

# THE PREVALENCE AND FACTORS FOR WORK-RELATED MUSCULOSKELETAL DISORDERS AMONG PHYSIOTHERAPY PERSONNEL IN LUSAKA, KITWE AND NDOLA.

Name: Loveness .A. Nkhata -BSc PT, Dip PT

Class: MPH 2009 - 2011

**Computer No: 529003644** 

Supervisor: Prof. S. Siziya -BA-Ed, MSc, PhD, DLSHTM, CStat

Co-Supervisor: Dr. C. Zyaambo - MBChB, Mphil

DISSERTATION SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE MASTER OF PUBLIC HEALTH DEGREE PROGRAMME AT THE UNIVERSITY OF ZAMBIA.

#### ABSTRACT

Injuries at a work place comprise a substantial part of injury burden. They are an important public health problem that affects not only the person sustaining the injury but other household members that are dependent on the injured adult. Although, health workers frequently treat patients with work-related injuries, they also suffer from the same injuries. Injury rate among hospital workers is estimated to be twice that of other service industries. The cause is attributed to high levels of patient contact, as well as other variables in the health care environment. Work-related musculoskeletal disorders (WRMDs) are common in the field of physiotherapy because the nature of job tasks is physically challenging and therapeutic procedures are often repetitive, labour intensive and involves direct contact with patients.

The aim of this study was to determine the prevalence and factors for WRMDs among physiotherapy personnel in Lusaka, Kitwe and Ndola districts. The objectives were to determine the proportion of physiotherapy personnel in Lusaka, Kitwe and Ndola that had experienced WRMDs, the extent to which work-load is associated to the development of WRMDs among physiotherapy personnel also, to establish the extent to which job tasks are associated to the development of WRMDs among physiotherapy personnel and to identify possible measures which could be put in place to reduce occurrence of WRMDs among physiotherapy personnel.

This was a cross-sectional quantitative study. Data was collected using a self- administered semi structured questionnaire and analysed using SPSS version 16.0. for windows. Association of factors was tested using the uncorrected Pearson's chi-square test. The cut off point for statistical significance, was set at 5%.

Most of the respondents (n=82) experienced WRMDs that lasted for more than 3 days in the last 12 months to the survey. The lower back was the most frequently affected body part. Onset of symptoms was gradual for the majority and their first episode was within five years of graduation.

WRMDs were common among physiotherapy personnel in Lusaka, Kitwe and Ndola. Outcomes reflects similar WRMDs, work factors and coping strategies for physiotherapists elsewhere. Therefore, it underlines the importance of further research with large sample sizes to examine factors associated with WRMDs and identify work practices that contribute to injury with a view to formulating preventive strategies.

#### ACKNOWLEDGEMENT

I am highly indebted to the Lord God Almighty for having brought me this far. I have not laboured in vain, because He has been with me. Sincerely, i would like to thank the following;

- My supervisors; Prof Seter Siziya, you are just wonderful. Thank you for being there
  for me each time I bothered you. Your constructive and sound advice led to the
  logical and grammatical flow of this work. Dr. Cosmos Zyaambo, you are exceptional
  in your own way. May the Lord God Almighty bless you all.
- My employers; UTH for giving me a chance to pursue the MPH programme.
- Medical council of Zambia for allowing me to use the physiotherapy registers.
- Physiotherapy personnel in Lusaka, Kitwe and Ndola for having taken time off your busy schedules to participate in this survey.
- My classmates, for peer review, criticism and encouragement. Guys you made my stay at com-med memorable.
- Lecturers and other staff in the Department of Community Medicine. Thank you for making the whole MPH programme enjoyable.

Lastly, but of course not the least my entire family am very grateful for your selfless love and support. I cannot write what each one of you has done for me, i am just happy that i am surrounded by this wonderful clan.

### **DECLARATION**

I, Loveness .A. Nkhata declare that the work presented in this paper for the award of the Master of Public Health degree at the University of Zambia is my own. It has not been presented in part or wholly for a degree or diploma in any other university and is currently not being presented for any other degree. Further, i know that use of another's work and presenting it as my own is a an offence. Therefore, each significant quotation from the works of others has been cited and attributed as such.

Signed	Date	
Loveness Nkhata. A.		
Supervisor's Signature	Date	

Prof. Seter Siziya

## **COPYRIGHT**

I have not allowed anyone to copy this piece of work with an intention of presenting it as their own.

It is hereby, notified that no part of this dissertation may be reproduced, stored in a retrieval system, or transmitted in any form or by any means being, electronic, mechanical, photocopying, recording or otherwise, without prior written consent of the author except for research purposes.

## **CERTIFICATE OF APPROVAL**

This dissertation has been approved in partial fulfilment of the requirements for the award of the Master of Public Health degree Programme at the University of Zambia.

Examiner	Date
Examiner	Date
Examiner	Date
Prof. Seter Siziya	
Supervisor	Date
Dr. Charles Michelo.	
Signature	Date
Head of Department.	

## TABLE OF CONTENTS

	Page	
Table of contents		i
Acronyms		iv
List of figures		v
List of tables		vi
Key words		vii
CHAPTER ONE		1
1.0 Introduction/ Background		1
1.1 Statement of the problem		2
1.2 Problem analysis diagram for WRMDS		6
1.3 Significance of the study		6
1.4 Research questions	6	
CHAPTER TWO		7
2.0 Literature review		7
2.1 Introduction		7
2.2 Prevalence		7
2.3 Risk factors	8	
CHAPTER THREE		11
3.0 Study objectives		11
3.1 Introduction		11
3.2 General objective		11
3.3 Specific objectives	11	
CHAPTER FOUR	12	
4.0 Methodology		12
4.1 Introduction		12
4.2 Study Variables		13

4.3 Study design	13
4.4 Study setting	13
4.5 Study population	14
4.6 Inclusion criteria	14
4.7 Exclusion criteria	14
4.8 Sample size and sampling	15
4.9 Data collection tool	15
4.10 Data quality control checks	15
4.11 Data analysis	15
4.12 Ethical consideration	16
CHAPTER 5	17
5.0 Results	17
5.1 Sample Descriptions	17
5.2 Work-related musculoskeletal disorders	18
5.2.1WRMDs in association with work load	18
5.2.2WRMDs in association with demographic characteristics	18
5.2.3WRMDs in association with sets of equipment	19
5.2.4WRMDs in association with number of PTP	20
5.3 Affected body parts of WRMDs among respondents	20
5.4 Onset of WRMDs among respondents	21
5.5 Work factors contributing to WRMDs among respondents	22
5.6 Coping strategies	23
CHAPTER 6	24
6.0 Discussion	24
6.1 Introduction	24
6.2 Prevalence of WRMDs	24
6.3 WRMDs by Demographic characteristics	25
6.4 WRMDs by workload, sets of equipment and number of PTP in a department	26
6.5 WRMDs by job tasks	26
6.6 Limitations for the study	27
6.7 Conclusions	27
6.8 Recommendations	27
References	29
ADDIADIOS	

APPENDICES 32

Appendix II (Information sheet and consent form)  Appendix III (Work plan)  41  Appendix IV (Budget)  42  Appendix V (GPF- letter)  43  Appendix VI (Research ethics- approval letter)  44	Appendix I (Questionnaire)		32
Appendix IV (Budget)  42  Appendix V (GPF- letter)  43	Appendix II (Information sheet and consent form)		38
Appendix V (GPF- letter) 43	Appendix III (Work plan)	41	
, pperson (consistency)	Appendix IV (Budget)	42	
Appendix VI (Research ethics- approval letter 44	Appendix V (GPF- letter)		43
	Appendix VI (Research ethics- approval letter	44	

#### **ACRONYMS**

AIDS - Acquired Immuno- Deficiency Syndrome

**cso** - Central Statistical Office

**EHC** - Evelyn Hone College

**HIV** - Human Immuno Virus

**HKPA** - Hong Kong Physiotherapy Association

**ILO** - International Labour Organization

**MOH** - Ministry of Health

NAC - National Aids Council

**PTP** - Physiotherapy personnel

**UNZA** - University of Zambia

**WHO** - World Health Organization

**WRMDs** - Work-related musculoskeletal disorders

**ZSP** - Zambia Society of Physiotherapy

# LIST OF FIGURES

Figure 1 Problem analysis diagram

Figure 2 Onset of WRMDs among respondents

### LIST OF TABLES

Table 1	Study variables, indicators and measurements
Table 2	Socio- demographic characteristics of participants
Table 3	WRMDs among respondents
Table 4	Prevalence of WRMDs by workload
Table 5	Prevalence of WRMDs by demographic characteristics
Table 6	Prevalence of WRMDs by sets of equipment
Table 7	Prevalence of WRMDs by number of physiotherapy
	Personnel in a department
Table 8	Commonly affected body parts of WRMDs
Table 9	Work factors that respondents identified as contributing to
	WRMDs
Table 10	Coping strategies used by respondents

# **KEY WORDS**

Musculoskeletal disorders

Occupational injury

Risk factors

Physiotherapy