

Identification of stressors and Perceptual difference of stress in first and final year Doctor of Physical Therapy students; a comparative study

Ayesha Afridi, Muhammad Faisal Fahim

Abstract

The aim of the study is to identify the main causes of stress and to identify the perception difference of stress in first and final year DPT students

Students in universities can experience stress in balancing the different demands on them - academic, interpersonal, intrapersonal, and professional or work related. A comparative Cross-sectional study was conducted using self-administered questionnaires including socio demographics. A total of 177 university students (first year 109 & final year 68 students) were included in the period March, to September 2015 in a private medical college Islamabad. Significantly valid tool (The Medical Student Stressor Questionnaire) (MSSQ) was used to measure the stress level. The research was conducted according to the principles of the Declaration of Helsinki. Three stressors academic related inter/intrapersonal related and group activities related stressors were causing high stress in all DPT students. There was significant difference in perception of stressors among first and final year DPT students.

Keywords: stress, academic stressor, doctor of physical therapy & students.

Introduction

Doctor of physical therapy is a new emerging health related field with more and more complicated practices and technologies. To excel in the field of physical therapy there is a huge amount of stress and pressure on the students to cope with upcoming new techniques of efficiently treating patients.¹ Previous researches have determined that stress and anxiety is increasing in university students which adversely affects their academic performance.² Medical and allied health students are considered to be the most stressed due to their long term and expenses. Many studies reported different causes of stress in first and final year medical and allied health students. First year stress is due to totally changed life style and environment of medical

Bahria University Medical and Dental College, Karachi, Pakistan.

Correspondence: Ayesha Afridi. e-mail: afridi.ayesha@gmail.com

school while final year stress in students is considered due to shift of routine from preclinical to clinical section.³ within a limited time duration, memorizing and cramming of many small details in a single topic, strict examination procedures with many assignments, presentations etc.⁴ Social life stress is caused by dealing with patients in pain, morbidity and mortality and personal problems. Financial crisis related stress can affect the medical students private and social life at the university.³ Even in developed countries offering many facilities for good education on fifty percent of medical students experience stress and physical exhaustion. This stress and physical exhaustion has long term drastic effects on health professionals as well as on patient's satisfaction level, treated by those health care professionals.⁵ A limited number of studies on stress in medical students are reported in developing countries, while Malaysian studies show that thirty percent of medical students are facing different types of stress with various causative factors. A few Asian studies have found almost the same results.⁶ Researches to identify the stressors and prevalence of stress in medical students have shown that prevalence ranges from 21.6% to 56%.⁷ It is normal to take stress in life up to some extent as it enhances the performance in academic work load, but if threshold for stress exceeds the limits, it considerably affects the academics, social and personal life of medical students especially in first year. These events can affect first year medical students from their first day at university followed to final year.⁸ One of the most important stimulus, triggering stress is considered to be the year of study in five years course during this time stress is incessant and growing with time.⁹

This study was not conducted in a university, so ethical approval letter was not taken in consideration and questionnaire was sent to first and final year students using email and social media. The research was conducted according to the principles of the Declaration of Helsinki.

Comparative cross sectional survey was conducted to

Annexure (Questionnaire)

Consent form: The study has no potential harm to participants. All data collected from you will be coded in order to protect your identity, and should not be disclosed to anyone.

Name _____ Age: _____ Gender: M/F
Occupation: _____ Address: _____

	no stress at all	causing mild stress	Causing moderate stress	causing high stress	causing severe stress
stressTests/Examinations					
Talking to patients about personal problems					
Conflicts with other students					
Quota system in examinations					
Verbal or physical abuse by other students(s)					
Parental wish for you to study medicine					
Need to do well (self-expectation)					
Not enough study material					
Conflict with personnel(s)					
Heavy workload					
Participation in class discussion					
Falling behind in reading schedule					
Participation in class presentation					
Lack of guidance from teacher(s)					
Feeling of incompetence					
Uncertainty of what is expected of me					
Not enough medical skill practice					
Lack of time for family and friends					
Learning context- full of competition					
Teacher- lack of teaching skills					
Unable to answer questions from patients					
Inappropriate assignments					
Having difficulty understanding the content					
Facing illness or death of the patients					
Getting poor marks					
Poor motivation to learn					
Lack of time to review what have been learnt					
Verbal or physical abuse by teachers					
Frequent interruption of my work by others					
Unable to answer the questions from the teacher(s)					
Conflict with teacher(s)					
Unwillingness to study medicine					
Large amount of content to be learnt					
Need to be imposed by others					
Not enough feedback from teacher(s)					
Unjustified grading process					
Lack of recognition for work done					
Working with computers					
Verbal or physical abuse by personnel(s)					
Family responsibilities					

* If you are not in clinical year yet, please answer based on what do you feel if you face this situation. 1

Verbal Abuse is defined as to speak insultingly, harshly and unjustly about a person.
Physical Abuse is defined as to treat in harmful, injurious or offensive way to a person

Medical Students Stressor Questionnaire (MMSQ) Form.

Section A	I	II	III	IV	V	VI
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
Total A						

Section B	I	II	III	IV	V	VI
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						
32						
33						
34						
35						
36						
37						
38						
39						
40						
Total B						

Σ	I	II	III	IV	V	VI
Total A						
Total B						
Total						

Σ	I	II	III	IV	V	VI
Total						
Divided by	15	7	7	6	3	4
Scores						

identify the main stressors and perceptual differences among first and final year students. An online questionnaire was sent to the students who were asked to send it back to researcher through mail and social media account. It took almost 6 months to get the responses (March to September 2015). A convenient sampling method was used. There were 109 responses were from first year students while 68 were from final year. From total 177 students, 60 were males and 117 were females, age ranging from 17 to 24 years. There was no specific sample size calculation method applied, all the students of 1st and final year were included. Only completely filled questionnaire were included. All the participants were asked to provide a written consent.

This questionnaire included six categories of different stressors bothering the medical and rehabilitation students. These six domains were covered in 40 questions which were scored on 0-4 Likert scale.

1: Academic related stressors (ARS)

Examinations, assignments, quizzes, expended course work, short time span for preparation of exams, difficult course content, and high competition in academics, high expectations of teachers, parents and self are related to ARS.

2: Inter/Intrapersonal Related Stressor (IRS)

Students relationship with colleagues, teachers, administration, patients and with students own self, least motivation to study, low self-confidence, any physical verbal or emotional abuse by someone are related to IRS.

3: Teaching and Learning Related Stressor (TLRS)

Teacher's capabilities to clear the concepts of students well, least appreciation and encouragement from teachers are related to TLRS.

4: Social Related Stressor (SRS)

Spending time on extra-curricular activities, with friends and family and listening to the problems of patients are related to SRS.¹⁰

5: Drive and Desire Related Stressor (DRS)

Behaviours, emotions, thinking power disturbances due to self and others bad attitudes, mentally not satisfied and ready to study in college, choosing wrong career, demotivation after knowing about field scope are related to DRS.¹⁰

6: Group Activities Related Stressor (GARS)

Presentations, problem based learning and group discussions are all included in GARS.¹⁰

Data was entered and analyzed using statistical packages for social sciences (SPSS) version 23. Distribution and frequency was examined on demographics and chi square test was applied on 2 groups for perception comparison.

Results

Table 1 shows that first year 61 (56.0%) students reported moderate stress while final year 45 (66.2%) students reported high stress, in response to academic related

Table-1: Showing ARS, IRS and TLRS causing stress in first and final year students.

		Academic Related Stressor				Chi-Square value	Total students	p-value
		mild stress	moderate stress	high stress	severe stress			
Year of Study	1st year	13 (11.9%)	61(56.0%)	35(32.1%)	0(0.0%)	37.590	109	0.000
	final year	0(0.0%)	17(25.0%)	45(66.2%)	6(8.8%)		68	
Total		13(7.3%)	78(44.1%)	80(45.2%)	6(3.4%)		177	
		Interpersonal and Intrapersonal Related Stressor				Chi-Square value	Total students	p-value
		mild stress	moderate stress	high stress	severe stress			
Year of Study	1st year	7(6.4%)	42(38.5%)	48(44.0%)	12(11.0%)	9.465	109	0.024
	final year	4(5.9%)	24(35.3%)	40(58.8%)	0(0.0%)		68	
Total		11(6.2%)	66(37.3%)	88(49.7%)	12(6.8%)		177	
		Teaching and Learning Related Stressor				Chi-Square value	Total students	p-value
		mild stress	moderate stress	high stress	severe stress			
Year of Study	1st year	20(18.3%)	58(53.2%)	31(28.4%)	0(0.0%)	21.111	109	0.000
	final year	7(10.3%)	22(32.4%)	32(47.1%)	7(10.3%)		68	
Total		27(15.3%)	80(45.2%)	63(35.6%)	7(4.0%)		177	

Table-2: Showing SRS, DRS & GARS causing stress in first and final year students.

		Social Related Stressor				Chi-Square value	Total students	p-value
		mild stress	moderate stress	high stress	severe stress			
Year of Study	1st year	32(29.4%)	63(57.8%)	14(12.8%)	0(0.0%)	20.244	109	0.000
	final year	12(17.6%)	28(41.2%)	25(36.8%)	3(4.4%)		68	
Total		44(24.9%)	91(51.4%)	39(22.0%)	3(1.7%)		177	
		Drive and Desire Related Stressor				Chi-Square value	Total students	p-value
		mild stress	moderate stress	high stress	severe stress			
Year of Study	1st year	31(28.4%)	53(48.6%)	20(18.3%)	5(4.6%)	4.065	109	0.255
	final year	19(27.9%)	39(57.4%)	10(14.7%)	0(0.0%)		68	
Total		50(28.2%)	92(52.0%)	30(16.9%)	5(2.8%)		177	
		Group Activities Related Stressor				Chi-Square value	Total students	p-value
		mild stress	moderate stress	high stress	severe stress			
Year of Study	1st year	14(12.8%)	37(33.9%)	52(47.7%)	6(5.5%)	9.595	109	0.022
	final year	11(16.2%)	35(51.5%)	22(32.4%)	0(0.0%)		68	
Total		25(14.1%)	72(40.7%)	74(41.8%)	6(3.4%)		177	

stressors. This perceptual difference among first and final year students was highly significant (p -value 0.000). Among all students (first & final year) majority of students scored high stress in response to academic related stressors.

Inter/Intrapersonal Related Stressor response was high stress in both first and final year students (44.0% & 58.8% respectively) and perceptual difference among first and final year was significant (p -value 0.024).

Teaching and learning related stressor was scored with moderate stress in 53.2% first year students while final year students 47.1% perceived this stressor differently as high stress. (P -value 0.000) .

Table 2 shows that first and final year students scored moderate stress (57.8% & 41.2% respectively) but perceptual difference was significant (p -value 0.000).

48.6% first year and 57.4% final year students were moderately stressed over drive and desire related stressor. There was not significant perceptual difference related to drive and desire related stressor among them (p -value greater than 0.05).

Group activity related stressor was causing high stress in first year 47.7% students while moderate stress in 51.5% final year students. Perceptual difference existed with p -value less than 0.05.

All stressors were perceived differently in first and final year students except drive and desire related stress which was equally moderately affecting the first and final year students. This stressor was also noted as the main cause of stress among students 52.0%. Second leading cause of stress was social related stressor 51.4% while academic and teaching and learning related stressors were equally affecting the students of DPT 45.2% and least affecting stressor was group activity related with 41.8%.

Conclusions and Recommendations

Academic burden, choice of studying medical related course, choosing wrong career and worrying about scope, is prominently affecting the DPT students with moderate stress. To suppress these stress causing factors, rehabilitation colleges should properly arrange the seminars and workshops on career counseling throughout the DPT course for students.

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