PERCEIVED ACADEMIC STRESS AMONG PHYSIOTHERAPY UNDERGRADUATE STUDENT DURING COVID-19 PANDEMIC

Tejas.V. Wagh[1], Dr. Deepali Hande (PT) [2]

[1]Intern, Dr. APJ Abdul kalam college of Physiotherapy, Loni, Ahmednagar, India.

[2]Professor, Dr APJ Abdul kalam college of Physiotherapy, Loni, Ahmednagar, India.

ABSTRACT:

Background: The COVID-19Pandemic has been in India since January 2020and for precautionary measures the Government has taken actions such as total lockdown of School, Colleges, and Universities which lead students to study from home by doing online lectures which further lead students into coping with different level of stress. In this Covid-19 Pandemic students are suffer from social, emotional and physical as well as family problems may influence their learning ability and academic performance. Excessive stress may result in mental and physical problems and may diminish a student's sense of worth and might affect his/her academic achievement. In this study, perceived stress scale and student stress scale were used for assessment of level of stress in Undergraduate Physiotherapy students in which various questions were asked through by Google forms.

Aim: To Identifying Academic stress in physiotherapy undergraduate students due to COVID-19 Pandemic.

Objectives: To study level of stress in physiotherapy undergraduate students. To study class wise distribution of level of stress in physiotherapy undergraduate students

Methods: In this study, perceived stress scale and student stress scale were used for assessment of level of stress. The questions of these scales were asked online through by Google forms to all physiotherapy undergraduate students. Total 120 students responded.

Result: We found that student were having mild to moderate academic stress in this COVID-19 Pandemic.

Conclusion: The study conducted on 120 participants. In this study result has been concluded that student are mild to moderately stress in this COVID-19 Pandemic. All most 88.33% students has moderate level of stress according to Perceived Stress Scale and 42.45% students has slightly stress (mild) according to Student Stress Scale.

Key words: Academic stress, COVID-19 Pandemic, Perceived Stress Scale, Student Stress Scale.

1. INTRODUCTION

"S T R E S S is Someone Trying to Repair Every Situation Solo"

Stress is a condition that generates a specific biological response. When perceive a threat or a major challenge, chemicals and hormones surge throughout body. Stress triggers fight-or-flight response in order to fight the stressor or run away from it. Typically, after the response occurs, body should relax. Too much constant stress can have negative effects on long-term health. Stress is a normal biological response to a potentially risky situation. When encounter sudden stress, brain floods body with chemicals and hormones such as adrenaline and cortisol. That gets heart beating faster and sends blood to muscles and important organs. It feel energised and have heightened awareness so it can focus on immediate needs. These are the different phases of stress and how people familiarize. When stress is occur, the hypothalamus at the base of brain reacts. It sends nerve and hormone signals to adrenal glands, which release an abundance of hormones. These hormones are nature's way of preparing to face danger and increase chances of survival. One of these hormones is adrenaline. While stress might also know it as epinephrine, or the fight-or-flight hormone. In rapid fashion, adrenaline works to: Increase heartbeat, Increase breathing rate, Make it easier for muscles to use glucose, Contract blood vessels so blood is directed to the muscles, Stimulate perspiration, Inhibit insulin production.

While this is helpful in the moment, frequent adrenaline surges can lead to: Damaged blood vessels, High blood pressure, or hypertension, Higher risk of heart attack and stroke, Headaches, Anxiety, Insomnia, Weight gain.

1.1 Types of stress:

- Acute stress
- Episodic acute stress
- Chronic stress

1.1.1 Acute stress

Acute stress happens to everyone. It's the body's immediate reaction to a new and challenging situation. It's the kind of stress might feel when narrowly escape a car accident. Acute stress can also come out of something that actually enjoy. It's the somewhat-frightening, yet thrilling feeling get on a roller coaster or when skiing down a steep mountain slope. These incidents of acute stress don't normally do any harm. They might even be good for health. Stressful situations give body and brain practice in developing the best response to future stressful situations. Once the danger passes, body systems should return to normal. Severe acute stress is a different story. This kind of stress, such as faced a life-threatening situation, can lead to post-traumatic stress disorder (PTSD) or other mental health problems.

1.1.2 Episodic acute stress

Episodic acute stress is when frequent episodes of acute stress happen. This might happen if often anxious and worried about things suspect may happen, might feel that life is chaotic and seemingly go from one crisis to the next. Certain occupations, such as law implementation or firefighters, might also lead to recurrent high-stress situations. As with severe acute stress, episodic acute stress can affect physical health and mental well-being.

1.1.3 Chronic stress

When high-stress levels for an extended period of time, body have chronic stress. Long-term stress like this can have a negative impact on health. It may subsidies to nervousness, cardiac disease, depression, high blood pressure, a weakened immune system. Chronic stress can also lead to recurrent ailments such as problems, an upset stomach, and sleep difficulties. Achievement insights into the different types of stress and how to identify them may help.[1]

1.2 Academic stress

Stress and its appearances, such as nervousness, depression, and exhaustion, have always been seen as a common problem among people in different livelihoods and occupations. In the last few years, alarm has already been triggered by the propagation of books, research reports, popular articles and the rising number of organized workshops, pointing to teach people how to manage with this phenomenon (Keinan & Perlerg 1986). In contrast, academic stress among college students has become a topic of attention for few day. Academic promises, commercial pressures, and the absence of time management skills have resulted in many college students experiencing intense stress at expected times during each semester. College students' fitness and academic performance can be undesirably affected because of developed degree of stress (Campbell & Svenson, 1992). The level of experienced stress is influenced by the resources available for the person in order to deal with specific stressful events and situations (Zeidner, 1992). Keinan and Perlberg (1986) pointed that degree of stress experienced by undergraduate students may differ from non-student aristocracies and from one school year to another. During the first year at the college, undergraduate students have problems to assimilate a huge amount of academic material in short period, and they are compulsory to develop actual study techniques and habits in order to cope with the volume of material assigned to them (Campbell & Svenson, 1992). It has been argued that the first exposure of the undergraduate students to the academic studies and to the highly administrative university administrative procedure can also cause stress, because they have to make necessary adjustment to their social environment as well. Some undergraduate students are frequently stressed because of social relationships with peer and they practice considerable difficulty when trying to adjust to the university social network (Shirom, 1986). The alteration problem may be regarded as a major problem for the undergraduate students. Keinan and Perlberg (1986) argue that the emotional state of frustration, anxiety, and depression are among the potential significances of high degree of stress. Campbell and Svenson(1992) privilege that regardless of year of schooling or gender, undergraduate students face a lot of pressure with regards to economic problems, extreme class workload, new tasks, change in various kind of behaviors, time organization, and finding a potential life partner. Mckean et al. (2000) maintain that stressors alone do not produce nervousness, unhappiness or pressures. Instead, the interaction between stressors and the person's perception and the reaction to these stressors cause stress. Environmental stress occurs as a result of environmental incentives or demands held by a person that are more than his or her ability to deal with them (Shirom, 1986). Radcliff and Lester's (2003) studies on the perceived stress among final year medical undergraduate students revealed that the most stressful circumstances for students were the extreme class load, the socialization compression, the lack of guidance, and transition periods of transition. The few trainings that exactly relate to the sources of academic stress are rather limited. Zedner's (1992) studies measured the perceptions of major sources of academic stress among 184 Jewish and 209 Arab undergraduate students in a major university in Israel.

1.3 COVID-19

 COVID-19 is a disease triggered by a new straining of coronavirus. 'CO' stances for corona, 'VI' for virus, and 'D' for disease. Formerly, this infection was raised to as '2019 novel coronavirus' or '2019-nCoV.' The COVID-19 virus is a novel virus linked to the same family of viruses as Severe Acute Respiratory Syndrome (SARS) and some types of mutual cold. The indications can include fever, cough and shortness of breath. In more severe cases, contagion can cause pneumonia or breathing problems. More infrequently, the disease can be deadly. These indications are comparable to the flu (influenza) or the common cold, which are a lot more mutual than COVID-19. This is why testing is compulsory to confirm if someone has COVID-19. The virus is communicated through direct contact with respiratory condensations of an infected person (generated through coughing and sneezing). Individuals can also be infected from and touching surfaces polluted with the virus and touching their face (e.g., eyes, nose, and mouth). The COVID-19 virus may survive on surfaces for numerous hours, but simple sanitizers can kill it. The shield of children and educational facilities is particularly significant. Precautions are necessary to prevent the potential spread of COVID-19 in school settings; however, care must also be taken to avoid branding students and staff who may have been unprotected to the virus. It is important to remember that COVID-19 does not differentiate between borders, ethnicities, disability status, age or gender. Education settings should continue to be welcoming, respectful, inclusive, and helpful environments to all. Measures taken by schools can prevent the entry and spread of COVID-19 by students and staff who may have been unprotected

to the virus, while minimizing disturbance and protecting students and staff from discernment. In households with a high school or college student suffering an educational disruption from COVID-19. Also Necessary Steps has been taken by the government to ensure safety of the students by closing down educational institutes such as schools, colleges, universities etc. and their studies are continued by arranging online lectures which can lead students to suffer from stress.

2. METHODOLOGY:

Sources of data collected in Undergraduate students of APJ Abdul Kalam College of Physiotherapy. Total 120 participant (age group18 - 24years) participated in study. Each participant was provided with the Perceived Stress Scale and Student Stress Scale .The PSS, developed by Cohen (1988) is a 10-item self-report measure which assesses the severity of stress related to students and SSS have 57 questions. The following PSS and SSS questionnaire will be used to examine stress of students in this study. The consent form and the questionnaire will be given to the students online that is through Google Forms. I have administered 67-point questionnaire for the study which will be given to the students. It is MCQ type questionnaire in which the students will be able to answer from scale 1 to 5 that is from 'never' to 'very often' the total possible minimum score is 67 and the maximum possible score is 261. The higher the total agreement score, the better the correlation with stress involved with students. Physiotherapy students in the professional phase of their training (academic) will be surveyed in Dr. APJ Abdul Kalam College Of Physiotherapy, Pravara Institute of Medical Sciences, Loni .Prospective participants will be informed in a cover letter accompanying the questionnaires that completion of the questionnaires implied consent to participate, and that anonymity will be assured. No form of identification will be required on the questionnaire which takes about 20 minutes to complete. The main aim to of providing the questionnaire through Google Forms is to maintain privacy and confidentiality.

2.1.1 OUTCOME MEASURES:

2.1.1.1. The *Perceived Stress Scale* (PSS) is the most widely used psychological instrument for measuring the perception of Stress. It is a measure of the degree to which situations in one's life are appraised as stressful. Items were designed to tap how unpredictable, uncontrollable, and overloaded respondents find their lives. The scale also includes a number of direct queries about current levels of experienced stress. The PSS was designed for use in community samples with at least a junior high school education. The items are easy to understand, and the response alternatives are simple to grasp.

Moreover, the questions are of a general nature and hence are relatively free of content specific to any subpopulation group. The questions in the PSS ask about feelings and thoughts during the last month. In each case, respondents are asked how often they felt a certain way

Evidence for validity: Higher PSS scores were associated with (for example): failure to quit smoking, failure among diabetics to control blood sugar levels, greater vulnerability to stressful life-event-elicited depressive symptoms, more colds

Health status relationship to PSS: Cohen et al. (1988) show correlations with PSS and: Stress Measures, Self-Reported Health and Health Services Measures, Health Behavior Measures, Smoking Status, Help Seeking Behaviour.

Temporal nature: Because levels of appraised stress should be influenced by daily hassles, major events, and changes in coping resources, predictive validity of the PSS is expected to fall off rapidly after four to eight weeks.

Scoring: PSS scores are obtained by reversing responses (e.g., 0 = 4, 1 = 3, 2 = 2, 3 = 1 & 4 = 0) to the four positively stated items (items 4, 5, 7, & 8) and then summing across all scale items.[2]

2.1.1.2. Student Stress Scale

The study involves 57-point questionnaire which will be used to examine the stress of student in this COVID-19 Pandemic.

And In Student Stress Scale 57 will be able to answer from scale 1 to 4

1. No Stress at all

2. Slight Stress

3. A lot of Stress

4. Extreme Stress.

2.2 METHOD:

The study received approval from Institutional Ethical Committee of (Reference no. is PIMS/DR. APJAKCOPT/IEC/2020/204). Each participant was provided with the Perceived Stress Scale and Student Stress Scale .The PSS, developed by Cohen (1988) is a 10-item self-report measure which assesses the severity of stress related to students and SSS have 57 questions. The following PSS and SSS questionnaire will be used to examine stress of students in this study. The consent form and the questionnaire will be given to the students online that is through Google Forms. I have administered 67-point questionnaire for the study which will be given to the students. It is MCQ type questionnaire in which the students will be able to answer from scale 1 to 5 that is from 'never' to 'very often' the total possible minimum score is 67 and the maximum possible score is 261. The higher the total agreement score, the better the correlation with stress involved with students. Physiotherapy students in the professional phase of their training (academic) will be surveyed in Dr. APJ Abdul Kalam College Of Physiotherapy, Pravara Institute of Medical Sciences, Loni .Prospective participants will be informed in a cover letter accompanying the questionnaires that completion of the questionnaires implied consent to participate, and that anonymity will be assured. No form of identification will be required on the questionnaire which takes about 20 minutes to complete. The main aim to of providing the questionnaire through Google Forms is to maintain privacy and confidentiality.

The study involves 67-point questionnaire which will be used to examine the stress of student in this pandemic. It is a MCQ type questionnaire in which 10 you will be able to answer from scale 1 to 5 where,

1-Never

2-AlmostNever

3-Sometimes

4-FairlyOften

5- Very Often .   and 57 will be able to answer from scale 1 to 4

1. NO stress at all

2. Slightly stress

3. A lot stress

4. Extreme stress

3. RESULTS:

In this study, Perceived Stress Scale and Student Stress Scale has been used.

In Perceived Stress Scale 120 students participated and following result has been concluded that student are moderately stressed in this COVID-19 Pandemic on the reference of grading system in this scale.(Table no 1 and fig no 1)

- 0-13 (Low Stress) in which 8 students scored

- 14-26 (Moderate Stress) in which 106 students scored

- 27-40 (High Perceived Stress) in which 6 students scored

In Student Stress Scale also 120 students participated and following result has been concluded that maximum students are suffering from slightly stress category in the grading system of this scale.(Table no 2 and fig no 2)

Grade 1 (No Stress at all) - 38.39% of students scored
Grade 2 (Slight Stress)   - 42.45% of students scored

Grade 3 (a lot of Stress)   - 14.35% of students scored

Grade 4 (Extreme Stress) - 4.79 % of students scored

In overall study, the conclusion has been reached that most number of students are under academic stress in this COVID-19 Pandemic where numbers of the study shows that most number of students come under slightly stressed and moderate stress category.

4. DISCUSSION:

In this study result has been concluded that Physiotherapy students are having mild to moderately stress in this COVID-19 Pandemic. All most 88.33% students has moderate level of stress according to Perceived Stress Scale and 42.45% students has slightly stress (mild) according to Student Stress Scale. College closures and social isolation have also effected the students. Mental health and academic achievement are linked, research shows. Chronic stress changes the chemical and physical structure of the brain, impairing cognitive skills like attention, concentration, memory, and creativity. "You see deficits in your ability to regulate emotions in adaptive ways as a result of stress," said Cara Wellman, a professor of neuroscience and psychology at Indiana University. Ines Heinen stated that In line with other studies, the medical students in study showed higher levels of perceived stress than the normal population. There are at least two possible explanations for this result: First, it is possible that the general level of perceived stress among medical students has increased within the last one year. Second, it is possible that the semester is a time, where many personally relevant changes take place within the students' lives.[3] Wenjun Cao specified the Studies have suggested that public health emergencies can have many psychological effects on college students, which can be expressed as anxiety, fear, and worry, among others. The main goal of this study was to evaluate the psychological condition of college students during an epidemic and explore factors influencing their anxiety. This survey indicated that 24.9% of college students were afflicted with experienced anxiety because of the COVID-19 outbreak.[4] Yingfei Zhang investigated that impact of the COVID-19 pandemic on the mental health and quality of life of the general public in mainland China. Since the pandemic is not over yet and there is a further spread of the pandemic to other countries such as Italy, it is possible that the COVID-19 pandemic will cause excessive panic and anxiety in residents living inside and outside mainland China because of the increasing number of COVID-19 cases worldwide. Holiday periods were also postponed and school openings were extended to reduce the numbers of new COVID-19 cases. The overall IES score in participants indicated a mild stressful impact.[5]. In this survey Leilei Liang, found that there were more young people with a tendency toward psychological problems, which was higher than the ratio of psychological problems in other studies. This study suggested that participants with junior high school or below education had significantly higher scores on the GHQ-12. These groups may experience long-term mental health problems because they lack the ability to recover from emergencies. The government and relevant psychological institutions should take relevant psychological counseling measures to help this group recover from the impact of COVID-19.[6] Usama Rehman specified that the levels of stress and depression were found to be mild, whereas the levels of anxiety were moderate among males and females. Students, researchers, teachers, and health professionals reported mild levels of stress. These finding could be attributed to the closure of universities and colleges that offer limited technological support and knowledge resulting in uncertainty about the future of students, teachers, and researchers. The current pandemic places demands on students and teachers alike to adapt to online teaching albeit with limited resources, thus resulting in above normal stress levels.[7]

5. CONCLUSION:

In this study 120 Physiotherapy students participated and provided with Perceived Stress Scale and Student Stress Scale that has led to the conclusion that maximum number of students are coping with Mild to Moderate academic level of stress in COVID-19 Pandemic. In Perceived Stress Scale, Students are coping with moderate level of stress. In Student Stress Scale, Students are coping with slight level of stress. This research findings indicate that students and health professionals need special attention because of their higher psychological distress.

6. REFERENCES:

1. Trimothy J.Legg position statement on basic of stress available at:

https://www.healthline.com/health/stress#symptoms

2.The PSS Scale is reprinted with permission of the American Sociological Association, from Cohen, S., Kamarck, T., and Mermelstein, R. (1983). A global measure of perceived stress. *Journal of Health and Social Behavior, 24,* 386-396. Cohen, S. and Williamson, G. Perceived Stress in a Probability Sample of the United States. Spacapan, S. and Oskamp, S. (Eds.) *The Social Psychology of Health.* Newbury Park, CA: Sage, 1988.

3. Heinen I, Bullinger M, Kocalevent RD. Perceived stress in first year medical students-associations with personal resources and emotional distress. BMC medical education. 2017 Dec 1;17(1):4.

4.Cao W, Fang Z, Hou G, Han M, Xu X, Dong J, Zheng J. The psychological impact of the COVID-19 epidemic on college students in China. Psychiatry research. 2020 Mar 20:112934

5.Zhang Y, Ma ZF. Impact of the COVID-19 Pandemic on Mental Health and Quality of Life among Local Residents in Liaoning Province, China: A Cross-Sectional Study. *Int J Environ Res Public Health*. 2020;17(7):2381. Published 2020 Mar 31.

6.Liang, L., Ren, H., Cao, R. *et al.* The Effect of COVID-19 on Youth Mental Health. *Psychiatr Q* (2020). https://doi.org/10.1007/s11126-020-09744-321 April 2020

7.Rehman U, Shahnawaz MG, Khan NH, Kharshiing KD, Khursheed M, Gupta K, Kashyap D, Uniyal R. Depression, Anxiety and Stress Among Indians in Times of Covid-19 Lockdown. Community Mental Health Journal. 2020 Jun 23:1-7

7. Table and Figure:

Table no.7.1.1: Demographic Profiles of all Participants in Perceived Stress Scale.

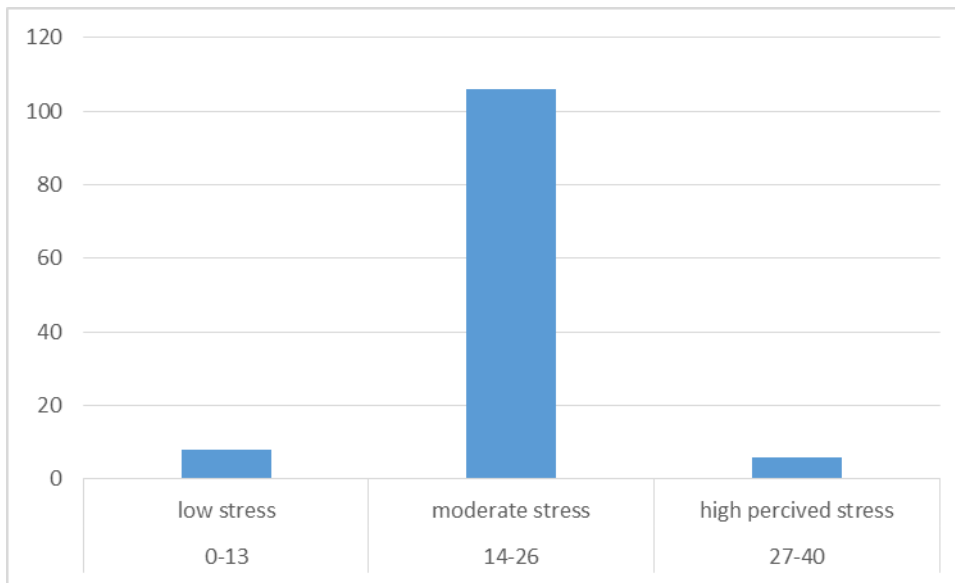| Grading Score	Participants
0-13	8
14-26	106
27-40	6

Figure no 7.1.2: Graphical representation of participants

Table no.7.2.1: Demographic Profiles of all Participants in Student Stress Scale.

GRADES	PARTICIPANTS
GRADE 1	38.38%
GRADE 2	42.45%
GRADE 3	14.35%
GRADE 4	4.79%

	0	1	2	3
■ Series1	38.39%	42.45%	14.35%	4.79%
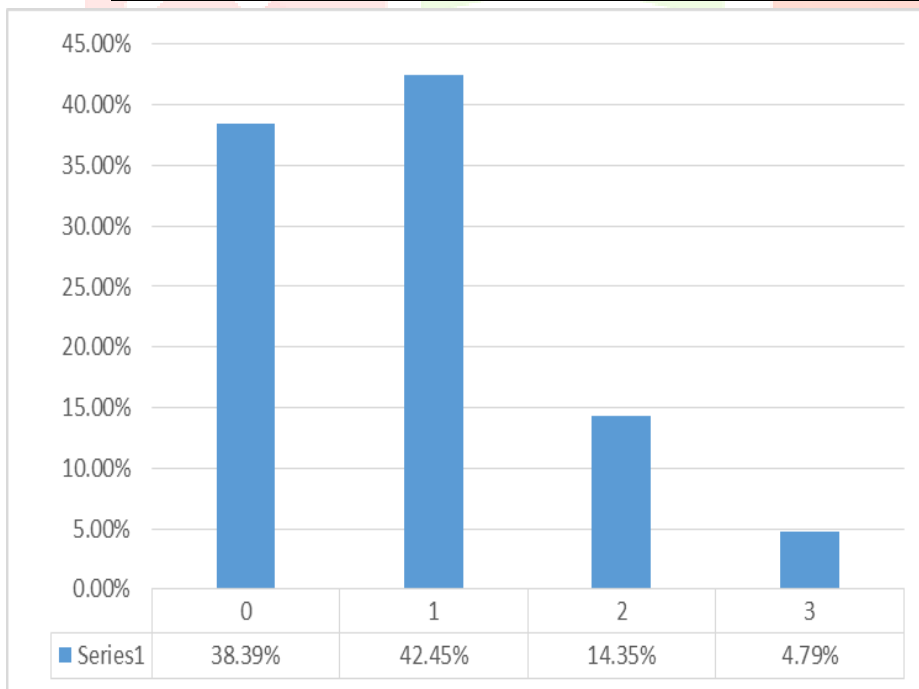
Figure no 7.2.2: Graphical representation of participants

8. ACKNOWLEDGEMENT