



Academic Stress and Suicidal Ideation among Medical and Non-Medical Students of Abbottabad, KPK, Pakistan. A Cross Sectional Study

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Abstract

The present study has investigated the level of academic stress and suicidal ideation among medical and non-medical students of different colleges of Abbottabad city. It was hypothesized that medical students will have high level of academic stress and suicidal ideation as compare to non-medical students. It was further hypothesized that female medical students as compare to male medical students and female non-medical students as compare to male no-medical students will have high level of academic stress and suicidal ideation. The sample was comprised of total 160 students, 80 medical (40 male medical students and 40 female medical students) and 80 non-medical (40 male non-medical students and 40 female non-medical students) students. The entire sample was selected using convenience sampling technique. Academic Stress Scale and Beck Scale for Suicidal Ideation were used to assess the level of academic stress and suicidal ideation among the students. After gathering the data, the results were drawn by using SPSS version 20. The results of the study confirmed our hypothesis. Suggestions and limitations of the study were also presented at the end.

Keywords: Academic Stress, Suicidal Ideation, Medical students, Non-medical students.

Introduction

Stress can be defined as an instinctive fence against assault or alarming situation. Academic stress, on the other hand, is a form of stress that results from education, assignments, presentations, projects, papers, and all the things related to scholastic achievements. (Mannan, 2017). Kaur (2013) explained that academic stress is a bitter reality of the day that stems from the undue pressure of getting 4.0 GPA, worries for getting high grades, need of perfection, pressure from the parents, burden of classwork, and competition etc. it results in panic attacks, nervous breakdowns, and depression among many students. Strong support from parents, friends, and family members can help the students to fight with such alarming conditions.

Shadi, Peyman, Taghipour, and Tehrani (2018) in their theory of academic stress stated that most of the students suffer from it during their studies and in return it leaves negative effects on the mental health of the students. Moreover, gender and educational level are also related to academic stress. Female students, as compared to male students, are more academically stressed and undergraduate students as compared to postgraduate students are also having more stress. Gnawali (2017) construed academic stress as a torturous condition of a student due to tension for high grades, prenatal pressure for high achievement, grade rivalry, and so on. It was reported that high grades are just like a license for professional studies and it stressed the student immensely which further leads the students to make wrong choices and adopt harmful behaviours as drug addiction and suicide etc.

Hill, Goicochea, & Merlo (2018) stated that medical students have a high rate of stress due to the fear of poor performance and dropping out. It was observed that students have enormous loads of studies that make them unable to concentrate on their studies, to manage the time properly, to focus on their health, and to bring a balance between their academic and social life. When a person is having depression or stress, it is very common to have suicidal thoughts. Sometimes these thoughts are temporary but sometimes these are permanent. A person suffering from suicidal thoughts has other symptoms like hopelessness, emotional distress, mood swings, guilt, sleep disturbance, disturbed relations, annoying behaviours, isolation, remorse, poor concentration, poor appetite, and much more. (Nordqvist, 2018).

Purse (2019) defined that suicidal ideation is a phenomenon when a person wants to end his life. Sometimes, it is passive i.e. a person only has a wish to die but doesn't make any plans to terminate his/her life. Sometimes, it is very active and a person seriously plans to terminate his/her life. Simon (2014) described two types of suicidal ideation, active and passive. Passive suicidal ideation is having very fragile thoughts or beliefs to end the life. It can be a wish to develop a fatal disease or to die while sleeping. Suicidal ideation, whether active or passive, has the same goal i.e. to cease the life. Passive ideation is also very dangerous because it can turn to active attempts of suicide any time.

Rotenstein, Ramos, & Torre (2016) in their meta-analysis study, on the students from the field of medical colleges, obtained the results that indicated 27.2% of the students suffering from depressive symptoms while suicidal ideation was also common among 11.1% students.

Sohail (2013) conducted a study on 250 medical students. 7.5% of the students reported a low level of stress, moderate stress was observed among 71.67% students while there was a high level of stress among 20.83% students of Allama Iqbal Medical College Lahore. Zhang, Wang, Xia, Liu, & Jung (2012) observed that among 671 Chinese medical students, almost 20% were having suicidal ideation. Another study by Saipanish (2009) also indicated some kind of stress among 61.4% of medical students while 2.4% with severe stress.

Dahlin, Janeborg, & Runeson (2005) tried to explore various factors of stress and depression upon 342 medical students of Karolinska Institute Medical University, Sweden. The results confirmed that 12.9% students were having symptoms of depression while 2.7% of these students have made attempts for suicide.

Dis (2018) investigated the suicidal ideation among medical students and it was found that suicidal ideation is very common among medical students because of stress related with their academic life. Ghanzafar et al (2015) conducted an extensive study on medical students and found a high suicidal ideation because of stress, fatigue, depression, headache, and burden of studies.

Mustafa, Aziz, Nazir, Mehmood, & Shuib (2014) conducted a study on college students of Malaysia and found a higher suicidal ideation among male students than female students.

Another study conducted on the 769 students of University of Michigan Medical School reported that 65.7% students were found depressed that leads them toward harmful behaviours like alcoholism, burnouts, and suicide. (Schwenk, Davis, & Wimsatt, 2010). Kosik, Nguyen, Ko, & Fan (2017) reported that suicidal ideation is continuously increasing among medical students in Taiwan.

People related to medical profession are at a higher risk of suicidal ideation because of stress, emotional distress, and other factors that compel them towards suicidal ideation. (Zisooket al 2015). Osama et al (2014) also discovered that 35.6% of medical students in Pakistan have suicidal ideation.

Akram, Ahmed, & Akram (2018) interpreted that there is a high rate of suicidal ideation among medical students of Punjab province especially, Lahore and Gujarat. Ronald et al (2018) also highlighted that academic stress is a major factor that elevates the suicidal ideation among undergraduate. Sherina, Rampal, & Kaneson (2004), in their study on 414 medical students of Malaysia, reported high level of stress symptoms among the students.

Sheikh et al (2004) also reported that medical students are faced with helplessness, immense psychological pressure, intolerable burden of study, and tension. Another study by Shah, Hassan, Malik, & Sreeramareddy (2010) also unveil the reality that there are clear symptoms of academic stress among the medical students.

Roman, Gomez, Miranda, and Jeglic (2016) found in their study on 1375 young people that stressful life is a major reason of suicidal ideation. Chen and Glaude (2017) reported that suicidal behaviour in Chinese students is strongly correlated with extreme level of academic stress.

The profession of medical has become an obsession among parents of Pakistani society. Majority of parents want their children to be the doctors. It has become a bitter reality of our society that medical is considered as the only respectful profession, a symbol of status and even a key to unlock the door to find a good partner. Parents implant in the minds of their children that medical is the only respectful profession and they should try their level best to be successful in taking admission in medical colleges. It's very pathetic that there is a race among parents in this regard. Parents are not concerned with the choices and aptitudes of the children.

Most of the students in return want to fulfill the wishes of the parents because they want to be positively accepted by their parents. On the other hand, all the people have different aptitudes and personalities and so is the case with the students. While trying to comply with the dreams of the parents, mostly students work too hard and take extra burden to become a doctor. As medical studies is very tough, sometimes there is unbearable burden upon the students. Due to this insufferable condition, work load, academic stress, parental pressure, and fear of rejection students make themselves indulge in different harmful activities like drug addiction and suicide.

The main purpose of the study is to highlight the fact that medical is not the only noble profession but there are a lot of other professions and careers. Moreover, there must be psycho-educational programs in medical colleges to provide proper services to the students so that we can overcome all the above mentioned problems.

Methodology

Statement of the problem

The problem under study was to explore suicidal ideation in relation to academic stress among medical and non-medical students of Abbottabad.

Objectives of the study

The main objectives of the study are:

- i. To find out the relationship of suicidal ideation with academic stress among medical and non-medical students.
- ii. To find the gender difference with relationship to suicidal ideation among medical students.
- iii. To find the gender difference with relationship to academic stress among medical students.

Hypothesis

- i. There will be high academic stress among medical students than non-medical students.
- ii. There will be high suicidal ideation among medical students than non-medical students.
- iii. There will be high academic stress among female medical students than male medical.
- iv. There will be high suicidal ideation among female medical students than male medical.

Variables

- i. **Independent variable:** In this research the independent variable is the medical and non-medical studies.
- ii. **Dependent variable:** Dependent variable in study is academic stress and suicidal ideation.

Research design

For this study survey method was used to collect the data from different medical colleges of Abbottabad city.

Sample and Population

Population of the present study was the medical and non-medical students of Abbottabad city. The total data for the study was 160 medical and non-medical students. The study included two types of sample i.e. 80 medical students (40 male and 40 female) and 80 non-medical students (40 male and 40 female).

Sampling technique

Whole data was collected from different medical and non-medical colleges of Abbottabad using convenience sampling technique. The whole sample was divided into four groups i.e. 80 medical students (40 male and 40 female) and 80 non-medical students (40 male and 40 female).

Research instruments

Beck Scale for Suicidal Ideation BSSI

BSSI is developed by Beck to measure suicidal ideation and locate individuals who are at risk of attempting suicide. It is consisted of 19 groups of statements. Each group has three statements and the respondent has to choose only one of the three statements. Each statement has a score 0 to 2. Total scores range from 0 to 38 where higher scores indicate high suicidal ideation. There is no cutoff score or any differentiated degrees of suicidal thoughts.

Academic Stress Scale

Academic Stress Scale was developed by Kim (1970) and was later adopted by Rajendran and Kaliappan in (1990) to Indian conditions. Academic Stress Scale has total 40 items in it with five response options i.e. 'No Stress' to 'Extreme Stress'. All the responses carry a score of '1', '2', '3', '4' and '5' respectively. Students were given instructions to choose the best option that suits them. Academic Stress Scale is highly valid and reliable.

Procedure

Data collection is not an easy task ever. For the present study, it was not possible to collect the entire data personally. The researcher has taken help from some class fellows and friends in this regard. Firstly instructions were given to the helpers that how they will give instructions and how they will collect the data in a proper way. Then respondents were approached and questionnaires were distributed in face to face fashion. All the respondents were requested to listen the instruction and then write their responses on the questionnaires carefully. They were asked to read the items carefully and then mark in the relevant response category very honestly. It was requested to complete the questionnaires and then return it. It was make sure that their identity will not be revealed. They were also thanked for their amazing cooperation.

Analysis and interpretation of data

Data collection was really very tough task. After the data has been collected, it was interpreted and analyzed in the light of objectives of the study on SPSS. The data is presented in the form of tables in the next chapter.

Results

The basic purpose of the study was to explore the level of academic stress and suicidal ideation among medical and non-medical students. It was hypothesized that medical students have more academic stress and high level of suicidal ideation as compare to the non-medical students. Sample for the study was taken from different medical and non-medical colleges of Abbottabad city. After collection data was arranged and analyzed according to the hypotheses and following results were obtained.

Table.1. Results of Independent sample T-test analysis to see the academic stress among medical and non-medical students.

Level of Academic Stress			Non-Medical			95% CI for		
Medical Students			Students			Mean		
M	SD	n	M	SD	n	Difference	t	df
145.55	25.42	80	65.30	19.44	80	73.18, 87.31	22.4	158

* $p < .00$.

Table. 1. The paired sample test indicates that there is a significant difference among medical and non-medical students in relation to the level of academic stress. $t(160) = 22.4$, $p = .00$.

Table 2. Results of Independent sample T-test analysis to see the suicidal ideation among medical and non-medical students.

Level of Suicidal Ideation			Non-Medical			95% CI for		
Medical Students			Students			Mean		
M	SD	n	M	SD	n	Difference	t	df
31.11	2.17	80	4.28	3.88	80	25.84, 27.80	53.8	158

* $p < .00$.

Table. 2. The paired sample test again confirms that there is a significant difference among medical and non-medical students in relation to the level of suicidal ideation. $t(160) = 53.8, p = .00$.

Table. 3 Results of Independent sample T-test analysis to see the academic stress among male medical and female medical students.

Level of Academic Stress						95% CI for		t	df
Male Medical Students			Female Medical Students			Mean Difference			
M	SD	N	M	SD	n				
127.00	16.37	40	164.10	18.30	40	-44.8, -29.3		-9.55	78

* $p < .00$.

Table. 3. The results of the table confirms our hypothesis that female medical students have more academic stress as compare to male medical students. $t(80) = -9.55, p = .00$.

Table. 4 Results of Independent sample T-test analysis to see the suicidal ideation among male medical and female medical students.

Level of Suicidal Ideation						95% CI for		t	df
Male Medical Students			Female Medical Students			Mean Difference			
M	SD	N	M	SD	n				
30.60	2.21	40	31.62	2.03	40	-1.97, -.078		-2.1	78

* $p < .034$.

Table. 4. The t-test results in the above table again confirms the hypothesis that female medical students have high level of suicidal ideation as compare to male medical students. $t(80) = -2.1, p = .03$.

Discussion

Modern era is an era of great stress and chaos for everyone. The focus of our study was to investigate and compare the level of academic stress and suicidal ideation among medical and non-medical students. The findings of the study have confirmed our first hypothesis that medical students have more academic stress than non-medical students. Sam et al (2017) also confirmed that level of stress is much higher in medical students than students from other disciplines.

Our second hypothesis was that suicidal ideation will be high in medical students than non-medical students. The results from the t-test also confirmed this hypothesis and it was concluded that medical students have high level of suicidal ideation than non-medical students. A study by Coentre and Góis(2018) also supports our results where it was found that suicidal ideation ranged from 1.8% to 53.6% among medical students due to academic pressure and depression.

Another hypothesis of the study was to assess the level of academic stress among male and female medical students. The results indicated that female students are more sensitive to academic stress than male students of medical. Backovic, Zivojinovic, Maksimovic and Maksimovic (2012) also tried to investigate the level of academic stress among medical students and findings of their study suggested that female students are more vulnerable to stress than male students. Lastly, it was also confirmed that female medical students have high level of suicidal ideation as compared to male medical students.

Conclusion

The purpose of the current study was to explore the level of academic stress and suicidal ideation among medical students as compared to students of other disciplines. These results of the study confirmed that medical students have high level of academic stress and suicidal ideation than non-medical students. There should be some extracurricular activities for the students of medical and they must be encouraged to participate in such activities that may have a refreshing effect on their minds.

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