

ASSESSMENT OF MENTAL HEALTH OF MEDICAL UNDERGRADUATE STUDENTS BY GLOBAL MENTAL HEALTH ASSESSMENT TOOL

Vinayak Kapoor¹, Ramesh Kumar Mishra^{2*}, Lokendra Sharma³, Kusum Gaur⁴, Kopal Sharma⁵, Ashwani Kumar Parashar⁶, Dr. I D Gupta⁷

1. Final MBBS Student, 2. Professor, Department of Microbiology, 3. Professor, Department of Pharmacology, 4. Senior Professor and Head, Department of Preventive medicine, 5. Demonstrator, PhD research Scholar, Department of Pharmacology, 6. Final MBBS Student, 7. Professor psychiatry, SMS Medical College, Jaipur

*Corresponding author - Ramesh Kumar Mishra

Email id - mishraark@gmail.com

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ABSTRACT

Background: In our country we often neglect mental health. In the present study we intend to understand the different psychological morbidities that are experienced by medical undergraduate students and also to train the enrolled students about the Global Mental Health Assessment Tool. **Materials and methods:** Fifty students who gave their informed consent were enrolled and assessed for any psychological morbidity using Global Mental Health Assessment Tool (GMHAT). Each of them was asked to fill the first part of the pre-designed performa consisting of six questions. The second part of performa was filled by the assessor based on the interview which consisted of 25 questions, each focusing on different types of psycho- morbidity. Global Mental Health Assessment tool generates computer based diagnosis for the candidate and also helps to rate symptoms and assess self harm risk. It is easy to use tool to assess mental health in primary care settings. Significance of difference in proportion was inferred by Chi-square Test of significance. Significance of difference in mean scores was inferred by unpaired student t-Test of significance. For significance P value equal to or less than 0.05 was considered as significant. **Results:** The response rate of our study was 100%. Out of which 80% of the participating students had some or other kind of psychological morbidity. Depression was the most prevalent psychological morbidity, followed by obsessions/compulsions and anxiety respectively. Psychological morbidity showed a significant change based on the type of residence. Depression was significantly associated with type of residence and family history of mental health problem. Obsessions/compulsions were evenly distributed among all groups of students while anxiety was associated significantly with the history of stressful events. **Conclusion:** We found that mental health issues affect a significant proportion of medical undergraduate students. So this study highlights the need of appropriate interventions to improve the mental health of medical students.

Keywords: First MBBS Students, GMHAT questionnaire, Mental Health, Stress

INTRODUCTION

The Global Mental Health Assessment Tool (GMHAT) is a computerized clinical assessment tool

developed to evaluate and screen mental health problems in primary care (1). Purpose of developing

GMHAT is to help patients/students/workers in diagnosing and relieving them from their mental disorders. This is more relevant in countries in which there is lack of adequate service because of shortage of staff (1). Several factors affect medical student's mental health like adjustment to the environment at medical college, educational debt, heavy workload, sleep deprivation, poor learning environments, information overload and career planning (2).

All these pave way to dreadful outcomes like psychological morbidity, impaired academic performance, medical errors and attrition from medical colleges. Starting from the first year, itself the levels of stress and depressions prevail in the students and they continue to persist in them throughout their final years, resulting in lower satisfaction in them by the time they complete their final years of under graduation. (3, 4, 5).

Mental health does not get as much importance as the physical health and it is often overlooked in India. Medical students are at a greater risk of depression and suicidal ideation as compared to other population groups of same age (6). It may decrease their self-esteem, their standard of comfort and happiness, care they provide to patients with decreased sympathy.

Besides this they may engage in various addictions like alcohol and drugs. (7). There is scarcity of information in Indian literature revealing the mental health status of medical students. So we planned to carry out this study with the aim to screen the hidden cases of mental disturbances present among first MBBS students and to correlate how to find various biosocial factors influence psychological morbidity. Also through this study the students were introduced to use the Global mental Health assessment tool, which they can use further in clinical settings as well.

MATERIALS AND METHODS

It was a cross sectional observational study, done with first MBBS students of SMS Medical College in December 2016. Permission was sought from institutional ethics committee before commencing this study. During the time of foundation lectures by medical education unit, the students were explained

about the purpose of study, and the students who gave their written consent were recruited. Total of 50 students volunteered to participate in this study out of 65 students who were present.

The data was collected using a pre-structured performa which 2 major parts; Part (1) had general information regarding socio-demographic data and study pattern; Part (2) assessment of mental health status of the students as per GMHAT which is a freely available tool. Prior permission was taken from the researcher who developed this tool.

Participants were instructed to fill the 1st part of performa and then their psycho-wellness was evaluated through GMHAT. Every participant was given 15 minutes time to complete the questionnaire independently. 2nd part of performa was filled by assessor as per the result of mental health condition of the student obtained through GMHAT.

Statistical Analysis: The results were analyzed through SPSS version 17 (IBM Corporation, Armonk, NY, USA). Outcome variable in the study was expressed as proportion and percentages. Significance of difference in proportion was inferred by Chi-square Test of significance. Significance of difference in mean scores was inferred by unpaired student t-Test of significance. For significance P value equal to or less than 0.05 was considered as significant.

RESULTS

The mean age of study population was 20 years with SD of 1.6 years. There was male predominance with Male: Female is 4:1.

Maximum students i.e. 43 (86%) were from urban background. A positive family history of mental illness was noted in only 16% students. History of stressful event was found positive in 5% and none of student had history of delayed milestone and/or history of epilepsy as summarized in [Table I]. The distribution of the medical students as per various psychological morbidities is depicted by Table II.

When association of psycho morbidity with biosocial

factors was analyzed it was revealed that none of biosocial factors studied could be related with psycho morbidity in students except residence. Psycho morbidity was found significantly more in proportion in students of urban background than rural as depicted in Table III.

On further analysis about type of psycho morbidity it was found that depression which was found in maximum students was also found significantly more in students of urban background than in students from rural background. Likewise depression was also found significantly more in students having family history of mental problem.

Other biosocial factors studied like age, sex, history of stressful event etc. were not to be related with depressed mood as depicted in Table IV.

None of biosocial factor was found to be related with Obsessions/Compulsions in participating students [Table V]. On further analysis it was also depicted that among all biosocial factor studies, history of stressful event was associated with anxiety in these students as shown in Table VI.

DISCUSSION

In our study, the psycho morbidity was prevalent in 80% of the students. When further assessed, depression was found maximally as psycho morbidity (46%). Similar studies by Yadav et al (8) over depression conducted in S.M.S. medical college Jaipur previously, and by Kumar et al in Karnataka on medical students showed that depression was among 42.6% in Jaipur and 41% in Karnataka students (10).

The Karnataka study also showed that depression is quiet common among medical undergraduates in comparison to other students (9). Our study also highlighted that girls had more tendency of eating disorder and fear of appetite. On further interviewing the girl's student it was reflected that they were scared about their weight and considered themselves as obese or overweight even when their weight was within normal limits.

Among the most frequent stressors were 'drastic change in the pattern of teaching from school days', 'vastness of academic curriculum/syllabus', 'frequent examinations' and 'pressure to perform in the examinations' occurred much frequently and the students themselves rated these stressors as severe. Previous study by Sreeramareddy et al also emphasized that academics and examinations are most common source of stress in medical students (10).

Overall psychological morbidity was found less in students from rural background and significant in urban students. The reason might be the unhealthy lifestyle, the polluted environment around them, excess and early exposure of technological resources, and competition in urban population.

The number of students showing psycho morbidity was high (80%) in our study because any student reporting even a slight disturbance in the 2nd part of the Performa in which he/she was asked a set of 25 questions was counted with the students with severe psycho morbidity and given equal weight age in the statistics. The reason for depression in the students in our study was that their native place of residence was away, while in some students there was a family history of depression.

The other reasons for depression are not fully understood by the researchers and hence they could not be attributed to a single source. Complex combination factors like genetic, hormonal, environmental, psychological and social/psychosocial affect depression (7). Although no significant cause of obsessions/compulsions came out from our study but the hidden causes can be genetic, neurological, behavioral, cognitive and environmental factors. Studies have shown that the reasons for anxiety disorders are dysfunction in the modulation of brain circuits (11).

Strength of our study was that few of the students were found to have severe symptoms like sleeplessness, pain, headache, anxiety, either due to recent history of physical or mental trauma, which might have gone untreated if this study had not been

conducted. These students were referred to the dean of the institution who is a consultant psychiatrist.

Limitation of this study is its inability to reflect the mental health status of all the medical undergraduates enrolled in our institution. This was because only one batch of the students were targeted for this study as we also wanted to familiarize the students with this global mental health assessment tool so that it could be used by them also once they become clinicians.

CONCLUSION

Psycho morbidity among MBBS students is a frequently unrecognized matter. We found that mental health issues affect quite a number of medical undergraduate students. So by appropriate and planned interventions should be undertaken to improve the mental health of medical students.

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[Table I]: Biosocial Distribution of study Population

1	Age (in Years)	Mean ± SD	20 ± 1.6
2	Sex	Male	40
		Female	10
3	Residence	Urban	43
		Rural	7
4	Family history of mental problem*	Yes	8
		No	42
5	History of delayed milestone	Yes	0
		No	50
6	History of stressful events*	Yes	5
		No	45
7	History of epilepsy	Yes	0
		No	50

*Assessed by taking relevant history from the participants

[Table II]: Psychomorbidity pattern in study population

Types of Morbidities	Distribution	
	Male	Female
Stressor	5	1
Drug Misuse	2	3
Memory Impairment	---	---
Psychosis	---	---
Thought Disorder	2	2
Phobia	3	4
Hypochondriasis	3	4
Appetite	2	4
Loss of Concentration	2	3
Worries	4	6

[Table III]: Association of biosocial factors with psychiatric morbidity

S. No.	Biosocial Variables		Biosocial Variable Value		P value	LS
			With Psycho morbidity (N=40)	Without Psycho morbidity(N=10)		
1	Age (in Years)	Mean ± SD	19.72±1.20	20.7±2.1108	>0.05	NS
2	Sex	Male	33	8	>0.05	NS
		Female	7	2		
3	Residence	Urban	39	4	<0.001	HS
		Rural	1	6		
4	Family history of mental problem	Yes	4	2	>0.05	NS
		No	36	8		
5	History of delayed milestone	Yes	0	0	Not Applicable	
		No	40	10		
6	History of stressful events	Yes	4	1	>0.05	NS
		No	36	9		
7	History of epilepsy	Yes	0	0	Not Applicable	
		No	40	10		

NS-Not Significant

S- Significant

HS- Highly Significant

[Table IV]: Association of Biosocial Factors with depressed mood

Biosocial Variables		Biosocial Variable Value		P value	LS
		With Psycho morbidity (N=23)	Without Psycho morbidity (N=27)		
Age (in Years)	Mean ± SD	19.814±1.144	19.65±1.921	>0.05	NS
Sex	Male	19	21	>0.05	NS
	Female	4	6		
Residence	Urban	23	20	0.026	S
	Rural	0	7		
Family history of mental problem	Yes	7	1	0.040	S
	No	17	25		
History of delayed milestone	Yes	0	0	Not Applicable	
	No	23	27		
History of stressful events	Yes	4	1	>0.05	NS
	No	19	26		
History of epilepsy	Yes	0	0	Not Applicable	
	No	23	27		

NS-Not Significant

S- Significant

HS- Highly Significant

[Table V]: Association of biosocial factors with Obsessions/Compulsions

Biosocial Variables		Biosocial Variable Value		P value LS
		With Psycho morbidity (N=14)	Without Psycho morbidity (N=36)	
Age (in Years)	Mean ± SD	1 ⁹ .125±1.08	19.53±2.326	>0.05 NS
Sex	Male	12	28	>0.05 NS
	Female	2	8	
Residence	Urban	13	30	>0.05 NS
	Rural	1	6	
Family history of mental problem	Yes	3	5	>0.05 NS
	No	11	31	
History of delayed milestone	Yes	0	0	Not Applicable
	No	14	36	
History of stressful events	Yes	1	4	>0.05 NS
	No	13	32	
History of epilepsy	Yes	0	0	Not Applicable
	No	14	36	

NS-Not Significant

S- Significant

HS- Highly Significant

[Table VI]: Association of biosocial factors with anxiety

Biosocial Variables		Biosocial Variable Value		P value LS
		With Psycho morbidity (N=11)	Without Psycho morbidity (N=39)	
Age (in Years)	Mean ± SD	19.10±0.0315	19.60±1.81	>0.05 NS
Sex	Male	9	31	>0.05 NS
	Female	2	8	
Residence	Urban	11	32	>0.05 NS
	Rural	0	7	
Family history of mental problem	Yes	1	7	>0.05 NS
	No	10	32	
History of delayed milestone	Yes	0	0	Not Applicable
	No	11	39	
History of stressful events	Yes	4	1	0.006 S
	No	7	38	
History of epilepsy	Yes	0	0	Not Applicable
	No	11	39	

NS-Not Significant

S- Significant

HS- Highly Significant