

Assessment of stress among physiotherapy students at Riphah Centre of Rehabilitation Sciences

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Abstract

Objective: To assess stress and psychological morbidity in undergraduate students of physiotherapy at Riphah Centre of Rehabilitation Sciences (RCRS).

Methods: A cross-sectional study was conducted from 2008 to 2010 at RCRS. Two hundred and thirty one students from first semester to fourth semester were included in the study. The data was collected through a semi-structured proforma and the Student Life Stress Inventory (SLSI) scale. Data was analysed by applying t-test and ANOVA with SPSS version 17.

Results: Two hundred and three respondents (88%) reported feeling stressed: 97(42%) students were mildly stressed, 92(40%) were moderately stressed, and 14(6%) were severely stressed. Significant gender differences were found on the total score of stress, stressors and reactions. The findings revealed that females face more stressors especially pressures ($p < 0.001$), physiological, emotional ($p < 0.01$) and behavioural ($p < 0.05$). An analysis of variance on SLSI is significant, $F = 3.747$ ($p < 0.05$). Mean difference indicates that prevalence of stress is higher in 4th semester RCRS students.

Conclusion: The findings reveal the higher level of stress in undergraduate physiotherapy students. The high psychological morbidity necessitates the need for interventions like counseling and psychological support to improve the quality of life for these allied health care professionals.

Keywords: Stress in physiotherapy students, Stressors in health care professionals, Psychological morbidity, DPT-students. (JPMA 63: 346; 2013)

Introduction

Health profession education is highly demanding and challenging rendering students to deal with complex learning environment. Health care education can be a stressful experience for some individuals, and may affect negatively emotional well-being and academic performance of the students. Studies suggest that high levels of stress and psychological morbidity occur in health care profession students.¹ Considerable research has investigated stressors and psychological morbidity in medical, dental and nursing students,²⁻⁶ however, few studies have been undertaken in physiotherapy students. This study explores different sources of stress and psychological morbidity in undergraduate physiotherapy students.

Stress is actually a particular pattern of disturbing psychological and physiological reactions that occur when an environment event threatens important motives and taxes one's ability to cope. It has both physical and emotional effects and can create positive

or negative feelings. According to Lazarus and Folkman stress is "a relationship between the person and the environment that is appraised by the person as taxing or exceeding his or her resources and endangering his or her well being."⁷

Too much stress pooled with other psychological factors can be damaging and can disrupt normal functioning of the students. It may lead to further psychological complications causing psychological morbidity. Subjective experience of stressors in students can lead to poor quality of life, condensed self-esteem resulting in lower self-confidence, compromised ability to cope with daily life problems and may influence student's academic performance.^{8,9} Students who drop out of professional institutions actually do not lack intellectual ability, but emotional problems and poor motivation lead to failure.¹⁰

Physiotherapy education is changing, and educators are increasingly concerned about the psychological problems observed in students. There is substantial amount of literature which suggests that the physiotherapy education is a demanding field and students are subjected to different kinds of stressors such as the academic demands and pressures, competition for good grades, social adjustment,

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interpersonal and family problems, uncertainty of future, lack of leisure time, coping with the high stimulating environment of college, exams, too much work load and financial concerns. These stressors can affect student's learning capacity, academic output as well as their day to day adjustment process. All these stressors not only effect the academic performance of the students but also threaten their physical and psychological well being.¹¹⁻¹³

Recently mental health issues are becoming the focus of attention in academic setting to enhance psychological well-being and to add to capacity building. In addition to professional education of the students it is also imperative to look into the factors which maintain the quality of life of the students during the years of training.¹⁴ Sound mental health is a prerequisite for any kind of academic achievement. There is a dire need to identify the different stressors and their sources to cater the practical needs of the students.

A thorough literature review revealed that scanty research has been conducted to evaluate psychological morbidity in students of physiotherapy programme. However, many studies have explored the psychological problems of MBBS students,¹⁵⁻¹⁷ such studies are lacking in physiotherapy students. Keeping in mind, the present study was planned and the objectives were to find out the prevalence of stress and to identify the stressors in DPT students.

Subjects and methods

A cross-sectional study was conducted from 2008-2010 in RCRS. The data was collected through Student Life Stress Inventory (SLSI). Questionnaire was administered to all the registered DPT students at Riphah University during 2008-10 and 231 students filled the questionnaire. Students of other disciplines and medical colleges were not included in study. The SLSI consists of 51 items listed in 9 sections indicating different types of stressors (frustrations, conflicts, pressures, changes, and self-imposed stressors) and reactions to the stressors (physiological, emotional, behavioural, and cognitive). The Cronbach's alpha, internal consistency coefficients turned out to be 0.83

showing that the inventory is reliable and valid. Informed consent was taken from the students prior the research and ethical approval was taken from RCRS. The students were assured about the confidentiality of the data. Out of 250 students, 231 students agreed to fill the questionnaire and the response rate was 92.4%.

Data was analysed through SPSS version 17. Descriptive statistics were calculated to find out the overall percentage and frequency of stress. Mean and standard deviation (SD) was taken out of all the subscales of the inventory. Independent t-test was applied to see the mean differences between male and female students in experiencing stress and ANOVA — one way analysis of variance was applied to establish the differences in the level of stress expressed by students in different semesters of physiotherapy.

Results

Two hundred and three respondents (88%) reported feeling stressed: 97(42%) students were mildly stressed, 92(40%) were moderately stressed and 14(6%) were severely stressed, while 28(12%) students reported no symptoms of stress. The t-test and ANOVA were applied to see the significant differences on the

Table-1: Scores on subscales and total scores of Students Life Stress Inventory for male and female physiotherapy students (N = 231).

Subscales	Gender (Male students) (n = 75) M±SD	Gender (Female students) (n = 156) M±SD	t
Total Scores	124.18±21.54	136.56±23.83	-2.880**
Total Stressors	57.18±11.16	61.16±11.01	-1.852*
Total Reactions	107.41±20.03	120.16±22.07	-3.191**
Frustrations	14.68±4.15	15.79±4.63	-1.258
Conflicts	6.94±2.23	7.55±2.70	-1.187
Pressures	11.35±4.07	13.82±3.74	-3.321***
Changes	8.38±3.37	8.46±2.80	-0.1385
Self-imposed	22.68±4.01	23.07±3.17	-0.596
Physiological	26.29±6.49	30.34±8.55	-2.964**
Emotional	11.29±3.64	13.48±3.70	-3.042**
Behavioural	15.21±3.94	16.69±4.14	-1.859*
Cognitive	7.06±2.45	7.37±1.99	-0.753

df = 149, *p< .05, **p< .01, ***p< .001.

Table-2: Life stress inventory of physiotherapy students from 1st to 4th semester (N = 231).

Scale	First Semester (n = 50) Mean	Second Semester (n = 35) Mean	Third Semester (n = 65) Mean	Fourth Semester (n = 81) Mean	F
Student Life Stress Inventory	60.90±11.52	60.21±10.79	55.10±10.17	63.89±10.46	3.747*

df = 227, *p < .05.

total scale, on the total score of stressors, on the total score of reactions and on the subscales in the mean scores of RCRS students.

Table-1 shows significant gender differences on the total scale, total score of stressors, total score of reactions and on the subscales in the mean scores of RCRS students. These findings reveal that females perceive more stress and are more prone to reactions as compared to males. Significant gender differences are also found on almost all the subscales in the mean scores. These findings reveal that females face more stressors especially pressures, and the significant reactions are physiological, emotional and behavioural.

Table-2 shows the differences between different semesters in experiencing stress computed through ANOVA. Fourth semester students expressed the high level of stress followed by first semester students.

Discussion

The present research focuses upon the assessment of mental health well-being of DPT students. This study is an initiative in this field of professional health education as this area of research has been lacking behind in Pakistan. Enormous studies have been conducted in western countries to assess levels of stress and other mental health related variables. In the light of their findings a variety of programmes and strategies have been developed to battle this issue. It is imperative to give special attention on mental health of our health profession students as it is as important as physical health.

This study shows that most of students in physiotherapy school experience high level of stress. The level of stress varies in nature and severity. The overall prevalence of perceived stress is 88%, moderate stress was perceived in 42% students, 40% experienced mild level of stress, and severe stress was observed in 6% of the total students.

The findings show gender differences in perception of stress among students. The female students perceive more stress. They not only differ in their perception of stressors as they perceive more pressures over themselves, but their reactions to stressors are also different. They seem to be more overtly reactive. They demonstrate more physiological and emotional responses than male students. Many studies propose that females perceive high levels of stress as compared to males.^{18,19} These gender differences in perception of stressors and their reactions might be interpreted as

evidence for gender role socialization of emotions. Usually in our culture males are expected to suppress their emotions. So lower psychological and emotional reactions to stressors for male students may result from their socialization, which teaches them that emotional expression is an acceptance of weakness and does not fit into the construct of masculinity. The other possible reason could be that females are more emotionally responsive and have tendency to over report their medical and psychological symptoms.

Differences in the level of stress were also found along with the year of study. Highest prevalence was present in the 1st and 4th semesters. Usually in the first year or first semester of study stress and psychological problems are more perceived and reported, it has been supported by various studies.^{20,21} This might be due to the stress of new environment. Stress has decreased in 2nd and 3rd semesters but then again there is increase in 4th semester which shows gradually getting a difficult syllabus in the later semesters including clinical work which demands more attention and energy.

Students represent the vital part of our young population which comprised of almost more than 40% of the total population.²² It is heartening to know that health problems of the young population are underlined and addressed to some extent in the government's policy for youth Pakistan.²³ As a health care professional it is our responsibility to monitor prevalence of stress among students and provide professional help for them to cope with these stressors. Proper guidance, advisory services, counseling, support groups, review of academics, and exam schedules, regular sessions on time management and stress management by experts, healthy leisure activities, regular extra or co-curricular activities and better interaction with the faculty at the campus can do a lot to reduce the stress.

Conclusion

The current study presents empirical evidence regarding the psychological health of physiotherapy students in this college. The findings reveal a higher level of stress in these students. The higher level of psychological morbidity necessitates the need for interventions like advisory services and psychological support to improve the quality of life for these health profession students.

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