International Journal of Health Sciences and Research
Vol.13; Issue: 7; July 2023
Website: www.ijhsr.org
Original Research Article *ISSN: 2249-9571*

Comparison of Stress and Quality of Life Among Clinical and Non-Clinical Physiotherapists

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DOI: https://doi.org/10.52403/ijhsr.20230716

ABSTRACT

Background And Need of Research: It is unquestionable that health-care professionals work in stressful environment and that stress has become a concern for health-care professionals. Physiotherapists are a professional group of health-care workers with a high rate of attrition and at risk of stress. The purpose of this investigation was to examine the stress levels and health-related quality of life of physiotherapists working in hospital and clinical setup with those who are in academic sector.
Methods: An Observational Study was conducted on Physiotherapists of Gujarat State. Perceived Stress Scale and Short Form-12 Survey (SF-12) was filled by 102 physiotherapists (n=51 clinical and n=51 non-clinical). Ethical approval has been taken.
Result: SPSS Version 29 Software was used for Data Analysis. Mann Whitney U test was used to compare Stress and Quality of Life (QoL) Physical & Mental component in Physiotherapists. The result of Stress and Quality of Life in Clinical and Non-clinical physiotherapist was significant with P value of p=0.021 and p=0.114 (PCS) and p=<0.001 (MCS) respectively.
Conclusion: The Result of this study suggests that Stress and Mental Component of QoL of Clinical physiotherapist was more than that of non-clinical physiotherapist.
Clinical Implications: Aerobic Exercise and Breathing Exercises, Yoga

Keywords: Stress, Quality of Life, Physiotherapists.

INTRODUCTION

It is undeniable that the stressful environment in which health care workers work has caused people to worry about them. (1) Professional health care employees with a high attrition rate and stress risk include physiotherapists. (2) The majority of health care workers, such as nurses, dentists, dental hygienists, and physiotherapists, perform comparable labour-intensive and physically taxing jobs. Regular lifting, bending, twisting, reaching, and providing manual therapy are all part of typical physiotherapy procedures. The manual techniques frequently internal and external rotation, lateral flexion, and forward flexion. Over time, these abnormal postures place greater pressure on many body regions in addition to the lumbar spine. (3) Numerous cross-sectional epidemiologic studies have shown that physical strains brought on by the workplace on the hand, wrist, neck, and shoulder result in injuries. (4)

Career of physiotherapists: Many physiotherapists quit their careers or at least stop working in the clinic. (5) Raising a family and pursuing more education are only two of the many variables that affect how many physiotherapists leave the profession. (6) Furthermore, several studies have demonstrated that physical activity issues have a significant impact on both the

length of physiotherapists' employment and their health-related quality of life. [7] The PT's (physiotherapists) personal lives have an impact on their health, which in turn has an impact on how well they perform at work and how well health care services are provided. As a result, the need for quality control and quality management to monitor these services grows. Numerous studies have demonstrated that health care professionals play a crucial role in the battle against physical inactivity since their line of work directly interacts with physical activity. [8]

Physical inactivity has an impact on the PT's sense of self-worth, attitudes towards others, mental health, and level of perceived stress. [9] Knowing physical activity and how it affects health-related quality of life is crucial since physical activity is significant in a PT's work life. [10] The prevalence of stress, anxiety, and depression among young adults in India ranges between 5-70%, with depressive symptoms being experienced by 18.5% of the population, anxiety symptoms by 24.4%, and stress being experienced by 20% of the population. [11] It appears that physiotherapy is a significant field of medicine with an emphasis on helping patients recognize their abilities and improve their capacity to move and perform. [12,13]

The range of tasks included in physiotherapy require a lot of physical activity, from positions to postures, and this may occasionally be unfavourable and harmful to physiotherapists, putting them at a greater risk of accidents and injuries. Pushing, pulling, lifting, stretching, reaching, bending, sitting, standing, sitting, lowering, walking, and displaying are just a few of the many different professions available. Due to the unpleasant physical conditions in the workplace, many jobs appear to be stressful. Because of this, physiotherapists are at a higher risk of developing musculoskeletal diseases (MSD), which are caused by physical stress. [14,15]

Physical therapists go through both objective and psychological stress. Sources of subjective stress include the level of expectations, competing demands, time constraints, and a lack of resources to complete the task at hand and continue one's professional development. The expectations and function of a physiotherapist as an emotional worker are likely connected to occupational stress, which develops when there is an imbalance between organisational objectives and personal requirements with regard to the work. Physical therapists, for example, are likely to experience high levels of emotional labour and work stress due to the dual command structure of medical care and administration, excessive workload, a rise in medical disputes, and escalating competition among medical institutions. [16]

Stress may result in major health problems, shorten the lifespan of a profession, and create psychological unhappiness. The effects of professional stress may eventually have a negative influence on a person's dedication, productivity, health, and quality of life. [17] According to one definition, stress "makes a demand on the adaptive capacities of the mind and body." [18] The aim of this study was to compare the health-related quality of life and stress levels of physiotherapists working in clinical and non-clinical setup.

MATERIALS & METHODS

The study employed a comparative study design to examine the quality of life and stress levels of physiotherapists working in various settings, including clinics, hospitals, colleges, and teaching institutes. A total of 102 physiotherapists from Ahmedabad, Gujarat, participated in the study, with 51 individuals in each group--clinical physiotherapists and non-clinical physiotherapists. In order to be included, participants had to meet specific criteria: they were required to be between the ages of 25 and 40, of any gender, and willing to participate. Exclusion criteria encompassed physiotherapists who did not work a

minimum of six hours daily, as well as those with any form of disability or disorders such as musculoskeletal, neurological, congenital, or students of physiotherapy. Data collection was facilitated through the use of Google Forms, which allowed for efficient and organized data gathering. The form included fields for participants to provide their name, email address, age, gender, qualification, and indicate whether they were classified as clinicians or non-clinicians. Additionally, participants were required to complete two questionnaires: the Perceived Stress Scale, which assessed their perceived stress levels, and the SF-12 questionnaire, which measured their physical and mental health-related quality of life.

The SF-12 questionnaire was employed as the tool to assess the quality of life in the study. It is a widely used instrument that measures various aspects of mental and physical health, including general health, physical functioning, body pain, emotional problems, and self-perceived health. The questionnaire consists of 12 questions that are rated on a Likert scale, allowing participants to indicate their level of agreement or disagreement with the statements. The SF-12 is considered a shorter and more concise alternative to the SF-36, another commonly used quality of life instrument. The 12 questions of the SF-12 are divided into two components: the mental health component summary (MCS) and the physical health component summary (PCS). The MCS evaluates emotional well-being and any limitations caused by emotional problems, while the PCS assesses physical health and any limitations resulting from physical health issues. The scores on the MCS and PCS are standardized, typically ranging from 0 to 100. Higher scores indicate better health-related quality of life and well-being in the respective domains. The test-retest reliability of PCS-12 scale is 0.89 and for MCS-12 was 0.76. [19]

The Perceived Stress Scale (PSS) is a self-reporting psychological instrument that measures an individual's perception of stress. It is designed to assess the degree to which a person views circumstances in their life as stressful. The scale consists of 10 questions, and respondents are asked to select the most relevant option from a scale of numbers ranging from 0 to 4. To obtain the PSS score, the responses for questions 4, 5, 7, and 8 are reversed, and then the scores across all scale items are summed. The total score ranges from 0 to 40, with higher scores indicating a higher level of perceived stress. The scores can be interpreted as follows: 0-13 (low stress), 14-26 (moderate stress), and 27-40 (high perceived stress). [20] Internal consistency reliability for PSS was α=0.82. [21]

STATISTICAL ANALYSIS

Data analysis was performed using SPSS version 29, aimed to compare the scores of two groups of physiotherapists, namely clinical physiotherapists and non-clinical physiotherapists. The Kolmogorov-Smirnov test was used to test the distribution of the data and found that the data was not normally distributed. To conduct the comparison, the Mann-Whitney U test was employed to assess the Perceived Stress Scale (PSS), Physical Component Summary (PCS), and Mental Component Summary (MCS) scores.

RESULT

The study included a total of 102 participants, with an average age of 30.27 years. Among these participants, there were 69 females, accounting for approximately 67.65% of the total sample. Clinical physiotherapists (n=51, mean age=30.7) in the study were slightly older than non-clinical physiotherapists (n=51, mean age=29.78).

The results of the analysis revealed interesting findings. Firstly, the clinical physiotherapists exhibited significantly higher scores on the Perceived Stress Scale (mean=19.94, SD=2.69) compared to their non-clinical counterparts (mean=17.61, SD=5.53), indicating that clinical

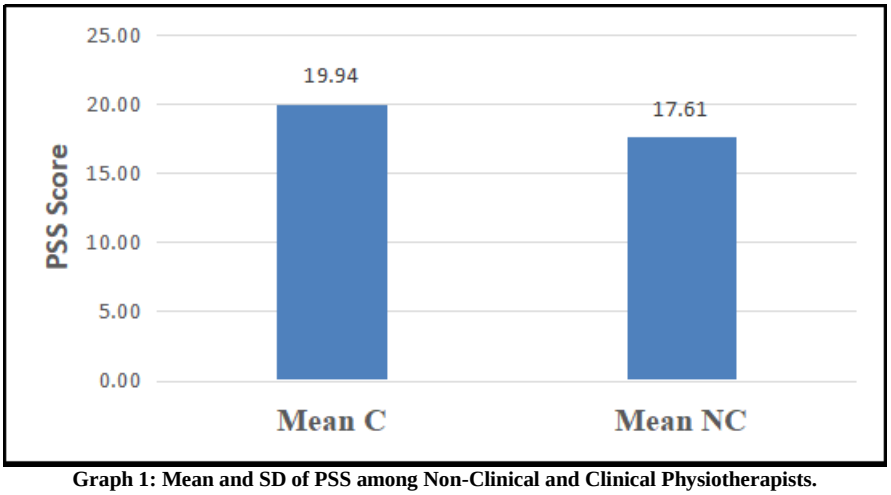
physiotherapists experienced higher levels of stress in their work environment. The difference in stress between clinical and non-clinical physiotherapists was significant with a p-value of 0.021. (Table I)

Regarding the Physical Component Summary (PCS) scores, no significant difference was observed between clinical (mean=44.05, SD=8.52) and non-clinical (mean=46.95, SD=7.50) physiotherapists. This implies that both groups had similar physical health statuses, suggesting that the nature of their work did not significantly impact their physical well-being. The difference in physical component between clinical and non-clinical physiotherapists was non-significant with a p-value of 0.114. (Table I)

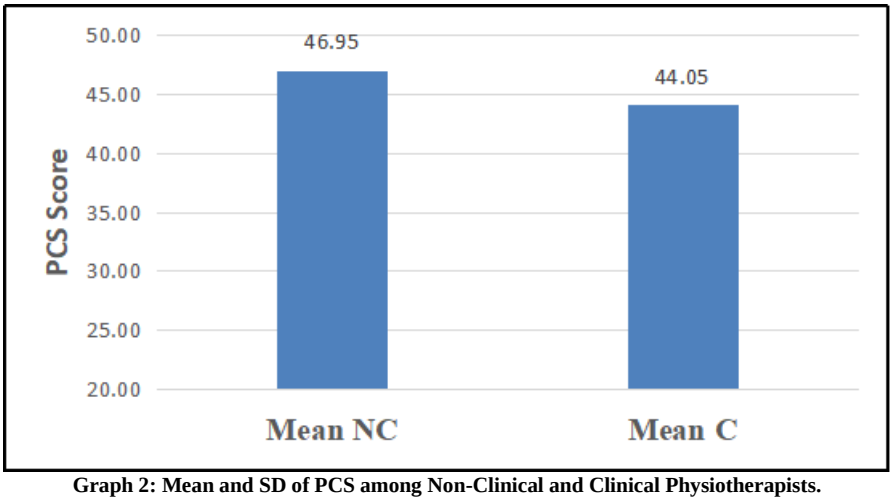
On the other hand, the analysis showed that clinical physiotherapists had significantly higher Mental Component Summary (MCS) scores (mean=47.47, SD=9.78) compared to non-clinical physiotherapists (mean=41.05, SD=7.63). This indicates that clinical physiotherapists faced higher levels of mental or emotional problems in their profession. The difference in mental and emotional component between clinical and non-clinical physiotherapists was significant with a p-value of <0.001. (Table I)

Table I: - Mean, SD and p-value of PSS, PCS and MCS among Clinical and Non-Clinical Physiotherapists

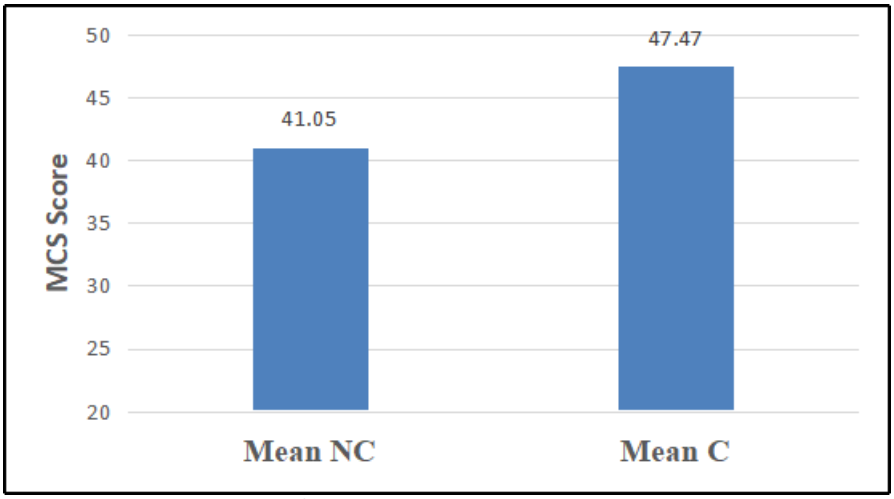
	Clinical (C)	Non-Clinical (NC)	
	Mean ± SD	**Mean ± SD**	**p-value**
PSS	19.94±6.29	17.61±5.53	0.021
PCS	44.05±8.52	46.95±7.50	0.114
MCS	47.47±9.78	41.05±7.63	<0.001



Graph 1: Mean and SD of PSS among Non-Clinical and Clinical Physiotherapists.



Graph 2: Mean and SD of PCS among Non-Clinical and Clinical Physiotherapists.



Graph 3: Mean and SD of MCS among Non-Clinical and Clinical Physiotherapists.

DISCUSSION

Among the clinical therapists, 84.31% reported experiencing moderate stress levels, while 7.84% reported high stress levels. On the other hand, among non-clinical therapists, 78.43% reported moderate stress levels, and only 3.92% reported high stress levels. These findings suggest that a higher percentage of clinical therapists experience moderate and high levels of stress compared to their non-clinical counterparts.

Multiple research studies have provided insights into how common stress, mental health concerns, and overall well-being are among physiotherapists and health-care professionals. One study conducted by M.C. Santos et al. in 2010 found that a majority of physiotherapist participants reported moderate to high levels of stress. [(1)] Similarly, a study by Bhakti et al. in 2017 revealed a significant prevalence of stress among physiotherapy students in Gujarat, with approximately 32% of students affected. [(22)] Ines Carmona-Barrientos et al. (2020) detected a high prevalence of occupational stress among physiotherapists in Cadiz, Spain, where more than half of the sample experienced moderate to high levels of stress. [(23)]

On the other hand, a study conducted by Dibyendunarayan et al. in 2017 highlighted a strong positive relationship between the mental component of health-related quality of life (HRQoL) and student satisfaction levels. This suggests that higher mental health component is associated with greater satisfaction among students. [(24)] Furthermore, Maria Liaqat et al. (2018) found that physical health among physiotherapists is influenced by various factors such as gender, job type, nature of job, financial issues, and family issues. The study indicated that physical health deteriorates as the severity of depression, anxiety, and stress increase. [(25)]

Nizar Abdul Majeed Kutty et al. (2019) emphasized the need for physiotherapists to be vigilant regarding the detrimental effects of severe occupational stress on their well-being. [(17)] Additionally, Mouath D. Abushkadim et al. (2020) highlighted that the physical activity level of physiotherapists plays a significant role in their health-related quality of life, which, in turn, affects their job performance. [(26)] While not specific to physiotherapists, a systematic review and meta-analysis conducted by Pappa et al. (2020) during the COVID-19 pandemic revealed a high prevalence of depression (22.8%), anxiety (23.2%), and insomnia (38.9%) among health-care workers. [(27)] This underscores the mental health challenges faced by health-care professionals during this period.

CONCLUSION

In conclusion, the study reveals that clinical physiotherapists experience higher levels of stress and lower mental quality of life

compared to their non-clinical counterparts. However, there is minimal difference in the physical component of quality of life between the two groups. To further advance our understanding in this area, future research should aim to identify the specific stressors faced by physiotherapists and explore the coping strategies they employ to mitigate the effects of stress. Additionally, it is important to design and implement appropriate strategies, such as aerobic exercise, breathing exercises, and yoga, to improve the overall quality of life and reduce stress levels among physiotherapists. By addressing these factors, we can work towards enhancing the well-being and resilience of these health-care professionals.

Declaration by Authors

Ethical Approval: Approved

Acknowledgement: The author sincerely expresses his gratitude to all the senior professors who helped in the research study, and a heartfelt thank you to everyone who co-operated and contributed to the study for their tremendous support and active participation.

Source of Funding: None

Conflict of Interest: None

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How to cite this article: Shailesh Parmar, Hemal Patel. Comparison of stress and quality of life among clinical and non-clinical physiotherapists. *Int J Health Sci Res.* 2023; 13(7):95-101.
DOI: *https://doi.org/10.52403/ijhsr.20230716*

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