

**KNOWLEDGE, ATTITUDE AND PRACTICE OF PHYSICAL
ACTIVITIES AMONG HEALTH PERSONNEL AT MUHIMBILI
NATIONAL HOSPITAL**

Salome Maguzu, BSc

**Master of Public Health Dissertation
Muhimbili University of Health and Allied Sciences
October, 2019**

**Muhimbili University of Health and Allied Sciences
School of Public Health and Social Sciences**



**KNOWLEDGE, ATTITUDE, PRACTICE OF PHYSICAL ACTIVITIES
AMONG HEALTH PERSONNEL AT MUHIMBILI NATIONAL
HOSPITAL**

By

Salome Maguzu

**A Dissertation Submitted in (Partial) Fulfillment of the Requirements for the Degree
of Master of Public Health of**

**Muhimbili University of Health and Allied Sciences
October, 2019**

CERTIFICATION

The undersigned certifies that he has read and hereby recommends for acceptance by Muhimbili University of Health and Allied Sciences a dissertation entitled: “**Knowledge, Attitude and Practice of Physical activities among Health Personnel at Muhimbili National Hospital**”, in (partial) fulfillment of the requirements for the degree of Master of Public Health of Muhimbili University of Health and Allied Sciences.

Dr. Ezra J. Mrema

(Supervisor)

Date

DECLARATION AND COPY RIGHT

I, **Salome Maguzu** declare that this **dissertation** is my own original work and that it has not been presented and will not be presented to any other university for a similar or any other degree award.

Signature.....

Date.....

This dissertation is a copyright material protected under the Berne Convention, the Copyright Act 1999 and other international and national enactments, in that behalf, on intellectual property. It may not be reproduced by any means, in full or in part, except for short extracts in fair dealing, for research or private study, critical scholarly review or discourse with an acknowledgement, without the written permission of the Directorate of Postgraduate Studies, on behalf of both the author and the Muhimbili University of Health and Allied Sciences.

ACKNOWLEDGEMENT

Foremost I thank the almighty God for his love and favor. For the strength, peace of mind and good health to this very point.

My deepest appreciation goes to my supervisor, Dr. Ezra J. Mrema for his valuable guidance; above all for his patience. I really can't thank you enough.

I would wish to extend my sincerely appreciation to CDC for their support in financing this research work.

To my statistician, thanks for your help,

To my wonderful family and friends, thank you very much for your unconditional love and support. Lastly but not least, my special and humble thanks to all Health personnel for participating/consenting in pursuit of this work, You made this possible.

To you all, God bless you in abundance.

DEDICATION

I dedicate to my late husband Sylvanus Mayenga, my children Bernard, Elizabeth, Benedicto, Beatrice and my late parents Mr. and Mrs. Bernard Maguzu Kasiga for supporting me and their encouragement.

ABSTRACT

Background: Physical exercises describe all forms of muscle movement including sports, game, work, life style activities and exercises for fitness. In most parts of the world non-communicable diseases emerge as the major health challenge as a result of minimum physical exercise. Health personnel are important source of physical exercise information. The primary way to prevent the risk of developing chronic health problems such as diabetes mellitus, obesity and cardiovascular diseases is through counseling patients to engage in physical activities.

Objectives: To assess knowledge, attitude and practice of physical exercise among health personnel at Muhimbili National Hospital (MNH), Tanzania.

Method: The study design was a cross sectional study conducted among medical and dental practitioners, nurses, medical physiotherapists and nutritionists at MNH. Self administered questionnaire was used to assess knowledge attitude and practice (KAP) on physical activities in September 2018. Data were analyzed by using Statistical Package for Social Science (SPSS) software version 20. Chi-square test was used ($p < 0.005$).

Results: A total of 340 health personnel participated in this study. About 65% of the study demonstrated good knowledge on physical activities. Good practice was observed in 68.8% of the interviewed subjects. Knowledge positively correlated with physical activities practice ($p < 0.05$). Lack of time was one of the identified factors that hinder about 56% of health personnel participation into physical activities. Single participants demonstrated higher physical exercise practice.

Conclusion and Recommendations: A significant number of health personnel demonstrated good knowledge and engaged in physical activities. Knowledge was found to be a significant attribute of physical activities practice. More advocacies need to be done to promote good knowledge and positive attitude towards physical activities. It is also recommended to conduct further studies to explore other mediators of physical activities among general population.

TABLE OF CONTENTS

CERTIFICATION	i
DECLARATION AND COPY RIGHT	ii
ACKNOWLEDGEMENT	iii
DEDICATION	iv
ABSTRACT	v
TABLE OF CONTENTS	vi
LIST OF TABLES	viii
LIST OF FIGURES	viii
LIST OF ABBREVIATIONS	ix
DEFINITION OF KEY WORDS	x
CHAPTER ONE.....	1
1.0 INTRODUCTION	1
1.1 Background.....	1
1.2 Problem Statement	3
1.3 Conceptual Framework.....	4
1.4 Rationale	5
1.5 Research Questions	5
1.5.1 Main Research Question	5
1.5.2 Specific Research Questions	5
1.6 Objectives	6
1.6.1 Broad Objective.....	6
1.6.2 Specific Objectives.....	6
CHAPTER TWO.....	7
2.0 LITERATURE REVIEW	7
2.1 Knowledge on Physical Activities	7
2.2 Practice on Physical Activities	8
2.3 Attitude on Physical Activities	11

CHAPTER THREE	13
3.0 MATERIALS AND METHODS	13
3.1 Study Setting and Design.....	13
3.2 Study Design.....	13
3.3 Study Population, Sample Size and Selection	13
3.3.1 Sample Size Estimation.....	14
3.3.2 Sampling Technique and Procedures	14
3.3.3 Inclusion criteria.....	14
3.3.4 Exclusion criteria.....	14
3.4 Study Variables.....	15
3.5 Data Collection Methods	15
3.6 Investigation Tools, Validity and Reliability.....	16
3.7 Data Analysis	16
3.8 Ethical Clearance and Consideration	18
CHAPTER FOUR	19
4.0 RESULTS	19
CHAPTER FIVE	29
5.0 DISCUSSION.....	29
5.1 Study Limitation and Mitigations	31
CHAPTER SIX	32
6.0 CONCLUSION AND RECOMMENDATIONS	32
6.1 Conclusion	32
6.2 Recommendations.....	32
REFERENCES	33
APPENDICES	39
Appendix I: Questionnaire for Data Collection	39
Appendix II: Dodoso la Utafiti	46
Appendix III: Informed Consent.....	53
Appendix IV: Fomu ya Ridhaa.....	56

LIST OF TABLES

Table 1:	Measuring Practices towards physical activity to Health Personnel Muhimbili National Hospital	19
Table 2:	Socio-demographic characteristics of the study population.....	22
Table 3:	Distribution of knowledge level with socio-demographic characteristics....	24
Table 4:	Self reported practice on physical activities.....	26
Table 5:	Distribution of practice by socio-demographic characteristics.....	28
Table 6:	Participants' attitude towards physical activities.....	30

LIST OF FIGURES

Figure 1:	Conceptual framework to understand factors affecting physical activities among health personnel at Muhimbili National Hospital.....	5
Figure 2:	Distribution of knowledge with regards to physical exercise.....	23
Figure 3:	Participants' category of practice towards physical activities.....	25
Figure 4:	Distribution of knowledge level with physical activities practice.....	27
Figure 5:	The participants' attitude towards physical activities.....	29
Figure 6:	Distribution of attitude with physical activities practice.....	31

LIST OF ABBREVIATIONS

CDC	Centre for Disease Control
HP	Health personnel
KAP	Knowledge, attitude and practice
MNH	Muhimbili National Hospital
MOI	Muhimbili Orthopaedics Institute
MUHAS	Muhimbili University of Health and Allied Sciences
NCD	Non Communicable Diseases
PA	Physical Activities
PPAHQ	Promotion of Physical Activities by Health Practitioner Questionnaire
SPSS	Statistical package for social sciences
WHA	World Health Assembly
WHO	World Health Organization

DEFINITION OF KEY WORDS

KNOWLEDGE: Is a familiarity, awareness, or understanding of someone or something, such as facts, information, descriptions or skills, which is acquired through experience or education by perceiving, discovering, or learning. (<https://en.wikipedia.org/wiki/knowledge>).

PRACTICE: Is a method, procedure, process, or rule used in a particular field or profession, a set of these is regarded as standard. Or practice is a business in which a professional or number of associated professionals offer services, such as a law practice or a medical practice. (www.businessdictionary.com/definition/practice.html).

ATTITUDE: Is a predisposition or a tendency to respond positively or negatively towards a certain idea, object, person, or situation. Attitude influences an individual's choice of action, and response to challenges, incentives, and rewards (together called stimuli). (www.businessdictionary.com/definition/attitude.html).

PHYSICAL ACTIVITY: According to WHO is being defined as Physical activity is defined as any bodily movement produced by skeletal muscles that requires energy expenditure. (<https://www.who.int/dietphysicalactivity/pa/en/>).

EXERCISE is a subcategory of physical activity that is planned, structured, repetitive, and aims to improve or maintain one or more components of physical fitness. Beyond exercise, any other physical activity, that is done during leisure time, for transport to get to and from places, or as part of a person's work, has a health benefit. Further, both moderate and vigorous intensity physical activities improve health. (<https://www.who.int/dietphysicalactivity/pa/en/>).

HEALTH PERSONNEL: Is a person who have special education on health care and who is directly related to provision of health care services. Health care personnel include all paid and unpaid persons working in health care settings. (<https://definitions.uslegal.com/h/health-care-personnel-hcp/>).

CHAPTER ONE

1.0 INTRODUCTION

1.1 Background

Physical activity is any bodily movement as the result of skeletal muscles that consume energy (1). Regular physical activity has a positive effect on physical, mental, and social aspects of individual and community health in general (2). In 2004, the 57th World Health Assembly endorsed the World Health Organization (WHO) global strategy on diet and physical activities. Performing physical activities was regarded as one of the factors that prevent the risk of having non communicable diseases (NCDs) (3).

Non communicable diseases are the leading causes of deaths globally. They are strongly influenced by four main behavioral risk factors including tobacco use, insufficient physical activity, harmful use of alcohol and unhealthy diet which lead to elevated blood pressure, raised blood glucose and cholesterol level and excess body weight (4). NCDs currently cause more deaths than other causes combined, WHO projections show that NCDs deaths are projected to increase from 38 million in 2012 to 52 million by 2030. The greatest increase will be in Africa, The Eastern Mediterranean and South East Asia (4).

Physical activities have major beneficial effects to chronic diseases. They limit progression of diseases and improve physical fitness, muscular strength and quality of life (6). Regular physical activities are very important for the individual health. Vigorous and moderate physical activities are associated with low mortality rate for both older and younger population (5). During the 21st century the leading cause of death shifted from infectious to chronic diseases (6). Living sedentary life without doing much physical activities is one of the major factors that lead to chronic diseases (6). WHO recommends an adult person to perform physical activities of moderate intensity for example fast walking and, swimming for 30 minutes per day (4). This will keep a person health and help in reducing risks of developing NCDs and chronic diseases. More than half of the world populations (60%) do not meet this recommendation (1). Attitude towards physical activities of an individual is an indicator of physical activity level (7).

Physical activities involvement is motivated by knowledge and belief of health benefits of physical activities (8). However, several barriers exist which impede physical activities participation. These barriers can be categorized as demographic, psychological, behavioral and socio-cultural or environmental (8). Accumulation of physical activities throughout the day has been suggested as means of increasing physical activity behaviors (9).

Evidence suggests that the medical personnel have a greater knowledge on healthy lifestyle when compared to other people in the general population (10). One of the most important factors for predicting the engagement to physical activities among the medical personnel is their own attitudes towards health promotion, illness prevention, and physical activities (10).

Getting regular physical activity is the best thing health personnel can do for good health. It lowers the risk of NCDs such as heart diseases, diabetes, stroke, high blood pressure, osteoporosis, and certain cancers, and it can also help control stress, improve sleep, boost mood, reduce obesity, and improve cognitive function in older adults (3).

1.2 Problem Statement

Lack of physical activities is a major public health problem worldwide. People who are not doing physical activities regularly are at higher risk of developing NCDs such as heart diseases, stroke, and diabetes. These are the main causes of deaths globally in which 68% of all deaths were due to NCDs in 2012 (4).

Health personnel are the key figures in promoting good health which is highly influenced by physical activities. Majority of health personnel are aware of the benefits of physical activity and they are expected to be knowledgeable in matters relating to healthy lifestyle and, in their capacity, should be the role models for maintaining a healthy lifestyle to the general population. However, they cannot do so if their own health habits are poor.

In sub-Saharan Africa, adults including health professionals are not regularly active as since overweight, obesity, musculoskeletal pains have been found to result from unhealthy lifestyle of inactivity amongst most healthy professional (32).

WHO report of 2014 on non communicable diseases (NCDs) in Tanzania reported the total deaths of 403,000. NCDs were estimated to account for 31% of total deaths. Since health personnel are advocates of patients, it is important for them to be role model on physical activity to prevent the burden of NCDs.

Despite the widely known roles and merits of physical activity in overcoming NCDs in the community (18), less remain to be known on the levels of knowledge, attitudes and practices of physical activities among health personnel. This study will examine knowledge, attitude and practice of physical activities among health personnel in hospital setting whereby Muhimbili National Hospital will be used as a case study.

1.3 Conceptual Framework

Insufficient physical activities are the main causes of NCDs. Physical activity, knowledge, attitude and practices are mainly influenced by individual social demographic profile such as age, sex, marital status, work experience and residence. On the other hand independent variables (knowledge, practice and attitude) have a direct influence to the dependent variable (physical activity). This study will depict how these factors affect physical activity. The scheme shows the relationship between the independent variables and dependent variable (Figure 1).

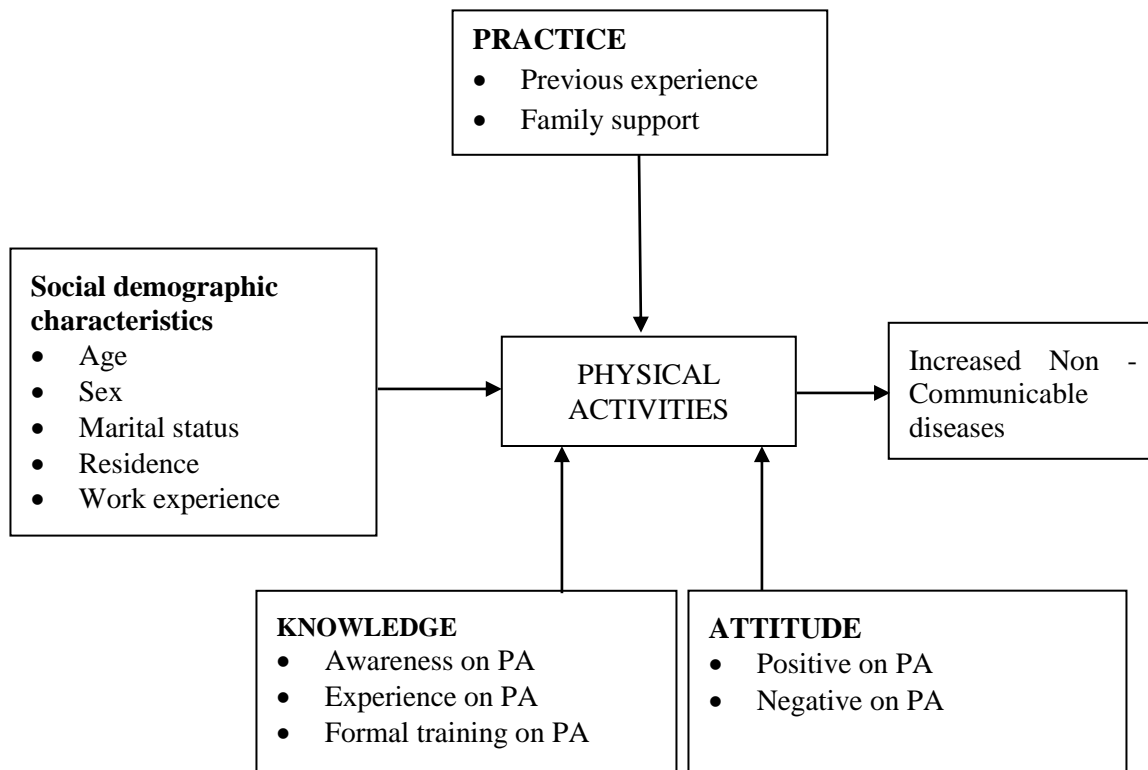


Figure 1: Conceptual framework to understand Knowledge, Attitude and Practice towards physical activities among health personnel at Muhimbili National Hospital.

1.4 Rationale

This study was conducted in the light of paucity of information on KAP with regards to physical activities among Health personnel at the Muhimbili National Hospital. Information from this study will enlighten the public on present situation of KAP on physical activities among Health Personnel at MNH and hence add to the body of knowledge. Moreover the findings of this study will lay down the foundation for improvement of health education with regards to a standard and recommended WHO guidelines of physical activities practice. Health personnel who are knowledgeable on recommended physical activities practice will act as a catalyst and channel appropriate information to the general public.

To the authorities of Muhimbili National Hospital and other employers at large, the findings will help them to be aware and put their health personnel in regular physical activity program.

1.5 Research Questions

1.5.1 Main Research Question

What is the knowledge, attitude and practice of physical activities among health personnel at Muhimbili National Hospital?

1.5.2 Specific Research Questions

1. How knowledgeable are health personnel on physical activities at Muhimbili National Hospital?
2. What is the proportion of health personnel who practice physical activities at Muhimbili National hospital?
3. What is the attitude of health personnel towards physical activities at Muhimbili National Hospital?

1.6 Objectives

1.6.1 Broad Objective

The main objective of this study is to assess knowledge, attitude and practice of physical activities among health personnel at Muhimbili National Hospital.

1.6.2 Specific Objectives

1. To examine knowledge on physical activities among health personnel in Muhimbili National Hospital.
2. To examine practice of physical activities among health personnel in Muhimbili National Hospital.
3. To assess attitude towards physical activities among health personnel at Muhimbili National Hospital.

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Knowledge on Physical Activities

A cross sectional study conducted in Brazil in 2015 revealed that 58% of nurses and physician are more knowledgeable on the amount of physical activities recommendation for health benefits than community health care workers. Physicians were more likely to recommend physical activities after noticing a problem on the patient. However, this was limited by appointment time (7). The intervention to promote PA in 2001 in America identified several factors that affect physical activities such as personal characteristics, program or regime based factors and environmental factors (7). Perception on physical environment had direct impact on physical activities.

Another cross sectional analysis on the practice of physical activities among future doctors reported lack of time and laziness or lack of motivation as the most hindering factor by 50% for regular physical activities among the future doctors (11). In a study conducted in America on factors underlying variation in receipt of physician advice on diet and physical activities showed that 24.5% of the respondents received advice on physical activities and exercise. Poorer self-rated health status patients had more likelihood of receiving advice on physical activities (11).

Study done in USA on antenatal physical activity counseling among health care providers revealed 50% of health care providers has good knowledge on physical activity counseling and they do counseling to expectant women to improve the wellbeing of both mother and the baby (12). Another study done in California shows that despite nurses' knowledge of the importance of healthy behaviours, this knowledge does not always translate into self-care. The consequences of unhealthy workforce can adversely affect nurses' morale, productivity, and ultimately patient cares. Nurse leaders can serve as role models for healthy lifestyles, and they can support staff nurses' efforts to exercise, consume a healthy diet, reduce stress and improve interpersonal relationships (13).

Study done in United Kingdom among nursing and medical students showed that many students did not achieve recommended level of physical activity (nursing 48%, medical students 38%). Intervention to build self-efficacy for exercise and increase social support should be developed targeting on specifically to shift-working frontline care staff, to reduce schedule related to barriers to exercise and increase accessibility to workplace health and well-being initiatives (14).

A study done in Nigeria among physiotherapists towards promotion of physically active lifestyles in patients' management reported to have good knowledge (15). Another study in the same country on knowledge, attitude and practice (KAP) principles of exercise prescription among physiotherapist reported availability of guidelines towards exercise prescription on various conditions. The guidelines are of help to health care professionals with little or lack knowledge towards exercise prescription to improve the wellbeing and care for those in need of the service (16). Furthermore, a KAP study conducted in Ghana in 2013 revealed that majority of nurses lacked adequate specific knowledge on exercise counseling/prescription. Most of nurses were not exercising and only few prescribe exercise to their patients (17).

From studies conducted previously it shows there is still a knowledge gap among health personnel on the physical activity recommendations by WHO for health benefits. Poor practices on physical activities among health personnel have also been documented.

2.2 Practice on Physical Activities

Study done in United States of America 2003 on exercise counseling and personal exercise habits of United States women physicians showed good practice in exercise (18). A cross sectional study in Slovenia 2017 on physical activity practice among undergraduate nursing students showed that they do not practice regular physical activities despite knowing their advantages towards health promotion. The most barriers reported are lack of time, too many duties, lack of finance and motivation towards physical activities (19).

In Western Sweden 2011 a study done on healthcare workers participation in a healthy life style promotion showed poor record involvement in physical activities (20). Moreover, a study done in England showed knowledge gained through education relating to healthy promotion and health behaviors of patients being targeted at pre-registered nurses, is not transferred to nurses own behaviors, as their healthy profile are relatively poor, and those who are sedentary engage in other negative lifestyle (21). On the other hand study done to physical therapists, physical therapist assistants, and student physiotherapists in America showed that most physical therapists appear to be good role models in physical activity which have clinical implications towards counseling patients on importance of physical activity (22). A study done on prevalence of overweight and obesity among nurses in Scotland revealed that the prevalence of overweight and obesity among Scottish nurses was higher than other health professionals and non health related occupations which has an impact to their health since overweight and obesity are predisposing factors to heart diseases, diabetes, cancer etc. Regular physical activity will reduce the burden of overweight and obesity which has an impact on NCDs (23).

Study done on occupational factors associated with obesity and leisure time physical activity among nurses in California revealed higher prevalence of overweight and obesity and leisure time physical inactivity among nurses which were associated with occupational factors such as job title, full time work, long work hours, shift work, and high job demand (24).

Study done on physical inactivity and perceived barriers to physical activity among healthy college students in South Western Saudi Arabia revealed that majority were physically inactive, top barrier reported to among inactive students was time limitation (25). Another study in India among dentists on physical activity showed physical inactivity among dentists which put them at risk of developing NCDs (26). In contrary to that study in Hyderabad among dental health professionals towards physical activity showed high physical activity 60.7% among them, education, income and occupation are factors which likely led them to engage in healthier behaviors (27).

Another cross sectional study conducted at Sungai Campus in Malaysia among health personnel in faculty of medicine reported that male staff had good practice towards exercises compared to female staff who had several constraints towards exercise such as exhaustion after heavy and continuous working hours, lack of time, cost, desire to do other things like domestic household and family responsibility (28).

The study conducted in Colombo, Sri Lanka on physical inactivity among physiotherapy undergraduates reported that majority of them were inactive due to internal barriers such as lack of support and motivation on PA, exercise and sports which were developed during childhood and adolescent (29).

Another study on prevalence and risk factors for overweight and obesity among nurses in Ghana revealed physical inactivity among nurses and habitual meal skipping due to nature of their occupation and various sedentary tendencies associated with it, were found to be significant contributors to overweight and obesity among nurses which has an impact to NCD (30).

In Kwa Zulu Natal, South Africa a cross sectional study was conducted and showed a low level of physical activities among health professionals (31). Besides that study done in Rwanda 2013 on physical activity and healthy promotion strategies among physiotherapists reveals good physical practice among this cadre although some barriers such as government policy, cultural and environmental influences and time constraints were reported which have impact towards health promotion strategies (32).

The study done in Saudi Arabia on prevalence of physical activity among primary health care physicians showed majority of physicians were active and were more likely to impart advise on physical activity to their patients compared to physically inactive physicians (33). Another study in Nigeria among health care professionals towards physical activity showed high rate of physical inactivity and overweight/obesity among health care personnel (34).

The study done in Ethiopia among health care professionals on physical activity habits and their confidence to prescribe physical activity showed majority of health care professionals (73.7%) had moderate level of physical activity (35).

Gap identified from the reviewed studies indicate most of health personnel lack enough time to do physical activity due to various reasons. Moderate physical activity among health personnel at Muhimbili National Hospital has been documented.

2.3 Attitude on Physical Activities

A study on attitude and practices of physicians and nurses regarding physical activities promotion in Catalonia, Barcelona –Spain shows that 88% of physician/nurses promoted PA at least infrequently. However, work conditions were perceived as unfavorable with the main barriers being lack of time, training and protocol (36). Moreover, study done in Taiwan on physical activities and influencing factors among public health nurses in public health sector indicate low motivation towards physical activities (37).

Another study done on registered nurses' beliefs of the benefits of exercise, their exercise behavior and their patient teaching regarding exercises shows that nurses who believe in health promotion and support healthy behaviors are more likely to be positive role models and teach healthy behaviors to their patients (38).

Another study done in 2011 in United Kingdom among registered nurses in self reported healthy and lifestyle behavior showed that almost half of the sample failed to meet public health recommendations for physical activity, and almost two thirds of them did not consume five portions of fruits or vegetables daily and almost half ate foods that were high in fat and sugar content on a daily basis (39). Study done on lifestyle behaviors and weight among hospital based Nurses in USA revealed that they are not involved in weight management behaviors, poor diet and not physically active making most of them to be overweight and obese (40).

Study done in Britain to pre registered nurses show less exemplary and inconsistent with their own beliefs and attitudes on importance of nurses as being role models towards physical activity for general public. An intervention to influence positive change in health behavior within this population is required to ensure a healthy public work force for the future (41). Another study done to nurses in the same country show nurses were promoting physical activity within their clinical practice, personal physical activity behavior, perceived health status, length of clinical practice, clinical specialty, and actual body weight were significantly related to the registered nurses professional physical activity related practice (42).

Study done in India to nurse students showed good orientation towards health behaviours, attention needs to be paid for health food choices. Health promotion planning is necessary to motivate nursing students for regular physical activity with the purpose of promoting health and preventing non communicable diseases (43).

Another study done in Malaysia among health care workers showed that socioeconomic status, income and self motivation were the main factors that were associated with the level of physical activity among health care workers (44). On the other side a study done in South Africa on nurses' lifestyle behaviors, healthy priorities and barriers to living a healthy lifestyle revealed that the prevalence of NCDs and healthy related conditions and risk factors such as obesity, physical inactivity, poor dietary habits and substance abuse has been reported among the nursing workforce (45).

Gap identified from literature review shows low motivation/morale towards physical activity among health professionals. Low motivation also has been reported in this study.

CHAPTER THREE

3.0 MATERIALS AND METHODS

3.1 Study Setting and Design

The study was conducted at Muhimbili National Hospital which is located at Upanga West ward in Ilala municipality in Dar es Salaam region. The hospital is the largest public and tertiary hospital in Tanzania and a teaching hospital of the Muhimbili University of Health and Allied Sciences (MUHAS). The hospital receives patients from 3 regional referral hospitals which are Temeke, Amana and Mwananyamala hospitals and other hospitals within Dar es Salaam city and upcountry. The site was chosen due to the fact that being a tertiary hospital it has several health personnel of different cadres who handle various patients with NCDs. That group of patients needs quality health education on physical activities knowledge and practice as part of management. Ascertaining their KAP on physical activities will enable us to explore the current practice that exist among health personnel and enable improvement.

3.2 Study Design

This was a cross sectional analytical study. The study was done at MNH among health personnel who have direct interaction with patients in their daily duties. The study was conducted in September 2018 to examine knowledge, attitude and practice towards physical activity.

3.3 Study Population, Sample Size and Selection

The target study population was all health personnel in Muhimbili National Hospital who have direct interaction with patients in their daily duties. These included medical and dental practitioners, nurses, medical physiotherapists, occupational therapists and nutritionists.

3.3.1 Sample Size Estimation

Sample size was calculated using a Slovincs formula because the number of healthcare providers is known. Muhimbili National Hospital has a total of 2000 healthcare providers.

$$n = N / (1 + Ne^2)$$

Where;

N = Total number of healthcare providers

e = Random error

n = Sample size

$$n = 2000 / (1 + 2000 * 0.05^2) = 340$$

3.3.2 Sampling Technique and Procedures

In the course of undertaking this study at MNH simple random sampling was used. The sampling technique followed after cluster sampling in the course of selecting few departments among various departments at the MNH. A simple random sampling was used to select 13 departments out of 29 departments. The health personnel were randomly selected from each department to participate in the study. Thus, a total of 26 respondents were selected from each department making a total of 338. The last two participants were recruited from the last department to increase power of the study. In the end total sample was 340 respondents. The study participants were selected based on inclusion and exclusion criteria set for the study.

3.3.3 Inclusion criteria

All health personnel from MNH who have direct interaction with patients in their daily activities and who were willing to participate and agree to sign the informed consent were eligible subjects in this study.

3.3.4 Exclusion criteria

All health personnel who were severely sick during the study period were not included in this study.

3.4 Study Variables

3.4.1 Dependent Variable

Physical activity defined as any bodily movement produced by skeletal muscles that requires energy expenditure is a dependent variable of this study. Physical activities practice has been assessed in the present study. Practices toward physical activities were measured in ordinal scale as indicated in Table 1 in section 2.6.

3.4.2 Independent Variables

In this study independent variables were knowledge, attitudes and practices towards physical activity. The demographic variables that were included in this study are age in years (ratio), sex (nominal), marital status (nominal), education level (ordinal), professional cadre (ordinal), and work experience (ratio). Environmental factors that impact access to physical exercise, safety (ordinal), infrastructure (ordinal) and Economic and societal factors-income level (ordinal).

Knowledge on physical activity was measured in ordinal scale which is graded at three levels: 1 = good, 2 = moderate 3 = poor.

Attitudes toward physical activities were measured using a scale of five levels of Likert scale (1 = very little, 2 = little, 3 = average, 4 = much, and 5 = very much).

3.5 Data Collection Methods

Questions on physical activity were adapted from the validated International Physical Activity Questionnaire (10). This was done to ensure data quality. Questionnaire was then developed by adapting the International Physical Activity Questionnaire. All data were collected through self-administered questionnaires among MNH health personnel who consented to participate in the study. The questions which focused on knowledge of PA consisted of source of information of PA, benefits of doing PA, awareness of PA guidelines, duration of performing PA and quality (time and days) to meet the recommended definition of PA. The questions which focused on attitude of PA consisted of

motivation to do PA, counseling of patients towards PA, benefits of PA. Questions which focused on practice of PA consisted of number of days a person does vigorous/moderate PA in a week, time spent by a person in doing vigorous/moderate PA per day, number of days spent by a person for walking in a week, time spent by a person for walking in a day (Appendix I).

The health personnel who agreed to participate in the study were requested to sign the informed consent form before filling the questionnaire questions. Those who were busy at the time of administering the questionnaire, the questionnaires were left to them and were collected after a maximum of two working days. The data collected included age, sex, marital status, working experience, questions measuring knowledge and attitude.

3.6 Investigation Tools, Validity and Reliability

This study used self administered questionnaires to collect data at MNH. Prior the study, a pilot study was conducted for one day to ten health personnel at MOI Hospital to correct and change questions which are not clear and improve questions accordingly. In this pilot study no changes were made, questions were clear so no corrections made. Data obtained from pilot study was not included in the report during data analysis.

3.7 Data Analysis

Data was analyzed by using Statistical Package for Social Sciences (SPSS) version 20. Descriptive statistics was performed to present frequency and percentage of the respondents. Social demographic and social economic information were cross tabulated to ascertain association between variables.

Specific objective one was analyzed by using descriptive statistics on the category of knowledge levels and their correlation with socio-demographic characteristics. The responses were presented in a table or graph.

In specific objective two descriptive statistics was used to analyze the data where frequency and percentage of response are shown in a pie chart. Detailed measurements of variables are shown in Table 1.

Table 1: Physical activity practice among health personnel at Muhimbili National Hospital

Variable	Operational definition	Measurement	Unit
Vigorous activities	Number of days a person does physical activities in a week	Ratio	Number
Exercise time	Time spent for doing vigorous physical activities	Ordinal	1 = < 15 minutes 2 = 15 minutes 3 = 30 minutes 4 = 45 minutes 5 = 60 minutes 6 = 75 minutes 7 = 90 minutes
Moderate physical activities	Number of days spent by a person to do moderate physical activities	Ratio	Number
Duration of moderate physical activities	Time spent by a person in doing moderate physical activities per day	Ordinal	1 = < 15 minutes 2 = 15 minutes 3 = 30 minutes 4 = 45 minutes 5 = 60 minutes 6 = 75 minutes 7 = 90 minutes
Walk	Number of days spent by a person for walking in a week for at least 10 minutes	Ratio	Number
Duration of walking	Time spent by a person for walking in a day	Ratio	1 = < 15 minutes 2 = 15 minutes 3 = 30 minutes 4 = 45 minutes 5 = 60 minutes 6 = 75 minutes 7 = 90 minutes
Duration of sitting	Time spent by a person for sitting in a single day	Ordinal	1 = < 1 hour 2 = 1 - 2 hours 3 = 3 - 4 hours 4 = 5 -6 hours 5 = > 6 hours

Specific objective three on attitude towards PA was measured and analyzed by using a five point Likert scale. Six statements were used to measure the attitude of healthcare providers on PA using an ordinal scale of five levels of Likert scale (1 = very little, 2 = little, 3 = average, 4 = much and 5 = very much). At the end, the general attitude scores were computed to get a cut off points in order to present three levels as follows; based on the six statements $6 \times 5 = 30$ as the ones with highest scores of attitude, $6 \times 3 = 18$ as the ones with intermediate attitude level while $6 \times 1 = 6$ as the ones with the lowest attitude. The average score from 6 - 17 were considered to have negative attitude, the average score of 18 indicated moderate attitude while those score from 19 - 30 were considered to have positive attitude.

3.8 Ethical Clearance and Consideration

Ethical clearance was sought from MUHAS Institutional Review Board. Permission to conduct the study was obtained from the Executive Director of MNH. The purpose of the study, the nature of the study as well as possible risks and benefits were explained to the study subjects. The study participants were informed that participation in the study was on voluntary basis with rights to withdraw at any time during the study period without penalty or any loss of benefit to treatment. Informed consent was requested from the prospective study participants who were approached at the commencement of the study. After securing informed consent recruited subjects were asked to sign the informed consent forms. To ensure confidentiality, participants were given ID codes for data collection and entry. The study participants were assured that the collected data would not be used for other purposes other than this study.

CHAPTER FOUR

4.0 RESULTS

A total of 340 health personnel consented and agreed to participate in the study. Almost half of the study participants were between 26 to 35 years of age. The mean age was found to be 35.8 ± 10 years. The youngest participants 33 (9.7%) were less than 25 years of age. This study was predominated by female who were 211 (62.1%). Almost 96% of the study participants reported to have college/university education. The study showed that more than half of health personnel 199 (58.5%) were married and most of them were nurses 231 (67.9%) (**Table 2**).

Table 2: Socio-demographic characteristics of the study population (n = 340)

Characteristics	Frequency (n)	Percentage (%)
Age (in years)		
>25	33	9.7
25- 35	166	48.8
36 – 45	73	21.5
>45	68	20
Sex		
Male	129	37.9
Female	211	62.1
Education level		
Secondary education	15	4.4
College/University	325	95.6
Marital status		
Single	123	36.2
Married	199	58.5
Separated	2	0.6
Divorced	4	1.2
Widowed	8	2.4
Co-habiting	4	1.2
Professional cadre		
Medical practitioner	76	22.4
Dental practitioner	17	5
Nurse	231	67.9
Physiotherapist	11	3.2
Nutritionist	5	1.5

A number of questions were used to assess the knowledge regarding physical activities. Participants were asked about the benefits and the recommended WHO guidelines on physical exercise practice. A correct response was given a score of 1 and incorrect one a zero score. Total scores were then calculated and divided into three equal categories for good, moderate and poor knowledge levels. Further analysis was then carried out to correlate the knowledge levels and socio-demographic characteristics together with physical exercise practice.

Most participants 221 (65%) demonstrated good knowledge towards physical activities. Fifty seven participants (16.8%) had poor knowledge towards physical activities (**Figure 2**).

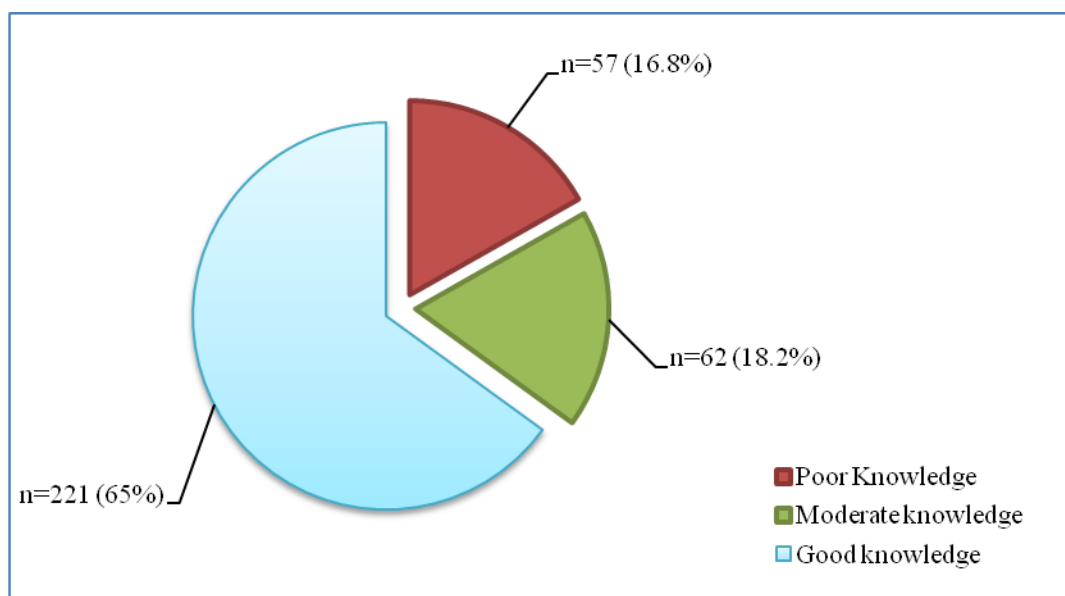


Figure 2: Distribution of knowledge with regards to physical exercise (n = 340)

Knowledge was correlated with the socio-demographic characteristics (**Table 3**). Good knowledge was seen among 22 (66.7%) study subjects who were of young age as compared to other older ones, the observed difference was however not statistically significant ($p = 0.735$). Slightly higher proportion 139 (65.9%) of female participants had good knowledge as compared to male participants 82 (63.6%). However, the difference was not statistically

significant ($p = 0.773$). Those with college/university education 213 (65.5%) had good knowledge on physical activities as compared to those who had secondary education. The observed difference was also not statistically significant ($p = 0.595$).

All cohabiting participants had shown good knowledge on physical activities as compared to other groups. The observed difference was however not statistically significant ($p = 0.336$).

Good knowledge was moreover demonstrated mostly among nutritionist 5 (100%) followed by physiotherapist 8 (72.7%) as compared to other professional cadres. The observed differences in proportion was however not statistically significant ($p = 0.252$) (**Table 3**).

Table 3: Distribution of knowledge level with socio-demographic characteristics (n=340)

Character	Level of Knowledge			$X^2, p\text{-value}$
	Poor n (%)	Moderate n (%)	Good n (%)	
Age (in years)				
< 25	3 (9.1)	8 (24.2)	22 (66.7)	
26 to 35	27 (16.3)	28 (16.9)	111 (66.9)	
36 to 45	16 (21.9)	13 (17.8)	44 (60.3)	
>45	11 (16.2)	13 (19.1)	44 (64.7)	3.56, 0.735
Sex				
Male	21 (16.3)	26 (20.2)	82 (63.6)	
Female	36 (17.1)	36 (17.1)	139 (65.9)	0.515, 0.773
Education level				
Secondary	3 (20)	4 (26.7)	8 (53.3)	
College/University	54 (16.6)	58 (17.8)	213 (65.5)	1.03, 0.595
Marital status				
Single	22 (17.9)	23 (18.7)	78 (63.4)	
Married	32 (16.1)	36 (18.1)	131 (65.8)	
Separated	1 (50)	1 (50)	-	
Divorced	2 (50)	-	2 (50)	
Widowed	-	2 (25)	6 (75)	
Co-habiting	-	-	4 (100)	11.2, 0.336
Professional cadre				
Medical practitioner	9 (11.8)	15 (19.7)	52 (68.4)	
Dental practitioner	5 (29.4)	-	12 (70.6)	
Nurses	41 (17.7)	46 (19.9)	144 (62.3)	
Physiotherapist	2 (18.2)	1 (9.1)	8 (72.7)	
Nutritionist	-	-	5 (100)	10.1, 0.252

A total of 5 questions were used to assess the participants' practice towards physical activities. The questions focused on the WHO recommended guidelines for both vigorous and moderate physical activities. Participants who met the recommended WHO criteria were reported as having good practice on physical activities whereas those who had not met were reported as having poor practice.

On analyzing the data on physical exercise practice, most of study subjects 234 (68.8%) had demonstrated good practice as shown in Figure 3. Most health personnel had reported to engage in vigorous physical activities for more than 2 days per week. Moreover, 310 study subjects (91.2%) had spent less than 75 minutes in vigorous physical activities on those days.

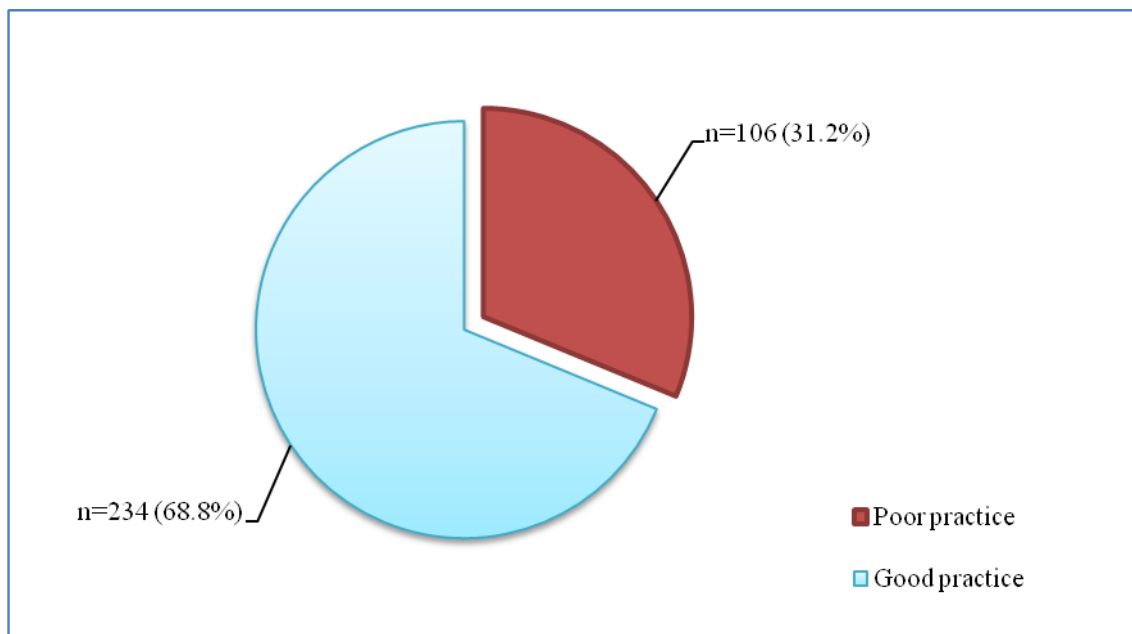


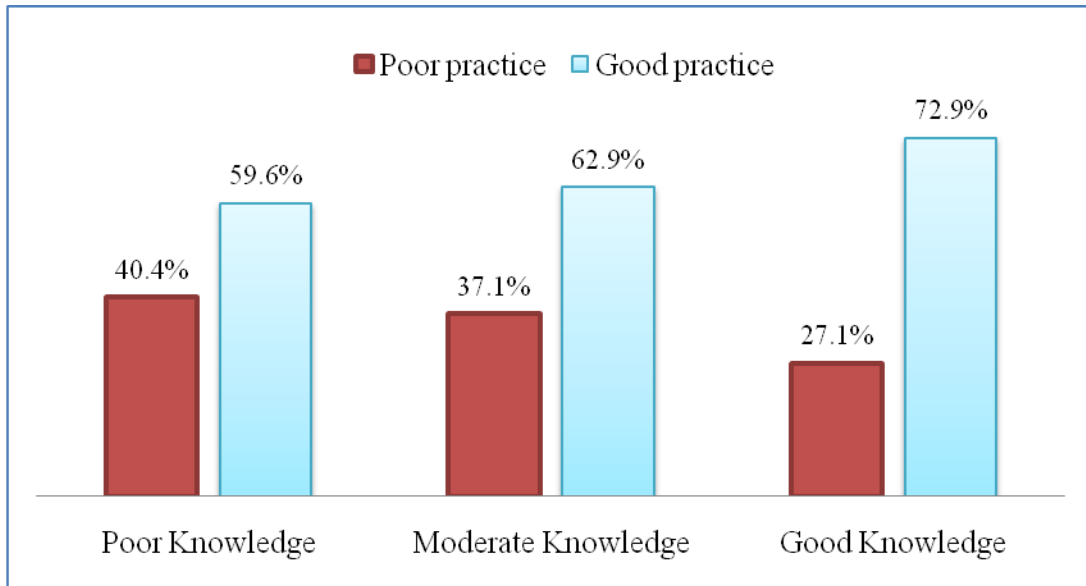
Figure 3: Participants category of practice towards physical activities (n = 340)

This study also found that 234 (68.6%) participants spent more than 3 days in a week in moderate physical activities; 326 (95.9%) spent less than 150 minutes for moderate exercise and 303 (89.1%) spent less than 75 minutes on walking (**Table 4**).

Table 4: Self reported practice on physical activities (n = 340)

Variable	Frequency (n)	Percentage (%)
During the last 7 days how many days did you do vigorous physical activities?		
Less than 2 days	56	16.5
More than 2 days	284	83.5
How much time did you spend on vigorous physical activities in those days?		
Less than 75 minutes	310	91.2
More than 75 minutes	30	8.8
During the last 7 days how many days did you do moderate physical activities?		
Less than 3 days	106	31.2
More than 3 days	234	68.8
How much time did you spend on moderate physical activities in those days?		
Less than 150 minutes	326	95.9
More than 150 minutes	14	4.1
How much time did you always spend walking on those days?		
Less than 75 minutes	303	89.1
More than 75 minutes	37	10.9

Figure 4 shows the Pearson Chi-square correlation between knowledge and practice towards physical activities. Good practice was seen mostly among participants with good knowledge (72.9%) as compared to those who had poor knowledge (59.6%). The observed difference in proportion was statistically significant ($p = 0.035$).



(Chi-square = 4.9, $p=0.035$)

Figure 4: Distribution of knowledge level with physical activities practice (n=340)

Table 5 shows distribution of on physical exercise practices with socio-demographic characteristics. Good practice was seen mostly among youngest participants 24 (72.7%) as compared to other age groups. The observed difference in proportion was statistically insignificant ($p = 0.238$). Male participants had good practice 97 (71.3%) as compared to female counterparts 142 (67.3%). However, the observed difference in proportion was statistically insignificant ($p= 0.438$).

Health personnel that had college/university education level demonstrated good practice 226 (69.5%) as compared to those with secondary education level 8 (53.3%). The observed difference in proportion was not statistically significant ($p = 0.185$).

Physical activities were also more prominent among single participants 97 (78.9%) as compared to married ones. The observed difference in proportion was statistically significant ($p = 0.03$).

All nutritionists had good practice on physical activities followed by physiotherapists 9 (72.7%) and then medical practitioners 55 (72.4%). The observed difference in proportion was statistically insignificant ($p = 0.439$).

Table 5: Distribution of practice by socio-demographic characteristics (n=340)

Character	Poor practice n (%)	Good practice n (%)	X², p-value
Age (years)			
< 25	9 (27.3)	24 (72.7)	
26 to 35	45 (27.9)	121 (72.1)	
36 to 45	29 (39.7)	44 (60.3)	
>45	23 (33.8)	45 (66.2)	4.22, 0.238
Sex			
Male	37 (28.7)	92 (71.3)	
Female	69 (32.7)	142 (67.3)	0.60, 0.438
Education level			
Secondary education	7 (46.7)	8 (53.3)	
College/University	99 (30.5)	226 (69.5)	1.75, 0.185
Marital status			
Single	26 (21.1)	97 (78.9)	
Married	71 (35.7)	128 (64.3)	
Separated	1 (50)	1 (50)	
Divorced	2 (50)	2 (50)	
Widowed	5 (62.5)	3 (37.5)	
Co-habiting	1 (25)	3 (75)	12.3, 0.03
Professional cadre			
Medical practitioner	21 (27.6)	55 (72.4)	
Dental practitioner	7 (41.2)	10 (58.8)	
Nurses	75 (32.5)	156 (67.5)	
Physiotherapist	3 (27.3)	9 (72.7)	
Nutritionist	-	5 (100)	3.76, 0.439

Likert scale was used to assess the participants' attitudes towards physical activities. The positive response was given a score of 5 for a "very much" response to the minimum score of 1 for a "very little" response. Total scores were then taken for individual participant and mean score for all participants. Participants who had a score above the calculated mean score were considered to have a positive attitude whereas those with lower score were considered to have negative attitude. Almost three quarter 250 (73.5%) of all participants had positive attitude towards physical activities (**Figure 5**).

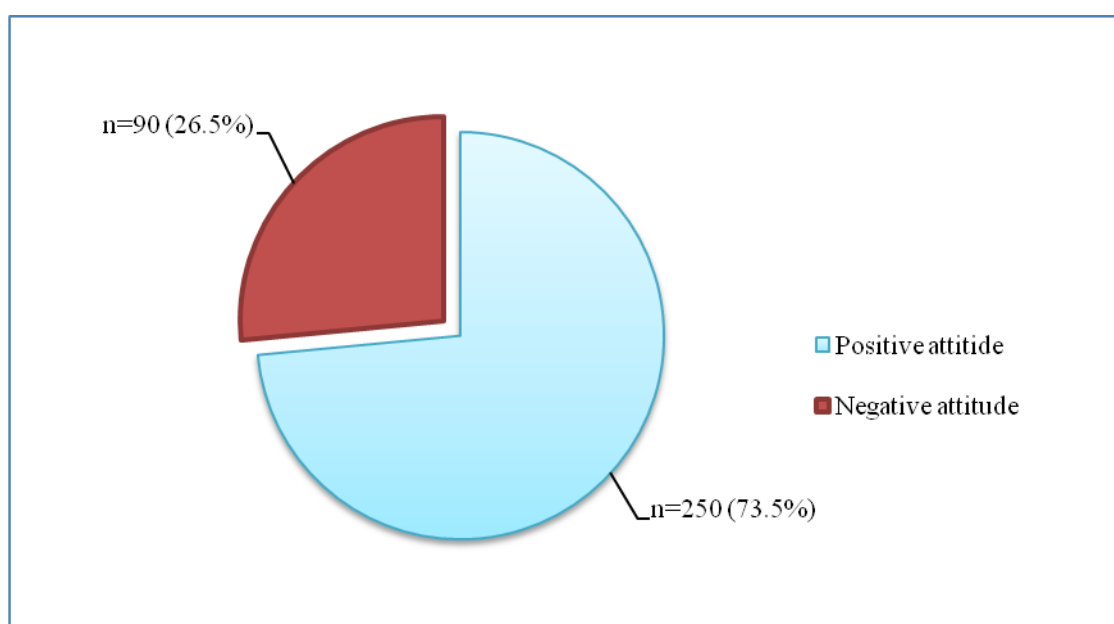


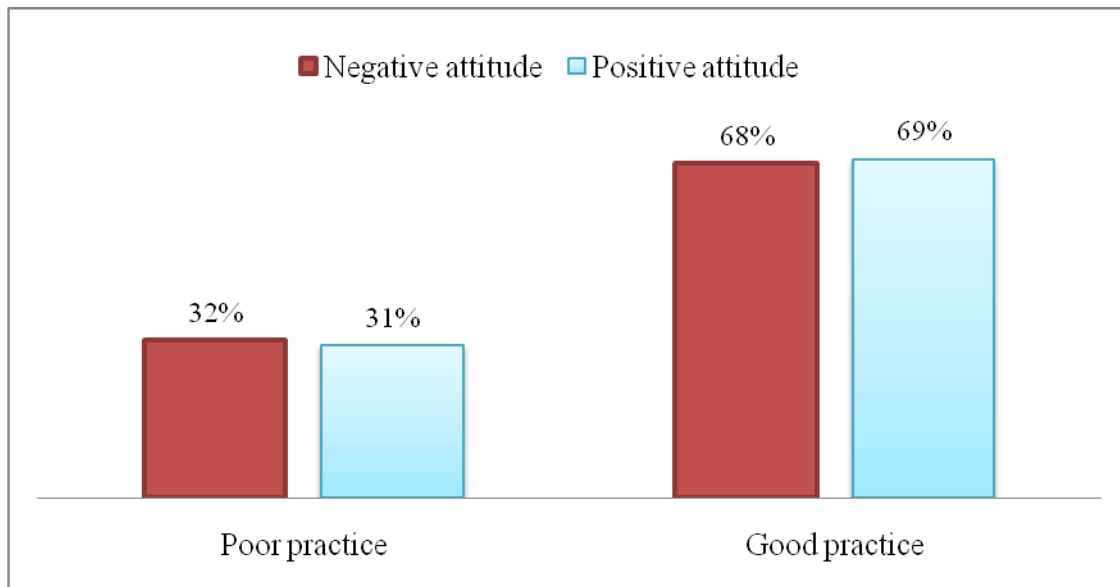
Figure 5: The participants' attitude towards physical activities (n = 340)

The analysis showed that 218 (64.7%) of participants had reported to like doing physical activities but only 68 (20%) agreed to have spent more time on physical activities. Moreover, 61 (18.1%) of health personnel had reported to have been satisfied with the physical activities environment and 66 (19.6%) agreed to had gotten enough time on physical activities. It was also found that more than three quarter of health personnel 269 (79.8%) usually counsel their clients on the benefits of physical activities and most of them 262 (77.7%) think that physical activities have health benefits (**Table 6**).

Table 6: Participants attitude towards physical activities (n = 340)

Variable	Frequency (n)	Percentage (%)
Do you like doing physical activities?		
Much	218	64.7
Average	75	22.3
Little	44	13.1
Do you feel you get enough physical activities?		
Much	68	20
Average	131	38.5
Little	138	40.6
Are you satisfied with your physical activities environment?		
Much	61	18.1
Average	105	31.2
Little	171	50.7
Do you think you have enough time to do physical activities?		
Much	66	19.6
Average	84	24.9
Little	187	55.5
Do you counsel your clients on health benefits of physical activities?		
Much	203	60.2
Average	66	19.6
Little	68	20.2
Do you think physical activities have any beneficial effect to your health?		
Much	262	77.7
Average	11	3.3
Little	64	19

As shown in **Figure 6**, nearly similar proportion of participants 69% vs. 68% with positive and negative attitude, respectively had demonstrated good practice towards physical activities.



(Chi-square = 0.17, $p=0.677$)

Figure 6: Distribution of attitude with physical activities practice (N = 340)

CHAPTER FIVE

5.0 DISCUSSION

The study was done to examine knowledge, attitude and practice of health personnel towards physical activities. The assessment of knowledge and practice as the core variable was based on WHO recommended values on both vigorous and moderate exercises. Data from 340 consented health personnel had demonstrated significant number of health personnel to have good knowledge, attitude and practice on physical activities. From the conceptual framework, it is well known that good knowledge on physical activities seems to promote good physical practice behaviour. However, attitude was not found to be the predictor for good practice.

The study findings show large proportion of well knowledgeable health personnel on physical activities. This was contrary to what was observed in Brazil (7). The observed findings could be due to professional training and orientations among health personnel. Recruited study populations are exposed on the health benefits of physical exercise during their training period and later in career development. A study from Nigeria backs our findings that had shown the largest proportion of health personnel having good knowledge on physical activities (15).

Knowledge levels were not significantly influenced by any of demographic characteristics. However, a Brazilian study observed a positive relationship between knowledge on physical activities with literacy levels (7). The observed difference of knowledge from our present findings could be due to good education background on our study population. Nearly all participants had college/university education (95.6%). It is assumed that the health care workers have better knowledge on health lifestyle as compared to other people (10).

A significant positive correlation between knowledge and practice of physical activities was found in the present study. We have noticed an increase in proportion of good physical activities practice with increase in knowledge level. Similar findings were reported in the study conducted by Hosseinzadeh and colleagues (7).

Proportion of health personnel who engaged in moderate and vigorous physical activities was significantly high. However, less number of participants spent less than 75 minutes in walking as part of physical activities. What have being observed in the present study is similar to what was found in a Ghana study that explored physical exercise practice among nurses. High proportion of participants had good practice on moderate and vigorous physical activities (17).

As we have observed, insufficient physical activities tally to observation elsewhere in the world. Insufficient physical activities seems to be prevalent more prevalent in Sri Lanka (29) and Slovenia (19). Lack of time, too many duties, and lack of motivation seem to be the most hindering factors. The problem of lack of physical activities is even more prevalent among South Africans health professional (31).

In this study, good practice on physical activities was significant observed among single health personnel as compared to others marital status. This can be explained by lack of time due to family commitments that married individuals had. Moreover, we noted good number participants to have positive attitude towards physical activities. Attitude has an impact on practice hence promoting positive attitude will in turn enhance good practice.

What we have noted with regards to attitude on physical activities is similar to what has been found elsewhere (37). Health care providers who believe in physical activities for health promotion usually demonstrated good practice and were more likely to teach health behaviors to their patients (38).

Most of the interviewed study subjects seemed to like doing physical activities but they don't feel to have enough physical activities. Physical activities environment looks like one of the potential hindering factor. Time also was also a problem among many health care workers. The problem of time was also observed in Catalonia, Barcelona (24).

Breaking the barrier to regular physical activities will therefore results into better practice outcomes. This can be reinforced through promoting good knowledge and positive attitude towards physical activities.

5.1 Study Limitation and Mitigations

Study results cannot be generalized to all health personnel in the country. It is limited to a single health facility which might not give enough information. Also since the data collection instrument was self-reported, responses might be biased of respondents' feeling at the time they filled out the questionnaire. This challenge was mitigated by explaining the purpose of the study clearly before the respondent signs consent form.

CHAPTER SIX

6.0 CONCLUSION AND RECOMMENDATIONS

6.1 Conclusion

It can be concluded on this study that a significant number of health personnel had demonstrated good knowledge on physical activities. Positive attitude was also seen in nearly three quarter of all participants. Knowledge was found to be significantly influenced by physical activities practice. The present study moreover showed a good proportion of health personnel who engage in physical activities. Single participants had a positive correlation with physical activities practice. Health personnel still maintained their positive view of health benefits of physical exercise and they were willing to continually share this to their patients.

6.2 Recommendations

The following are recommended from what we have observed:

1. Efforts need to be made on promoting knowledge and attitude towards physical activities so as to promote good practice.
2. Further studies need to be done so as to explore other mediators of physical activities.

REFERENCES

1. Alricsson M. Physical Activity Why and How? J Biosaf Heal Educ 2013 Aug; 1(4):1–2.
2. Ramezankhani A, Motalebi M, Tavassoli E, Pour ZG, Heydarabadi AB, Barekati H, et al. The Study of Knowledge, attitude and practice towards physical activity and its Related Factors of College Students Living on Campus in Shahid Beheshti University of medical science. J Paramed Sci; 2013 Jun, 4(3) 63-7.
3. Myechia Minter-Jordan, Irene S. Davis ZA. Healthy Mind, Healthy Body : Benefits of Exercise. CMAJ 2014 Mar; 174(6):801-9.
4. WHO .Global status report on Non Communicable Diseases.2014 Geneva Switzerland BMC Health Serv Res. 2019, Feb11;13:21.
5. U.S. Department of Health and Human Services. Physical Activity and Health: A Report of the Surgeon General. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, 1996.
6. Warburton DE, Nicol CW, Bredin SS. Health benefits of physical activity: the evidence. CMAJ. 2006 Mar 14;174(6):801-9.
7. Hosseinzadeh K, Heidari MA, Karbord A, Azimian J. Knowledge, Attitude and Practice Regarding Physical Activity in Nursing and Midwifery Students. Biotechnol Heal Sci. 2017 Jul; 4(1):1–5.
8. Ribeiro MA, Martins M de A, Carvalho CRF. The role of physician counseling in improving adherence to physical activity among the general population. Sao Paulo Med J. 2007 Mar; 125(2):115–121.

9. Serwe KM, Swartz AM, Hart TL, Strath SJ. Effectiveness of Long and Short Bout Walking on Increasing Physical Activity in Women. *J Women's Heal* 2011 Feb; 20(2):247–53.
10. Park MS, Huh MK. The Study of Physical Activity Questionnaires at Hadong-gun in Korea Department of Physical Education , College of Art and Sports Sciences , Dong-eui University , 176 Department of Molecular Biology , Colleg. 2017 May; 4(1):51–6.
11. Rao CR, Darshan BB, Das N, Rajan V, Bhogun M, Gupta A. Practice of Physical Activity among Future Doctors: A Cross Sectional Analysis. *Int J Prev Med* 2012 May; 3(5):365–9.
12. Leiferman J, Gutilla M, Paulson J, Pivarnik J. Antenatal physical activity counseling among health care providers 2012. *Ojog* 2012 Nov; 2(4):346-55.
13. Ross A, Bevan M, Brooks AT, Gibbons S, Wallen GR. Nurses and health promoting behaviours; Knowledge may not Translate into self-care; *AORN J*. 2017 Mar; 105(3):267-75.
14. Blake H, Stanulewicz N, McGill F. Predictors of physical activity and barriers to exercise in nursing and medical students. *JAN* 2016 Oct; 73(4):917-29.
15. Aweto HA, Oligbo CN, Fapojuwo OA, Olawale OA. Knowledge, attitude and practice of physiotherapists towards promotion of physically active lifestyles in patient management. *BMC Health Serv Res*. 2013 Jan 14; 13:21.
16. Okafor UAC, Aweto HA, Adewole AH, Igwesi-Chidobe CN, O debiyi DO. Attitude and Practice principles of exercise prescription among physiotherapists. *BMC Health Serv Res*. 2013 Jan 14; 13:21.

17. Grimstvedt M. Physical Activity counseling Knowledge, Attitude and Practice among nurse Practitioner and Physician assistants in Arizona State University. 2011 Apr. Available at: https://repository.as.edu/attachments/56381/content/Grimstvedt_asu_0010E/10345.pdf. Date accessed: 03/07/2018.
18. Frank EI, Schelbert KB, Elton L. Exercise counseling and personal exercise habits of US women physicians. *J Am Med Womens assoc* 1972 [01Jan. 2003, 58(3):178-184].
19. Cilar L, Preložnik N, Štiglic G, Vrbnjak D, Pajnikihar M. Physical activity among nursing students, *Pielegniarstwo XXI wieku / Nursing in the 21st Century*, 16(1), 30-5. doi: <https://doi.org/10.1515/pielxxiw-2017-0005> Date of access March 2018.
20. Jonsdottir HI, Borjesson M, Ahlborg JrG. Healthcare workers' participation in a healthy lifestyle promotion project in Sweden. *BMC Public Health* 2011 Jun; 11:448.
21. Blake H, Malik S, Mo PK, Pisano C. 'Do as I say, but not as I do'. Are next generation nurses role models for health? *Perspect public health* 2011 Sep; 131(5):231-9.
22. Chevan J, Haskvitz EM. Do as I do: Exercise habits of physical therapists, physical therapist assistants, and student physical therapists. *Phys Ther.*2010 May; 90(5):726-34.
23. Kyle RG, Neall RA, Atherton IM. Prevalence of Overweight and Obesity among Nurses in Scotland. *Int J Nurs Stud.* 2016 Jan; 53:126-33.
24. Chin DL, Nam S, Lee SJ. Occupational factors associated with obesity and leisure time physical activity among Nurses. *Int J Nurs Stud.* 2016 May; 57:60-9.

25. Awadalla NJ, Aboelyazed AE, Hassanein MA, Khalil SN, Aftab R, Gaballa II, et.al
Physical inactivity and perceived barriers to physical activity among health college students South western Saudi Arabia. *East Mediterr Health J.* 2014 Oct 20; 20(10):596-604.
26. Sharma P, Golchha V. Awareness among Indian dentists regarding the role of physical activity in prevention of work related musculoskeletal disorders. *Indian J Dent Res* 2011 May; 22(3):381-4.
27. Srilatha A, Doshi D, Reddy MP, Kulkarni S, Reddy BS, Reddy S. Physical activity among dental health professionals. *Dent Res J (Isfahan)* 2016 Nov;13(6):544-51
28. Mohd Rozali SNS, Anuar FN, Abdurahman CSS, Rahazi NAH, Adnan AAM, Al-Kubaisy W, et al. - Attitude and ability to overcome barriers in practicing physical exercise among Academy staff in faculty of Medicine. *Int J Health an life sciences* 2015 Jan;1(1):197-213
29. Ranasinghe C, Sigera C, Ranasinghe P, Jayawardena R, Ransinghe ACR, Hills AP et al. Physical inactivity among physiotherapy undergraduates: exploring the knowledge-practice gap. *BMC Sports Sci Med Rehabil.* 2016 Dec; 8:39.
30. Aryee PA, Helegbe GK, Baah J, Asante RA, Therson RQ. Prevalence and risk factors for overweight and obesity among Nurses. *Int J Nurs stud* 2013 Oct;2(4) 13-25.
31. Kunene SH; Taukobong NP, Level of physical activity of health professionals in a district hospital in KwaZulu-Natal, South Africa. *S Afr JPhysiother* 2015 Aug; 71(1):6.
32. Frantz JM, Ngambare R. Physical activity and health promotion strategies among physiotherapists. *Afr Health Sci* 2013 Mar; 13(1):17-23.

33. Banday AH, Want FA, Alris FF, Alrayes MF, Alenzi MJ. Prevalence of Physical among Primary Health Care Physicians. *Mater Sociomed.* 2015 Aug; 27(4):263-66.
34. Iwuala SO, Sekoni AO, Olamoyegun MA, Akanbi MA, Sabir AA, Ayankogbe OO. Self reported physical activity among health care professionals. *Niger J Clin Pract* 2015 Aug; 18(6):790-5.
35. Getu T, Harish K, Paramvir S. Healthcare Professionals' Habits of Physical Activity and their Confidence to Prescribe/Counsel Physical Activity. *Amer J Sport Sci* 2017 April; 5(1):1-6.
36. Ribera AP, Mckenna J, Riddoch C. Attitudes and practices of physicians and nurses regarding physical activity promotion in the Catalan primary health care system. *Med J.* 2007 Dec; 125(2):115–21.
37. Ling ML, Huang JJ, Chuang, HY, Tsai HM, Wang HH. Physical activities and influencing factors among public health nurses. *BMJ open* 2018 Apr 20; 8(4).
38. Esposito EM, Fitzpatrick JJ. Registered Nurses' beliefs, of the benefits of exercises, their exercise behavior and their patients teaching regarding exercises. *Int J Nurs Pract.* 2011 Aug; 17(4):351-6.
39. Malik S, Blake H, Batt M. How healthy are our nurses? New and Registered nurses compared in their self reported healthy lifestyle behaviors. *Br J Nurs* 2011 Apr 28-May 12; 20(8):489-96.
40. Zapka JM, Lemon SC, Magner RP, Hale J. Lifestyle behaviors and weight among hospital based Nurses. *J Nurs Manag.* 2009 Nov; 17(7):853-60.
41. Blake H, Harrison C. Health behaviours and attitudes towards being role models. *Br J Nurs.* 2013 Jan; 22(2):86-4.
42. Bakhshi S, Sun F, Murrells T, While A. Nurses behaviors and physical activity-related health promotion practices. *Br J Community Nurs.* 2015 Jun; 20(6):289-96.

43. Borle PS, Parande MA, Tapare VS, Kambe V, Bulakh P. Health-promoting lifestyle behaviours of nursing students of a tertiary care institute. *Int J Community Med Publ Heal*. 2017 May; 4(5):1768-73.
44. Jamil AT, Ismail A, Idris IB, Soo KC, Teng AJ, Bahaman NA, et al. Level of physical activity and its associated factors among health care workers. *Malay J Pub Heal Med* 2016 Jul; 16(3):127-33.
45. Phiri LP, Draper CE, Lambert EV, Kolbe-Alexander TL. Nurses' lifestyle behaviors, healthy priorities and barriers to living a healthy lifestyle. *BMC Nurs*. 2014 Nov 28; 13(1).
46. Chaubal SR. Effect of knowledge of Exercise Benefits on Attitude, Motivation, and Exercise participation. 2011. Available at:
<https://dspace.scunycconnect.suny.edu/handle./1951/57157>. Date of access 01/07/2018.
47. WHO. World Health Organization: Global Status Report on Non Communicable Diseases Geneva 2010. Available at:
<http://www.who.int/nmh/publications/ncd/report2010/en/1>. Date accessed: 18/08/2018.

APPENDICES

Appendix I: Questionnaire for Data Collection

MUHIMBILI UNIVERSITY OF HEALTH AND ALLIED SCIENCES

SCHOOL OF PUBLIC HEALTH AND SOCIAL SCIENCES



Questionnaire for investigating knowledge, practice and attitude of physical activities among Health Personnel at Muhimbili National Hospital

A: IDENTIFICATION

1. Identification number
2. Date of interview.....

B: DEMOGRAPHIC INFORMATION

Instruction: Use the answer column on the right to fill the correct answer

No	Question	Option	Answer
3	Date of birth	Number	
4	Sex	1 = Male 2 = Female	
5	Marital status	1 = Single 2 = Married 3 = Separated	

		4 = Divorced 5 = Widow/widower 6 = Cohabiting	
6	Level of education	1 = Primary 2 = Secondary 3 = College 4 = Others	
7	Professional cadre	1 = Medical practitioner 2 = Dental practitioner 3 = Nurses 4 = Physiotherapist / Occupational 5 = Nutritionist 6 = Others	
8	Work Experience	number	
	Other factors		
9	Access to recreation services, sports clubs, gym, cycling and walking paths	1 = easy 2 = difficulty 3 = not available	
10	Safety to recreation services, gym or sports club	1 = available 2 = not available	
11	Infrastructure maintenance such as roads, walking paths, cycling	1 = good 2 = satisfactory 3 = not satisfactory	
12	Level of income	1 = satisfactory 2 = not satisfactory	
13	Number of relatives close to you in your house	1 = none 2 = one 3 = more than one	

14	Number of close friends	1 = none 2 = one 3 = more than one	
15	Active member in Organized Social participation	1 = church 2 = mosque 3 = recreation / sports 4 = professional trade 5 = any other organization	
16	Role responsibility-taking care of your own children	1 = none 2 = some	
17	Company in doing physical activities	1 = partner 2 = friends 3 = others	
18	Social norms towards physical activity at work place	1 = none 2 = available	

C: KNOWLEDGE ON PHYSICAL ACTIVITIES

Questions

I will give you questions about your knowledge on physical activity. Please think carefully about each question before you respond.

1. 19- Have you ever heard about Physical Activity as a means to prevent or treat non communicable disease?

1- Yes

2- No

20- What are the health benefits of doing physical activity?

1- 2- 3- 4- 5-

21- Are there any physical activity guidelines available at your work place?

1- Yes

2- No

3- I don't know

22- How do you come to know about physical activity?

1- Training

2- Experience

3- Radio/television

4- Health facility

5- Books/newspaper

6- Colleagues/friends/relatives

7- Others-----specify

23- In reference to the WHO guidelines, in one occasion, how many minutes should a physical activity session last? -----minutes

24- In reference to the WHO guidelines, how many days per week (including weekends) should an adult perform moderate physical activity? -----days

(Moderate physical activity as part of a job, transport, household chores or leisure time etc)

25- On each of the days an adult does moderate physical activity, how many minutes a day should he/she do it for to be good for their health? -----minutes

26- In reference to the WHO guidelines, how many days a week (including weekends) should an adult perform vigorous physical activity? ----- days.

(Vigorous physical activity, as part of a job, transport, household chores or leisure time etc)

27-On each of the days an adult does vigorous physical activity, how many minutes per day should they do it for it to be good for their health? -----minutes

D: PRACTICE ON PHYSICAL ACTIVITY

International Physical Activity Questionnaire

We are interested in finding out about the kinds of physical activities that people do as part of their everyday lives. The questions will ask you about the time you spent being physically active in the last 7 days. Please answer each question even if you do not consider yourself to be an active person. Please think about the activities you do at work, as part of your house and yard work, to get from place to place, and in your spare time for recreation, exercise or sport.

Think about all the **vigorous** activities that you did in the last 7 days. Vigorous physical activities refer to activities that take hard physical efforts and make you breath much harder than normal. Think only about those physical activities that you did for at least 10 minutes at a time.

28. During the last 7 days, on how many days did you do vigorous physical activities like heavy lifting, digging, aerobics or fast bicycling?

29. How much time did you usually spend doing vigorous physical activities on one of those days?

1 = Less than 15 min

2 = 15 min

3 = 30 min

4 = 45 min

5 = 60 min

6 = 75 min

7 = 90 min

30. During the last 7 days, on how many days did you do moderate physical activities like carrying light loads, bicycling at regular pace, or double tennis? (Do not include walking)

.....

31. How much time did you usually spend doing moderate physical activities on one of those days?

1 = Less than 15 min

2 = 15 min

3 = 30 min

4 = 45 min

5 = 60 min

6 = 75 min

7 = 90 min

32. During the last 7 days, on how many days did you walk for at least 10 minutes at a time?

33. How much time did you usually spend walking on one of those days?

1 = Less than 15 min

2 = 15 min

3 = 30 min

4 = 45 min

5 = 60 min

6 = 75 min

7 = 90 min

34. During the last 7 days, how much time did you spend sitting on a weekday?

1 = Less than 1 hr

2 = 1 - 2 hrs

3 = 3 - 4 hrs

4 = 5 - 6 hrs

5 = More than 6 hrs

E: ATTITUDE TOWARDS PHYSICAL ACTIVITY**Instructions: In every question choose one option**

1 = Very much,

2 = Much,

3= Average,

4= Little,

5 = Very Little

No	Attitude questions	(5)	(4)	(3)	(2)	(1)
35	Do you like doing physical activities					
36	Do you feel you get enough physical activities					
37	Are you satisfied with your physical activities environment					
38	Do you think you have enough time to do physical activities?					
39	Do you counsel your clients on health benefits of doing physical activities					
40	Do you think physical activities has any beneficial effect to your health					

This is the end of questionnaire, thank you for participating

Appendix II: Dodoso la Utafiti**CHUO KIKUU CHA AFYA NA SAYANSI SHIRIKISHI MUHIMBILI****SHULE YA AFYA YA UMMA NA SAYANSI ZA JAMII**

Utafiti kwa wafanyakazi wa Hospitali ya Taifa Muhimbili kuangalia uelewa, ushiriki na mtazamo wao kuhusu faida ya mazoezi ya mwili

A: UTAMBUZI

1. Namba ya utambuzi.....
2. Tarehe ya mahojiano.....

B. TAARIFA ZA AWALI

Maelezo: Tumia sehemu ya majibu kuweka jibu moja tu

Namba	Maswali	Machaguo	Majibu
3	Tarehe ya kuzaliwa	Namba	
4	Jinsia	1 = mwanamume 2 = mwanamke	
5	Hali ya ndoa	1 = sijaoa/Sijaolewa 2 = nimeoa/nimeolewa 3 = tumetengana 4 = mtalaka 5 = mgane/Mjane 6 = tunaishi pamoja	

6	Kiwango cha elimu	1 = msingi 2 = sekondari 3 = chuo	
7	Fani	1 = daktari 2 = daktari wa meno 3 = muuguzi 4 = mtaalamu wa mazoezi 5 = mtaalamu wa chakula 6 = wengineo	
8	Uzoefu kazini	miaka	
9	Jinsi ya kufika kwenye kumbi za burudani, klabu za michezo/mazoezi, njia za baiskeli na waendao kwa miguu	1 = rahisi 2 = vigumu 3 = hakuna	
10	Usalama kwenye kumbi za burudani, klabu za mazoezi, michezo	1 = upo 2 = haupo	
11	Hali ya miundombinu kama vile barabara, njia za waendesha baiskeli, waenda kwa miguu	1 = mizuri 2 = inaridhisha 3 = hairidhishi	
12	Hali ya uchumi	1 = unaridhisha 2 = hauridhishi	
13	Idadi ya ndugu wa karibu unaoishi nao pamoja	1 = hakuna 2 = mmoja 3 = zaidi ya mmoja	

14	Idadi ya marafiki wa karibu	1 = hakuna 2 = mmoja 3 = zaidi ya mmoja	
15	Ushiriki wako kwenye vyama vilivyoratibiwa kwenye jamii	1 = kanisani 2 = msikitini 3 = burudani/michezo 4 = vyama vya taaluma 5 = vinginevyo(taja)	
16	Majukumu yako katika kutunza watoto wako	1 = hakuna 2 = kiasi	
17	Unayeshirikiana naye kwenye mazoezi ya kawaida	1 = mwenza 2 = rafiki 3 = wengineo	
18	Taratibu za kufanya mazoezi ya kawaida kwenye eneo lako la kazi	1 = hakuna 2 = zipo	

C: UELEWA AU UFAHAMU KUHUSU MAZOEZI YA KAWAIDA YA MWILI

Naomba ujibu maswali kuhusiana na uelewa au ufahamu wako kuhusiana na mazoezi ya mwili ya kawaida: Tafadhali fikiria kwa makini kwenye kila swali kabla ya kulijibu.

19-Umeisha wahi kusikia popote kuhusiana na mazoezi ya mwili ya kawaida kwamba ni suluhisho la kinga au matibabu ya magonjwa yasiyoambukiza?

1-Ndiyo

2-Hapana

20-Ni manufaa yapi kiafya unayoyapata kwa kufanya mazezi ya kawaida ya mwili

1-----

2-----

3-----

4-----

5-----

21-Kwenye eneo lako la kazi kuna vitabu vyovyote vya miongozo ya kuelekeza namna ya kufanya mazoezi ya kawaida ya mwili kwa watu wazima?

1-Ndiyo 2-Hapana 3-Sifahamu/Sijui

22-Uelewa au ufahamu wako kuhusiana na mazoezi ya kawaida ya mwili uliupataje?

1-Nilipata mafunzo 2-Uzoefu 3-nilisikiaredioni/runinga

4-Kwenye kituo cha afya 5- Nilisoma vitabu/magazeti

6-Toka kwa wafanyakazi wenzangu, marafiki, ndugu

7-Nyinginezo-eleza

23-Kutokana na miongozo ya afya ya Umoja wa Mataifa, ni dakika ngapi zinatakiwa kuwa kufanya kipindi kimoja cha mazoezi ya mwili ya kawaida?

Dakika -----

24-Kutokana na miongozo ya afya ya Umoja wa Mataifa ni siku ngapi kwa wiki (ikijumuisha na siku za mwisho wa juma - wikiendi) mtu mzima anatakiwa kufanya mazoezi ya mwili ya wastani? (mazoezi ya mwili ya wastani, kama sehemu ya kazi, usafiri, shughuli za kusafisha nyumba au wakati wa mapumziko n.k.)

Siku -----

25-Mtu mzima anatakiwa kufanya mazoezi ya wastani ya mwili kwa dakika ngapi kwa siku ili kuimarisha afya yake? Dakika -----

26-Kutokana na muongozo wa afya ya Umoja wa Mataifa ni siku ngapi za wiki (ikijumuisha na siku za mwisho wa juma) mtu mzima anatakiwa kufanya mazoezi ya kutumia nguvu nyingi na kumfanya aheme kwa nguvu kuliko kawaida? (kutumia nguvu nyingi kwenye mazoezi kama sehemu ya kazi, usafiri, shughuli za ndani ya nyumba au wakati wa mapumziko n.k. Siku -----

27-Mtu mzima anatakiwa kutumia dakika ngapi kwa siku kufanya mazoezi ya mwili ya kutumia nguvu ambayo yanamfanya aheme zaidi kuliko kawaida ili kuimarisha afya yake

Dakika -----

D: Ushiriki wa Wafanyakazi wa Afya Kwenye Mazoezi ya Kawaida ya Mwili

Maswali ya Kimataifa Kuhusiana na Ushiriki Wamwili wa Mazoezi

Fikiria kuhusu shughuli za nguvu ambazo ulizifanya siku saba zilizopita. Shughuli za kutumia nguvu nyingi ni zile ambazo zinakupa ugumu kwenye shughuli na kukufanya uHEME au upumue kwa nguvu kuliko kawaida. Fikiria tu zile shughuli za mwili ambazo ulizifanya angalau kwa dakika kumi kwa wakati mmoja halafu naomba ujibu maswali yafuatayo:

28. Kipindi cha siku saba zilizopita, ni siku ngapi ulifanya mazoezi ya mwili ya kutumia nguvu nyingi kama vile kunyanyua vitu vizito, kuchimba mazoezi yaliyoratibiwa, au kuendesha baiskeli kwa kasi? Siku

29. Ni masaa mangapi kawaida unatumia kufanya mazoezi ya kutumia nguvu nyingi katika moja ya siku hizo?

1 = chini ya dakika 15

2 = dakika 15

3 = dakika 30

4 = dakika 45

5 = dakika 60

6 = dakika 75

7 = dakika 90

30. Kipindi cha siku saba zilizopita, ni siku ngapi ulifanya shughuli za kutumia nguvu za wastani kama vile kunyanyua mizigo myepesi, kuendesha kawaida baiskeli au mpira wa kudundadunda wa mezani -double tennis? (Usijumuishe na kutembea)

Siku

31. Ni masaa mangapi unatumia kufanya shughuli za kutumia nguvu za wastani katika mojawapo ya siku hizo?

1 = Chini ya dakika 15

2 = Dakika 15

3 = Dakika 30

4 = Dakika 45

5 = Dakika 60

6 = Dakika 75

7 = Dakika 90

32. Kipindi cha siku saba zilizopita, ni siku ngapi ulitembea angalau kwa dakika kumi kwa wakati mmoja? Siku

33. Ni muda kiasi gani ambao huwa unatumia kutembea kati ya siku mojawapo kati ya siku hizo?

1 = Chini ya dakika 15

2 = Dakika 15

3 = Dakika 30

4 = Dakika 45

5 = Dakika 60

6 = Dakika 75

7 = Dakika 90

34. Kipindi cha siku saba zilizopita, ni masaa mangapi uliyatumia ukiwa umeketi siku za juma?

1 = Chini ya saa 1

2 = Masaa 1 - 2

3 = Masaa 3 - 4

4 = Masaa 5 - 6

5 = Zaidi ya masaa 6

E: MTAZAMO WA WAFANYAKAZI KUHUSU KUFANYA MAZOEZI YA KAWAIDA

Maelekezo: Weka jibu moja tu kwenye sehemu ya majibu kwa kila swali

1 = Napenda sana; 2 = Napenda; 3 = Kiasi; 4 = Kidogo; 5 = Kidogo sana

Na	Swali	(5)	(4)	(3)	(2)	(1)
35	Unapenda kufanya mazoezi?					
36	Unahisi unapata mazoezi ya kutosha					
37	Unaridhika na hali ya mazingira katika kufanya mazoezi					
38	Unafikiri unapata muda wa kutosha kufanya mazoezi					
39	Huwa unawashauri wateja wako juu ya faida ya kufanya mazoezi ya kawaida					
40	Je, unadhani kufanya mazoezi kunaweza kunaleta madhara yoyote kwenye afya yako?					

Appendix III: Informed Consent

MUHIMBILI UNIVERSITY OF HEALTH AND ALLIED SCIENCES

DIRECTORATE OF RESEARCH AND PUBLICATION



ID NO.....

**CONSENT FORM FOR INVOLVEMENT IN A RESEARCH STUDY TITLED:
'PHYSICAL ACTIVITIES AMONG HEALTH PERSONNEL IN MNH**

Dear study participant,

Greetings,

My name is **Salome Maguzu** a student at Muhimbili University of Health and Allied Sciences pursuing Master of Public Health. I am conducting a research study on the above mentioned title.

Purpose of the Study: The main purposes, is to examine the knowledge, attitude, practice on physical activities among health personnel at MNH.

Participation: If you agree to take part to the study, you will be needed to respond to some questions about physical activities knowledge, practice and attitude.

Confidentiality: All the information that will be collected from you will be treated confidential; it will not be used for any other purpose other than this study. Your name will not be written on any questionnaire or report that might let someone identify you. The information collected during the interview will be analyzed using identification number.

Risks: We ensure that NO any harm will happen to you because of joining in the study as none of any invasive devices will be used. We will also not interfere in planned management of your work.

Rights to withdraw and alternatives: Taking part in this study is entirely voluntary. If you choose not to participate in the study or decide to stop participating in the study at any time even if you had signed this consent form, you will continue to be treated normally. If you would wish to come back into the study for any reason after withdrawal, we will be ready to accept you to continue. Refusal to participate or withdrawal from the study will not involve penalty or loss of any benefits to which you are otherwise entitled.

Benefits: You will derive no direct benefit from participating in this study; however, the results of this study will provide valuable information regarding KAP on Physical Activity. The information you provide will help to highlight areas where knowledge, attitude and practice on physical activity should be improved in order to reduce the burden of non communicable diseases.

Who to contact for questions:

Salome Maguzu (Principal Investigator)

School of Public Health and Social Sciences

Muhimbili University of Health and Allied Sciences (MUHAS)

P.O. Box 65001, Dar es Salaam

Mobile phone: +255754433898

Dr. Ezra J. Mrema (Supervisor)

School of Public Health and Social Sciences

MUHAS

P.O. Box 65015, Dar Es Salaam

Mobile: +255683649461

Dr. Bruno Sunguya (The Director of Research and Publications)

The Directorate of Research and Publications

MUHAS

P.O. Box 65001, Dar Es Salaam.

Tel No:+2552150302-6.

Signing: Do you agree to participate? *Write the word 'Yes' if you agree.....*

I, _____ have read the contents in this form. My questions have been answered and I agree to participate in this study.

Signature of participant _____ Signature of investigator _____ Date of signed consent _____

Appendix IV: Fomu ya Ridhaa**CHUO KIKUU CHA AFYA YA SAYANSI SHIRIKISHI MUHIMBILI****KURUGENZI YA UTAFTI NA UCHAPISHAJI****FOMU YA RIDHAA**

NAMBA YA UTAMBULISHO

RIDHAA YA KUSHIRIKI KATIKA UTAFTI

Salaam,

Jina langu ni Salome Maguzu mwanafunzi katika Chuo Kikuu cha Afya na Sayansi shirikishi Muhimbili. Ninasoma shahada ya pili za uzamili katika fani ya afya ya jamii. Nafanya utafiti kwa wafanyakazi wa hospital ya Taifa Muhimbili kuangalia ufahamu wao ushiriki na mtazamo wao kuhusu umuhimu wa mazoezi ya kawaida ya mwili. Kama utakubali kujiunga katika utafiti huu utatakiwa kujibu maswali utakayoulizwa.

Kushiriki kunahusisha nini?

Ukikubali kushiriki katika utafiti huu utahitajika kutumia muda wako kujibu maswali utakayoulizwa na mtafiti.

Usiri

Majibu yote yatakusanywa kutoka katika eneo la utafiti na yataingizwa kwenye kompyuta kwa kutumia namba ya utambulisho tu. Hakuna jina la mshiriki litakalochapishwa.

Haki ya kutoka na mbadala

Kushiriki katika utafiti huu ni hiari yako, una uhuru wa kukubali au kukataa kushiriki katika utafiti huu. Pia unaweza kuacha kushiriki katika utafiti kwa muda wowote utakapojisikia hivyo hata kama umeshakubali kushiriki. Kukataa kushiriki au kuacha kushiriki katika utafiti huu hakutakufanya upate adhabu.

Faida

Ukikubali kushiriki katika utafiti huu hakuna faida ya moja kwa moja utakayopata. Lakini tunaamini maelezo utakayoyatoa yatasaidia. Hata hivyo, matokeo ya utafiti huu yatatoa habari muhimu kuhusu ufahamu wa mazoezi ya kawaida ya mwili, ushiriki na mtazamo wa mazoezi hayo kwa wafanyakazi wa hospitali ya Taifa Muhimbili. Maelezo unayoyatoa yatasaidia kuonyesha maeneo ambayo yanahitaji kuboreshwa kwa huduma ya mazoezi ya kawaida ya mwili ili kuboresha hali za afya kwa wafanyakazi wa afya.

Madhara

Hatutegemei kwamba utapata madhara yoyote ya kimwili kwa kushiriki katika utafiti huu.

Mawasiliano

Kama utakuwa na swali lolote kuhusu utafiti huu unaweza kuwasiliana na mkuu wa utafiti huu:

Salome Maguzu

Chuo Kikuu cha Afya na Sayansi Shirikishi Muhimbili

S.L.P. 65001, Dar es Salaam

Namba ya simu: 0754 433898.

Daktari Ezra J. Mrema (Msimamizi Mkuu wa Utafiti huu)

Shule ya Afya ya Umma na Sayansi za Jamii

Chuo Kikuu Cha Afya na Sayansi Shirikishi Muhimbili

S.L.P 65015, Dar Es Salaam

Simu ya mkononi: +255683649461

Ukiwa na lolote kuhusu haki zako kama mshiriki, wasiliana na:

Daktari **Bruno Sunguya** (Mwenyekiti wa Kamati ya Utafiti ya Chuo)

Kurugenzi ya Tafiti na Machapisho

S.L.P 65001, Dar es Salaam

Namba ya simu: 2150302-6

Sahihi

Je umekubali?

Mshiriki amekubali-----

Mshiriki hajakubali-----

Mimi ----- nimesoma maelezo ya fomu hii.

Maswali yangu yamejibiwa. Nimekubali kushiriki katika utafiti huu.

Sahihi ya mshiriki

.....

Sahihi ya mtafiti

.....

Tarehe ya ukubali wa usaili

.....