

Prevalence, Patterns and Correlation of Behavioral and Emotional Disorders in School-going Children and Adolescents: A Cross-sectional Study

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ABSTRACT

Background: School-going early adolescent population are most vulnerable to psychiatric disorders. The study was undertaken to determine the prevalence, patterns, and correlation of behavioral and emotional disorders in school-going early adolescent children.

Material and methods: The present study was conducted in Kolhapur district schools. A total of 376 students of age 6–16 years, without any diagnosed medical/surgical illnesses and known to teachers for at least 3 months were included in the study. The school teachers were then introduced to the screening tools such as the pediatric symptom checklist PSC for 6–12 years and youth self-report Y-PSE for ≥ 12 years.

Results: The mean age of the children was 9.80 ± 1.85 years, ranging from 6 to 13 years. The majority of participants were male (52.92%). The incidence of behavioral and emotional disorders was found to be 46.67%. The prevalence of behavioral and emotional disorders was more in children of 10–11 years of age (34.07%), followed by 12–13 years (29.12%), 8–9 years (27.32%), and 6–7 years (9.34%). Whereas, prevalence in boys was more than in girls (53.30% vs 46.70%). The assessment of the pattern of emotional and behavioral problems in the children revealed that external problems were most common in children followed by attention problems and internalizing problems. A significant correlation was seen between academic performance and the presence of emotional and behavioral problems in children ($p = 0.000$).

Conclusion: Alarming number of school-going early adolescent children are suffering from emotional and behavioral problems at the study site causing a significant impact on academic performance. These data suggest urgency in establishing a school-based mental health service.

Keywords: Adolescents, Behavioral and emotional problems, Screening, Youth self-report.

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INTRODUCTION

These years are critical for promoting mental health since more than half of mental health issues start during childhood and adolescence and many persist into adulthood. Global figures reveal an increase in the prevalence of mental health issues among children and adolescents, with the percentage of those afflicted reaching approximately 20%. This makes it a current concern.¹ In India, the incidence of “behavioral and emotional” issues in teenagers ranges from 13.7 to 50%, according to studies done in various regions of the world. Given that adolescents make up about one-fifth of the population in India, the social burden of sickness is significant.²

Parents and mental health stakeholders share a common concern about the emotional and behavioral difficulties (EBP) that children and adolescents experience. Most EBP start in early childhood or adolescence and have an impact on daily functioning, including school attendance, learning capacity, substance use, violence, and interpersonal relationships.³ They also frequently last into adulthood. The types of issues can vary depending on the child’s age and can comprise an extensive range of issues such as “conduct issues, antisocial behavior, anxiety, depression, and substance abuse,” which are some of the most common issues affecting children and adolescents’ mental health.⁴

Children with “mental health disorders (MHD) are very likely to experience disruptive (oppositional defiance disorder (ODD), conduct disorder (CD), attention-deficit hyperactivity disorder (ADHD), pervasive (autistic spectrum) disorders, emotional-obsessive-compulsive disorder (OCD), anxiety, and depression.

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Emotional diseases, such as sadness and anxiety are regarded as internalizing disorders, whereas disruptive habits, such as ADHD and CD are characterized as externalizing disorders.⁵

Finding outlines of “emotional and behavioral problems” in preschool kid’s studies have produced occurrence rates for “emotional and behavioral issues” in preschoolers that range from 12 to 26%. Although the incidence of emotional and behavioral issues associated with gender varies depending on the study, one consistent finding is that boys exhibit more externalizing issues. Although prevalence rates in preschoolers vary, they are frequently

markedly minor when using predetermined “diagnostic criteria,” such as those for “ADHD (2–8%), oppositional defiant disorder (ODD) (2–7%), CD (1–3%), depressive disorder (2–3%), separation anxiety disorder (SAD) (2.5%), or generalized anxiety disorder (GAD) (2–7%), per DSM-IV.”⁶

The majority of the research has been devoted to comprehending the crucial role played by the caliber of student interaction and discourse in entire class settings or small group settings. Lack of information on the prevalence, patterns, and correlation of behavioral and emotional disorders prevents an evaluation of the problem’s scope, which is necessary for efficient healthcare planning. The present study was undertaken to estimate the incidence, patterns, and correlation of “behavioral and emotional disorders” in school-going early adolescents children.

MATERIALS AND METHODS

The present study was conducted in Kolhapur district schools. Out of 3,750 schools in Kolhapur having primary as well as secondary education, 517 schools had 1st to 10th standard. Among these, 205 were urban and 312 were rural schools. However, 1% of the sample was taken from both groups which resulted in a total of 5 schools, that is, 2 urban and 3 rural for the conduct of the study. A total of 376 students of age 6–16 years, without any diagnosed medical/surgical illnesses and known to teachers for a minimum of 3 months were involved in the study. Whereas, children outside the specified age range not known to teachers for at least 3 months and homeless or living in organizations were excluded from the study.

The permission letter was taken from the education department of the Z.P. office and was submitted to the school authority. The written parent consent forms were sent to all the students for the teacher assessment and permission to share the data with researchers at stage I with the details of the study title, need for the study, and benefits. Then preliminary information about the children was obtained from the schools after explaining the purpose of the research. Before screening, the teachers were involved in the discussion on Child and Adolescent Mental Health (CAMH) issues for the orientation as well as to develop much interest in the study. The school teachers were then introduced to the screening tools. After meeting the criteria, the preliminary screening was done with the help of teachers by using screening tools, such as the pediatric symptom checklist PSC for 6–12 years and youth self-report Y-PSE for ≥12 years, and the class instructors of the “divisions of 8th, 9th and 10th standards” were provided the required directions to complete the proforma. Children who scored significant points were assessed further.

Statistical Analysis

“Data were collected and entered into a Microsoft Excel sheet and statistically analyzed using Z-test for proportion and the Chi-square test for association.”

Stage I comprises the “teacher’s assessment of the child’s behavior using PSE” for the age group of 6–12 (Hindi and English version) and adolescents from the age of 13–16 filled Y-PSC. All the children who score ≥10 were considered positive at stage I.

RESULTS

“The mean age of the children was 9.80 ± 1.85 years, ranging from 6 to 13 years.” The maximum number of patients was male

Table 1: Demographic status of the study population

Variables	Subcategory	Percentage (%)
Sex	Male	52.93
	Female	47.07
Residence	Urban	98.94
	Rural	1.06
Socioeconomic status	Middle	98.40
	Lower	1.6
Past medical/psychologic history	Yes	0.80
	No	99.20
Type of family	Joint	30.05
	Nuclear	69.95
Number of siblings	1	33.78
	2	52.66
	3	13.56
Birth order	1	55.59
	2	38.56
	3	5.85

Table 2: Patterns of emotional and behavioral problems among children

Pattern	Factors	Percentage (%)
Internalizing problems (anxiety or depression)	• Feel sad, unhappy	46.15
	• Worry a lot	37.91
	• Feel hopeless	43.41
	• Seem to be having less fun	35.16
	• Down on yourself	25.82
Attention problems (ADHD)	• Fidgety, unable to sit still	51.10
	• Distract easily	53.30
	• Act as if driven by a motor	27.47
	• Daydream too much	59.34
Externalizing problems (conduct, disorder, oppositional, and defiant disorder)	• Have trouble concentrating	50
	• Fight with other children	58.24
	• Tease others	56.59
	• Do not listen to rules	67.58
	• Do not understand other people’s feelings	56.59
	• Blame others for your trouble	39.01
	• Take things that do not belong to you	20.88

(52.92%). The detailed distribution of subjects according to sociodemographical variables is illustrated in Table 1.

The behavioral and emotional disorder was seen in 46.67% of the children. The incidence of “behavioral and emotional disorders” was more in children aged 10–11 years (34.07%) followed by 12–13 years (29.12%), 8–9 years (27.32%), and 6–7 years (9.34%). Whereas prevalence in boys was more than in girls (53.30% vs 46.70%); however, the variance was statistically insignificant ($p > 0.05$).

The assessment of the pattern of “emotional and behavioral problems” in the children revealed that external problems were

Table 3: Distribution of subjects according to academic performance and emotional and behavioral problems

Academic performance	Children without emotional and behavioral problems (%)	Children with emotional and behavioral problems (%)
Excellent	30.32	14.83
Good	48.45	58.79
Average	18–56	25.27
Poor	2.06	1.10

most common in children followed by attention problems and internalizing problems (Table 2).

The proportion of good, average, and poor academic performance was more in children with “emotional and behavioral problems” associated with their counterparts (Table 3). A considerable correlation was observed between academic performance and the occurrence of “emotional and behavioral problems in children ($p = 0.000$).”

DISCUSSION

“The study aimed to determine the prevalence, patterns, and correlation of behavioral and emotional disorders in school-going children and early adolescents.” In this study, the incidence of behavioral and emotional problems in early adolescent children (6–13 years of age) was found to be 46.67%. The incidence of “behavioral and emotional problems” in the studies of Biswas R et al. and Chaudhury S et al. was described to be 30.70 and 30.97%, respectively in the early “adolescent age group children.”^{7,8} The difference in the results may be due to the type of the study and the study setting. These findings suggest that the majority of early adolescent children are suffering from emotional and behavioral problems unknowingly without even recognition.

The mean age of the present study population was 9.80 ± 1.85 years. Here, the incidence of behavioral and emotional disorders is predominantly seen in children of 10–11 years age group followed by 12–13 years, 8–9 years, and 6–7 years. These findings are comparable with the study of Biswas R et al.⁷ Moreover, a study carried out by Pathak R et al. suggested that as the age of the children increases, the incidence of behavioral and emotional problems increases.⁹ The present study evidenced an almost similar trend. Furthermore, in the present study subjects, 53.30 and 46.70% of children were male and female, respectively. There was no significant difference in the proportional distribution of sex. However, Biswas R et al. showed male predominance in their study.⁷ The variation in the outcomes may be because of the study setting as they conducted a hospital-based study. The presentation of male children in hospitals may be due to the male sex being the gender of choice in the Indian scenario and receiving extra care than females.¹⁰

In this study, 98.94% of children live in urban areas whereas, 98.40% of children belong to middle-class families. About 69.95 and 30.05% of children stay in nuclear and joint families, respectively. It is well known that child behavior and emotional disorders are related to the family background. The present study was a school-based survey and teachers were the respondents on behalf of children, thus detailed family insight was not achieved which could be a potential limitation of the study.

In this study, most of the children had external problems (conduct, disorder, oppositional, defiant disorder), followed by

“attention problems (ADHD) and internalizing problems (anxiety or depression).” In the study of Biswas R et al. anxiety disorder was predominantly seen in children followed by ADHD, disruptive impulse control and conduct disorder, and autism.⁷ Another study conducted by Pillai A et al. showed “anxiety disorders, depressive disorders, behavioral disorders, and ADHD in children.”¹¹

The proportion of good, average, and poor academic performance was more in children with “emotional and behavioral problems” compared with their counterparts. A significant correlation was obtained between academic performance and the existence of emotional and behavioral problems in children ($p = 0.000$). These findings are comparable with previous reports.^{7,9}

The strength of the study was adequate sample size and uniform application of the protocol. Moreover, the sample size was taken from the community setting. We acknowledge certain limitations including parents of the children who were not assessed in the study and “factors which may directly or indirectly influence the mental health of children remain unexplored.”

CONCLUSION

The occurrence of “behavioral and emotional disorders” in school-going children and early adolescents is at an alarming state. Patterns of the disorder include external problems, attention problems, and internalizing problems. Academic performance was significantly correlated with “emotional and behavioral problems in children.” A multicenter study with a large sample size including all the direct and indirect factors affecting children’s behavior and emotion is the further recommendation of the study.

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