

Assessment of depression among the medical students of Allama Iqbal medical college Lahore Pakistan during supplementary examination

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ABSTRACT

Background: The aim of study was to check the depression level among medical students during supplementary examination. Standardized measures were used to examine depression level during supplementary examination.

Methods: This cross-sectional and descriptive study was conducted during January and February 2018 in The Allama Iqbal Medical College Lahore. Information is collected from the students of 1st, 2nd, 3rd, 4th & 5th professionals. A questionnaire is designed to check depression level that consist of socio-demographic characters of respondents & PHQ8. Analytical methods used were mean, median, mode, standard

deviation, range (maximum, minimum) & percentile.

Results: Total number of 188 students including male 76(40.4%) & female 112(59.6%) were approached out of which 67% having no clinical depression. Major depression & severe major depression were found in 29.8% & 2.7% of our respondents, respectively. Depression level was higher among female students as compared to male.

Conclusion: Total number of 188 students were participating in this study. It is concluded from the study that female students have more depression level as compared to males. Students falling in the range of age from 19–21 & 20–24 have more depression as compared to other age ranges. Depression level was due to theory



papers as compared to practical paper. Also greater in the students of 1st & 4th professionals as compared to 2nd, 3rd & 5th professionals.

INTRODUCTION

Depression is a mental disorder that presents with depressed mood, decreased energy, feeling of guilt or low self-worth, loss of interest or pleasure, Disturb sleep or appetite and poor concentration. Depression often comes with symptoms of anxiety these problems becomes chronic or recurrent and lead to substantial impairments in an individual's ability to take care of his/her everyday responsibilities at its worst depression can lead to suicide.

There are multiple variation of depression that a person suffer from, an individual with a mild depressive episode have some difficulty in continuing with ordinary work

and social activities in an individual with a severe episode of depression, the sufferer will not be able to continue with social work or domestic activities. Depression is 50% higher in females than males depression maternal depression may be a risk factor for poor growth in a young children.

Depression among the student is very common. Basically depression is a serious medical condition in which a person feels very sad, hopeless and unimportant and often unable to live in a normal way. Depression is a state of low mood that can effect a person's thought, behavior, feelings and sense of well-being. They may lose interest in activities that were once pleasurable, over eating, having problem in concentrating, making decision, so they attempt or commit suicide. Physiological wellbeing is important for medical students. Students are facing many problems including social, emotional, physical &



family problems, which effects their learning abilities & academic performance [2].

Medical students with depression are more commonly considered dropping out there course. Medical students have been found experience higher level of depression and anxiety compared with general population.

Various problems arises in the community due to the depression among the students. It is a number one reasons students drop out of the college, and is the gateway issue that, if left untreated, could lead to other symptoms or suicide.

In general, students feel depressed before exams but before supplementary exams, students feel a lot of depression and stress. The prevalence of stress is very higher during the supplementary exams there are many problems one of them is the

attendance issue. They have to study before the supplementary exams so they can't attend their usual classes and their attendance become short because attendance criteria in the college is very high about 75 to 80% which is very difficult to fulfill it.

Other problems is of parents expectations, parents expect a lot from their children because they have already pass the medical entry test so they expect that their children will pass their annual exams easily as well.

Another problem is the insomnia due to lack of sleep before exams students starts to take the sleeping pills in heavy dose due to heavy dose lot of psychological problems occur student can be even become mad.

The strategy adopted in developing our assessment protocol was informed by the need for a stress audit of medical students, therefore our protocol focuses on the impact

of the medical study context upon the psycho social well-being of students.

The research on depression in college students has to important motivation firstly it aims to understand the degree to which such stress influence physical and mental health and decision making. Secondly, to examine the relationship between the stress and perception of the learning environment.

In the past medical students assessed by using array of broad or general measures of distress such as General Health Questionnaire (GHQ) and Maslach Burnout Inventory (MBI) [7]. But the questionnaire used in our study is PHQ8. PHQ8 is a

Study variables:

Personal health questionnaire depression scale. The questionnaire include 8 questions and give 4 choices and scoring is given. A score greater than 10 is considered a major depression, 20 Or more is severe major depression.

Objective:

To introduce the stress profile among the medical students during supplementary exams.

Research questions:

What is the percentage of stress among the medical students before supplementary exam?

Dependent variable	Independent variable
Stress Level	<ul style="list-style-type: none"> • Age • Gender • Monthly Income • Monthly Expenditure on study • Residing in hostel or home • Year of study • Family history

	<ul style="list-style-type: none">• Fear Of being retained• Insomnia• Parents Expectations• Attendance Issues
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Literature review

In China recent studies find 11.2-17.4% of medical students experience suicidal ideation annually.[1] Almost 1 million are lost yearly due to suicide which translates to 3000 suicide deaths every day. Depression and morbidity world-wide in Japan the prevalence rate is 3% and 17% in US. In most countries the number of people would suffer from depression during their lives within 8-12%. In North America the prevalence rate is 3-5% for male and 8-10% for female. Prevalence of depression among students in public universities has been estimated 10.4% in Greece, 15.2% in USA, 21.7% in Malaysia, 24% in UK, 29.1% in

India and 43.8% in Pakistan. Anxiety and the depression were found 60-70% according to two Pakistani studies. Depression is a common but serious illness that leaves you feeling despondent and helpless, completely detached from the world. But a study from Pakistan reported at sports, music, and hanging out with friends were common coping strategies [2]

In UK, psychiatric morbidity rate was 16% whereas prevalence rate was found to be in range of 14-24%. Similarly, In Turkish medical students, the prevalence rate was 21.9% [3].

Depression, anxiety and stress levels of moderate severity in Turkish students were



found is 27.1% , 47.1% and 27% of our respondents , respectively .Stress scores were higher among females than males students while first year and second year students had higher depression than others [4].

During internship students attain higher level of depression. Two studies were conducted which shows that 39% of woman physicians had episodes of major depression in contrast to the major depression in general female population, between 4.9 and 8.7% [5].

There are many symptoms associated with the depression these include feeling of sadness and unhappiness, change in appetite or weight , slowed thinking or speech, fatigue sleeplessness, loss of interest in social gathering, feelings of guilt or anger or over past failures, trouble concentrating , indecisiveness, anchor or frustration for no distinct reason, thoughts of dying.

Depressive symptoms and suicidal ideation are common in medical students and these negatively affect their personal life , potentially causes substance abuse , resignation and in extreme cases, suicide.[6]

In the past medical students assessed by using array of broad or general measures of distress such as General Health Questionnaire (GHQ) and Maslach Burnout Inventory (MBI) [7].

Previous studies in Pakistan have shown a higher prevalence of anxiety and depression in medical students. In Nishtar medical college 46.07% of the students had anxiety and depression. In Karachi prevalence rates was 60% and 70% respectively. High prevalence of depression in females is consistent with other studies. It may be because females are more likely to report concern, stress due to self- expectation,

feeling of lack of competence and tendency to over report symptoms [8].

The prevalence rate of depression among Korean medical students was 2.9 %. The prevalence rate in males was 2.6% and in females 3.6%. Females show higher rate of depression than males [9].

In a longitudinal study from the United Kingdom, 63 (37%) of students had poor mental health [10].

METHODS

Study setting

A cross-sectional study was conducted at AllamaIqbal Medical College Lahore Pakistan in 2018. In which a total number of 188 students were surveyed. The students received no reward for taking part in the study. The surveys were anonymous with the exception of class year.

Study Design

A total number of 188 students were surveyed from different professionals (1, 2, 3, 4, 5) of AIMC Lahore. The survey was anonymous with the exception of class year.

We invited 44 students from the 1st professional, 65 from 2nd professional, 39 from 3rd professional, 38 from 4th professional & 2 from 5th professional of medical student class to participate in study.

We asked them the following questions

- What are their feelings when they have supply in the annual examination?
- What type of depression they have experienced during supply examination preparation period?
- Are they afraid of supply?
- What was the depth of depression & how much it affects their daily life?
- Are you suffering from ATTENDANCE ISSUE during the supplementary examination?
- At the end we asked them have they ever got any guideline from the teachers & senior fellow?
- We also asked them is there any student society in the college working for the wellness of the

students to get rid of this depressive state? And if there is, have they ever visited?

- Finally, we will ask students about facilities available to students experiencing emotional distress or mental illness.

Data Collection Tool

A questionnaire was designed that contains three sections.

- Section I:

It contains informed consent declaration.

- Section II:

It contains socio-demographic information about the respondents including respondent ID, gender, age, residence, part time job, current professional year, professional year for which appearing in supplementary examination, total

number of supplies, subject of supplies, type of paper(theory, practical or both), total number of chances availed for supplementary examination & attendance issues.

- Section III:

It contains Patient Health Questionnaire-8 (PHQ-8). The PHQ-8 is a validated tool used to screen for depression.

The PHQ-8 is an eight- item self-reported scale that assesses the severity of a number of depressive symptoms over the past two weeks from zero (i.e., not at all) to three (i.e., nearly every day). The total score ranges from 0 to 24, subdivided into three categories.

[2]<10 is no clinical depression

[2] 10-19 is major depression

[2]>20 is severe major depression

Statistical Analysis

Mean, median, mode, standard deviation, range, minimum & maximum values & percentile were analyzed from the collected data by using SPSS software.

RESULTS

Characteristics of the respondents

A total of 188 respondents were approached. Total number of males in our study were 76 and

Females were 112. Students were of different ages .Starting from less than 18 or 18 to 25 or

above. Majority were between 19 to 21 years. Only 3 students were above 25 years. There

are five professionals Maximum percentage of students from 2nd professional actively

Participated in this study. For further information refer to table 1.

Table: 1 Socio-demographic characteristics of the respondents (N =188)

Demographic variables	Frequency(%)	Demographic	Frequency(%)
Gender		Theory paper	
Male	76 (40.4%)	Pharmacology	15 (8%)
Female	112 (59.6%)	Pathology	16 (8.5%)
		Anatomy	8 (4.3%)
Age(years)		Medicine	16 (8.5%)
Smaller than or equal to 18	10 (5.3%)	surgery	14 (7.4%)
19-21	90 (47.9%)	Others	49 (26.1%)
22-24	85 (45.2%)	Not disclose	70 (37.2%)
Greater than or equal to 25	3 (1.6%)		
Professional year appearing		Practical paper	
1 st professional	44 (23.4%)	Pharmacology	6 (3.2%)
2 nd professional	65 (34.6%)	Pathology	11(5.9%)
3 rd professional	39 (20.7%)	Anatomy	9 (4.8%)
4 th professional	38 (20.2%)	Medicine	21(11.2%)
5 th professional	2 (1.1%)	surgery	3 (1.6%)
		Others	18(9.6%)
		Not disclose	120(63.8%)
Type of paper		Attendance Issue	
Practical paper	38 (20.2%)	Yes	71 (37.8%)
Theory paper	92 (48.9%)	No	117(62.2%)
Both	56 (29.8%)		

The total number of students included in our study were 188. Mean of the data is 1.46, median 1.00 and mode is 1. Range obtained is 21 and Std. Deviation is 1.597. for further information refer to table below

Table 2:

Statistics

PHQ8_depression

N	Valid	188
	Missing	0
Mean		1.46
Median		1.00
Mode		1
Std. Deviation		1.597
Range		21
Minimum		1
Maximum		22
Percentiles	25	1.00
	50	1.00
	75	2.00

There was no clinical depression found in 126 medical students. The number of students having MAJOR depression were 56 and remaining 5 students had SEVERE major clinical depression.

.PHQ8_depression

	Frequency	Percent	Valid Percent	Cumulative Percent
less than 10 no clinical depression	126	67.0	67.0	67.0
Valid 10 to 19 major depression	56	29.8	29.8	96.8
greater than 20 severe major depression	5	2.7	2.7	99.5

22	1	.5	.5	100.0
Total	188	100.0	100.0	

Table#3:-

Total number of students involved in our study were 188. 20 Male members had major depression whereas 36 Females had major clinical depression. 2nd professional students were having more depression as compared with other professionals. For further detail refer to table 3 below.

Table 3:PHQ-8 depression among the independent variables

PHQ-8 Depression

	Less than 10 no clinical depression	10-19 major depression	Greater than 20 severe major depression	22Total
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Gender				
Male	54	20	2	0
				76
Female	72	36	3	1
				112
Age-Years				
smaller than or equal to 18	2	7	0	1
				10
19-21	63	24	3	0
				90
20-24	58	25	2	0
				85
Greater than or Equal to 25	3	0	0	0
				3
Professional year appearing				
1 st professional	26	16	1	1



					44
2 nd professional	50	14	1	0	65
3 rd professional	27	10	2	0	39
4 th professional	21	16	1	0	38
5 th professional	2	0	0	0	2
Type of paper					
Theory paper	58	30	3	1	92
Practical paper	32	5	1	0	38
Both	35	20	1	0	56
Practical paper					
Pharmacology	1	5	0	0	6
Pathology	9	2	0	0	11
Anatomy	9	0	0	0	9
Medicine	16	5	0	0	21
surgery	2	0	1	0	3
Others	12	6	0	0	18
Did not disclose	77	36	4	1	
Theory paper					
Pharmacology	8	6	1	0	15
Pathology	8	7	1	0	16
Anatomy	6	2	0	0	8
Medicine	10	5	0	1	16
Surgery	8	6	0	0	14
Others	31	16	2	0	49
Did not disclose	55	14	1	0	70
Attendance Issue					
Yes	42	25	4	0	71
No	84	31	1	1	117

Mean PHQ-8 scores

The mean PHQ-8 scores for the study population = 1.46

Table 4: Distribution of PHQ-8 scores among the study participants

PHQ-8 scoring	Depression level	Frequency (%)
<10	No clinical depression	126
10–19	Major depression	56
≥20	Severe major depression	5

DISCUSSION

Everyone occasionally feels blue or sad. But these feelings are usually short-lived and pass within a couple of days. When you have depression, it interferes with daily life and causes pain for both you and those who care about you. Depression is a common but serious illness.

Many people with a depressive illness never seek treatment. But the majority, even those with the most severe depression, can get better with treatment. Medications, psychotherapies, and other methods can effectively treat people with depression.

Three methodologic issues need to be addressed.

Firstly some students feel shy and embarrassed and did not want to disclose their theory or practical papers in which they are appearing in supplementary exams. Total 188 students of college participate in this study .but in theory paper 70 students and in practical paper 120 students did not disclose their paper.

Secondly, we collected the data of all the subjects in medical course, but the ratio of in Anatomy and pathology is high than other subjects. Previously no study was conducted



in medical student of Allama Iqbal medical college Lahore.

Thirdly an attendance issue is a big problem in medical students. Students are not giving any relaxation of attendance even in supplementary papers that's why depression is appearing in some students. The ratio of attendance issue is 37.8% in students.

Parents' expectation is also an issue of depression among the student

CONCLUSION

The study was conducted about depression in medical students. Total 188 number of students

Participated. 56 students were having major depression while 5 students were having

Severe major depression. Females have more depression level as compared to males. Students

having age from 19 to 21 or 20 to 24 have more depression as compared to other Students of 1st

Professional and 4th professional have greater level of depression as compared to 2nd, 3rd and 5th professional.

Due to theory papers depression level is greater as compared to practical papers. Attendance issue is also the cause of depression.



REFERENCES:

- [1]. Kunmi Sobowale¹, A.N.Z., Jingyi Fan², Ni Liu³, Renslow Sherer⁴, *Depression and suicidal ideation in medical students in China: a call for wellness curricula*. International Journal of medical education 2014.
- [2]. Sreeramareddy*¹, C.T., et al., *Psychological morbidity, sources of stress and coping strategies among undergraduate medical students of Nepal*. BMC Medical Education, 2007.
- [3]. Alvi¹, T., et al., *Depression, Anxiety and their associated factors among medical students* Journal of the college of physicians and surgeons Pakistan, 2010. **20(2)**.
- [4]. Æ, N.B. and N. Bilge, *The prevalence and socio-demographic correlations of depression, anxiety and stress among a group of university students*. 2008.
- [5]. Zoccolillo, M., G.E. Murphy, and R.D. Wetzel, *Depression among medical students*. Journal of affective disorder, 1986.
- [6]. Diane Thompson, M., et al., *A program for reducing depressive symptoms and suicidal ideation in medical students*. Academic medicine, 2010. **85**.
- [7]. O'Rourke, M., et al., *The Medical student stress profile: a tool for stress audit in medical training*. 2010
- [8]. Jadoon, N.A., et al., *Anxiety and depression among medical students, A cross-sectional study*. Journal of Pakistan Medical Association, 2010.
- [9]. Myoung-Sun Roh, M., PhD, et al., *The prevalence and impact of depression among medical students: a nationwide cross-sectional study in South Korea*. Academic medicine, 2010. **85**.
- [10]. Liselotte N. Dyrbye, M., et al., *Systematic review of depression, anxiety and other indicators psychological distress among U.S and Canadian medical students*. Academic medicine, 2006. **81**.