Open Access

ORIGINAL ARTICLE

Physical Activity and Health-Related Quality of Life Among Physiotherapists

Khadija Amin[1], Sana Hafeez[2], Danish Hassan[3], Saima Zahid [4]

[1]Internee Physical Therapist, Riphah Rehabilitation Clinic, Riphah International University
[2,3]Senior Lecturer, Riphah College of rehabilitation Sciences, Riphah International University
[4]Assistant Professor, Riphah College of rehabilitation Sciences, Riphah International University

Keywords

Musculoskeletal disorders, physiotherapists, physical activity.

Author`s Contribution

[1]Conception and design, Collection and assembly of data
[2]Analysis and interpretation of the data, Statistical expertise
[3]Drafting of the article, Statistical expertise
[4]Critical revision of the article for important intellectual content

Article Info.

Received: May 2, 2018
Revised: July 30, 2018
Accepted: Aug 15, 2018

Conflict of Interest: Nil

Funding Sources: Nil

Address of Correspondence

Danish Hassan
Danish.hassan@riphah.edu.pk

Cite This article as Amin K, Hafeez H, Hassan D, Zahid S. Physical Activity And Health-Related Quality Of Life Among Physiotherapists. JRCRS. 2018; 6(1):51-

A B S T R A C T

Background: Physiotherapy profession demands high manual work. The objective of this study was to determine the level of physical activity and health-related quality of life among academic and clinical physiotherapists.

Methods: A cross sectional survey was conducted in which 200 physiotherapists were included. The data was collected from different universities and hospitals. Physical activity was measured through the Active Australia survey and health-related quality of life was measured through SF- 36.

Results: Results of this study showed that 72% of the physiotherapists were active. 81.9% of the clinical, 58.3% of the academic and 71.2% working in both were active. According to quality of life, therapist's physical health summary is 68.2 ± 18.36 and mental health summary is 63.0 ± 18.3.

Conclusion: From this study it was concluded that clinical physiotherapists had a high level of physical activity than academic therapists. The other conclusion is that therapists working for 6 hours had a good health status as compared to those working for more than 6 hours.

Introduction

Physical activity (PA) is described as the increase in the level of energy expenditure due to the contraction of muscles which results in the normal body movements. It plays an important role in improving the musculoskeletal fitness and it also helps in the health prevention strategies.[1] Globally, physical activity is considered an important measure for the prevention of chronic disabilities.[2] It has been observed that physical inactivity, use of drugs, and unhealthy diet increases the chances of getting diseased.[3] Worldwide, it is the fourth known leading cause of mortality. Health professionals' especially physical therapists prime responsibility should be to pay more attention towards this aspect. As, in this modern era people show more sedentary lifestyle.

Physical therapists or physiotherapists are the healthcare professionals who deal with the movement disorders. This profession demands high level of physical work, increased manual force, repetitive activities and awkward posture.[4] Due to which work related musculoskeletal disorders are the most common in them.[5] The prevalence of musculoskeletal problems during work was noticed in different regions, with highest of 48% in low back, 33% in neck, 23% in upper back, and 23% in thumb.[4] Of which, low back pain is the most prevalent problem. The occurrence of these disorders is more

common in the novice practitioners as compared to the experienced therapist. The practice of manual therapy which includes mobilization techniques in which a lot of manual force is required also contributes to the development of musculoskeletal problems.

As the Physical therapists working with musculoskeletal problems, neurology unit and geriatrics specialities are at the highest risk; due to this risk one out of six therapists leave the field, or change their speciality.[6] One reason for this is that the numbers of employees are less. That's why workload is increased on the therapist on job. This also leads to burnout i.e. psychological and bodily exhaustion.[7]

Due to high intensity work demanding nature of the profession, physical therapists suffer from different musculoskeletal problems. Maria Tsekoura et al in 2016 conducted a survey to find out the predominance of musculoskeletal disorders among Greek physiotherapists. A total of 148 therapists completed the survey. 95% participants suffered from musculoskeletal problems and 85.8% reported problems in more than once. The percentage of disorders according to regions was highest in lower back, then neck, shoulder and hands. The regions of pain differ according to gender; females had more pain in the cervical spine (64.2%) as compared to males who had more pain in the lower back (55.1%). The region of least pain was the elbow (6.03%). There was a significant difference in the pain of shoulder in both males and females (p=0.00003). Due to the increasing number of disorders, mostly therapists adopt different postures while working (54.0%). And they start therapeutic exercise regime for their patients (41.9%).[8] The main objective of the present study was to determine the level of physical activity. As, the health of the physical therapists is considered to be influenced by the way they spend their life. The profession demands manual work, this aspect was focused in this study. The second objective was to evaluate the health- related quality of life because this aspect was not studied before.

Methodology

The study design of this survey was cross sectional observational survey. The data was collected from Riphah College of Rehabilitation Sciences (RCRS) of Riphah International University. The study was conducted on Physiotherapists who worked for greater than or equal to 6 hours. The sampling technique used for data collection was non-probability convenience sampling. Inclusion Criteria was Physiotherapists working part-time or full-time, duty hours of the working physiotherapist should be ≥ 6 hours, physiotherapists present at the time of data collection. An exclusion criterion was Physiotherapists not working or working for less than 6 hours, any disability, and musculoskeletal disorder. The sample size was 200. The questionnaire used for data collection consists of demographics which include age, gender, and status of work, experience, and working hours. It includes two further tools. The first tool used was the Active Australia survey which measured physical activity. This tool not only measures the level of activity, it also assesses the knowledge or awareness related to activity. It measures the activity at three different levels of intensity i.e. walking, vigorous and moderate. On the basis of sessions and duration of activity it is divided into 3 categories. If the time is greater than 150 minutes and sessions are more than 5, the its considered sufficiently active, if time is more than 150 minutes and sessions less than 5 or time is less than 149 minutes, then it is insufficiently active and if duration is zero then it is called sedentary.[9]

The second tool used was Short Form- 36 (SF-36) Health survey which consists of 36 questions and it measures eight different aspects of physical and mental health i.e. general health (GH), physical functioning (PF), role physical (RP), bodily pain (BP), vitality (VT), social functioning (SF), role limitations due to emotional problems (REE) and mental health (MH). It calculates the physical contemporary summary (PCS) and the mental contemporary summary (MCS). Its value ranges from 0 to 100 i.e. from worst to best of which 50 being the average score.[10]

The questionnaire used for data collection consists of demographics which include age, gender, and status of work, experience, and working hours. It includes two further tools. The first tool used was the Active Australia survey which measured physical activity. This tool not only measures the level of activity, it also assesses the knowledge or awareness related to activity. It measures the activity at three different levels of intensity i.e. walking, vigorous and moderate. On the basis of

sessions and duration of activity it is divided into 3 categories. If the time is greater than 150 minutes and sessions are more than 5, the its considered sufficiently active, if time is more than 150 minutes and sessions less than 5 or time is less than 149 minutes, then it is insufficiently active and if duration is zero then it is called sedentary.[9] The second tool used was Short Form- 36 (SF- 36) Health survey which consists of 36 questions and it measures eight different aspects of physical and mental health i.e. general health (GH), physical functioning (PF), role physical (RP), bodily pain (BP), vitality (VT), social functioning (SF), role limitations due to emotional problems (REE) and mental health (MH). It calculates the physical contemporary summary (PCS) and the mental contemporary summary (MCS). Its value ranges from 0 to 100 i.e. from worst to best of which 50 being the average score.[10] A brief introduction of the present study was given to the participants. Then questionnaires were distributed and informed consent was taken from them. Participants were free to withdraw from the survey at any time. The data collected was completely kept safe. The data was analyzed using SPSS 16. Mean, standard deviation, tables were used to present the sociodemographic data. Pie chart, bar chart, histogram were used to present the data in graphical form.

Results

The survey was completed by 200 physiotherapists. Each of these 200 data sets had responses for all questions. Demographic information for the participants is presented in Table I. The majority of respondents were female (n= 138, 69%), consistent with the gender distribution of physiotherapists in the clinical and academic settings. Respondents' ages ranged from 23 to 47 years and their years of experience working as a physiotherapist ranged from 1 year to 24 years. The majority (n=179, 89.5%) were younger than 30 years of age. Health-related quality of life data are displayed in Table I.

The SF-36 comprising of different aspects of physical and mental health, with majority of physiotherapists showing a good physical health (68.2 ± 18.36) and followed by mental health score (63.0 ± 18.33). Most of the physiotherapists working for more than 8 hours (n= 57, 65.7 ± 19.1 for PCS and 62.5 ± 18.9 for MCS) show more level of health problems. Those therapists working for 8 hours showed less health issues (n= 91, 68.9 ± 18.2 for PCS and 63.3 ± 17.2 for MCS) and the ones working for 6 hours showed these results (n= 52, 69.6 ± 17.71 for PCS and 63.04 ± 19.9 for MCS). The graphical representation is given in Figure 1.

Table I: Characteristic of Participants

Characteristics		Total Participants (n= 200)
Age		26.76 ± 4.04
Years in profession		3.50 ± 3.76
Gender	Male	62 (31%)
	Female	138 (69%)
HRQoL	PCS	68.2 ± 18.36
	MCS	63.0 ± 18.33

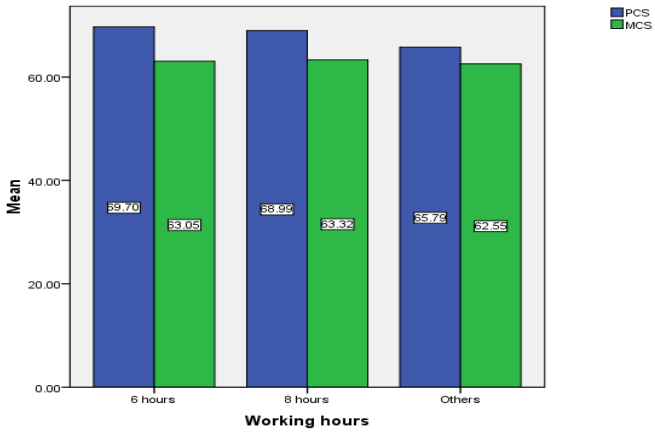

Figure 1. HRQoL according to working hours

According to their self-reported physical activity levels (Table II), the majority of participants (n=144, 72%) were sufficiently active for health and (n=11, 5.5%) participants were sedentary. Bar charts presenting physical activity time by percentage are displayed in Figure 2.

Levels of physical activity were also calculated according to current status, among 48 academic therapists (n= 6, 12.5% were sedentary, n= 14, 29.2 % were insufficiently active, n= 28, 58.3% were sufficiently active). A total of 72 clinical therapists participated (n= 3, 4.2% were sedentary, n= 10, 13.9 % were insufficiently active, n= 59, 81.9% were sufficiently active). And 80 participants worked in both academic and clinical setups (n= 2, 2.5% were sedentary, n= 21, 26.2 % were

insufficiently active, n= 57, 71.2% were sufficiently active). The level of activity is graphically represented in Figure 3.

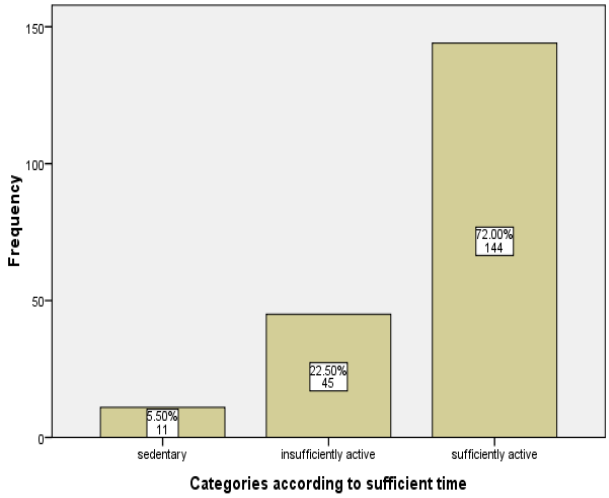

Figure 2. Distribution of physical activity level

Table II: Level of physical activity level		
PA	**Frequency**	**Percent**
Sedentary	11	5.5
Insufficiently active	45	22.5
Sufficiently active	144	72.0
Total	200	100.0

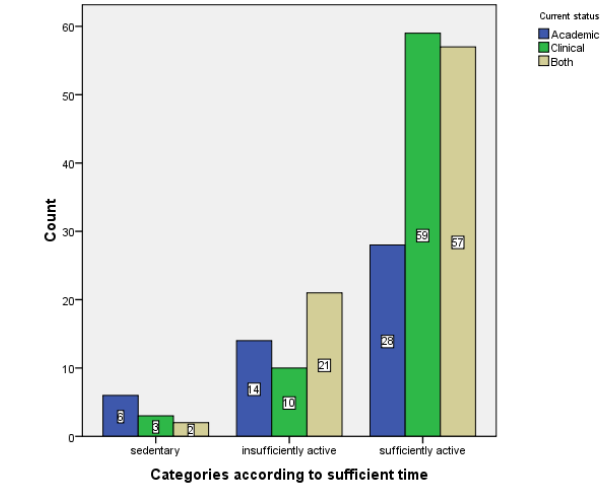

Figure 3. Physical Activity according to working setup

Discussion

This study was conducted to determine the level of physical activity and the level of quality of life among physiotherapists. The results of this survey showed that 72% physiotherapists were physically active.

The physiotherapists working in clinical setups were more active as compared to the academic physiotherapists, as the nature of their job didn't demands any heavy force or performing treatment in different postures. On the other hand, clinical physiotherapists are at the high risk of disorders, so, they were more physically active.[4] Those physiotherapists working in both academic and clinical setup had a more active as compared to academic ones but less when compared to clinical physiotherapists. This survey also found the awareness level of physiotherapists for physical activity; the results showed that most physiotherapists agreed on it and had a good awareness of activity levels and its importance.

While sighting on the results calculated for health-related quality of life among physiotherapists, it was found that males had a better physical and mental contemporary summary as compared to females. Physiotherapists working for more than 8 hours showed lower health status as compared to those working for 8 or 6 hours. Those physiotherapists who work for 6 hours showed a good health status.

Different studies were conducted to find the activity level and quality of life on different populations. A study was conducted on physiotherapists in Australia; in it the physiotherapists were 90.9% active. In this study, there were only clinical physiotherapists and youngsters. The present study was conducted on both academic and clinical physiotherapists; the results were quite similar that clinical physiotherapists showed a good activity level as compared to the academic therapists. It depends on the nature of the work that the clinical therapists were more active as they become more prone to the work related musculoskeletal disorders. In the survey of Australia, therapists reported a good quality of life with minimum discomfort.[11] As the present survey was conducted on both clinical and academic therapists, it showed a high quality of life score among the therapists working in both setups. As the clinical work requires high manual force so, the physiotherapists in different areas across the globe require high level of physical fitness.

Another study was conducted in Rwanda among physiotherapists; it concluded that 64% of the physiotherapists were physically active in both work and leisure time. This study also included the therapists

working in hospitals.[2] In the present study, clinical physiotherapists showed higher level of physical activities, it might be due to the high level of awareness relating to physical activity.

One more study was conducted in Japanese middle aged people, in this survey it was concluded that males were more physically active as compared to females. It might be due to the differences in their lifestyles or nature of job. But in the present study, the results were different females were more active as compared to the males. When the other aspect is focused, the males in Japan had a higher physical and mental aspect as compared to the females.[12] The reason could be that females are more sensitive to emotions and in terms of physical component of health, fatigue more easily. In the present study, I got the similar results according to gender.

This type of study when conducted in some other area across the world can give different results based on their sociodemographic, lifestyle and nature of work.

Conclusion

As physical activity is an important measure of health. From this study it was concluded that clinical physiotherapists had a high level of physical activity than academic therapists.

The other conclusion is that therapists working for 6 hours had a good health status as compared to those working for more than 6 hours.

References

1. Warburton DE, Nicol CW, Bredin SS. Health benefits of physical activity: the evidence. Canadian medical association journal. 2006;174(6):801-9.
2. Frantz J, Ngambare R. Physical activity and health promotion strategies among physiotherapists in Rwanda. African health sciences. 2013;13(1):17-23.
3. Yach D, Hawkes C, Gould CL, Hofman KJ. The global burden of chronic diseases: overcoming impediments to prevention and control. Jama. 2004;291(21):2616-22.
4. Nordin NAM, Leonard JH, Thye NC. Work-related injuries among physiotherapists in public hospitals—a: Clinics (Sao Paulo). 2011 Mar;66(3):373-8. doi:10.1590/S1807-59322011000300002.
5. Passier L, McPhail S. Work related musculoskeletal disorders amongst therapists in physically demanding roles: qualitative analysis of risk factors and strategies for prevention. BMC musculoskeletal disorders. 2011;12(1):24.
6. Cromie JE, Robertson VJ, Best MO. Work-related musculoskeletal disorders in physical therapists: prevalence, severity, risks, and responses. Phys Ther. 2000;80.
7. Pavlakis A, Raftopoulos V, Theodorou M. Burnout syndrome in Cypriot physiotherapists: a national survey. BMC Health Services Research. 2010;10(1):63.
8. Tsekoura M, Kastrinis A, Nomikou E, Kentrou E, Dimitriadis Z. Work-Related Musculoskeletal disorders among Greek Physiotherapists. Musculoskeletal care. 2016.
9. Health AIo, Welfare. The Active Australia Survey: A guide and manual for implementation, analysis and reporting: Australian Institute of Health and Welfare; 2003.
10. Ware J, Kosinski M, Keller S. SF-36 physical and mental component summary measures: a user's manual. Boston, MA: The Health Institute, New England Medical Center. 1994.
11. McPhail SM, Waite MC. Physical activity and health-related quality of life among physiotherapists: a cross sectional survey in an Australian hospital and health service. Journal of Occupational Medicine and Toxicology. 2014;9(1):1.
12. Shibata A, Oka K, Nakamura Y, Muraoka I. Recommended level of physical activity and health-related quality of life among Japanese adults. Health and quality of life outcomes. 2007;5(1):64.