Assessment of psychological problems in schoolgoing adolescents of Aligarh

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Background: Adolescence is a period of physical, nutritional, and sexual transition, also remarkable for the accompanying psychological changes. Worldwide, 20% of children and adolescents suffer from a disabling mental illness. Therefore, knowledge of the prevalence of these disorders can be used to design intervention strategies. The present study was conducted in the 13–15 years’ age group schoolgoing adolescents, with the objective to estimate the prevalence of psychological morbidity, employing Strength and Difficulties Questionnaire (SDQ). Materials and Methods: A cross-sectional analytical study was conducted in three different schools of Aligarh, in the 13–15 years’ age group, with a prior permission from the school authorities. The study was approved by a multidisciplinary Institutional Ethics and Research Advisory Committee. Results: A total of 1456 students were sampled for the study. The prevalence of psychological morbidity on the basis of total difficulties score was found to be 9.75% (95% confidence interval - 8.33–11.39). The prevalence of emotional, conduct, hyperactivity, peer, and prosocial problems was 5.42%, 5.56%, 3.78%, 4.40%, and 4.26%, respectively. Conclusions: Psychological problems are fairly common in the adolescent age group. Despite the need, there is a dearth of studies conducted in this crucial age group in India. Of the studies available, a wide variance is reported either due to the difference in diagnostic tools or due to the types of psychological disorders considered in different researches. For the purpose of uniformity and comparability, SDQ stands as a good option. Keywords: Adolescence, behavior, conduct, psychology, Strength and Difficulties Questionnaire

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9.5/1000 to 370/1000 population in India. Therefore, there is a need for the assessment of psychological health screening to have a preliminary idea of the problem.

Despite the ever-increasing adolescent population of the country, there is an absence of any national reporting of psychological/mental disorder in adolescents. There is a significant need for a national database for the prevalence of psychopathologies in this age group. Furthermore, for the sake of uniformity, comparison, and organized planning, any one scale should be preferred. The main barrier to such a database is the nature of these disorders - the screening questionnaires and clinical diagnosis being the two stages for population-based diagnosis. The need for a national database can be fulfilled by a screening questionnaire with satisfactory validity and reliability, which eliminates the need for a clinical diagnosis for epidemiological purposes.

One of the questionnaires that can address this wide gap is the Strength and Difficulties Questionnaire (SDQ). The importance of this questionnaire has already been emphasized in Indian settings by Sharan and Sagar, who recommend that it has the potential to become a basis for data collection for a much needed national database. The SDQ is one of the most frequently used assessment tools in adolescent mental, and has been translated into more than sixty languages with studies conducted and published from many countries. The self-rated version of the SDQ has been shown to be a reliable and valid method for the assessment of behavioral and other problems in children and adolescents, has a sensitivity of 85% and specificity of 80% compared to independent diagnosis of a clinician, with a satisfactory reliability and validity. The California Evidence-Based Clearinghouse for Child Welfare rates the English version of the questionnaire for age 4–16 years as of “A” grade (highest), which means that the reliability and validity has been demonstrated and widely published.

Thus, SDQ has the potential to become the standard questionnaire for database through school health services as the self-rated version of the SDQ has been shown to be a reliable and valid method for the assessment of behavioral problems in children and adolescents. In addition, it has the advantage of being popular and can be completed within a very short period, as little as 5 min. Besides, it also has the potential to sort out the “borderline” adolescents who are not in abnormal stage, who can be counseled, and a proper intervention can improve their situation from further deterioration into abnormal stages.

The present study was conducted in the 13–15 years’ age group of schoolgoing adolescents employing SDQ with the objective to estimate the prevalence of psychological morbidity, emotional problems, conduct problems, hyperactivity problems, peer problems, and prosocial behavior in the schoolgoing adolescents of Aligarh.

MATERIALS AND METHODS

Design
This was a cross-sectional analytical study.

Duration
The study was conducted over a period of 8 months, from August, 2011, to April, 2012.

Setting
The study was held in three different schools of Aligarh, all of which are English medium schools affiliated to the Aligarh Muslim University Board of Examination. In terms of numbers, these are among the largest schools of Aligarh. A prior permission was taken from the school authorities.

Study population
Students aged between 13 and 15 years enrolled in the aforementioned schools.

Sampling
All students in the age group of 13–15 years, who gave the assent, were recruited for the study. A written consent for the study was also taken from the parents and teachers of the students. This was a self-administered questionnaire, the study was conducted in small groups to improve response rates, accuracy, and reliability of the responses. The forms were filled under supervision of the interviewer.

Study instrument
The study instrument was the SDQ, English version. The SDQ is a 5-scale behavioral screening questionnaire meant for the assessment of psychological attributes between ages 3 and 16 years. The self-report version is only applicable for 11–16 years. The SDQ is a screening instrument for evaluating social, emotional, and behavioral functioning in children and adolescents and has five subscales, four for difficulties, and one for strength.

In each subscale, scores are calculated and are assigned for borderline, abnormal to normal. The problematic category is taken up as a disorder or abnormal in the screening as it has the maximum probability for possible diagnoses. The details of the scales of SDQ are shown in Table 1.

A pilot study was done after the SDQ was incorporated with the other details, and this pro forma was then tested and validated.

Ethical issues
The study was approved by the multidisciplinary
Table 1: The 5 scales of the Strength and Difficulties Questionnaire

| Scale                               | Items | Scoring |
|-------------------------------------|-------|---------|
| (1) Emotional symptoms              | Five  | On the basis of scores, each scale is classified as: |
| (2) Conduct problems                | Five  | 1. Abnormal/Problematic, |
| (3) Hyperactivity/inattention       | Five  | 2. Borderline, and |
| (4) Peer relationship problems      | Five  | 3. Normal |
| (5) Prosocial behavior              | Five  | Scales to 4 are added to generate total difficulties Score |
| Total Difficulties Score            | Twenty| |

Institutional Board of Studies. Counseling, health education, and relevant advice were offered to all participants. Those who needed specialized care were referred to the JN Medical College, Aligarh. The results of the study were kept confidential, and parents were personally informed by the investigator for further review.

Statistical analysis

A total of 1456 students were sampled and studied. IBM SPSS Statistics version 20.0 (IBM Corp., Armonk, NY, USA) was used for the data entry and statistical calculations. The confidence interval of proportions was calculated up to 95% using the modified Wald method.

RESULTS

A total of 1456 students were sampled for the study, out of those 732 were males and 723 females. The prevalence of psychological morbidity on the basis of total difficulties score was found to be 9.75% (8.33–11.39), whereas 18.48% (16.56–20.55) were found to have borderline scores. Among males, 10.50% (8.48–12.94) were found to have abnormal scores as compared to 8.99% (7.10–11.31) in females although the difference was found to have no statistical significance ($\chi^2 = 1.36$, df = 2, $P = 0.51$). The details are given in Table 2.

Among the different categories of psychological morbidity, the prevalence of conduct problems was found to be 5.56% (4.86-7.32) in the problematic range, followed by emotional problems in 5.42% (4.37–6.72). The peer problems, prosocial behavior, and hyperactivity problems were found to be abnormal in 4.40% (3.45–5.58), 4.26% (3.33–5.43), and 3.78% (2.91–4.89), respectively, the details of which are given in Table 3. Apart from the abnormal, the borderline category was found to be more than double in almost all the categories. Despite the probability of a disorder in this category being low, almost all the false negatives in the previous studies have been found in the borderline criteria. The borderline category is also important in the sense that it can be used to intervene for counseling before their problem becomes more severe.

DISCUSSION

The overall prevalence of psychological morbidity was found to be 9.75% (8.33–11.39) in the present study. Bansal and Barman found the prevalence of any psychological abnormality to be 20.12% using Childhood Psychopathology Measurement Scale for screening and International Classification of Diseases-10 (ICD-10) for confirmation, whereas Pathak et al. found it to be 29.5% using Youth Self Report (YSR). Dhoundiyal and Venkatesh found the prevalence to be 30.8% among girls of 12–18 years using SDQ with health-related quality of life inventory, whereas Pillai et al. found it to be 1.81% using Development and Well-Being Assessment Questionnaire. Ahmad et al. found the prevalence to be 17.8% using Youth Report of Pediatric Symptom Checklist and ICD-10 for confirmation, Srinath et al. found it to be 12% using Child Behavior Checklist and ICD-10 for confirmation, whereas Mishra and Sharma found it to be 13.76% using YSR and their self-designed questionnaire. Thus, a wide variance has been seen in the studies reported because of the difference in diagnostic tools and types of psychological disorders considered in different researches.

As far as the specific psychological abnormalities are concerned, emotional problems were found to be prevalent in 5.42% in our research. Pathak et al. reported the prevalence of behavioral and emotional disorders to be 29.5%, and Dhoundiyal and Venkatesh 20.4% in their studies. Conduct problems were present in 6% in our study, Bansal and Barman found it to be 1% using a different screening questionnaire and ICD-10 for confirmation. Ahmad et al. (2007) reported it to be 3.1%, and Anita et al. reported it as 4.5%. Hyperactivity problems were found to be 6% by Bansal and Barman, 8.3% by Dhoundiyal and Venkatesh, and 7.41% by Hiremath et al.

CONCLUSIONS

Psychological problems are fairly common in the adolescent age group. Despite the need, there is a dearth of studies conducted in this crucial age group in India. There is a need for more school-based studies for psychological assessment in India. For the purpose of uniformity and comparability, SDQ stands as a good option. It has been pointed out by Goodman et al., wide deployment of SDQ for screening has the potential to find out more than double to triple the number of psychological disorders among adolescents as compared to the numbers that are diagnosed presently.
Apart from the overall prevalence of 9.75% (8.33–11.39) in this study, there is a higher (almost double) prevalence of the borderline scores in this research. This is a vital area of concern as previous research have shown that apart from the abnormal scores, most of the others who were found to be false negatives belonged to the borderline scores. Therefore, those having borderline scores should also be followed up and reviewed further for the prevalence and management of psychological disorders. School mental health and social services have the potential to affect the prevalence of these and other psychological disorders by assisting in the assessment, referrals and management of the affected students, and teaching life skills such as problem solving, critical thinking, communication, interpersonal relations, empathy, and methods to cope with emotions and crises for all the students. It is pertinent to detect and manage these disorders in this age group or else they are likely to carry these morbidities into their adulthood.

This study had certain limitations as well. It was based on a self-administered pro forma and has not used a multi-informant method of assessment. Whether a prior detection of these disorders have a long-term benefit in the overall outcome is something which has not been researched in depth. Another vital issue of concern is that of false positives; the detection of disorders in those who do not actually have the disease, however, few their numbers may be, may cause distress to the students and their families.

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