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## Original Article

# Consequences of Stress on the Workability of Physical Therapists

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## ABSTRACT

Assertive stressors are legitimate within all occupations. Elements similar to varying employee slots, underprivileged administration, increasing payables, lack of scheduled employee development, insufficient figures of workers, moreover disputes in the office might be frequent job-related irritants. Work efficiency is based on the equilibrium between job requirements and individual resources. **Objective:** To evaluate the consequences of stress on the ability of physical therapists to work. **Methods:** A cross-sectional study was conducted in which data were collected from 100 Physical therapists by using a non-probability convenient sampling technique from multiple hospitals in Karachi. The duration of the study was 6 months from January 2023 to June 2023. Data were evaluated by two validated questionnaires: The Work Ability Index Questionnaire (WAI) and the Perceived Stress Scale (PSS). Statistical analysis was done through SPSS version 23.0. **Results:** Our study results show there is a weak relationship between stress with the different systems of the body in most of the research participants but it physically affects the performance of work in 27% of participants with symptoms while 4% were unable to complete their task due to stress. Among the participants, 42% were taking leave due to sickness and work burden. **Conclusions:** There is a significant effect of stress on the workability of a physical therapist.

## INTRODUCTION

Stress is defined as the character of our psyche that includes both the human brain and the body plus the synergy between them; it differs from man to man and not only emulates the considerable life affairs but also the clashes and it influences the routine life [1]. Hormones linked with the constant stress load look after the body momentarily and urge transformation (allostasis), although during the remote future, affecting strain about constant nervous tension originates modulation into the mind plus embodiment which be capable of bulging to illness (allostatic damage along with overwork) [2]. Brain ambits are elastic and are altered via stress to shift the equity among nervousness, temperament, remembrance, as well

as governing [3]. The brain is the chief structure concerning nervous tension as well as alteration. The societal and physical surrounding has strong upshot taking place in the corpse in addition to the brain via neuroendocrine, autonomic, and immune systems [4]. Job tensions have turned into an extremely universal as well as costly crisis inside the institute because Stress is not uniformly assigned, nonetheless, with gender, age, and practice type acknowledged being important associates [5]. In contemporary society, roles in hospitals are growing even more sophisticated with ongoing improvement in curative abilities within an association, sufferers regularly anticipating inside as well as outside of the hospital,

moreover, claim meant for the finest desirable utility [6]. Working stress is capable of influencing the well-being of individuals along with the company and also affects their effectiveness. Work proficiency is an all-around idea not merely correlates with physical condition nevertheless and with capability, morals, functioning habitat as well and societal relationships [7]. Job capacity is not only resolute via statistical attributes like senility, learning degree, the socio-economic rank, nevertheless is well pretentious using ecological elements in addition to living fashion [8]. The employment facility perception is a vigorous technique to facilitate alterations to a great extent all through a person's operational years. Anytime an internal or external dispute is detected as awful, devious, or alarming, a bunch of processes are roused that execute an arranged reaction to that specific dispute [9]. Stress is always present in our contemporary, action-based, and exacting community. In common, stress is familiar to brain study and memory actions [10]. Stress observed amid or pre-erudition is considered in the direction of improving reminiscence creation, where nervous tension extensive ahead knowledge is considered on the way to quench novel conceal headed for guard reminiscences composed within the demanding circumstances as of obstruction [11]. Stress assists various infirmities universally which results in producing a a serious economic load. Stressful disputes can be sharp or of a constant nature (being in distress or a shattered family) [12]. It may happen only once or may occur repetitively, which can be expected. Stress can be uncertain and ungovernable, harsh, and happening on and off concerning background, e.g. about education skills [13]. The anatomical strain feedback can break into two dissimilar instance areas in the company an instant reaction and a slow reaction. The initial fraction afore strain reaction be reasoned as the "alarm reaction" and "fight-fright-or-flight" reaction, which engage the fast energizing of the autonomic nervous system (ANS) which grounds the secretions like epinephrine as well as norepinephrine from the adrenal medulla [14]. Those chemical substances rapidly raise the fundamental speed of metabolism, and blood pressure along pulmonary functions, in addition to raising blood supply towards major important imperative structures which are important meant for "fight-or-flight" reaction, like the heart along with skeletal brute force [15]. The level of occupational capacity within the functioning people knows how to predict mutually future ceaseless incapability in addition to episodes of illness abscond [16]. Consequently, massive assortments of research have approached ultimate job capability within the vocational community using primarily corporeal burden next to employment. The relation between vocational capacity, and physical and mental

strength was explained by various studies [17]. Work efficiency is based on the equilibrium between job requirements and individual resources. Heath and functional ability form a base for workability with professional knowledge and capability, worth, stance, and encouragement.[18].

The aim of our study was to highlight factors that caused stress and affect the performance of a physical therapists. It will help to minimize the factors that are the reason of stress at workplace and improve the performance of a worker at workplace.

## METHODS

This study was a cross-sectional survey conducted from January 2023 to June 2023. The sample size of the study was 100. The sample size was calculated through Raosoft.com at a 90% confidence interval. After receiving ethical approval from the competent authority of Jinnah Postgraduate Medical Center. Research participants were recruited through a non-probability convenient sampling technique and the sample population was physical therapists from different hospitals in Karachi (Patel Hospital, National Institute of Cardiovascular Disease, National Medical Centre, Liaquat National Hospital, ACELP Institute of Child Development, Jinnah Postgraduate Medical Center, Sindh Institute of Physical Medicine and Rehabilitation, and Dow Ojha Campus). The inclusion criteria were physical therapists having a minimum of 1 year of clinical experience and also currently in practice, both male and female physical therapists were included. The exclusion criteria were physical therapists working in academic and administrative settings, and who were not willing to participate in our study. Data were collected through two validated questionnaires. The first tool was the Work Ability Index Questionnaire (WAI)-a measurement tool used to assess the ability of a person at work. in which the major parameters included are: the ability to do work, job description, acute conditions diagnosed by a doctor, inability to do work due to pathological conditions, leaves due to sickness in past tenure, and mental disability. The scoring of (WAI) ranging from 2 to 49. 2 to 27 lies in poor category, 28 to 36 medium, 37 to 43 good and 44 to 49 very good. The second tool which were used in this study was Perceived Stress Scale (PSS) is a self-reporting measuring tool to evaluate the working conditions of a physical therapists and their level of stress. It is type of five points Likert scale ranging from 0 (never) to 5 (very often). Data were collected from the 100 physical therapists of different hospitals and clinics in Karachi. Data were analyzed by SPSS version 23.0. in which frequency and percentages of research participants were evaluated.

## RESULTS

In our study, a total population of 100 physical therapists was included among which 38% were male and 62% were female 67% of respondents were between 21 and 30 years of age, 23% responded between the age of 31-40 years and 10% lie between 41-50 years of age. Work experience was categorized into four groups 64% of physical therapists had work experience of less than five years, 21 percent had 6 to 10 years, 12 percent had 11 to 15 years only 3 percent had more than 15 years of experience. The two evaluating methods were used in our study which is a questionnaire was named Work ability index (WAI) questionnaire, and the scale was used for stress was perceived stress (PSS) scale. According the findings of WAI, the current workability of physical therapists was recorded in which 15% of therapists reported moderate workability, 84% reported high workability and only 1% of therapists reported low workability as shown in table 1.

**Table 1:** Current Workability Compared with Lifetime

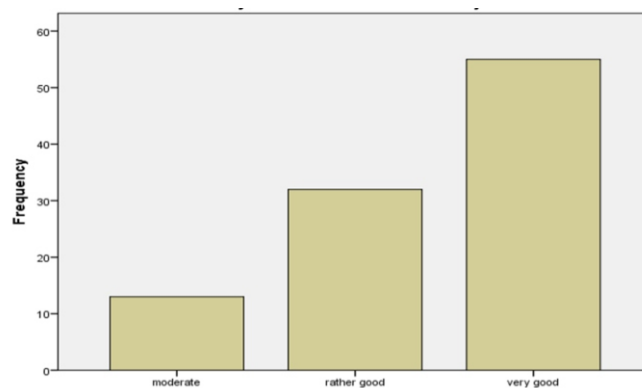
Workability	Frequency (%)	Valid Percent	Cumulative Percent
4-6 Moderate Workability	15 (15.0)	15.0	15.0
7-10 High Workability	84 (84.0)	84.0	99.0
1-3 Low Workability	1 (1.0)	1.0	100.0
Total	100 (100.0)	100.0	

In comparison to the job demands workability of physical therapists was categorized into 3 classes among which 13% lie in the moderate class, 32% of physical therapists reported rather a good workability and 55% had a very good ability to work in association with the demand of the job as shown in table 2.

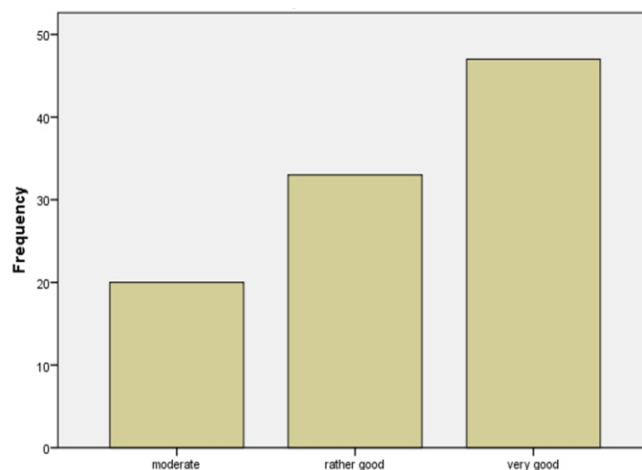
**Table 2:** Workability of the Demand for Job

Workability	Frequency (%)	Valid Percent	Cumulative Percent
Moderate	13 (13.0)	13.0	13.0
Rather Good	32 (32.0)	32.0	45.0
Very Good	55 (55.0)	55.0	100.0
Total	100 (100.0)	100.0	

The percentage of workability of physical therapists in demand for jobs and the physical demand for job was categorized into moderate, good, and very good, and the results are shown in figure 1 and figure 2.

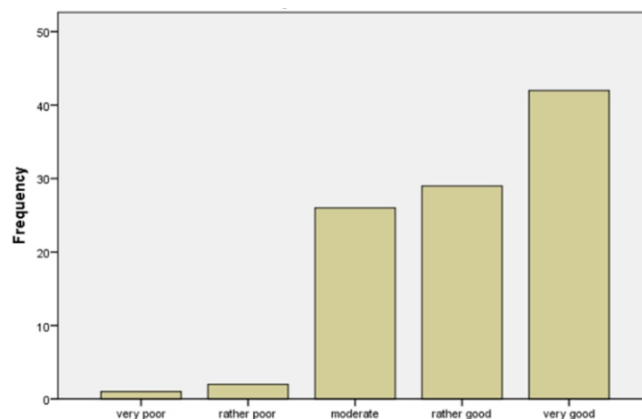


**Figure 1:** Workability in Relation to Demand of Job



**Figure 2:** Correlation of Work with Physical Demand of Job

The percentage of workability concerning the mental demand of a job was categorized into very poor, poor, moderate, good, and very good (Figure 3).



**Figure 3:** Correlation of Work with Mental Demand of Job

After asking the question related to feelings of stress in the last month the physical therapist answered in five categories never, rarely, sometimes, fairly often, and very often as shown in figure 4.

In the systemic review section, 84% of therapists did not have any back pain as the result of any injury from an accident, 14% reported injury in their own opinion while 2% of therapists had injury diagnosed by a physician In musculoskeletal diseases 67% participants reported with no disease in the upper back or cervical spine in contrast 24% have cervical pain in their own opinion and 9% were diagnosed by physicians Inquiring about lower back pain 87% of therapists reported no disease while 10% had pain in their own opinion and 3% were diagnosed by a physician. While investigating respiratory tract infections 87% reported no disease, 5% had their own opinion and 8% of cases were diagnosed). 75% of therapists don't have any mental disorders depression anxiety, or insomnia, 20% reported yes but that was their own opinion while 5% were diagnosed cases. While investigation of obesity revealed that 86% replied no, 11% had obesity in their own opinion and 3% were diagnosed cases. Investigation about anemia revealed that 88% had no disease, 10% were diagnosed by a physician and only 2% of cases had their own opinion. Among 100 participants 49% of therapists had no hindrance in their work 20% were able to carry out their job but some symptoms were experienced, 27% of therapists sometimes slow down their job speed or alter their technique and 4% of therapists must often slow down their speed. Among 100 participants 42% took sick leave none at all in the past 12 months, 43% of therapists took at most 9 days and 15% of therapists took 10-24 days of sick leave in the past year 66% of therapists reported relatively certain prognosis in their workability while 25% were not certain about it and 9% reported unlikely no prognosis.

A Perceived Stress Scale (PSS) was administered among participants, the results found to be 12 (12.0%) participants replied they never feel stress, 17 (17.0%) participants said almost, 32 (32.0%) participants replied sometimes, 27 (27.0%) replied to fairly often, and 12 (12.0%) responded very often feel stress that revealed among the total of 100 physical therapists as shown in figure 5.

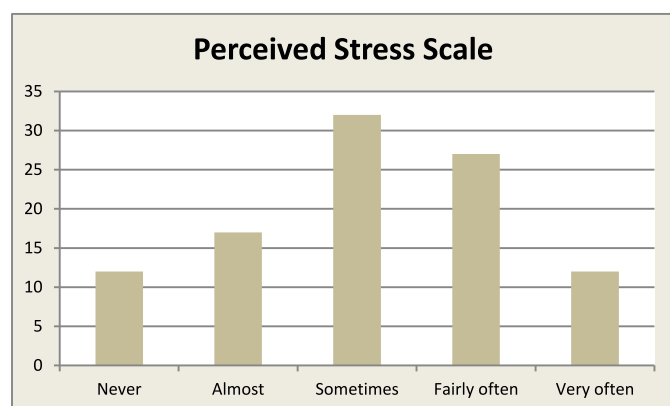


Figure 5: Cumulative Score of PSS

## DISCUSSION

Stress is defined as the character of our psyche that includes both the human brain and the body plus the synergy between them [19]. Our study showed that increased stress was independently associated with the lower workability of physical therapist as compared to this a study revealed an association between occupational efficacy, & backache. Soreness and workability together are interrelated to one another [20]. As the results of our study implicit that pain and work-related stress both affect the job attitude of physical therapists. It is also revealed that initially in earlier years workability had been reported high but gradually the ability was reduced to some extent due to musculoskeletal pain and stress factors whether it is personal or related to work. Furthermore, a study reported that incorrect posture and body mechanics result in decreased workability [21]. That is true but stress is also a major factor that affects workability in comparison to this. From our study it is observed that due to high levels of stress physical therapists often or sometimes change their pace or working methods. A study reported, Managerial discrimination may become the factor to enhances the stress level that ultimately results in decreased workability and psychosocial factors may be the prompt indicator of illness leave or absenteeism [22]. But in our study, there was not a very large impact but about 42% of good current mental workability 26% of therapists reported moderate level that shows that they have psychological hindrances in their work that may be personal or work-related. Additionally, a systemic review showed that musculoskeletal problems were experienced as 33% cervical pain, 13% lower back pain, and 4% other musculoskeletal problems 13% had respiratory infections, 25% mental problems, 14% obesity, and 12% experienced anemia in this high instance were reported about the mental problems and musculoskeletal pains. Some studies revealed that as age advances the work capacity decreases in addition the feeling of inferior rank staff mainly accounts for the increased stress levels of laborers that ultimately result in decreased work capacity [23, 24]. Those results of researches are also supported in our study that as the work experience advances of the physical therapists they reported the changes in their work pace and methods with the figure of 51% of therapists change their pace. Another study revealed that lack of support at the workplace, and poor communication lead to burnout that results in absenteeism and increased depression [25]. But in our study, results implied that 58% of therapists took sick leave that is due to increased stress levels and body problems related to their work. A study conducted among Australian veterinarians found a Strong relationship between too many patients per day, few

holidays extended working hours with no breaks that decreases the workability of veterinarians [26]. Similarly, in our study that mental resources had a great impact on the work efficiency of physical therapists increased workload enhances the stress level that ultimately decreases the workability either there may be any impairment related to physical problems are present or not the therapist most often loses their ability due to increased level of stress. The PSS (Perceived Stress Scale) is a validated tool used for the evaluation and self-reporting of stressful situations of own lives [27]. The investigation about the perceived level of stress of our study observed that most of the participants replied with the option of sometimes indicating that with the increased work demands the stress of the therapists increases that have an impact on the productivity of physical therapists. So, there is a need to develop those types of strategies that help therapists reduce their stress levels to enhance the workability that is beneficial for the therapists themselves and for the country's economy and development as well so future studies must focus on the development of purposeful strategies because impact is already described in the study so there is no need to develop such strategies and to reduce the levels of stress in physical therapists.

## CONCLUSIONS

In our study, there is a direct impact of mental condition on the physical ability of a physical therapists. Therefore, it is concluded that productivity of a physical therapists decreases as the level of stress increased at workplace that is a measuring factor needed by the healthcare professional during the clinical practice.

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## Authors Contribution

Conceptualization: MH

Methodology: SB, PL, KFR

Formal analysis: SM

Writing-review and editing: MH, NSB, SB, KFR, SRB

All authors have read and agreed to the published version of the manuscript.

## Conflicts of Interest

The authors declare no conflict of interest.

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