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ORIGINAL ARTICLE

Co-Relation of Psychological Stress & Self-Esteem on Suicidal Thoughts and Behaviors among DPT Students

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[1-4]Conception and design, Collection and assembly of data, [5,6]Analysis and interpretation of the data, [5,6]Critical revision of the article for important intellectual content, [7]Statistical expertise [1-8]Final approval and guarantor of the article

Article Info.

Received: June 22, 2021
Acceptance: January 22, 2022

Conflict of Interest: None
Funding Sources: None

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Cite this article as: Dawood HR, Sohail S, Jaffar S, Javed A, Safda S, Kiyani S, Azim ME, Shafi H. Co-Relation of Psychological Stress & Self-Esteem on Suicidal Thoughts and Behaviors among DPT Students. JRCRS. 2022; 10(1):35-39.
https://dx.doi.org/10.53389/JRCRS.2022100110

A B S T R A C T

Background: Stress can disrupt an individual's bodily and mental wellbeing. It is apt to state that Professional education is a stressful phase for numerous candidates, and can result in a negative effect on one's emotional health and academic performance.

Objective: The objective of the study was to identify the correlation of Psychological stress and self-esteem on suicidal thoughts and behaviors among Doctor of Physical Therapy (DPT) students.

Methodology: Descriptive Cross-Sectional Survey was conducted for the duration of 8 months from July 2019 to February 2020, after getting approval from the institutional research committee FUIRS and the sampling technique was convenient sampling. The study included 298 DPT students (13.70%) males and (86.30% females) with a mean age of 21.9 +1.59 years. For the evaluation of suicidal thoughts and behavior, psychological stress and self-esteem. We used the suicidal behavior questionnaire revised version SBQ Revised, student stress inventory scale SSI, and Rosenberg questionnaire RBQ respectively. Statistical analysis was done through SPSS version 21.

Results: The results showed that there was a non-significant very weak negative correlation between Suicidal thoughts & behavior with student's self-esteem ($r = -0.1$, $p = 0.084$) and a significant weak positive correlation between Suicidal thoughts & behavior with student's psychological stress ($r = 0.309$, $p = 0.001$).

Conclusion: The results showed that DPT students constitute a vulnerable group having a weak positive correlation of Psychological stress on suicidal thoughts and behaviors.

Keywords: Psychological stress, Suicide, Self-esteem.

Introduction

In the past few years, there has been a robust increase in physical therapy institutes. About 74 institutes are offering different degree level physiotherapy programs in Pakistan.[1] As there has been an abrupt increase in the number of physiotherapy institutes all over the country in the last five years, it has opened new doors of opportunities while simultaneously, on the other hand, it has also resulted in the increased number of students enrolled in physical therapy institutes. [2]

The transition to university life can be challenging for students due to the increased demands of assignments, deadlines and examinations. These factors, combined, can be a major cause of psychological stress.[3] The overall environment of the university is very diverse as compared to schooling as there are increased responsibilities that are more challenging and demanding in nature, furthermore, at the university level the parents are involved to a much lesser extent and students who live far from their homes in hostel facilities may have even

more added burdens.[4] Stress can disrupt an individual's bodily and mental wellbeing.[5]

It is apt to state that Professional education is a stressful phase for numerous candidates, and can result in a negative effect on one's emotional health and academic performance.[6] Significant levels of psychological stress can have to deteriorate effects not only on the mental but also the physical health of students.[3] Mental health problems pose serious dilemmas for several college students. There has been a rising concern about psychological distress among undergraduate medical students due to comparatively higher levels of stress, plus the risk of depression and extremes like suicidal thoughts among this population group. Increased stress levels have been picked up particularly in medical students and are also rising in other domains of health care professional student population groups. Stress has been known to have an unfavorable influence on mental health as well as clinical presentation. [7] A systematic analysis combining 40 studies has deduced that the total rates of psychological stress and recession among medical undergraduates surpass those of nonmedical undergraduates or age-matched co-relation of self-esteem with suicidal thoughts to equals from the total people. Stress along with its psychological manifestations are presently a huge area of interest, in particular, Medical education puts forward difficult challenges and increased demands for students globally.[4]

Executive tuition can be a disturbing experience for some individuals and may harm the emotional security and academic presentation of the individual. Intellectual morbidity and related sources of anxiety have not been focused deeply on physiotherapy individuals. This study found sources of stress, intellectual morbidity and the possible relation between these variables in undergraduate physiotherapy students.[6]

Most commonly the student population can be exposed to stress because of unusual stress-causing factors like loss of a family member, economic, health-related or educational. The body responds in the form of stress to adjust to the new state. Undoubtedly stress seems to have an adverse outcome on students' academic concert. The research was targeted to examine the stress and stressors plus to find out the link between stress levels and academic performance of students because of cumulative grade point average (CGPA)s.[7]

The current study denotes the extraordinary dominance of stress in medical college students. Hence, there is a call for measures to take by the authorities to reduce stress among students. [8]

Methodology

It was a Descriptive Cross-Sectional Survey. The data was collected from within the Rehabilitation institutes of Islamabad and Rawalpindi, between the time duration of July 2019 to February 2020 (8 months). The sample size was calculated using Raosoft with a margin of error 5%, confidence level 95%, 50% response distribution with population size of 20,000 and found to be found to be 377.[9] But the data collected during these 6 months was 298. The Sample was selected based on inclusion and exclusion criteria. The inclusion criteria included both males and females students (Both gender), undergraduate DPT students, age 18-26 year. The exclusion criteria excluded all the Physical Therapy Postgraduate students, students with any diagnosed medical condition including severe neurological, cardiovascular or musculoskeletal disorders, students with mental issues involving mood issues, stress disorders, personality problems and mental disorder.

The Student Stress Inventory (SSI) was developed to measure the level of stress among university students. SSI contained forty negative items to measure four subscales including Physical (ten items), Interpersonal relationship (ten items), Academic (ten items) and Environmental factor (ten items).The administration process approximately take fifteen to twenty minutes only. [10]

Rosenberg a ten-item scales that measures global self-worth by measuring both positive and negative feelings about the self. The scale is believed to be unit-dimensional. All items are answered using a four-point Likert scale format ranging from strongly agree to strongly disagree. The higher the score, the higher the self-regard. [11]

The Suicidal Behavior Questionnaire-Revised is a psychological self-report questionnaire designed to identify risk factors for suicide in children and adolescents. The four-question test is handed over to students to fill out and takes approximately five minutes to complete. It is the most commonly used tools for assessing suicidal thoughts and behaviors in college-aged students. It asks about future anticipation of suicidal thoughts or behaviors as well as past and present ones and includes a question about lifetime suicidal ideation, plans to commit suicide, and actual attempt.[12]

The tests of normality were applied, p-value lower than 0.05 indicates the use of non-parametric tests for data evaluation. As the data was not statistically significant Spearman's test was applied to find the relation between psychological stress and suicidal thoughts and behavior.

Results

Gender wise distribution comprised of males 41 and 257 females (n=298). All of the subjects were from Rawalpindi, Islamabad and its premises. The mean age of participants was years 21.9±1.51. Details of other demographic data are present in the table I.

Table I: Demographics

Variables		Value
Gender	Male (n)	41
	Female (n)	257
Age (mean ± SD)		21.9
Suicidal thoughts and behaviors (mean ± SD)		5.09 ± 2.85
Rosenberg Self-Esteem Scale (mean ± SD)		21.29 ± 3.19
Student stress inventory (mean ± SD)		82.85 ± 18.03
Student stress inventory (Subscales)		
Physical Stress (mean ± SD)		5.05 ± 1.28
Interpersonal relationship(mean ± SD)		5.01 ± 1.22
Academic stress (mean ± SD)		5.59 ± 1.66
Environmental stress (mean ± SD)		5.06 ± 1.28

The tests of normality, Shapiro-Wilk Test were applied, p-value less than 0.05 indicates the use of non-parametric tests for data evaluation. So, Spearman's test was applied to find relation between self-esteem, psychological stress and suicidal thoughts and behavior. It was found that there was a non-significant very weak negative correlation between Suicidal thoughts & behavior with student's self-esteem (r = 0.1, p = 0.084), a significant weak positive correlation between Suicidal thoughts & behavior with student's psychological stress (r = 0.309, p = <0.001) and significant very weak negative relation between students' self-esteem and psychological stress (Table II).

Table II: Correlation between suicidal thoughts & behaviors with self-esteem & psychological stress in students.

Correlations (Spearman's Test)		Correlation coefficient	P-value
Suicidal thoughts and behaviors	Rosenberg Self-Esteem Scale	-0.1	0.084
	Student stress inventory	0.309	<0.001
Rosenberg Self-Esteem Scale	Student stress inventory	-0.123	0.033

Furthermore, the correlation between suicidal thoughts and behaviors with subscales of student stress inventory including physical stress, interpersonal relationship, academic stress and environmental stress was analyzed and all revealed a significant but very weak positive correlation (Table III).

Table III: Correlation between suicidal thoughts & behaviors with subscales of student stress inventory

Correlations (Spearman's Test)		Correlation coefficient	P-value
Suicidal thoughts and behaviors	Physical stress	0.288	<0.001
	Interpersonal relationship	0.249	<0.001
	Academic stress	0.249	<0.001
	Environmental stress	0.2.88	<0.001

Discussion

The recent study sought to determine the correlation of psychological stress and self-esteem on suicidal thoughts and behaviors among undergraduate medical students and our main variables were psychological stress and self-esteem. The results that were obtained from this study is consistent with the results of other studies demonstrating that medical students around the globe are exposed to high levels of stress.

In the current study, results showed a large variation in gender demographics because the female population was more than the male population in quantity. The major result from this study indicated there is a weak positive significant correlation between suicidal thoughts and psychological stress and coexistence between week positive insignificant correlation suicidal thoughts and self-esteem. Our finding of a high prevalence of correlation between suicidal thoughts and psychological stress is consistent with other studies. Our data have also suggested that female students might be more prone to psychological distress and depression.

One of the study conducted by Anna et all on medical students and the results of the study strongly depicted the negative influence of stress and anxiety on mental health as well as confirmed the relation of stress and anxiety with suicidal thinking in medical students.[13]

Saleh et all conducted study in 2016, also stated that there is a significant correlation between anger and self-esteem with suicidal ideation. Evidence also supports that psychological distress does harm students and the female students are more affected than male students and overall results concluded that there is a positive correlation between stress anxiety and depression. [14]

Similarly, a study was conducted in 2016 which stated that many 1st-year student experience more stress as they do not understand what their tutors are conveying and they feel

that they can learn more through experience and practice rather than listening because they cannot comprehend it that's why students feel more anxious and stressed as they do not understand what they are studying. [15]

One of the recent study concluded that female medical students as compare to male medical students feel more discouraged and tired in medical training and also showed greater loneliness and a more undesirable perception of their social life [16]

Unfortunately, this kind of training can also cause psychological distress in student's reports has also shown these evidence. Studies are showing the fact that emotional distress is more increasing and higher in American and Canadian students. A wide range of systems of the medical drill has also recognized a high frequency of distress in medical students worldwide. In a longitudinal study from the United Kingdom, (37%) of students had poor mental health by the middle of the first year, and (31%) and (22%) had poor mental health in the fourth year and fifth year, respectively. Another U.K. study of first-year students found the occurrence of poor mental wellbeing folded over the first year, increasing from 48 (25%) to 108 (52%).

In contrast to our study, a study conducted in 2010 to find a relation between suicidal ideas, depression, anxiety and mental health among Tehran university students. 265 students were selected from Tehran University. The factors of daily stress, anxiety, depression and mental health correlate positively and significantly with thoughts of suicide.[17] In another study conducted in 2013 for the correlation between psychic intelligence anxiety and suicidal risk in nursing students, the results show a significant negative association of suicidal thoughts with self-regard.[18]

There is growing literature on depression stress and anxiety but there is limited studies or literature on psychological distress and self-esteem. Our study will help to establish a baseline for future studies and more researches can be done on medical school students.

Conclusion

It is a common perception that psychological stress and self-esteem is very common in university going medical students. This study concluded that Suicidal thoughts and behavior revealed a significant weak positive correlation with Psychological Stress however non-significant weak positive correlation with Self-esteem among Undergraduate Physical Therapy Students of twin cities.

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