

Psycho-wellbeing of Ist MBBS students of SMS Medical College, Jaipur” (Raj) India

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Abstract- Background and Objectives: Mental disorders account for a large proportion of the disease burden in young people in all societies and earlier diagnosis can facilitate better treatment .¹ So, this study was conducted to find out the psycho-wellness of Ist MBBS Students. **Materials and Methods:** A cross-sectional study was carried out on 250 students of I MBBS. They are interrogated as per MMS scale to assess the psycho-wellbeing of students. These data collected were analyzed and inferred with Chi-square, ANOVA and Tukey test of significance. OR for suicidal tendency and PTSD was also found out. **Results:** Out of 230 students, 26.96% and 15.65% were in red and orange zone of psycho-wellness respectively. Suicidal tendency was found in 11.3% and PTSD was found in 18.26% of students. Suicidal tendency and PTSD was found significantly more in students of red and orange zone. Psycho-wellness was found significantly more in females, middle class students and students who have attempted PMT more times. **Conclusions:** More than one fourth of students were in red zone of psycho-wellness and suicidal tendency in more than one tenth of students. Psycho-morbidity was found more in females, middle class and students who have attempted PMT more times.

Index Terms- Anxiety Disorders, MMS, Psychotic Disorders, PTSD and Psycho-wellness

Abbreviation: CTSC (Clinical Trial Screening Committee), EC (Ethical Committee), MMS (Modified MINI Screen Scale), PTSD (Post Traumatic Syndrome Disorder) and PMT (Pre-Medical Test)

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I. INTRODUCTION

Psycho-morbidity is one of the common and major emerging diseases all over the world. It is the curse of urbanization and development. In India urban population is more than 30% and is expected to 56% by 2025.² There is increase recognition of complex effects of urbanization on health. The nature of modern urbanization is having bad effect on mental health because of over crowing, pollution, stresses, rising level of violence, poor social support etc.³ Pandav R *et al.*⁴ found a lifetime prevalence of 26.5% and 30% of major depression and anxiety disorders,

respectively. The rate of serious mental illness was higher for 18 to 25 year olds (7.4 %) in 2008 than for any other age group over 18.⁸ In addition, the onset for 50 percent of adult mental health disorders occurs by age 14, and for 75 percent of adults by age 24.⁵

Adolescents are biologically prone to have more mood swings because of the hormonal changes associated with adolescence and coupled with the fact that their brains are still developing⁶ Youth is the stage at which most mental disorders begin but often detected in later life, and then it becomes difficult to treat. So, detecting these disorders and individual prone to these disorders at earlier ages can facilitate better treatment.¹ Available data suggest that 20 percent of adolescents i.e. one in five adolescents have a diagnosable mental disorder.⁷ So this study was conducted on I MBBS students of SMS Medical college, Jaipur (Rajasthan) with following objectives:-

1. To assess the psycho-wellbeing of I MBBS students SMS medical College, Jaipur.
2. To present distribution pattern of psychiatric illnesses in I MBBS students SMS medical College, Jaipur (Rajasthan)

II. MATERIALS AND METHODS

Study Design and Study Universe: A cross-sectional observational study was carried out on 230 students of I MBBS after taking clearance from Clinical Trial Screening Committee (CTSC) and Ethical Committee (EC) of SMS Medical College, Jaipur. After taking written inform consent from each of the student, they are given predesigned Performa to fill.

Study population: I MBBS students present on the day of survey excluding Students want to participate in the survey.

Performa has two major parts. Part (1) has general information regarding socio-demographic data and study pattern. Part (2) Performa is Modified Mini Screen (MMS) scale to assess the psycho-wellbeing of students.

Modified Mini Screen (MMS) acceptability and reliability was found satisfactory by many authors.^{8,9} It is a 22-item scale designed to identify persons in need of an

assessment in the domains of Mood Disorders, Anxiety Disorders and Psychotic Disorders. (Section 'A' for Mood, section 'B' for Anxiety and section 'C' for Psychosis).

MMS also interpret psycho-wellness zone as **Green Zone (No Disease Zone)** (Scores between '1' to '5') where no further action is required, **Orange (Borderline Disease)** (Scores between '6' to '8') consider for referring to Psychiatric and **Red Zone (Yes Disease)** (Scores '9' and above): referred to Psychiatric for confirmation of diagnosis and treatment.

Question number (4) of MMS says about Suicidal tendency and Question no. (14 and 15) says about depression. If both Questions (14 and 15) are yes it predict Post Traumatic Syndrome Disorder (PTSD) and individual is referred to Psychiatric for further evaluation

These proforms were collected after filled by students. Data thus collected were compiled in MS Excel and analyzed with Primer version 6 with Chi-square, ANOVA and Tukey test of significance. OR Ratio of suicidal tendency and PTSD was also found out.

III. RESULTS

In this cross sectional observational study on the day of survey 230 students were present out of total 249 so attendance was 92.37% to represent the I MBBS students.

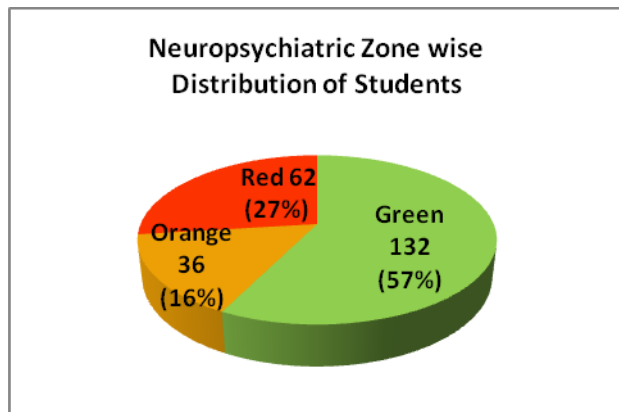


Figure No:1

Out of these 230 students, 132 students (57.39%) were in green zone (no disease zone), while 36(15.65%) students were in orange (borderline) and 62 students (26.96%) were in red zone (Psychiatric disease zone) of psycho-wellness. (Fig 1)

Mean scores of students in section 'B' which belongs to Anxiety group was observed 2.77 which was the highest followed by mean scores of section 'C' (Psychosis group) and section 'A' (Depression group). This distribution was found with significant variation ($p < 0.001$) (Table 1).

Table No. 1
MMS Mean Scores of Students (N=230)

Neuropsychiatric Section	Mean Score of Students	SD of Scores of Students
Section 'A' (Depression)	1.49	1.41
Section 'B' (Anxiety)	2.77	2.46
Section 'C' (Psychosis)	1.50	1.68
Total Score	5.72	4.64

It was also depicted that Anxiety was found to be associated with Depression ($p < 0.05$) and Depression with Psychosis ($p < 0.05$) but Anxiety and Psychosis was not found to be associated ($p > 0.05$) (Table 2).

Table No. 2
Association among Neuropsychiatric Sections

Neuropsychiatric Zone	*P<0.05	Association
Depression v/s Anxiety	Yes	Yes
Anxiety v/s Psychosis	Yes	Yes
Psychosis v/s Depression	No	No

*Tukey Test

It was also observed in this study that suicidal tendency was found in 26 (11.3%) students and PTSD was found in 42 (18.26%) students.

It was also revealed that suicidal tendency was found significantly more in students of orange zone whereas PTSD was found maximum in students of red zone. Suicidal tendency and PTSD was found significantly in student of red and orange zone (OR= 10.667 and 8.49 for orange and red zone in comparison to green zone for suicidal tendency. And OR= 10.667 and 8.49 for orange and red zone in comparison to green zone for PTSD) (Table 3)

Table No. 3
Neuropsychiatric Zone wise Suicidality and PTSD

Neuropsychiatric Zone (N=230)	® Suicidality (n=26)		* PTSD (n=42)	
	No.	OR	No.	OR
Green (132)	4	1(R)	10	1(R)
Orange (36)	9	10.667	10	4.692
Red (62)	13	8.490	22	6.710
Chi-square test P Value LS	21.522 at 2 DF P < 0.001 HS		24.603 with 2 DF P < 0.001 HS	

®Que. No. 4 'Yes' of MMS and *Que. No. 14 & 15 both 'Yes' of MMS

It was also depicted from this study that although religion, caste and type of family of the student was not associated with type of psycho-wellness zone but sex, type of residence and socio-

economic status was associated with type of psycho-wellness zone. It was found that there were significantly more proportion of females in red and orange zone. Likewise, significantly higher proportion of urban students was in red and orange zone. Middle class students were found significantly more in red and orange zone than upper and lower class. It was also revealed in this study that although coaching status, educational status of parents were not associated with type of psycho-wellness zone but number of attempts for PMT is strongly associated with type of psycho-wellness zone. It was found that as the number of attempts for PMT increases the proportion of students in red and orange zone increases (Table 4).

Table no 4
Association of variables on psychiatric wellness

Variables	Psychiatric Wellness Zones (N=249)			X ² Test P Value LS
	Green (n=132)	Orange (n=36)	Red (n=62)	
Sex				
Male (n=159)	84	26	48	P=0.042 S
Female (n=70)	26	20	24	
Residence				
Rural	65	22	35	P=0.009 S
Urban	37	34	37	
Religion				
Hindu (n=224)	128	35	60	P=0.723 NS
Muslim (n=4)	3	0	1	
Other (n=3)	1	1	1	
Caste				
General (n=93)	58	14	21	P=0.742 NS
OBC (n=79)	40	14	25	
SC (n=34)	21	4	8	
ST (n=25)	13	4	8	
Type of Family				
Joint Nuclear (n=99)	55	15	29	P=0.558 NS
Nuclear (n=105)	62	19	24	
Three Generation	15	2	9	
Socio-economic Status				
Class I	82	25	37	P=0.008 S
Class II	6	8	2	
Class III	7	7	13	
Class IV	11	5	6	
Class V	6	1	6	
Coaching				
No	3	1	1	P=0.923 NS
Yes	129	35	61	

Number of Attempts				P<0.001 S
1	59	10	27	
2	47	27	32	
3	3	9	13	
>3	3	0	2	
Father's Education				P=0.540 NS
illiterate	8	2	4	
Primary	8	1	5	
Middle	6	2	5	
Secondary	21	5	12	
Graduate	36	14	19	
Professional	30	6	5	
Mother's Education				P=0.437 NS
illiterate	38	8	23	
Primary	12	2	8	
Middle	16	4	2	
Secondary	14	6	9	
Graduate	30	8	11	
Postgraduate	12	5	8	
Professional	10	3	1	

IV. DISCUSSION

Present study observed that 26.96% of students were in red zone i.e. Psychiatric disease zone of psycho-wellness. Well comparable observations were made by other also. Centres for Disease Control and Prevention¹⁰ reported more than one in four (29 %) high school students in grades 9-12 in year 2012. Likewise, another survey that collected information from adolescents between the ages of 12 and 17 found that in 2008, about one in 12 (8 percent) reported experiencing a major depressive episode during the past year.¹¹ K. Sebi et al¹² also reported psychiatric illnesses in 26.7% , which was well comparable to present study.

Present study also observed that only 79.13% students were found with few or less symptoms of anxiety followed by depression and psychosis i.e.70 % and 58.26% respectively. In contrast to that the most prevalent mental disorder experienced among adolescents by another author was depression¹³ with more than one in four high school students found to have at least mild symptoms of this condition.¹⁴ Knopf D. et al¹³ also reported anxiety in 10 percent of adolescents which was quite lower than the present study but another author⁹ reported 30% anxiety and

18% psychosis and 39% mood disorders in adolescents. The present study reports much higher proportion that may be because of the reason that here each symptom of these disorders was considered as psycho-disorders.

In the present study it was also revealed that Anxiety was found to be associated with Depression and Depression with Psychosis but Anxiety and Psychosis was not found to be associated. Well comparable observations were made by other authors^{13,14}.

The single most disturbing potential consequence of adolescent mental disorders is suicide, which was observed in 11.3% of students in the present study. This suicidal tendency was found to be associated with depression in the present study. Menon V et al¹⁵ also observed association between high intent of suicide in young is associated with psychiatric morbidity and presence of hopelessness. Although suicide can have multiple causes, 90 percent of adolescents who commit suicide had a diagnosable mental disorder, and up to 60 percent of them were suffering from depression at the time of their death.¹⁶

It was also depicted from this study that however religion, caste and type of family was not associated with type of psycho-wellness zone but there were significantly more females, middle class students and students who have attempted PMT more times were in red and orange zone. Almost similar observations were made by other authors. Nair MK et al¹⁷ reported Adolescent girls were at risk of developing Social Anxiety Disorder (SoAD) (adjusted OR = 1.69). Level of education had a protective influence on SoAD (adjusted OR = 0.59). Swarnalatha N et al¹⁸ reported more depression was in female sex and low socio-economic status.

Findings similar to those of the current study were also observed in the studies conducted by Goswami et al¹⁹ and Jain RK et al,²⁰ who also reported female predominance in psycho-morbidity.

V. CONCLUSION

More than one fourth of students were in red zone of psycho-wellness and about one sixth were in orange zone. Suicidal tendency was also found in more than one tenth of students. Anxiety was found to be associated with Depression and Depression was associated with Psychosis. Psycho-morbidity was found predominantly in females, middle class students and students who have attempted PMT more times.

REFERENCES

1. WHO. Child and adolescent mental health policies and plans. Geneva: World Health Organization, 2005
2. Harpham T & Blue I (Eds) (1995) Urbanization and Mental Health in developing countries, Avebury Aldershot
3. Prasad KM, Sreenivas KN, Ashok MV. Psychogeriatric patients. A sociodemographic and clinical profile. *Indian J Psychiatry* 1996;38:178-81
4. Pandav R, Fillenbaum G, Ratcliff G, Dodge H, Ganguli M. Sensitivity and specificity of cognitive and functional screening instruments for dementia: The Indo-US cross national dementia epidemiology study. *J Am Geriatr Soc* 2002;50:554-61.
5. Blackorby, J., & Cameto, R. (2004). Changes in school engagement and academic performance of students with disabilities. In *Special Education Elementary Longitudinal Study: Wave 1 Wave 2*
6. Child Trends, Adolescent Health Highlight: Mental health disorder Jan 2013, P1-13.

7. Schwarz, S. W. (2009). Adolescent mental health in the United States: Facts for Policymakers Retrieved November 9, 2012, from http://nccp.org/publications/pdf/text_878.pdf
8. Narsimha R. Pinninti *, Harry Madison, Erica Musser, David Rissmiller. MINI International Neuropsychiatric Schedule: Clinical utility and patient acceptance. *European Psychiatry* 18 (2003) 361–364
9. Donald W. Black, MD, Stephan Arndt, PhD, Nancy Hale, BS, RN, and Rusty Rogerson, BA. Use of the Mini International Neuropsychiatric Interview (MINI) as a Screening Tool in Prisons: Results of a Preliminary Study. *J Am Acad Psychiatry Law* 32:158–62, 2004
10. Centers for Disease Control and Prevention. (2012). Youth Risk Behavior Surveillance-United States, 2011. Morbidity and Mortality Weekly Report, 61(4.)
11. Substance Abuse and Mental Health Services Administration Center for Behavioral Health Statistics and Quality. (2011). The NSDUH Report: Major Depressive Episode and Treatment among Adolescents: 2009. Rockville, MD. Retrieved November 9, 2012, from <http://www.oas.samhsa.gov/2k11/009/AdolescentDepression.htm>
12. K. Sebi, Suprakash C and Rudraprasad C. Prevalence of psychiatric and physical morbidity in an urban geriatric population. *Indian J Psychiatry*. 2011 Apr-Jun; 53(2): 121–127
13. Knopf, D. K., Park, J., & Mulye, T. P. (2008). The mental health of adolescents: A national profile, 2008 Retrieved November 9, 2012, from <http://nahic.ucsf.edu/downloads/MentalHealthBrief.pdf>
14. Child Trends. (2010). Child Trends Databank: Adolescents who feel sad or hopeless. Retrieved November 9, 2012, from <http://www.childtrendsdatabank.org/alphabet?q=node/126>
15. Menon V, Kattimani S, Shrivastava MK, Thazath HK. Clinical and socio-demographic correlates of suicidal intent among young adults: a study from South India. *Crisis*. 2013 Jan 1;34(4):282-8. doi: 10.1027/0227-5910/a000203.
16. National Center for Mental Health Checkups at Columbia University. (2010). Youth suicide and prevention. Teen Screen. Retrieved November 9, 2012, from <http://www.teenscreen.org/images/stories/PDF/YouthSuicideandPrevention.pdf>
17. Nair MK¹, Russell PS, Subramaniam VS, Nazeema S, Sequeira AZ, Chembagam N, George B. ADAD 6: the predictive factors for Anxiety Disorders among adolescents in a rural community population in India. *Indian J Pediatr*. 2013 Nov;80 Suppl 2:S160-4. doi: 10.1007/s12098-013-1231-4. Epub 2013 Oct 5.
18. Swarnalatha N. The Prevalence of Depression among the Rural Elderly in Chittoor District, Andhra Pradesh. *Journal of Clinical and Diagnostic Research*. 2013 Jul, Vol-7(7): 1356-1360
19. Goswami A, Reddaiah VP, Kapoor SK, et al. Prevalence and determinants of cognitive impairment in rural elderly population in India; *Help Age India Research and Development Journal*. 2006; 12: 8-15.
20. Jain RK, Aras RY. Depression in geriatric population in urban slums of Mumbai. *Indian Journal of Public Health*. 2007; 51: 112-113.

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