

Research Article



INTERNATIONAL RESEARCH JOURNAL OF PHARMACY

www.irjponline.com

ISSN 2230-8407 [LINKING]

EXPLORING COMMON MENTAL DISORDERS IN INDIAN ADOLESCENTS RESIDING IN URBAN INDIA

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How to cite: Aruna D, Madhavi G. Exploring common mental disorders in Indian adolescents residing in urban India. International Research Journal of Pharmacy, 2023,14:2:30-35.

Doi: 10.7897/2230-8407.1303209

ABSTRACT

Background: Common mental disorders (CMDs) in adolescents, may hamper their psycho-social development. However, existing literature data is scarce about the prevalence and determinants of common mental disorders in Indian adolescents.

Aim: The present study aimed at exploring the prevalence and determinants of common mental disorders such as anxiety and depression in Indian adolescents aged 15-19 years residing in urban areas.

Methods: In the present cross-sectional clinical study, 1112 subjects in the adolescent age group residing in urban areas were randomly selected. Common mental disorders were assessed using Kid version 6 (MINI-KID) of the Mini International Neuropsychiatry Interview following DSM-IV TR and complaints using ICD-10 definitions of CMD. Associated risk factors were studied and assessed statistically using a semi-structured self-developed interview schedule.

Results: In the present study, 982 adolescents were assessed as the response rate among the selected subjects was 88.3%. Among them 50.3% (n=494) were females and 49.7% (n=488) were males from the lower middle socioeconomic group. The lifetime common mental disorder prevalence was 34%. Among all subjects, 22.4% and 6.7% subjects reported depression and anxiety respectively during their lifetime. Female gender faced one/more stressful events during the last 6 months. Also, tobacco smoking showed a significant increase in the probability of having common mental disorders.

Conclusions: The present study concluded that there is a high prevalence of common mental disorders in adolescents residing in urban areas of India and subjects were mostly from lower socio-economic groups. Hence, there is a need for detailed intervention in stress management and a need to promote healthy lifestyles in late adolescent age groups

Keywords: Adolescents, Common mental disorder, India, Mental health, Urban India

INTRODUCTION

Adolescence is a critical developmental stage characterized by significant physical, emotional, and social changes. During this period, individuals become particularly vulnerable to mental health issues, including common mental disorders (CMDs)

such as anxiety and depression. Research indicates that early signs of mental disorders often go unnoticed, leading to a higher risk of these conditions persisting into adulthood, which can severely impact quality of life.¹

Common mental disorders (CMDs), a term introduced by David Goldberg in 1994 includes various mental health issues such as somatoform disorders, anxiety disorders, and depression. These disorders significantly contribute to the overall burden of mental health problems within the Indian population. Over the past few decades, the prevalence of CMDs has been on the rise in India. According to data from the 2019 Global Burden of Disease study, anxiety and depression rank among the top ten leading contributors to disability-adjusted life years (DALYs) for young adults and adolescents aged 10 to 24 years.^{2,3}

The National Mental Health Survey (NMHS) conducted in 2015-2016 estimated that approximately 4.1% of adolescents aged 13-17 years in urban areas in India experience mental disorders. This figure is nearly three times higher than the 1.5% prevalence found in rural regions. Additionally, other studies have reported significant rates of anxiety disorders and depression among young adults and adolescents, with prevalence rates of 2.4% for anxiety and 18.5% for depression. This highlights the compelling need for targeted mental health interventions in urban settings.⁴

Existing literature reports show that individuals living in urban and slum areas often reflect poor indicators of health. The Indian government has initiated various urban resettlement projects aimed at relocating residents from slum areas to areas where they have an access to basic amenities. However, there is a significant lack of community-based studies focusing on mental health in these urban areas.⁵ This study therefore aimed to explore the prevalence and determinants of CMDs among late adolescents aged 15-19 years living in urban areas. Understanding these issues is essential for developing effective mental health strategies tailored to the needs of this vulnerable population.

MATERIALS AND METHODS

The present cross-sectional clinical study aimed to explore the determinants and prevalence of common mental disorders, such as anxiety and depression among late Indian adolescents aged 15-19 years living in urban areas of India. The study was conducted at the Department of Psychiatry, Sri Balaji Medical College Hospital & Research Institute, Renigunta, Tirupati, Andhra Pradesh from December 2022 – January 2023. All late adolescents who attended the hospital were included in the study. Both verbal and written informed consent was taken from all the subjects before participating in the study

The study assessed late adolescents belonging to middle and lower socioeconomic groups. Demographic data were collected from all participants, and those who met the eligibility criteria were included in the study through a random sampling method. Adolescents aged 15-19 years and living in urban areas for more than 6 months prior to the study were considered eligible. Participants who were unable to understand the questionnaire were excluded from the study.

The study focused primarily on two prime areas: anxiety and depressive disorders due to their relevance in the framework of CMDs. Depressive disorders were categorized into major depressive disorders and dysthymia, while, anxiety disorders included generalized anxiety disorders (GADs), panic disorders, and social anxiety/social phobia. To define these disorders, DSM-IV TR (Diagnostic and Statistical Manual for Mental Disorders, version IV, Text Revision) was used. These definitions were also in line with ICD-10 (International Classification of Diseases, 10th Revision). MINI-kid version 6, a structured interview designed for children and adolescents was used to diagnose these disorders.

Quality control in the use of MINI-kid was ensured by an experienced clinical psychiatrist who served as the examiner along with an interviewer who was fluent in the local language, capable of answering any questions from the participants. The MINI-kid was translated into Hindi and was then translated back to English for consistency. This process was thoroughly tested before implementation. Participants were asked single open-ended questions providing examples of stressful events such as abuse, illness in the family, and the death of a relative to gather information on stressful life events. The use of tobacco and alcohol in any form throughout lifetime was also assessed using lifestyle-related questions. The filled forms were randomly selected and assessed to see any errors in filling of the form and data capturing.

For adult subjects interviews were conducted without the presence of any caregiver or parent. However, in subjects aged less than 18 years, interview was conducted in the presence of a caregiver or parent ensuring that their presence would not influence the response of the subjects.

The data gathered were analyzed statistically using SPSS (Statistical Package for the Social Sciences) software version 24.0 (IBM Corp., Armonk, NY, USA). For assessment of descriptive measures, one-way ANOVA (analysis of variance), chi-square test, and Pearson test were used. The results were expressed as mean and standard deviation and frequency and percentages. The p-value of <0.05 was considered statistically significant.

RESULTS

The present cross-sectional clinical study aimed to investigate the determinants and prevalence of common mental disorders such as anxiety and depression in late Indian adolescents aged 15-19 years living in urban areas. The present cross-sectional clinical study included 982 randomly selected subjects in the adolescent age group. Among them 57.8% (n=568) were aged 15-17 and 42.2% (n=414) subjects were aged 18-19 years. The gender distribution was nearly balanced with 49.7% (n=488) males and 50.3% (n=494) females. In terms of educational background, participants reported varying levels education: 2% (n=20) completed < 8th grade, 31.7% (n=312) were in grades 8-10, 38.2% (n=374) were in grades 11-12, and 28.1% (n=276) study subjects had attended college. The majority of the participants were students 80% (n=786), while 7.1% (n=70) held part-time jobs, 4.3% (n=42) had full-time job and 8.6% (n=84) were unemployed. Regarding family structure, 76% (n=746) lived in nuclear families, while 24% (n=236) came from extended families. Socioeconomic status was not reported by 34.82% (n=342), 0.8% belonged to upper class (n=8), 21.4% (n=210) belonged to upper middle class, 42.8% (n=420) belonged to lower middle class, and 0.2% (n=2) belonged to lower class. (Table 1).

The prevalence of common mental disorders (CMDs) among adolescents varied significantly by gender. Anxiety disorders were reported in 27.5% (n=134) of boys and 40.5% (n=200) of girls. Dysthymia was present in 14.7% (n=144) of subjects with 11.1% (n=54) being boys and 18.2% (n=90) being girls. Major depressive episodes were observed in 7.3% (n=72) of the subjects, with 7.7% (n=38) being girls and 6.9% (n=34) being boys. Major depressive disorder in the past was reported by 11.6% (n=114) subjects, with 14.6% (n=72) being girls and 8.6% (n=42) being boys. Depression in a lifetime was reported in 22.4% (n=220) subjects, with 14.6% (n=132) being girls and 18% (n=88) being boys. CMDs in lifetime were reported in 34% (n=334) subjects, with 40.5% (n=200) being girls and 27.5% (n=134) being boys (Table 2).

In terms of specific anxiety disorders, generalized anxiety disorder was seen in 6.7% (n=66) of subjects with 6.1% (n=30) girls and 7.3% (n=36) boys. Generalized social phobia was reported in 0.6% (n=6) subjects, all of whom were girls. Non-generalized social phobia was reported in 1.4% (n=14) subjects with 2.4% (n=12) girls and 0.4% (n=2) boys. Panic disorders with limited symptoms were reported in 14% (n=14) subjects with 0.4% (n=2) being boys and 2.4% (n=12) being girls. Current panic disorder was seen in 0.6% (n=6) of subjects all of whom were boys. Lifetime panic disorder it was seen in 2.8% (n=28) subjects with 2% (n=10) being boys and 3.6% (n=18) being girls (Table 2).

The multivariate analysis showed a significant correlation between gender and CMDs with a p-value of 0.002, indicating a strong association with the female gender. Age groups of 15-17 and 18-19 years showed no significant association with CMDs with p=0.93. The type of guardianship – whether both parents or a single parent/ relative also showed no significant association with CMDs, as indicated by a p-value of 0.34. Socioeconomic status did not significantly correlate with CMDs either. Lower, middle, and upper classes had p=0.87 and 0.63 respectively, indicating no strong association with mental health outcomes. Body Mass Index (BMI) had no significant association with CMDs. Skipping breakfast had a significant association with CMDs with p=0.03. Current use of alcohol, smokeless tobacco, and smoking tobacco did not show significant association with common mental disorders with p=0.55, 0.54, and 0.08 respectively. Stressful life events experienced in the last 6 months were present in 73.05% (n=244) of study subjects showing a significant correlation with CMDs at p<0.001 (Table 3).

DISCUSSION

The present cross-sectional clinical study assessed 982 subjects who were randomly selected and were in the adolescent age group. There were 57.8% (n=568) subjects in 15-17 and 42.2% (n=414) subjects from 18-19 years of age. There were 49.7% (n=488) males and 50.3% (n=494) females in the present study. Educational status of <8th class, 8th-10th class, 11th to 12th class, and college and higher was reported by 2% (n=20), 31.7% (n=312), 38.2% (n=374), and 28.1% (n=276) study subjects respectively. Occupation of study subjects was students, part-time job, full-time job, and unemployment in 80% (n=786), 7.1% (n=70), 4.3% (n=42), and 8.6% (n=84) study subjects respectively. The family was extended and nuclear in 24% (n=236) and 76% (n=746) study subjects respectively. Socioeconomic status was not reported, upper class, upper middle class, lower middle class, and lower class in 34.2% (n=342), 0.8% (n=8), 21.4% (n=210), 42.8% (n=420), and 0.2% (n=2) study subjects respectively. These data were comparable to the studies conducted by Sandal RK et al⁶ in 2017 and Jayashree K et al⁷ in 2018 where authors assessed demographic data of subjects and disease data.

The study results showed that for the prevalence of common mental disorders in adolescent study subjects, for CMDs (common mental disorders), anxiety disorders were seen in 27.5% (n=134) boys and 40.5% (n=200) girls. Dysthymia was seen in 14.7% (n=144) subjects with 11.1% (n=54) boys and 18.2% (n=90) girls subjects. Major depressive episodes presently were seen in 7.3% (n=72) subjects with 7.7% (n=38) girls and 6.9% (n=34) boy subjects. Major depressive disorder in the

past was reported in 11.6% (n=114) subjects with 14.6% (n=72) girls and 8.6% (n=42) boys. Depression in a lifetime was reported in 22.4% (n=220) subjects with 14.6% (n=132) girls and 18% (n=88) boys. CMDs in lifetime were reported in 34% (n=334) subjects with 40.5% (n=200) girls and 27.5% (n=134) boys. These results were consistent with the studies of Bhasin SK et al⁸ in 2010 and Sagar R et al⁹ in 2020 where the prevalence of common mental disorders in adolescent subjects with depression similar to the present study was reported by the authors in their respective studies.

It was seen that generalized anxiety disorder was seen in 6.7% (n=66) subjects with 6.1% (n=30) girls and 7.3% (n=36) boys. Generalized social phobia was reported in 0.6% (n=6) subjects where all subjects were girls. Non-generalized social phobia was reported in 1.4% (n=14) subjects with 2.4% (n=12) girls and 0.4% (n=2) boys. Panic disorders (limited symptoms attack) were reported in 14% (n=14) subjects with 0.4% (n=2) boys and 2.4% (n=12) girls. Current panic disorder was seen in 0.6% (n=6) of subjects where all subjects were boys. For lifetime panic disorder, it was seen in 2.8% (n=28) subjects with 2% (n=10) boys and 3.6% (n=18) girls. These findings were in agreement with the previous data of Maddaus S et al¹⁰ in 2019 and Mishra SK et al¹¹ in 2018 where authors reported anxiety disorders in their studies similar to the present study.

Concerning multivariate analysis for parameters associated with common mental disorders in adolescent study subjects. A significant correlation was seen in gender and CMDs with $p=0.002$. Age of 15-17 and 18-19 years showed no significant association with CMDs with $p=0.93$. Guardianship of both parents and single parent or relatives also had no significant association with common mental disorders with $p=0.34$. In socioeconomic status, lower, middle, and upper status were not significantly linked to CMDs with $p=0.87$ and 0.63 . BMI had no significant association with CMDs. Skipping breakfast had a significant association with CMDs with $p=0.03$. Current use of alcohol, smokeless tobacco, and smoking tobacco use showed no significant association with common mental disorders with $p=0.55$, 0.54 , and 0.08 respectively. For stressful events experienced in the last 6 months, CMDs were present in 73.05% (n=244) of study subjects showing a significant correlation with $p<0.001$. The results of the present study were in concurrence with previous studies conducted by Usmani G. et al¹² in 2018 and Sheehan DV et al¹³ in 2010 where the authors reported a significant association between skipping breakfast and stressful events in the last 6 months and CMDs.

CONCLUSIONS

The present study, within its limitations, concludes the critical state of adolescent mental health in urban India, particularly adolescents belonging to lower socio-economic groups. This comprehensive overview provides valuable context for understanding the mental health landscape among urban adolescents in India and highlights the need for targeted interventions to address their unique challenges.

REFERENCES

1. Wang PS, Berglund PA, Olsson M, Kessler RC. Delays in initial treatment contact after the first onset of a mental disorder. *Health Serv Res.* 2004; 39:393-415.
2. Salve H, Goswami K, Nongkynrih B, Sagar R, Sreenivas V. Prevalence of psychiatric morbidity at a mobile health clinic in an urban community in North India. *Gen Hosp Psychiatry.* 2012;34:121-6.
3. Sahoo S, Khess CRJ. Prevalence of depression, anxiety, and stress among young male adults in India: A dimensional and categorical diagnoses-based study. *J Nerv Ment Dis.* 2010;198:901-4.
4. Gururaj G, Varghese M, Benegal V, Rao GN, Pathak K, Singh LK, et al. National Mental Health Survey of India, 2015-16: Prevalence, Patterns and Outcomes. Bengaluru: NIMHANS; 2019.
5. Wang PS, Angermeyer M, Borges G, Bruffaerts R, Tat Chiu W, DE Girolamo G, et al. Delay and failure in treatment seeking after the first onset of mental disorders in the World Health Organization's World Mental Health Survey initiative. *World Psychiatry* 2007;6:177-85.
6. Sandal RK, Goel NK, Sharma MK, Bakshi RK, Singh N, Kumar D. Prevalence of depression, anxiety and stress among school going adolescent in Chandigarh. *J Fam Med Prim Care* 2017;6:405-10.
7. Jayashree K, Mithra PP, Nair MKC, Unnikrishnan B, Pai K. Depression, and anxiety disorders among school going adolescents in an urban area of south India. *Indian J Community Med Off Publ Indian Assoc Prev Soc Med.* 2018;43:S28-32.

8. Bhasin SK, Sharma R, Saini NK. Depression, anxiety, and stress among adolescent students belonging to affluent families: A school-based study. Indian J Pediatr 2010;77:161-5.
9. Sagar R, Dandona R, Gururaj G, Dhaliwal RS, Singh A, Ferrari A, et al. The burden of mental disorders across the states of India: The Global Burden of Disease Study 1990–2017. Lancet Psychiatry 2020;7:148-61.
10. Madasu S, Malhotra S, Kant S, Sagar R, Mishra AK, Misra P, et al. Prevalence and determinants of anxiety disorders among adolescents in a rural community from northern India. Asian J Psychiatry 2019;43:137-42.
11. Mishra SK, Srivastava M, Tiwary NK, Kumar A. Prevalence of depression and anxiety among children in rural and suburban areas of Eastern Uttar Pradesh: A cross-sectional study. J Fam Med Prim Care 2018;7:21-6.
12. Usmani G, Ahmad N. Health status in India: A study of urban slum and non-slum population. J Nurs Res Pract 2018;2:9-14.
13. Sheehan DV, Sheehan KH, Shytle RD, Janavs J, Bannon Y, Rogers JE, et al. Reliability and validity of the mini international neuropsychiatric interview for children and adolescents (MINI-KID). J Clin Psychiatry 2010;71:313-26.

TABLES

Characteristics	Number (n)	Percentage (%)
Age range (years)		
15-17	568	57.8
18-19	414	42.2
Gender		
Males	488	49.7
Females	494	50.3
Education status		
<8 th class	20	2
8 th to 10 th class	312	31.7
11-12 class	374	38.2
College and higher	276	28.1
Occupation		
Students	786	80
Part-time job	70	7.1
Full-time job	42	4.3
Unemployed	84	8.6
Family		
Extended	236	24
Nuclear	746	76
Socioeconomic status		
Not reported	342	34.82
Upper class	8	0.8
Upper middle class	210	21.4
Lower middle class	420	42.8
Lower class	2	0.2

Table 1: Sociodemographic and clinical data in study subjects

Disorder	Boys		Girls		Total	
	n=488	%	n= 494	%	n=982	%
CMDs (in lifetime)	134	27.5	200	40.5	334	34
Anxiety disorder	54	11.1	90	18.2	144	14.7
Dysthymia (last 1 year)	12	2.5	22	4.5	34	3.5
Major depressive episode (presently)	34	6.9	38	7.7	72	7.3
Major depressive episode (past)	42	8.6	72	14.6	114	11.6
Depression (lifetime)	88	18	132	14.6	220	22.4
Generalized anxiety disorders	36	7.3	30	6.1	66	6.7
Generalized social phobia	0	0	6	1.2	6	0.6
Non-generalized social phobia	6	1.2	18	3.6	24	24

Panic disorders (limited symptoms attack)	2	0.4	12	2.4	14	1.4
Panic disorders current	6	1.2	0	0	6	0.6
Lifetime panic disorder	10	2	18	3.6	28	2.8

Table 2: Prevalence of common mental disorders in adolescent study subject

Variables	CMD (n)	CMD (%)	p-value
Gender			
Males	134	40.1	0.002
Females	200	59.9	
Age (years)			
15-17	192	57.49	0.93
18-19	142	42..51	Reference
Guardianship			
Both parents	290	86.8	0.34
Relatives/single parent	44	13.2	
Socioeconomic status			
Lower	70	24.82	0.87
Middle	142	50.35	Reference
Upper	70	24.82	0.63
BMI			
Underweight	70	20.96	0.31
Normal	246	73.65	Reference
Overweight	18	5.39	0.51
Skipping breakfast			
Yes	116	34.73	0.03
No	218	65.27	Reference
Alcohol use (presently)			
Yes	10	2.99	0.55
No	324	97.01	Reference
Smokeless tobacco			
Yes	20	5.99	0.54
No	314	94.1	Reference
Smoking tobacco			
Yes	26	7.7	0.08
No	308	92.2	Reference
Stressful event in last 6 months			
Yes	244	73.05	<0.001
No	90	26.95	Reference

Table 3: Multivariate analysis for parameters associated with common mental disorders in adolescent study subjects