Coping with Academic Stress: A Study on the Relationship Between Stress and Coping Behaviour Among Physiotherapy Students

Sonumol Ramanan[1], Syeda Fathima Hanna[2], Rumana Zain[3], A.K.Vijay Krishna Kumar[4]

[1]Lecturer, Department of Physiotherapy, Dr.B.R Ambedkar College of Physiotherapy, Bengaluru, India
[2,3]Intern, Department of Physiotherapy, Dr.B.R Ambedkar College of Physiotherapy, Bengaluru, India
[4]Principal, Department of Physiotherapy, Dr.B.R Ambedkar College of Physiotherapy, Bengaluru, India

ABSTRACT

BACKGROUND: Academic stress is defined as the body's response to academic related demands that exceeds adaptive capability of students. It estimated that 10-30% of students experience some degree of academic stress during their career. Physiotherapy students have attributed academic demands like time demands, amount of material to be learnt, uncertainty about expectation, lack of skill and personal factors as contribution to psychological morbidity

OBJECTIVE: The study aims at assessing the level of Perceived stress among Physiotherapy students and their coping behaviors with the stress

METHOD: It is a cross sectional time of descriptive study that was conducted on 250 physiotherapy students in and around Bangalore. A convenient non probability technique of sampling is used and 207 participants selected for study.

RESULTS: The study consisted of 207 Physiotherapy students, majority of the students that is 40.8% were between 18 to 20 years followed by 44% between 21 to 23 years and 6.3% were between 24 to 26 years old. Out of 207 participants, 67.6% were female and 32.4% were male. According to this study 34.8% were 1st year students, 25.6% were 4th years, 25.1% were 2nd years and 14.5% were 3rd year students. Average stress score was 42.82±8.14 and average COPE score was 65.71±12.60.

CONCLUSION: As a result, the objectives of this study is to identify the causes of the respondent's academic stress and the coping mechanisms they employed that have already been met by using the PAS questionnaire and the Brief Cope questionnaire as the instruments.

KEYWORDS: Academic stress, coping strategies, coping academic stress, sources of academic stress

INTRODUCTION

Psycholinguistic researchers have conducted numerous studies on stress, which is closely linked to various mental health issues such as depression, anxiety, and even life-threatening conditions like cardiovascular diseases. [1] The concept of stress is strongly associated with the belief that one is unable to meet the demands of their environment. [2] The term "stress" refers to an experience that disrupts an individual's physical or mental well-being, which typically arises when a person is unable to respond

adequately to the demands placed upon them.[3] Some researchers have identified various stressors, including excessive assignments, competition among students, financial difficulties such as a lack of pocket money, academic failures, poor relationships between students, students and professors, and students and their families, as well as problems at home that can contribute to stress. [4] Academic stress is a type of stress that arises in academic environments, such as schools and universities, due to various academic demands and expectations. Physiotherapy students have identified academic demands, such as time constraints, a large volume of material to be learned, uncertainty about expectations, and lack of necessary skills, as well as personal factors such as relationships with family and partners, physical health, and psychological well-being, as factors that contribute to psychological distress at the institutional level, stressors can include issues with lecture rooms, the semester system, and inadequate resources.[5] However, universities should also consider the diversity of students' needs, goals, and expectations. Academic stress is often a result of the number of tasks that students are required to complete, and it arises from the pressure of facing challenging academic situations. This can lead students to feel subjectively incapable of handling the demands of their environment and their actual resources. Therefore, more research is needed to accurately identify the stressors that contribute to academic stress among students. [6] This research aims to understand the stressors of academic stress by using the (PAS) Perception of Academic Stress Scale questionnaire. Academic stress can have both positive and negative consequences on students. While it can motivate students to work harder and be more creative, it can also cause anxiety and fear of failure. It's important for universities to take the issue of student stress seriously and provide appropriate support and resources to help students manage their stress levels. There are various ways to deal with academic stress, such as practicing good time management, seeking academic support, engaging in physical activity or mindfulness practices, and seeking professional help if needed. It's important for students to identify their stressors and find coping mechanisms that work best for them. [7] Coping involves the strategies people use to handle and control stress. This can include both actions and thoughts aimed at reducing the impact of stressors on one's mental and physical well-being. It is important to note that stress affects different individuals in different ways, and therefore, it is important for students to learn effective coping strategies that work. [1] Students need to learn how to cope with stress effectively so that they can identify when they are experiencing it and take appropriate steps to manage it. This may include seeking medical care, social support, and advice from professionals to improve their resilience and reduce the negative impact of stress on their lives.[8] Thus the second aim of the study is to know what kind of coping strategies that the student chooses to use in encountering the stress.

Objective of the study:
The study aims at assessing the level of perceived stress among physiotherapy students and their coping behaviour with the stress

Hypothesis:
Null hypothesis (H0): There is no significant relationship between perceived academic stress and coping behaviour among physiotherapy students.
Alternate hypothesis (H1): There is significant relationship between perceived academic stress and coping behaviour among physiotherapy students.

MATERIALS & METHODS

MATERIALS USED:

- Pen
- Paper

MEDTHODOLOGY

- **Method Research Design**: A cross sectional research design
- **Sampling technique:** convenient, non-probability technique of sampling
- **Sample size**: 250 students
- **Sample settings**: Physiotherapy colleges in and around Bangalore
- **Outcome measures**: PAAS: Perception of Academic Stress Brief-COPE: Brief –coping Orientation of problems experienced inventory

INCLUSION CRITERIA:

- Students who are willing to participate
- Both male and female Physiotherapy students
- Students belonging from age 18 to 25 years

EXCLUSION CRITERIA:

- Students with any Musculoskeletal disorder, Systematic diseases, Cardiovascular diseases Students
- who have undergone any recent surgeries

PROCEDURE

250 Physiotherapy students will be included in the study with age group between 18 to 25 years from different physiotherapy colleges in and around Bangalore. Informed consent will be obtained after explaining the objectives of the study. Each subject will be screened for, and those who will not meet the inclusion criteria will be excluded. Demographic data will be collected. The questionnaire will be personally distributed to the subjects and collected.

Data Analysis

- Statistical analysis of the data was done using SPSS20.0.
- Categorical variables were presented as frequency and percentage.
- Stress and COPE scores were expressed using mean and standard deviation.
- Correlation between Stress and COPE was found using Karl-Pearson's coefficient of correlation.
- A p value <0.05 was considered statistically significant.

Table 1: Distribution of the students based on age

	Frequency	Percentage
18-20	103	49.8
21-23	91	44.0
24-26	13	6.3
Total	207	100.0

Interpretation: study consisted of 207 Physiotherapy students, Majority of 40.8% were between 18 to 20 years followed by 44% between 21 to 23 years and 6.3% were between 24 to 26 years old.

Table 2: Distribution on the basis of gender

	Frequency	Percentage
Female	140	67.6
Male	67	32.4
Total	207	100.0

Interpretation: out of 207 participants, 67.6% were female and 32.4% were male

Table 3: Distribution on the basis of year of study

	Frequency	Percentage
1st year	72	34.8
2nd year	52	25.1
3rd year	30	14.5
4th year	53	25.6
Total	207	100.0

Interpretation: The table depicts, 34.8% were 1sy year students,25.6% were 4th years,25.1% were 2nd years and 14.5% were 3rd year students.

Table 4: Academic stress score

Items of specifications and the subscale items	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Stresses related to academic expectations					
Competition with my peers for grades is quite intense	26.6%	25.6%	40.1%	3.4%	4.3%
My teachers are critical of my academic performance	28.5%	23.7%	37.7%	6.3%	3.9%
Teachers have unrealistic expectations of me	17.9%	22.7%	39.1%	13.0%	7.2%
The unrealistic expectations of my parents stresses me out	20.8%	15.5%	31.4%	15.9%	16.4%
Stresses related to students' academic self-perceptions					
I am confident that I will be a successful student	63.8%	14.0%	18.8%	0.5%	2.9%
Am confident that I will be successful in my future career	70.0%	15.0%	12.6%	1.4%	1.0%
I can make academic decisions easily	28.0%	34.3%	28.0%	7.7%	1.9%
I fear failing courses this year	19.3%	15.9%	23.7%	11.1%	30.0%
I think that my worry about examinations is weakness of character	28%	27%	23.7%	11.1%	10.1%
Even if I pass my exams, am worried about getting a job	25.6%	28.0%	22.2%	7.2%	16.9%

Stresses related to faculty work and Examinations					
The time allocated to classes and academic work is enough	17.9%	25.6%	29.5%	16.4%	10.6%
The size of the curriculum (workload) is excessive	35.3%	30.0%	25.1%	8.2%	1.4%
I believe that the amount of work assignment is too much	32.9%	25.6%	24.6%	13.0%	3.9%
The examination questions are usually difficult	26.1%	28.0%	38.6%	5.3%	1.9%
Examination time is short to complete the answers	50.7%	25.6%	15.5%	6.8%	1.4%
Exam times are very stressful to me	57.5%	25.1%	10.6%	3.4%	3.4%

Interpretation: the green shaded area shows the participants had a neutral opinion on this questions (9/18=50%). Yellow represents strong agreement to the questions (7/8=38.05) and Blue shows agreement (2/18=11.1%)

Table 5: Brief COPE scoring

Active Coping				
Items of specifications and the subscale items	I have not been doing this at all	A little bit	Medium amount	I have been doing this a lot
I've been concentrating my efforts on doing something about the situation I'm in	16.4 %	42.0%	27.1%	14.5%
I've been taking action to try to make the situation better	11.6 %	30.9%	32.4%	25.1%
Planning				
I've been trying to come up with a strategy about what to do	10.1%	35.7%	27.5%	26.6%
I've been thinking hard about what steps to take	8.2 %	32.4%	28.0%	31.4%
Positive Reframing				
I've been trying to see it in a different light, to make it seem more positive	14.5%	34.8%	25.6%	25.1%
I've been looking for something good in what is happening	8.7%	28.5%	29.0%	33.8%
Acceptance				
I've been accepting the reality of the fact that it has happened	10.1 %	29.0%	27.1%	33.8%
I've been learning to live with it	10.6%	32.4%	26.6%	30.4%
Humour				
I've been making jokes about it	30.4 %	33.3%	17.4%	18.8%
I've been making fun of the situation	36.7%	30.0%	17.9%	15.5%
Religion				
I've been trying to find comfort in my religion or spiritual beliefs	15.0 %	17.9%	21.3%	45.9%
I've been praying or meditating	10.1 %	24.6%	27.5%	37.7%
Using Emotional Support				

I've been getting emotional support from others	27.5%	40.1%	19.8%	12.6%
I've been getting comfort and understanding from someone	17.4%	41.1%	25.6%	25.1%
Using Instrumental Support				
I've been trying to get advice or help from other people about what to do	16.4%	41.1%	25.1%	17.4%
I've been getting help and advice from other people	19.3%	14.1%	27.1%	13.5%
Self-Distraction				
I've been turning to work or other activities to take my mind off things	13.0%	52.2%	20.8%	14.0%
I've been doing something to think about it less, such as going to movies, watching TV, reading, daydreaming, sleeping, or shopping	15.0%	39.6%	22.2%	23.2%
Denial				
I've been saying to myself "this isn't real"	26.6%	40.1%	21.3%	12.1%
I've been refusing to believe that it has happened	30.0%	41.5%	19.8%	8.7%
Venting				
I've been learning to live with it	10.6%	32.4%	26.6%	30.4%
I've been saying things to let my unpleasant feelings escape	20.3%	46.4%	22.2%	11.1%
Substance Use				
I've been using alcohol or other drugs to make myself feel better	87.4%	4.8%	4.3%	3.4%
Behavioural Disengagement				
I've been giving up trying to deal with it	35.7%	33.3%	21.3%	9.7 %
I've been giving up the attempt to cope	37.2%	36.2%	17.9%	8.7%
Self-blame				
I've been criticizing myself	39.6%	31.9%	19.3%	9.2%
I've been blaming myself for things that happened	22.7%	34.3%	19.8%	23.2%

Interpretation: In COPE,18 out of 28 questions were reported' a little 'bit (64.2%),7 out of 28 were reported 'I haven't been doing this at all',3.5% of the questions were reported as 'I have been doing this a lot' and 7.1% of the questions were reported as 'medium amount'.

Table 6: Descriptive statistics of Stress and COPE

	N	Minimum	Maximum	Mean	Std. Deviation
Stress	207	18.00	71.00	42.8213	8.14266
COPE	207	28.00	99.00	65.7198	12.60870

Interpretations: Average stress core was 42.82±8.14 and average COPE score was 65.71±12.60.

Table 7: Correlation between STRESS and COPE

Correlation	r value	P value
STRESS and COPE	-0.028	0.688

Interpretation: There exist a weak negative correlation between stress and cope which is not statistically significant with p>0.05.

Table 8: Main stressors identified

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
The size of the curriculum (workload) is excessive.	35.3	30	25.1	8.2	1.4
I believe that the amount of work assignments is too much.	32.9	25.6	24.6	13	3.9
Exam times are too short to complete the answers.	50.7	25.6	15.5	6.8	1.4
Exam times are very stressful to me	57.5	25.1	10.6	3.4	3.4
I am confident I will be a successful student.	63.8	14	18.8	0.5	2.9
I am confident that I will be successful in future career	70	15	12.6	1.4	1
I think that my worry about my exams is a weakness of mine	28	27	23.7	11.1	10.1

RESULT

The study consisted of 207 Physiotherapy students, majority of the students that is 40.8% were between 18 to 20 years followed by 44% between 21 to 23 years and 6.3% were between 24 to 26 years old. Out of 207 participants, 67.6% were female and 32.4% were male. The table 3 depicts 34.8% were 1st year students, 25.6% were 4th years, 25.1% were 2nd years and 14.5% were 3rd year students. Average stress score was 42.82±8.14 and average COPE score was 65.71±12.60. There exists a weak negative correlation between stress and cope which is not statistically significant with p>0.05.

The table 8 depicts the main stressors of the students are, I am confident that I will be a successful in future career (70%) and I am confident I will be a successful student (63.8%). (57.5%) of students are strongly agreeing with exam times are stressful to me and (50.7%) of students are also strongly agreeing with exam times. The table 8 depicts the main stressors of the students are, I am confident that I will be a successful in future career are too short to complete the answers. (30%) of the subject of this study are agreeing with the size of the curriculum (workload)

DISCUSSION

Based on the information provided, it appears that the first aim of the study is to identify the stressors of academic stress. The study uses the PAS questionnaire, which consists of three main subscales: academic expectations, workload and examinations, and students' academic self-perceptions. By using these subscales, the researchers are able to get a comprehensive understanding of the different factors that contribute to academic stress among students.

According to Table 1, 28.5% of the participants strongly agree with the statement that "teachers are critical to their academic performances." This high agreement indicates that this condition is perceived as a stressor of academic stress related to academic expectations. The workload and examination subscale is the following subscale of the PAS questionnaire. According to table 1, the subscale item "examination times are very stressful to me" has a pretty high agreement from the subject, which is 57.5%. As a result, 30.0% of the students agree that the signs of the curriculum (work load) are too much for them, while 38.6% of the subjects are neutral with the statement that "the examination questions are usually difficult to them."

Student's academic self-perceptions is the last subscale on the PAS questionnaire, and the majority of respondents (70%) believe they have the potential to succeed in the future. They already have a specific career goal in mind. In contrast, the individual already perceives their concerns as a character flaw (28%). When they have a final exam, their fears tend to grow. Additionally, according to Alvin (2007) and Gusniarti (2002), academic stress is a condition that develops as a result of the pressure placed on students to deal with difficult academic circumstances.

Identifying coping mechanisms that students typically employ is the study's second goal. For this objective, a short cope questionnaire is utilized. The 14 subscales of the Brief Cope scale each have two items, and the subscales are: active coping, planning, positive reframing, acceptance, humour, religion, employing emotional support, instrumental assistance, self-distraction, denial, venting, substance use, behavioural disengagement, and self-blame.

Using table 2, In terms of active coping, the subject uses action to improve the circumstance, which is 30.9%. According to the planning subscale, the subjects regularly consider carefully what actions to take (32.4%) and what tactics to employ (35.7%). On the subscale for positive reframing, the participants routinely search for the positive in what is happening (28.5%).

The graduate students are already accepting the reality (29%) while trying to live with it is (32.4) on the following subscale, acceptance. The majority of the time, students in the classroom will discuss or work on tasks during their free time. This repetitive behaviour demonstrates that they are already used to the reality. The subscale's next component is humour.36.7 percent of the respondents make light of the circumstance.

From Table 2, the next subscale is religion, where half of the subjects (45.9%) frequently turn for solace. When using the emotional support subscale, the two subscale items with the lowest response and frequency were "I have been getting emotional support from others" (40.1%) and "I have been getting comfort and understanding from others" (41.1%), respectively.

Furthermore using instrumental support subscale with (41.1%) of the subjects is frequently trying to get advice from other people about what to do. The next subscale is self-distraction. (39.6%) of the subjects are get used to do something to think about what the reality less such as watching TV and sleeping. (52.2%) of the subjects of this study are turning to work or doing other activities a little. These results can be explained by the fact that respondents to the previous subscale had already accepted reality. Additionally, it explains why they prefer to work or do other productive activities to watching television. The next subscale is denial. Of the participants, 40.1% never acknowledge to themselves that the events are not real. Venting is the next subscale. 32.4% of graduate students are adjusting to it, according to the findings.

The outcome of the substance use subscale reveals that the majority of the study's participants (87.4%) never use alcohol or other drugs as a stress reliever. According to the findings on the aforementioned

religion subscale, the study's participants used religion as a source of solace in order to refrain from engaging in harmful behaviour, such as abusing alcohol or other drugs.

Next is the behavioural engagement subscale, where "I have not been doing this at all" was chosen by 35.7% of students. Self-blame is a topic covered by the final subscale. The findings indicate that (39.6%) of the. subjects frequently criticise themselves and (34.3%) of the subjects frequently attribute their problems to themselves. The PAS questionnaire's findings on the subscale measuring academic self-perceptions are supported by the realisation that anxiety is a sign of character weakness.Thus, the main stressor identified in the present study is the worries which is not related to the self- perception among the students

CONCLUSION

As a result, the objectives of this study—to identify the causes of the respondents' academic stress and the coping mechanisms they employed—have already been met by using the PAS questionnaire and the Brief Cope questionnaire as the instruments. According to the study, the individuals' fears had the biggest impact on their academic stress. Their anxiety is making them less capable of doing the work and handling stress. Furthermore, people used to find comfort in their faith as a way to cope with stress. They have adapted to dealing with stress because they have accepted reality. These study volunteers have carefully thought-out ways for coping with stress. However, the main stressor is not correlated with the self-perception to the coping strategies.

LIMITATIONS

- There were a finite number of participants.
- It was assumed that responses given by physiotherapist were true.
- Unwillingness of physiotherapy students to participate in the study.

RECOMMENDATIONS

- A future study with a larger sample size and more comprehensive demographic coverage might be able to identify the precise causes of issue this study highlighted.
- Further studies to be conducted to further elaborate the causes and effects of stress among the students and the coping approaches adapted by these students to overcome the stress.
- Further investigation could clarify and improve our knowledge of the necessity of appropriate strategies to the stressors among physiotherapy students.

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