

DECLARATION

I, **Tecla Mlambo** declare that this project is my original work. It has never been submitted before for any degree or examination at this or any other University. It is being submitted partial fulfillment of the Master of Science Degree in Clinical Epidemiology at the University of Zimbabwe, College of Health Sciences in 2011.

Signed..... Date:.....

ABSTRACT

Background: Zimbabwe's response to the HIV/AIDS pandemic in terms of prevention, testing, counseling and treatment has been commendable but inadequate in terms of provision of rehabilitation services to HIV-infected individuals.

Objectives: To determine the prevalence and extent of activity limitations and participation restrictions (disabilities) experienced by adults living with HIV/AIDS who are on Antiretroviral drugs (ARVs) and the factors associated with quality of life as assessed by the International Classification of Functioning, Disability and Health (ICF).

Study variables: type of ARV, period on ARVs, last CD4 count, physical and mental health, previous injury, use of assistive devices, having an assistant, and demographic characteristics.

Outcome variables: quality of life (total score), domain total scores, reduction and stopping of usual activities.

Methods: A cross sectional analytical study was done with 59 consenting HIV positive adults on antiretroviral drugs attending an opportunistic infection clinic. An ICF-based interview questionnaire was administered on consecutive patients. Ethical clearance was granted.

Data Analysis: Descriptive statistics were used to describe the distributions of participants according to demographic characteristics, clinical profile and prevalence of activity limitations and participation restrictions. Multivariate analysis was done to determine the factors that predicted quality of life. Level of significance was set at 5%.

Results: The mean age of participants was 41 years (+/- 9.3), 56% were female, 54% were married and 30.5% were widowed. Median period on ARVs was 13 months (I.Q.R 3-29) and median last CD4 count was 189.5 (I.Q.R 114-278). Thirty-two (54%) were on Stalanev. About 36% and 61% had stopped or reduced their usual activities due to the illness respectively. Most affected aspects were walking (71%), fine hand use (41%), lifting & carrying objects (71%), shopping (55%), housework (55%), remunerative employment (56%) and economic self-sufficiency (79%). The support and relationships and attitudes of health professionals (86% and 88%) and immediate family (75% and 78%) were the cited major environmental facilitators. Factors statistically significantly associated with quality of life were physical health ($p= 0.01$), mental & emotional health ($p= 0.04$), and use of assistive devices ($p= 0.02$). Period on ARVs and last CD4 count were not statistically significantly associated with quality of life.

Conclusion: HIV-related disabilities are prevalent even among those on antiretroviral drugs and their quality of life is reduced, hence the need to scale up rehabilitation services for them.

ACKNOWLEDGEMENTS

I give thanks and glory to the Almighty God for enabling me to undertake work of such a magnitude.

I would also like to acknowledge the invaluable input and support I received from the following people:

- My supervisors, Professors L Gwanzura and S. Rusakaniko for the guidance they gave throughout the study and the tremendous level of patience and dedication to ensure its completion.
- Professor J Matenga, the Director of CEU for taking his time to listen to my presentations and critiquing my work during the initial stages of protocol development
- Dr M Borok for allowing me to attend your clinics to get a better understanding of the condition I was to research on.
- Dr Vembo for assisting me with classifying and verifying the ARVs
- Dr S Khoza for assisting with the data analysis
- Clinical Epidemiology Unit especially Perpetua Manhuwa and Institute of Continuing Health Education for all the support
- All Department of Rehabilitation staff and students for the inspiration and all the assistance. Special mention goes to Mr Witness Mapanga, Shailendra Njitimana, Mutsa Nyaradzo Jeché and Tsitsi Juru for accompanying me during data collection and assisting.
- The men and women living with HIV who participated in this study
- My husband Piason and daughters, Tatenda and Kudzaiishe Grace, for their love and support, and for bearing with me when I was working long hours to complete this project.

May the Lord richly bless and multiply you all. Thank you.

DEDICATION

I dedicate this project to all those people who are living with HIV-related disabilities.

CONTENTS

Declaration	ii
Abstract	iii
Acknowledgements	iv
Dedication	v
Table of Contents	vi
List of Tables	viii
List of Figures	x
List of Appendices	xi
Abbreviations	xii
Operational Definitions	xiii

TABLE OF CONTENTS

CHAPTER ONE: INTRODUCTION AND LITERATURE REVIEW

1.0 Introduction	1
1.1 Background/Rationale	1
1.2 Literature Review	4
1.2.1 Antiretroviral Therapy	4
1.2.2 HIV-related disabilities	6
1.2.3 Role of Rehabilitation	8
1.2.4 Quality of life	11
1.2.5 The Research instrument	12
1.3 Problem Statement	14
1.4 Significance of Study	15
1.5 Research Questions	16
1.6 Objectives	16

CHAPTER TWO: METHODOLOGY

2.0 Introduction	18
2.1 Study Design	18
2.2 Subjects and sampling	18
2.3 Setting	19
2.4 Sample size	19
2.5 Study factors	19
2.6 Outcome factors	20
2.7 Indicators	20
2.8 The Data Collection Instrument	20
2.9 Procedure	21
2.9.1 Pretesting and Pilot study	21
2.9.2 Data Collection for main study	22
2.10 Data management and analysis	22
2.11 Ethical considerations	23

CHAPTER THREE: RESULTS

3.0 Introduction	24
3.1 Socio-demographic characteristics of participants	25
3.2 Clinical profile of participants	26
3.3 Other factors	31
3.4 Prevalence of activity limitations/participation restriction	33
3.5 Environmental factors	40
3.6 Domains most/least affected	42
3.7 Internal Consistency and Reliability	43
3.8 Internal Consistency and Reliability of items within each domain	46
3.9 Factors that predict quality of life	47

3.10 Predictors of one reducing or stopping usual activities	52
--	----

CHAPTER FOUR: DISCUSSION

4.0 Introduction	54
4.1 Discussion of Methodology	54
4.2 Demographic profile of participants	55
4.3 Clinical profile	57
4.4 Prevalence of activity limitations and participation restrictions	59
4.5 Barriers and facilitators to activity and participation	60
4.6 Factors predicting quality of life	61
4.7 Limitations of the study	63

CHAPTER FIVE: CONCLUSION AND RECOMMENDATIONS

Conclusions	64
Recommendations	64
Suggestions for further research	65

LIST OF REFERENCES	66
--------------------	----

LIST OF TABLES

3.1: Socio-demographic characteristics	25
3.2: Gender and marital status	26
3.3: Type of ARVs	28
3.4: Limitations and restrictions in mobility domain	34
3.5: Limitations and restrictions in self-care domain	35
3.6: Limitations and restrictions in domestic life domain	36
3.7: Limitations and restrictions in interpersonal interactions and relationships	37
3.8: Limitations and restrictions in major life domain	38
3.9: Limitations and restrictions in community, social and civic life	39
3.10: Experienced environmental facilitators and barriers	41
3.11: Domains least/most affected	42
3.12: Cronbach Coefficient alphas with variable deleted	44
3.13: Pearson Correlation Coefficients	45
3.14: Relationship between period on ARVs and quality of life	48
3.15: Relationship between last CD4 Count and quality of life	49
3.16: Relationship between type of ARV and quality of life	49
3.17: Factors predicting quality of life after adjusting for all variables	50
3.18: Predictive factors for reduction of usual activities	52
3.19: Predictive factors for stopping usual activities	53

LIST OF FIGURES

3.1: Box plot showing last CD4 count	26
3.2: Box plot showing period since last CD4 count	27
3.3: Box plot showing period on ARVs	29
3.4: Participants' rating of own physical health	30
3.5: Participants' rating of own mental and emotional health	30
3.6: Previous injury	31
3.7: Use of assistive devices	31
3.8: Reduction of usual activities	32
3.9: Stopping of usual activities	33

LIST OF APPENDICES

Appendix 1: Data collection instrument	70
Appendix 2: JREC Approval	75
Appendix 3: Informed Consent	76
Appendix 4: Sample Size	78
Appendix 5: Coding Booklet	79

ABBREVIATIONS

ART	Antiretroviral therapy
ARVs	Antiretroviral drugs
CD4	Cluster of Differentiation 4
CSO	Central Statistical Office
HAART	Highly Active Antiretroviral Therapy
HIV/AIDS	Human Immunodeficiency Virus/Acquired Immune deficiency syndrome
HRQoL	Health related quality of life
ICF	International Classification of Functioning, Disability and Health
MOHCW	Ministry of Health and Child Welfare
NAC	National Aids Council
OI	Opportunistic Infection
PLWHA	People Living with HIV/AIDS
PMTCT	Prevention of mother to child transmission
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNFPA	United Nations Population Fund
VCT	Voluntary Counseling and Testing
WHO	World Health Organisation

Operational Definitions

[according to WHO (2001)].

Body functions are the physiological functions of body systems (including psychological functions).

Impairments of body functions are problems in body function as a significant deviation or loss.

Body structures are anatomical parts of the body such as organs, limbs and their components.

Impairments of body structures are problems in structure as a significant deviation or loss.

Activity is the execution of a task or action by an individual.

Activity limitations are difficulties an individual may have in executing activities.

Participation is involvement in a life situation

Participation restrictions are problems an individual may experience in involvement in life situations.

Quality of life according to WHO is an individual's perceptions of their position in life in the context of the culture and value systems in which they live, and in relation to their goals, expectations, standards and concerns. In this study, how an individual rates his or her extent of activity limitation and participation restriction constitutes their quality of life.