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ORIGINAL ARTICLE

Psychiatric Symptoms in students of medical colleges in Punjab

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ABSTRACT

Background: In Punjab, after medical college entrance exam, 3405 candidates got seats in 19 medical colleges (public sector) from 80 thousand participants. In Pakistan, after UHS induction, enrollment of 4300 candidates was made in 43 private medical colleges per year. MBBS, In Pakistan, consist of five academic years along with one year of House job. MBBS is regarded as one of toughest studies that not only effect student health physically but also mentally.

Aim: To find out the incidence of stress, depression and anxiety, and stress experienced by medical candidates, and its link with different variables.

Duration and study design: September 2018 to December 2019, Cross-sectional study

Methods: From September 2018 to 2019 December, this case research was carried out in candidates of private as well as public Medical Colleges. The case research consists of sampling of 270 candidates. The data was collected via questionnaire.. The data was analyzed using social sciences .The statistical analysis of different variables and anxiety stress and depression was carried out.

Results: It was reported that the incidence of stress depression and anxiety, and between medical candidates were respectively, 41.1%, 60.1% and 62.2%. Female candidates were found to be more relaxed and stress free as compared to male candidates. Male students were found to be more depressed than female students (29.4% vs 52.2%) along with a statistically significant (P<0.001). Gender is free from association with stress and Anxiety. Candidates from urban areas were more stress free (41.4%) as compared to candidates from village sides (59.2%) with a statistically significant (P=0.021).

Conclusion: The incidence of stress anxiety and depression was found more significant in case of male candidates as compared to female candidates. Male candidates and candidates from rural sides were more prone to stress and anxiety.

Keywords: Medical Education, Depression, Anxiety, Stress, Medical students.

INTRODUCTION

The study of the MBBS study begins after intermediate studies of 12 years. During this span, candidates age from 17 to 19 years. This span is regarded as most significant because it is a transient from teen age to adulthood time. Study of medical consist of five years and regarded as most demanding and tuff. It is therefore important for candidates to acquire sufficient skill, sound professional knowledge and mature attitude in order to handle such medical challenges. At times it so happen that all these challenges impact negatively on candidates mental health as well as physical health[4]. By aid of using many instruments, high degree of stress anxiety and depression was found among candidates of medical[7]. All theses psychic morbidities might be link with factors such as financial, social and academic that candidate encounter due to environment of medical college or other factors linked with life style of candidates[4].

Now a days, one of the common metal morbidity is depression. Signs and symptoms of depression include loss of interest or pleasure, disturbed appetite or sleep, constant depressed mood feeling of low self-esteem, lack of energy and concentration[4]. Fear is regarded as the emotional reaction either to perceived or real in coming threat however anxiety is defined as future threat anticipation[6]. Stress is not any particular reaction of body to any threat"[7]. It is regarded as a natural response that is experienced by individual. Moreover, it is reaction to any perceived danger or threat. Stress is normal physiological reaction of the human[3]. Stress impact negatively on human cognitive and learning abilities specially during period of education[8]. Immune system also got affected by constant prolonged effects of stress and may lead to mental as well as physical pathologies[5].

The main aim of this research is to find out prevalence of stress anxiety and depression among candidates of medical Colleges and its association with variables demographically.

METHODS

From September 2018 to December 2019, a cross-sectional case research was carried out on medical candidates belonging to different academic years from different private and public medical college. The size of sample that was standardized consists of minimum 436 candidates. The research was approved by Ethical Committee. The sample size was calculated by aid of

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sample size calculator program. All information that was entered into sample size calculator program contained 5% maximum acceptable error, 95% of desired confidence level, and 50% response distribution[11]. About 800 students however were chosen via stratified random sampling that included first seven candidates from each ten that were chosen by aid of candidates list from department of registration. A same number of questionnaires were divided between selected candidates in order to reduce the non-respondenting candidates and to overcome missing information from questionnaires. From 800 questionnaires that were given to candidates, about 436 were return back, whereas exclusion of 152 had been done since 162 had missing data, and where as 2 had chronic disease or psychiatric morbidity or both. Finally we got 100 questionnaires. Informed consent in written form was taken from all the candidates before they started answering the questionnaires. The demographic data of candidates was assessed by predesigned questionnaire, along with factors like chronic illness history such as hypertension and diabetes and psychiatric morbidity such as bipolar disorder like anxiety and depression. Exclusion of candidates suffering from chronic illness or psychiatric morbidity was made. By aid of standardized Depression Anxiety Stress Scale-21 Items (DASS21), evaluation of depression anxiety and stress was estimated. The questionnaire contain three self-report scales sets for the analysis of candidate mental health like depression, anxiety and stress that was made in order to do assessment of stress anxiety and depression. Three DASS-21 scales contain seven items that were more subdivided but having similar content[10]. In case of depression scale, dysphoria, self- deprecation, lack of interest devaluation of life, hopelessness, inertia and anhedonia was included. The content of anxiety scale include autonomic arousal, situational anxiety, skeletal muscle effects experienced by subject, chronic nonspecific arousa and anxious affect. Stress scale analyzed being easily upset/agitated, irritability, over reaction, nervous arousal, and difficulty in relaxing. By summing all the values from scales of depression, anxiety and stress final *calculations were made*. For the assessment of the socioeconomic status of the candidate, the formal education years of parents, family members number, type of housing whether it is on rent or owned was estimated.

RESULTS

The age of candidates ranged from years 17 to 26. Characteristic feature related to sociodemographic ally are depicted in Table 1. The incidence of stress, depression and anxiety among medical candidates was 41.1%, 60.1% and 62.2%, respectively. Depression was found to be more among males than females (29.4% vs 52.2%, P <0.001). Regarding anxiety and stress, there was no significant association with gender. Anxiety among students from rural areas (56.1%) was significantly higher than students from urban areas (31.2%), P= 0.011. Otherwise, the association of depression, anxiety, and stress with other variables was not significant

Table 1: Demographic characteristics of the students

Characteristics	**n**
Gender	
Male	28*28%)
Female	72(72%)
Professional study	
First Prof	33(33%)
Second Prof	22(22%)
Third Prof	16(16%)
Fourth Prof	17(17%)
Final Prof	11(11%)
Residence	
Urban	62(62%)
Rural	38(38%)
Socioeconomic status	
Low Status	17(17%)
Medium Status	56(56%)
High Status	27(27%)
Total	100(100%)

Table 2: Prevalence of depression, anxiety, and stress by gender

Variable	**Male %**	**Female%**	**P value**
Depression	52	29	**0.001**
Anxiety	44	22	**0.003**
Stress	**42**	**39**	**0.004**

DISCUSSION

According to our case research, regarding depression, incidence of depression seen in medical candidates came out to be 52.1%, which is similar to study from Urmia previously, Iran (52.6%,50%) and two case research studies from India (49.1% and 51.3%). According to the case research two from Egypt the incidence of depression was noted to be 57.9% and 60.2% whereas from another case research from Pakistan it was recorded 43.89% and from United States it was noted to be 49%. With respect to anxiety, our case research showed the incidence of anxiety among medical candidates was recorded 62.5%, that is comparable to other case researches. In Egypt, a cross-sectional stud was carried out among medical candidates that also made use of DASS-21 Scale, the incidence was 65%.3 where as another case research from Egypt depicted that incidence of 43.9% where the Beck depression inventory (BDI) was utilized and inclusion of 145 samples of candidates was carried out[18]. In Pakistan a cross-sectional case research was carried out with standardized questionnaire, the Aga Khan University Anxiety and Depression Scale, depicted incidence of 43.8% from India A cross-sectional case research depicted from India prevalence of 66.9%. They calculated by aid of the Depression Anxiety Stress Scale DASS-42, containing a sample of 353 candidates[17]. In Pakistan, Karachi the incidence was70%[6] among candidates. The candidates from Al-Qadisia medical college, Iraq showed the incidence of 47.9%[19]. In case of our case research, incidence of stress was 45.1% and in India, the incidence was 53% where as in Malaysia, incidence of stress recorded to be 44.1%[20], in Thai 61.4%, in Egypt[21] 62.5%, in Saudi Arabia[3] 57%, in Iran[22] 61.3% and in case of Brazil, 47.1%[24]. From the researches in past it was seen that female candidates had more tendency to develop stress depression and anxiety as compared to male candidates, but data that was obtained for medical candidates were opposite to that since

in our case research we had discovered that stress anxiety and depression was more evident in case of male candidates as compared to female candidates (29.4% vs 52.2%). This case research was similar to another case reach that was held in Egyptian public university among first-year medical candidates using DASS-21, which showed the higher incidence of stress anxiety and depression among male candidates as compared to their female class fellows (53.9% vs. 46.1%)[25]. Another case research that was held in Malaysia showed higher incidence of depression among males as compared to females (39% vs. 29.4%) via DASS-21 scale[26]. In other case researches that were held to assess anxiety stress and depression among medical candidates reveled no link with gender since both males and females could be equally effected[1,14,18,27-29] whereas in case of some case researches stress anxiety and depression was found to be more among female medical candidates as compared to male candidates[1,16,17,24,30]. The explanation of these variety of results associated with gender might be due to many factors such as biological sociocultural, or combinations of both[31]. There might be other possibility that specially related to culture norms of our nation that males being superior and head of family member has more responsibilities as compared to their female counter parts and when this study was conducted country was already facing crisis related to political and economics. That is why males appeared to be more stressed or in anxiety and depression as compared to their female candidates. In case of our case research, we discovered no noteworthy link between anxiety, stress and depression with gender, which is similar to other case researches[17,24,25,29,30]. We found in our study no significant association between stress and gender, which is similar with many previous studies[23]. Where as in some case researches females were found to be more prone to depression, anxiety and stress as compared to males[3].،This difference in results in different case researches might be linked with different sociocultural family of the candidates and due to use of variant tools used in each of these case researches . With respect to link with other variables, there was no link found between residence and depression. This result is similar with previous two case researches[3,4] whereas there was noteworthy link of stress and anxiety found in candidates belonging to rural areas[25]. No link was found with marital status, which is similar to other two case reaches[3,4]. Moreover, no link was associated with religion, which is contradictory to another case reach[24]. There was no link associated with ethnicity as well which is similar to previous case reach[24]. No association of anxiety and depression was found with smoking, which is contradictory to a previous case reached that showed higher prevalence of depression found among non-smoker students[17]. There was no link found between depression and stress with socioeconomic status, that showed similarity with previous case reseach[28] and contradictory with another case research which showed that an important link with the low socioeconomic state and prevalence of depression[3]. No noteworthy link was found with class in the case research. Mostly, this might be due to fact that other factors were stronger as compared to effects of these variables that depicted no link with factors that leads to stress anxiety and depression and variant case researches depicted variable conclusions. In case of our case research noteworthy link was found between anxiety and candidates belonging from rural areas as compared to urban areas. This conclusion is contradictory with past case researches that showed no link between residency[19]. This change in results might be due to the using of variant tools by our case research and other researches. Moreover, sociocultural factors also had impact like unavailability of public transport and to live separately from their homes. With marital status, no important link was associated which is similar to other case reaches[3,4]. There was no link associated along with ethnicity and religion, that showed similarity with other case researches[24]. Moreover, smoking had no impact in prevalence of depression where as in one case reach depression was significantly linked with non-smoking[17]. No association was found between depression and socioeconomic status that showed similarity with past two case researches[3,28]. With respect to stress, no link was found between stress and residency, that showed similarity with other case reseaches[3] whereas, another case reach showed that candidates belonging from rural areas were more stress prone as compared to candidates from urban areas[25]. Marital status had no link associated, which is similar to previous case reseach[20] but when comparison was done with other two case researches, it was discovered that students who were married experienced less stress as compared to singles[3,23]. There was no link found with religion, similar to another case research[24] as well as no link with ethnicity[24,43]. With smoking no link was found which is opposite to two other case researches where one case research depicted more stress factor present in non-smoker[17] while the other case reach depicted more stress levels in smoker students. Socioeconomic status has no link with stress which is similar to other case researhes[28] which is opposite to two other case reaches: one of them depicted higher levels of stress among candidates belonging to low socioeconomic status[3] while in case of second one, more stress was found among candidates belonging to high socioeconomic status[8]. Many factors contribute to higher incidence of anxiety stress and depression among medical candidate. Such factors may be linked with political and economic downfall of our mother land, that began before three years conducing this study and then continued even after that. The programs and syllabus that was taught in these medical institutions also play a noteworthy role or might be linked with personal issues. Due to majority of non-responding rate by candidates, this case research could not be carry on properly since only 436 questionnaires we got after distributing 800 and 162 had missed data as well. In order to rule out factors effecting prevalence of anxiety, stress and depression we need candidate complete history as well as extensive physical examination. The candidates who did immigration were also not ruled out and this impact negatively in our case reach results. We only noted candidates who had complained due to medical issues.

CONCLUSION

The greater the incidence of stress anxiety and depression on medical student the more will be pressure on his or her

mental as well as physical health and overall all these factors have negative impact on performance of medical candidates in colleges. These factors may be linked with college environment, political and economic downfall of our country or personal factors that needs more investigation in researches in future.

Conflict of interest: Nil

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