



## Prevalence of Stress among Physiotherapy Students during Clinical Placement in Lahore, Pakistan

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### ABSTRACT

**Background:** Psychologically stress is defined as a negative discern of psychic breakdown and oppression. Occupational stress is the stress that absorb by individual during his work task like uncomfortable environment for work, overload, cannot meet the expenditure etc. **Objective:** To determine the prevalence of stress among physiotherapy students during clinical placements. **Material and Methods:** A cross-sectional study was conducted at UHS Lahore, and cluster sampling technique was used to collect data. Sample size of the study was 92. In sample, students of DPT 4th and 5th year from universities of health and sciences took part in this study according to the limitations of the study. Close ended questionnaire (workplace stress scale) used to collect data and questionnaire was generated in google forms due to COVID-19 situation. **Result:** Among all the students 6(6.52%) students feel no stress, 34(36.96%) feel low, 34(36.96%) feel moderate, 17(18.48%) feel severe and 1(1.09%) feel very severe stress. In these students, 81 females and 11 males with the equal number of participants from 4th and 5th year DPT students. **Conclusion:** Stress is a negative feeling which is an emotional strain. The stress is high when the workload is high, and the person is unable to cope up stress. It is harmful both for that person and the placement because it effects on their output and self-efficacy. As per conclusion and recommendations to cope up with the stress of those students we need to take several steps which will be helpful for the students as well as for the future researchers.

### INTRODUCTION

Psychologically stress is defined as a negative discern of psychic breakdown and oppression. Stress might be healthy for someone like for an athlete, at same time a burden e.g., overload for office worker. However, most stress is displeasure in life rather than a healthy competition for individuals. Now a days it observes that occupational stress is exponentially increasing among young individuals. As the workload is drastically rise as the competition in field increases. There are some little factors which usually get ignored in our daily livings which might leave a greater impact on one's personality.(1) Occupational stress are usually ailment and effect individual. In 2014, Montano and his fellows noticed the main causes of stress world widely.(2) There was plethora of causes which lead an individual life towards psychic breakdown which were general working

conditions of workplace, workload, long hours of offices, job status, salary or financial support, workplace bullying, narcissism and psychopathy, workplace conflict, sexual harassment, work-life balance, occupational group etc.(3) Bullying was reported that 62% in clinical educator, 23% in physiotherapist and 15% in patients.(4) Stress causes an increase in body metabolism, increase heart rate, and increase muscle activity etc. For a while, these changes are beneficial for a person, on the other hand, for longer duration it leads towards risk factors which pertain high blood pressure, heart diseases, diabetes, obesity, psychological distress, (5) depression or anxiety, skin problem such as acne or eczema, menstrual problem in females etc. If a person has already a health-related condition, stress can make it even worse.(6) Signs and symptoms of stress entails the



following: anxiety, depressed mode, irritability, apathy (loss of interest in work), problems sleeping, fatigue, trouble concentrating, muscle tension, headaches, stomach problems, social withdrawal, loss of sex drive, and excessive use of alcohol or drugs.(7) It is necessary to manage the stress as soon as possible. Some strategies are used to cope up the stress(8), and these encapsulate: regular exercise (set up a fitness program with weekly frequency of 3 to 4 times)(9), support system (listen to each other, provide necessary advice, and support each other), self-management,(10) time management (develop an organizational system), guided imagery and visualization (create a relaxed environment for peaceful mind), progressive muscle relaxation (loosen up tense or stiff muscles), assertiveness training, journal writing (express true emotion, self-reflection), stress management in the workplace,(11) reading interventions,(12) heart speak (a novel method for reducing stress and other stress-related conditions such as anxiousness, depression, and low self-esteem. According to the situation, all the coping mechanisms may be adaptive, or maladaptive.(13) the University of Stellenbosch introduced Structured Peer-Led Introduction to Clinical Practice (SPLICE), in which senior physiotherapy students allocate second year students to clinical practice and it was submitted that 86% students enjoyed it.(14) Dairy writing during internship showed that it help in self-reconstruction as a physiotherapist to gaining confidence, knowledge and skills.(15) In 2018, it was reported that clinically professional physiotherapists partake as 32% mild stressed, 33% moderate, 14% severe and 1% potentially dangerous stressed. While in academics, stress level was seen rise in physiotherapy students which had 35% mild, 29% moderate, 16% severe and 4% potentially at dangerous level. In 2017, prevalence of depression was 70.1%, for anxiety was 53.17%, and for stress was 60.05% in physiotherapists of Pakistan. Pedantic perusal of stress showed that 32.01% were mild, 25.4% were moderately and 2.6% were severely stressed. Financial issues, poor salaries and job dissatisfaction were the cardinal factors in leading to depression, anxiety, and stress.(16) In 2019, it was seen that stress prevalence was 88% among physiotherapy students of Pakistan, which is further classified as 42% mildly, 40% moderately and 14% severely stressed. The result submitted that most common stressors were pressures, physiological, emotional, and behavioral.(17) Stress is a common and vital condition which effect every person. Stress can change the working abilities of a physiotherapist/physiotherapy students. The evidence shows that majority of work done was related to curriculum-based stress or occupational stress in physiotherapist but array of time such work had not found on physiotherapy students during clinical placement. So, by determining the prevalence of stress in physiotherapy students during

clinical placement in Lahore will help us in decreasing the stress by introducing coping strategies and changes in the placement set up.

## MATERIAL AND METHOD

In this research, a type of observational cross sectional study was designed. It took 6-months roughly done from September 2020 to March 2021 to collect data from medical allied health sciences institutes of Lahore affiliated from university of health sciences Lahore. Sample size was calculated with the help of Rao software using the formula  $n = z^2 p / 1d - 2p$ , by this the sample size was 92 physiotherapy students from Lahore. Cluster sampling technique was used for this study. In this study, students of age range 21 to 25 years old include in this study. In addition, fourth and final year undergraduate physiotherapy students who had at 1 year experience of clinical rotation. For the study purpose, both male and female students were partaken. On the other hand, students from that institutes whose affiliation is other than UHS Lahore were excluded from the study. Furthermore, students having any sort of psychological conditions, neurological disorder or diagnosed with migraine or having a condition which may increase the perception of stress. For completion of study work, a workplace stress scale questionnaire was used for data collection purpose which consist of 8 questions. The questionnaire was generated online at google form due to COVID-19 situation. The undergraduate physiotherapy students who fulfilled inclusion criteria were first given with informed consent, and then with workplace stress scale questionnaire. Data was submitted in the form of tables, and graphs and analyzed by using appropriate Statistical data analysis technique, Statistical Package for Social Sciences (SPSS) software computer program version 21. The quantitative variables were presented as mean and standard deviation. The categorical variables were presented in form of frequency and percentages. Informed written consent attached, was taken from all the participants. Compilation of all data and information will be kept classified. Throughout the study participants were remain anonymous. The subjects were informed about that there are no risks or disadvantages on the whole modus operandi of the study. Also informed that they will be free to withdraw at any time during the study procedure.

## RESULTS

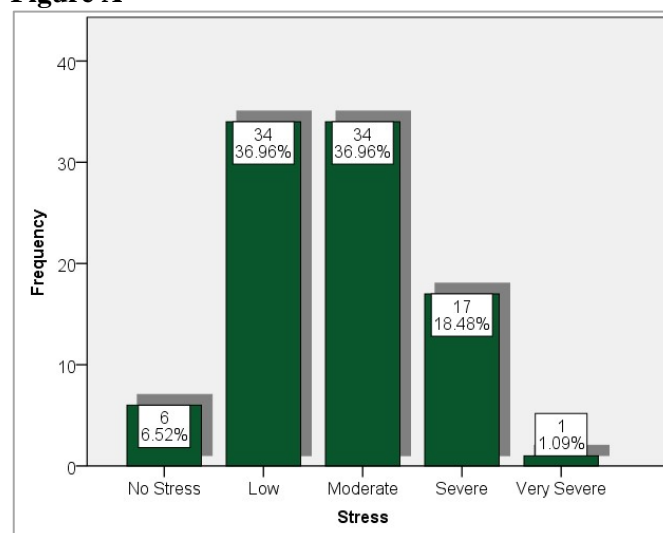
The data was analyzed using a statistical technique SPSS (statistical package for social sciences). The data was entered into SPSS and then analyzed through SPSS. The list of institutions from which fourth and final year undergraduate physiotherapy students were partaken in the report from the affiliated institution of university of health sciences, Lahore which include Allama Iqbal

Medical College Lahore, FMH College of Medicine and Dentistry Lahore, Shalamar Medical and Dental College Lahore, Lahore Medical and Dental College, the School of Allied Health Sciences, Rashid Latif Medical College Lahore, Akhtar Saeed Medical and Dental College, and PSRD College of Rehabilitation Sciences Lahore. Among these 92-undergraduate physiotherapy, 88% (81) participants were female and 12% (11) were male participants (undergraduate physiotherapy students). Additionally, equal number of students were pertained from fourth and final year undergraduate physiotherapy students which was 50% (46) and 50% (46) from each. The result of student's responses is given in table B.

**Table A**

Items	Never % (f)	Rarely % (f)	Sometimes % (f)	Often % (f)	Very Often % (f)	Mean $\pm$ St. deviation
Conditions at work are unpleasant or sometimes even unsafe.	14.1 (13)	31.5 (29)	48.9 (45)	5.4 (5)	---	2.4565 $\pm$ 0.80402
I felt that my job is negatively affecting my physical or emotional well-being.	26.1 (24)	20.7 (19)	41.3 (38)	9.8 (9)	2.2 (2)	2.4130 $\pm$ 1.04988
I have too much work to do and/or too many unreasonable deadlines.	9.8 (9)	26.1 (24)	42.1 (39)	14.1 (13)	7.6 (7)	2.8370 $\pm$ 1.04068
I find it difficult to express my opinions or feelings about my job conditions to my superior.	16.3 (15)	16.3 (15)	37.0 (34)	20.7 (19)	9.8 (9)	2.9130 $\pm$ 1.19203
I feel that job pressures interfere with my family or personal life.	13 (12)	23.9 (22)	41.3 (38)	16.3 (15)	5.4 (5)	2.7717 $\pm$ 1.04937
I have adequate control or input over my work duties.	8.7 (9)	13 (12)	32.6 (30)	35.9 (33)	9.8 (8)	2.7935 $\pm$ 1.09482
I receive appropriate recognition or rewards for good performance.	10.9 (10)	29.3 (27)	33.7 (31)	15.2 (14)	10.9 (10)	3.1413 $\pm$ 1.14433
I am able to utilize my skills and talents to the fullest extent at work.	2.2 (2)	6.5 (6)	39.1 (36)	34.8 (32)	17.4 (16)	2.4130 $\pm$ 0.92762

According to one sample t test analysis, the mean difference is 21.7391 and the standard deviation is 4.09468. The level of significance is .000 which is less than alpha value which shows that result supported the alternative hypothesis. The alternative hypothesis is "there is a significant relationship between stress in physiotherapy students and clinical placement". Stress perceived by the students shown in figure A.

**Figure A**


## DISCUSSION

Globally most common expression found in people is stress. Approximately 88% stress is present in Pakistan students. The most common causes of stress among physiotherapy students are they don't get enough appreciation regarding their work and cannot be able to manage workload. The things are quite different and unfamiliar as they studied in their curriculum. Students prepared themselves with respect to anatomy, physiology, manual handling and treatment strategies for their first clinical placement.(18) They experience new challenges in their placement, and takes time to absorb the things like protocols, rules, and regulations. Their interaction with patient and modalities first excites them and then they get nervous and stressed because they can not handle the things. The main scenarios are different as their expectations. They are looking forward to overcoming those queries but all in vain. This stress will affect their health and in result their efficacy. The graph show that 36.96% students feel low, 36.96% feel moderate, 18.48% feel severe and 1.09% students feel very severe stress (dangerous). Pertaining in clinical practice in general might be stressful but no specific social factors were identified.(19) A similar study conducted from 2008 to 2010 to find out stress and psychological morbidity in undergrade students of physiotherapy show that 88% undergrade physiotherapy students feel stressed in which 42% mildly stressed, 40% moderately and 6% severely stressed.(20) Physiotherapy students must manage their academic and clinical issues itself. In this way they have a lot of work to do. Shumaila Aslam et al. conducted a study in 2018 to compare the work-related stress in physiotherapists and found that 32% had mild stressed, 33% had moderate, 14% had severe and 1% had potentially dangerous level of stress among clinicians. In academics, 35% had mild stress, 29% had moderate, 16% had severe and 4% had potentially dangerous level of stress. Another study

conducted in 2017 among physiotherapists of Pakistan. Data showed that 70.1% feel depressed in which 43.7% were mild, 16.7% were moderately and 9.8% were severe. 60.05% feel stressed in which 32.01% were mild, 25.4% were moderate, and 2.6% were severe. 53.17% feel anxiety in which 45.8% were mild, 6.9% were moderate and 0.5% were severe. (16) The physiotherapy students from three different universities from different countries purported that the mean perceived stress in Ariel University Center of Samaria, Israel was 13.5, in University of Melbourne, Australia was 17.3 and in Lund University, Sweden was 19.0. (21) The research design is specifically limited to the population of Pakistan, University of Health Sciences Lahore Medical Institutions. Small sample size is used, due to the

situation of COVID-19. Data was collected in the form of close ended questionnaire which created in google forms. Future studies should be based on the relationship between clinical placement and other factors in producing the stress. Management strategies for the physiotherapy students should be introduced in order to cope with stress. The researcher suggests that find out the various factors and causes of the stress.

## CONCLUSION

In order to recapitulate, high levels of stress are found in physiotherapy students during the clinical placement. Early detection of sign and symptoms is an important factor in the management of stress and their good health which is necessary for their efficiency in work.

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