritional value in contrast the traditional food and way of living. The habits have changed with changing consumption patterns and ways of life. Thus non-communicable diseases have become a leading cause of death in Fiji.
In Fiji, most economic activities are concentrated in and around urban centres, thus rural to urban drift has resulted in an influx of people to these areas. Lautoka and Nadi are very important districts of the country as they contribute substantially to the national economy. Nadi is booming with tourism activities while Lautoka city is home to Fiji’s largest sugar mill. These western districts have challenges such as increasing occupational and lifestyle-related disabilities and opportunities.

The following are the broad findings of the study.
1. Disability definition varies widely, with most studies using the WHO definition to define disability.

2. According to the 2007 Fiji Population census, total disabled population was 11,402, which is not the true representation of people living with disabilities as no standard definition was used to determine the number of people living with disabilities.

3. Fijians of Indian descent had a higher incidence of disabilities in this study compared to iTaukei and Rotumans. The FNCDP in its 2010 survey found that iTaukei accounted for 67 percent of people with disabilities in Fiji while Fijians of Indian descent accounted for about 30 percent. This variation may be as a result of the small size sample which was used in this study, thus not capturing all people with disabilities.

4. The study found that most people with disabilities were in the single category. The FNCDP 2010 survey had also established a large number of people with disabilities with single status, especially in Nadi and Lautoka. This scenario can not only put individual person with disability in a harder position but also increases burden on the state to cater for the welfare of these people. The elder people of these category are of double burden as they do not have their own family.
5. The study found that approximately 42 percent of the respondents were youths below the age of 35 years, which is an alarming proportion. The demand for the social welfare and protection of these people is likely to increase as most of them are single individuals.

6. Lifestyle diseases account for the highest incidence of disability in Lautoka and Nadi areas followed by occupational injuries related disability. Diabetes was found to be one of the leading causes of acquired type of disability. This study found a higher prevalence of diabetes among the Fijians of Indian descent.

7. Multiple and physical disability dominate the disability types in the study areas. The high incidence of physical disability indicates a stronger linkage with diabetes as it is the leading cause of acquired disability.

8. Most people with disabilities had a low education level (87 percent). They had only attained primary and secondary levels of education. The study also found that most of the respondents were early school leavers and acquired disability during their adulthood. Education is pivotal in the context of disability. The lower the educational level, the higher was the incidence of disability.

9. This study found that most people with disabilities were unemployed (78 percent). The majority of the respondents had lower education levels, thus are either unemployed or working in the informal sector. The informal sector includes employment in roles such as beggars; sex workers, house girls and peanut sellers that lack social protection.

10. About 9 percent of the respondents were willing to work but remained unemployed because of their disability and employers were not interested in them.
Fiji’s ERP has provisions for employers to employ 3 percent of people with disabilities from total number of workers employed. To date the enforcement of this provision seems to be not strictly adhered to.

11. This study found that most people with disabilities were dependent on Department of Social Welfare (38 percent)) for financial assistance and support. 36 percent assistance was assisted by families and communities. This shows that families contribute enormously to the welfare of disabled people. The Social Welfare Department’s food voucher and Family Assistance scheme also provides assistance for people with disabilities. However, some of the respondents received no support and assistance from anywhere.

12. Movement and earning a livelihood were mentioned as major constraints for people with disabilities and they had to encounter hardships in their daily lives. In many cases, high levels of physical disability contributed to difficulties in their movement.

13. This study found that Lautoka hospital registered an average of 10 to 15 amputation cases per week. These findings are alarming as this rate. A high number of amputation cases per year can be expected if data are available from other hospitals in Fiji.

14. This study also found that amputation cases in the Western division of Fiji were most common among iTaukei females. Most of these amputations were related to diabetes cases.

15. This study also found that Government of Fiji has a National policy on Persons with Disabilities and ratified various International and United Nations conventions such as Millennium Development Goals and other agreements like Biwako Millennium Framework. However, disability remains a neglected area in the development process.
16. The study also found that 58 percent of people with disabilities are on some form of medications. This indicates that most people with disabilities have health problems due to their disability status.

6.3 Recommendations

Based on findings from this study, some suggestions are outlined to address the challenges of disability issues in Fiji. These suggestions are for the government, NGOs and other departments dealing with disability. These suggestions are:

1. Since data on disability are unreliable and inadequate, the Fiji Islands Bureau of Statistics (FBoS) in collaboration with FNCDP and other stakeholders dealing with disability should compile national data on all people with disabilities. The provision of such data and information allows policy makers to be realistic in laying out facts on the needs and resources needed to support and assist those that are disabled. It should also be a guide for the government when making decisions on the annual budget for every government ministry.

2. Mainstreaming people with disabilities in the development process is very critical. Therefore government should adopt strategies to include people with disabilities in all areas such as decision making.

3. The Ministries of Education and Health should develop a register of children at risk for the purpose of early prevention measures. The government can also provide community-based early identification and intervention services, especially in the rural areas.

The government should bring back the yearly medical clinic for all students. This clinic should include a thorough check up with advice and information given to students and their parents with information that is relevant for their health. These yearly clinics are a preventative measure to help young people to not only to be healthy but to be aware of any virus or diseases that is best detected early rather than later in their life.
4. The government should impose import tax on unhealthy foodstuffs with low nutritional value. This can reduce the costs surrounding lifestyle related diseases, which are one of the main contributing factors to NCDs. Promoting healthy local food production that is beneficial for health of the people of Fiji is a better option. The adopted Westernization lifestyle in Fiji encourages people to buy imported produce rather than buying and growing our own produce in our country. This is a psychological force as we are being influenced by media, cheap prices of unhealthy products and trying to live an easy life in our stressful situations.

5. The Ministry of Education should effectively promote and encourage children with disabilities in mainstream schools. They can also seek technical assistance from relevant international donors to provide and strengthen quality education and training for people with disabilities in Fiji. The Ministry of Education should set a standard in their Fiji Teachers Registration Board that all teachers should have at least 20 hours specifically in Special Education training. Like all occupation, teachers have a responsibility to improve skills and to adapt to the needs of their students. Likewise students with disabilities should not be excluded but allowed to mingle and integrate in the process of learning with any other healthy young child or teenager.

This is a healthy approach as it benefits the student that is disabled and prepares the others to be better informed and adapt to the situation of working and daily interaction of those that are disabled.

6. Government should provide scholarships for students and young leaders to study disability for better understanding and policy development in the future. The availability of these scholarships is a window for students to be aware of the other job opportunities that are available and can be promoted in Fiji, for example, speech therapists, occupational therapists and policy makers in the field of disability.
These are careers which will be growing in years to come in the country that can help many disabled persons to cope and rehabilitated back to work in the mainstream. In the field of policy making and occupational health safety standard, Fiji can meet the International standard that will instigate preventative measures in the workplace.

7. The government can promote the accessibility of health services, both urban and rural, to reduce the high incidence of non-communicable diseases. The Ministry of Health can provide training and the resources for health workers to detect early diagnosis and prevention of diseases that can result in some sort of disability. The decentralization of medical centres allows those even in the rural areas and interior of Fiji to have access to the same facilities and treatment as to those treated in urban medical centres.

8. The Ministries of Works and Transport, and Local Government should review the existing regulations to improve the provision of access for people with disabilities. All public transport should be accessible to those who use wheelchairs for mobilization. Buses that are in operation should provide accessibility for a person on a wheelchair to be in a bus and pay the same amount as any other citizen. Ramps should be installed in shopping malls and stores, all car parks should have a designated spot for drivers who are physically disabled to park their vehicle.

9. The Ministry of Social Welfare can be assisted with the data from the Fiji Islands Bureau of Statistics to assist them identifying the areas and number needed in strengthening their assistance for people with disabilities.

10. The government through relevant departments should provide more assistance for income generating programmes and skills training for people with disabilities. More job opportunities should be created within the government and private sector that will be relevant and applicable to one that is disabled.
11. It is time to develop and revise all government policies that relate to people with disabilities so that policies promote a rights-based approach in accordance with international human rights instruments, norms and standards.

12. The Ministry of Health should have sufficient mobility aids readily available. They should also provide consistent training for their staff to be competent and skilled in working with those who are born with or have acquired disability. In recent years, the amputees and their families had to find mobility aids from civil society organizations and this creates an extra burden for poor families.

About 300-400 amputations take place annually in the western division. Many of these patients go through daily physical therapy with physiotherapists but upon discharge the rehabilitation process is cut short because they cannot procure a wheelchair or any other mobility aid. This is usually due to the lack of the equipment or their lack of finance because of its high rent and purchasing cost set by those who are the very ones promoting the rights for those with disability.

13. Life style diseases and occupational hazard-related disability is preventable. A collaborative approach by government, non-government, private sector and community is required to deal with disability incidences and to help reduce cost incurred in the disability rehabilitation programmes.

14. The NGOs and civil society organizations have a critical role to play. They should conduct continual advocacy and awareness programmes on issues faced by people with disabilities. This will enhance the knowledge capacity of the communities in dealing with disability. Thus, people with disabilities can be treated as ordinary people and be given the opportunity to fully participate in the activities of their community.

15. Equally, the private sector can play a vital role in providing employment and medical aid to people with disability and help them in rehabilitation.
6.4 Future Research

There is a need to undertake further in-depth systematic studies to assess the socio-economic implications of lifestyle disease and occupational accident-related disability in Fiji. The disability rate is growing in Fiji. It is important to identify and understand the dimensions involved. The present study had only a small sample that may not permit of wider generalizations. Therefore, more studies countrywide are required to assess the disability incidence and its implications to development in Fiji.

More studies are needed to explore reasons for the high rate of amputations cases amongst iTaukei women and diabetes in the Fijians of Indian descent. This can provide vital information for policy makers and stakeholders to combat the non-communicable diseases through the implementation of activities and advocacy programmes.

More in-depth study is required to establish the linkages between occupational related hazards and disability. Currently there is limited information available on occupational-related accidents and on social protection systems especially for people working in the informal sector.


Combat Poverty Agency (1994). Disability, Exclusion and Poverty, retrieved from: http://books.google.co.uk/books/about/Disability_exclusion_poverty.html.on June 7, 2011,


Rioux, M. (1996). Disability community and society–Exploring the links, Rocher Institute, Canada


Secretariat of the Pacific Community (1998). Health promotion for the healthy islands, Secretariat of the South Pacific, Noumea


APPENDICES
Questionnaire

Confidentiality: The responses will be kept confidential and will be used for study purpose only.

Area: Nadi □ Lautoka □ Street/Location: ______________________

Locality: □ Squatter □ Non-squatters

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(Tick all that apply to you)

1. Age of Disabled: ____________

2. Ethnicity:
   □ Indian □ Fijian □ Others, specify__________

3. Marital status
   □ Single □ Married □ Widowed □ Divorced □ Separated

4. What is your maximum education level?: ______________

5. Are you employed currently?
   □ Yes □ No

   5a. If yes, what is your occupation? __________________________

   5b. Mention the place of work:_________________

6. How much you earn per week (F$)? ______________

7. Which of the following has contributed to your unemployed status? (Circle your answers)
   a. Willing to work but no one employs□
   b. Unfit to work
   c. Interested in self employment but no financial assistance
   d. Difficult to find suitable job
   e. Other reason, specify
   f. Not Applicable
8. Type of disability

*Screen the person, if required*

☐ mental illness ☐ physical impairment ☐ intellectual impairment ☐ hearing impairment

☐ vision impairment ☐ deaf/blind ☐ multiple disability

9. How have you acquired this form of disability?

Born with ☐ As a result of accident/injury ☐ Due to illness/Diseases ☐ Natural ageing ☐

10. Describe the cause of accident/injury that resulted to your current inability? (Circle your answers)

☐ 1. An accident or injury at home
☐ 2. A motor vehicle accident
☐ 3. An accident or injury at work
☐ 4. A sports accident or injury
☐ 5. Others, Specify:------------------------

11. Did your employer paid any compensation to you?

☐ Yes ☐ No ☐

12. Did you have any form of insurance during the period of employment?

Yes ☐ No ☐

If yes, specify _______________________________

13. Anyone else in your family is a disabled/less-abled person?

☐ Yes ☐ No ☐

14. Do you use any form of Aid or Appliance

☐ Yes ☐ No ☐

15. Do you get any form of cash assistance from?

☐ family ☐ relative ☐ friend ☐ social welfare department ☐
☐ NGO ☐ private organization ☐ Others, specify:------------------------

16. Do you get any other kind of support & assistance?

☐ Yes ☐ No ☐
If yes, specify _________________________

17. Are you on any form of medication?
   □ Yes □ No □

18. How much you spend on your medication per week approximately?
   ($)___________

19. Where do you get your medicines from?
   □ Govt. Hospital □ Private clinic □ □Dispensar□ □purchase from market
   □ Others, specify: ----------------------------

20. What kind of difficulties do you face in your daily life?
   □ Movement □ discrimination at place of work □ strained relationships □ earning a livelihood