

Comparative Assessments of Prevalence of Psychiatric Illnesses among School Going Adolescents in Rural and Semi Urban Maharashtra

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Conflict of interest: Nil

Abstract

The present study was conducted to assess the prevalence of psychiatric illness among school going adolescents in rural and urban schools in Dhule district of Maharashtra. The Study was a prospective observational study done by using a questionnaire to assess the prevalence and demographics. The study revealed that prevalence ranges from 17.94 in the private school in the urban area and 20.96% in government schools in the urban area to 20.61% in private schools in the rural area and 22.17 in government school of the rural area. The overall prevalence of psychiatric disorders is higher among adolescents in the rural area (21.38%) as compared to the urban area (19.43%). Rural adolescents had significantly higher rates of somatoform disorders (4.45%), conduct disorder (3.78%), dysthymia (1.11%), and other mood disorders (0.89%) whereas higher rates of depression (3.88%), anxiety (3.67%), and hyperkinetic disorders (3.02%) were found in urban counterparts.

Keywords: Adolescents, Prevalence, School

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Introduction

Adolescence is derived from a Latin word, “adolescere” meaning “to grow or to mature” indicating that the defining features of adolescence are developing. In India, age limits of adolescents have been fixed differently under different programs keeping in view the objectives of that policy are aimed at ensuring a viable modality for efficient developmental environments for the community.[1]

The experience of adolescents during teen years will vary considerably according to the cultural and social aspects of the network of social circles they live in.[2] There are around 250 million adolescents in India. Over the next two decades, the

number of adolescents is likely to increase further, but their share to population will decrease marginally as per the projections.[3]

Mental disorders and mental health problems seem to have increased considerably among adolescents in the past 20–30 years. The impact of changing youth subcultures on behaviour and priorities can also make it difficult to define mental health and mental health problems in adolescents.[4]

While there are a number of comprehensive studies on the prevalence of psychiatric illness in a community, there are few which have examined the teenage years

themselves and fewer in India in which age-specific rates are available for a period in life when so many biological and emotional changes are taking place.[5]

This study was thus undertaken to fill the lacunae in information in the true prevalence of psychiatric symptoms among adolescents in the defined subject population.

Methodology:

The present study was a prospective observational in nature. The population for the study comprised of children aged 11–16 years, studying in various government and public schools located in the urban and rural areas in the district. To get a representative sample of all socioeconomic classes of the society, two government schools and two public schools were chosen by simple randomization, in urban and rural areas of Dhule District, respectively. Permission to conduct the study was taken from the principals of the concerned school.

From the above population, children aged 11–16 years studying in VII–X classes who satisfied the selection criteria and whose parents/guardian gave informed consent were included in the sample for the study. Stratified cluster sampling was used considering the type of school as strata and sections of each standard as clusters. One section from each class from each school was selected randomly covering at least 30 students of each class in a school and covering 120 students in all the classes in a school.

The study was conducted in two steps; in the first step, self-designed questionnaire consisting of questions pertaining to sociodemographic data of the children which was prepared separately and pretested before final administration was used along with socioeconomic status scale. To study the psychiatric morbidity, the strength and difficulties questionnaire (SDQ) self-report version and parent version was used. The students of each

section were asked to fill the questionnaires at a time in the presence of the researcher.

Supervision by the teacher was avoided to enable the students to answer the questions. SDQ parent version was given to the students to be filled by their parents and was collected on the next working day. Students who scored borderline or abnormal on SDQ either version formed the sample for the second stage, and further, 5% cases were randomly selected out of the students with normal score, which were followed by clinical interview, detailed case history, and mental state examination; psychiatric disorders were diagnosed following International Classification of Diseases-10 (ICD-10) criteria.

To find the association between sociodemographic factors and psychiatric morbidity, Chi-square test was applied. Student's *t*-test was used for analysing scores of questionnaires. $P < 0.05$ was considered as statistically significant.

Observations:

Numbers of students enrolled in the study were almost equal in urban area and rural area. This shows that in both the groups, the number of total students is almost the same and the number of male and female students is also comparable in number with some male dominance, but the difference was not significant ($P < 0.54$). The numbers were equal as children were taken from school sections and all the schools had almost equal number of children in each section.

Screening of students was done using strengths and difficulties questionnaire, and it was identified that 14.7% of the individuals were abnormal, 25.5% as borderline, and 59.8% as normal (Table 1). Individuals who scored abnormal or borderline were further evaluated for the diagnosis of psychiatric morbidity. The mean scores on SDQ in the normal group were 10.61 in urban and 10.52 in rural; in the borderline group, 14.33 in urban and 13.52 in rural whereas it was 17.68 in urban and 17.42 in rural in the abnormal group.

The difference between the scores of the three groups was significant on *t*-test ($P < 0.01$).

Table1: Screening Using SDQ (Mean Scores)

SDQ	Urban	Rural
Abnormal	17.68	17.42
Borderline	14.33	13.52
Normal	10.61	10.52

The overall rates of psychiatric disorders were higher among rural adolescents (21.38%) as compared to urban (19.43%). Children from rural areas had higher odds for the overall rates of dysthymia, any other mood disorder, conduct, somatoform, adjustment, and other behavioral disorders whereas the reverse was true for anxiety, hyperkinetic disorders, and depression among urban students. However, the difference between rural and urban was not found to be statistically significant, i.e., $P > 0.05$.

Maximum number of diagnosed children, i.e., 27 belonged to the upper lower class (5.83%) and second in the rank were children from upper class, i.e., 25 (5.39%). Whereas in the rural area, the highest number belonged to the middle class, i.e., 24 (5.35%). It was seen that adolescents in lower socioeconomic classes (6 out of 23 students in urban area and 14 out of 48 students in rural area) had higher psychiatric morbidity as compared to upper class in both rural (18 out of 72 students) and urban areas (25 out of 122 students) and was significant statistically ($P < 0.05$).

Discussion:

The results of screening instrument show that on applying SDQ, 14.7% of the individuals were identified as abnormal, 25.5% as borderline, and 59.8% of the students had normal scores. The mean scores on SDQ in the normal group were 10.61 in urban and 10.52 in rural; in borderline group, 14.33 in urban and 13.52 in rural whereas it was 17.68 in urban and

17.42 in rural in the abnormal group. The difference between the scores of the three groups was significant. This was found to be similar to a study conducted by Gau et al and Pahwa et al [2,6]

The results also coincided with a study conducted by Anita *et al.* in 2003 which reported overall prevalence for psychiatric disorders among 6–14-year-olds, according to ICD-10, as 17.5% in urban and 16.5% in rural areas of Rohtak.[7]

In Contrast, Srinath et al [8] in 2000, Bengaluru reported the prevalence rates among the 4–16 years group to be 12% overall, which was lower compared with our findings and from other community-based studies in Western countries. [9,10]

Furthermore, the overall prevalence of psychiatric disorders is higher among adolescents in the rural area (21.38%) as compared to the urban area (19.43%). This was similar to findings in other studies where the rural area has been reported to have comparatively higher rates of psychiatric morbidity as compared to urban areas. [11,12]

Compared to their urban counterparts, rural adolescents had significantly higher rates of somatoform disorders (4.45%), conduct disorder (3.78%), dysthymia (1.11%), and other mood disorders (0.89%) whereas higher rates of depression (3.88%), anxiety (3.67%), and hyperkinetic disorders (3.02%) were found in urban counterparts, this was in concurrence with similar studies in other regions. [11,12]

The prevalence rate of psychiatric morbidity ranging from 17.94% to 22.17% for the entire sample (11–16 years) validates the conclusion that prevalence rates among adolescents are increasing over time. Furthermore, as the prevalence is higher in the rural area, one might speculate that low awareness of the importance of psychiatric disorders, poor living conditions, and the presence of multiple stressors could have combined to increase the magnitude of adolescent's problems. [13]

Conclusions:

There must be a targeted development of community-based strategies for identifying and managing of psychiatric disorders at a level of school among adolescents. The study showed that the prevalence is significant enough to warrant such an inclusive strategy. This will aid us to formulate a rational basis for deploying our resources for the treatment and prevention of mental illness in tomorrow's adults.

References:

- Mishra A, Maheswarappa SS, Maity M, Samu S. Adolescent's eWOM intentions: An investigation into the roles of peers, the Internet and gender. *Journal of Business Research*. 2018 May 1; 86:394-405.
- Pahwa MG, Sidhu BS, Balgir RS. A study of psychiatric morbidity among school going adolescents. *Indian journal of psychiatry*. 2019 Mar;61(2):198.
- Planning Commission. Government of India. Report of the Working Group on Adolescents for the Tenth Five Year Plan; 2001. Available from: http://www.planningcommission.nic.in/aboutus/committee/wrkgrp/wg_adolcnts.pdf.
- Payne D, Kennedy A, Kretzer V, Turner E, Shannon P, Viner R. Developing and running an adolescent inpatient ward. *Archives of Disease in Childhood-Education and Practice*. 2012 Apr 1;97(2):42-7.
- Henderson S, Davidson JA, Lewis IC, Gillard HN, Baikie AG. An assessment of hostility in a population of adolescents. *Archives of General Psychiatry*. 1977 Jun 1;34(6):706-11.
- Gau SS, Chong MY, Chen TH, Cheng AT. A 3-year panel study of mental disorders among adolescents in Taiwan. *American Journal of Psychiatry*. 2005 Jul 1;162(7):1344-50.
- Gaur DR, Vohra AK, Subash S, Khurana H. Prevalence of psychiatric morbidity among 6 to 14 years old children. *Indian Journal of Community Medicine*. 2003 Jul 1;28(03):133.
- Roberts RE, Roberts CR, Xing Y. Rates of DSM-IV psychiatric disorders among adolescents in a large metropolitan area. *Journal of psychiatric research*. 2007 Dec 1;41(11):959-67.
- Roberts RE, Roberts CR, Xing Y. Prevalence of youth-reported DSM-IV psychiatric disorders among African, European, and Mexican American adolescents. *Journal of the American Academy of Child & Adolescent Psychiatry*. 2006 Nov 1;45(11):1329-37.
- Angold A, Erkanli A, Farmer EM, Fairbank JA, Burns BJ, Keeler G, Costello EJ. Psychiatric disorder, impairment, and service use in rural African American and white youth. *Archives of general psychiatry*. 2002 Oct 1;59(10):893-901.
- Roberts RE, Fisher PW, Blake Turner J, Tang M. Estimating the burden of psychiatric disorders in adolescence: the impact of subthreshold disorders. *Social psychiatry and psychiatric epidemiology*. 2015 Mar; 50(3):397-406.
- Merikangas KR, He JP, Burstein M, Swanson SA, Avenevoli S, Cui L, Benjet C, Georgiades K, Swendsen J. Lifetime prevalence of mental disorders in US adolescents: results from the

National Comorbidity Survey
Replication–Adolescent Supplement
(NCS-A). Journal of the American
Academy of Child & Adolescent
Psychiatry. 2010 Oct 1;49(10):980-9.
13. Mohammed, ebtehag mustafa.
Explanatory Factor analysis to

determining the risk factors of
cardiovascular disease: A hospital-
based case-control study. Journal of
Medical Research and Health Sciences,
2020:3(8).