

# Prevalence of Emotional and Behavioral Problems among School-Going Adolescents: A Cross-Sectional Study

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## Abstract

**Background:** Adolescence is a period of several emotional, mental, and behavioral changes, and many adolescent problems are manifested in the form of emotional problems, conduct problems, hyperactivity, and peer-related problems. The objectives of the current study are to assess the prevalence of emotional and behavioral problems across gender and location. It analyzes the Strengths and Difficulties Questionnaire (SDQ) total score with sociodemographic details among school-going adolescents in Kollam district. **Materials and Methods:** A cross-sectional study of 600 school-going adolescents between Class VIII to XII from the rural and urban areas in Kollam district was carried out using a cluster sampling method. A self-reported SDQ was administered to the respondents. **Results:** The findings indicate that a little more than a tenth of school-going adolescents had emotional and behavioral problems and multiple regression analysis revealed a significant association in SDQ total score with the type of schools, settings, and socioeconomic status. **Conclusion:** Early detection, periodical assessment, and intervention in the schools with the aid of mental health professionals can help adolescents in coping with different issues and for a healthy transition into adulthood.

**Keywords:** Behavioral problems, emotional problems, school-going adolescents

## INTRODUCTION

Adolescence is the age between childhood and adulthood characterized by the rapid levels of biological and emotional change and maturity.<sup>[1]</sup> There are 243 million adolescents in India, entailing the largest adolescent population in the world.<sup>[2]</sup> Adolescence is a revolutionary period of sexual development and much influenced by life circumstances and socioeconomic conditions of their environment. Emotional and behavioral problems are one of the major mental health issues faced by adolescents.

A trail study investigated the need for mental health care among adolescents and its determinants. The parents of adolescents reported that a substantial proportion of adolescents need care for their mental health problems.<sup>[3]</sup> The meta-analysis studies related to adolescents revealed that 6.5% of community samples and 23.3% of school samples had a significant prevalence of emotional and behavioral issues;<sup>[4]</sup> 41 studies from 27 countries found that 13.4% of adolescents struggle with mental health issues.<sup>[5]</sup>

A systematic review of children and adolescents during the period from 2007 to 2017 depicts that the effects of mental health interventions decrease all psychopathological conditions and increase social skills and well-being.<sup>[6]</sup> A longitudinal 3 years' follow-up study on school experiences concerning emotional and conduct problems in adolescents depicts that positive school experiences decreased while also reducing emotional and conduct problems among the students.<sup>[7]</sup>

Mental health concerns among adolescents or youth in various studies show that 7.8% of mental health problems<sup>[8]</sup> and 13.8% of emotional and behavioral problems<sup>[9]</sup> are among adolescents while 15% had a high risk of emotional and behavioral problems<sup>[10]</sup> and total difficulties score was found to be 17.2% at the abnormal level;<sup>[11]</sup> another 26% had psychiatric problems.<sup>[12]</sup>

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The current study has investigated emotional and behavioral problems such as emotional problems, conduct problems, hyperactivity, and peer problems among school-going adolescents in Kollam District, Kerala. The objectives of the study are as follows:

1. To determine the prevalence of emotional and behavioral problems
2. To assess the gender comparison on emotional and behavioral problems
3. To examine the rural-urban comparison of emotional and behavioral problems
4. To assess the association between the Strength and Difficulties Questionnaire (SDQ) total score with socio-demographic details among school-going adolescents in Kollam District Kerala.

### MATERIALS AND METHODS

A cross-sectional study was conducted in the Kollam district, which is one of the finest education hubs in the state of Kerala. The study covered a total of 19 schools which includes 5 urban-government schools, 3 urban private schools, 6 rural government schools, and 5 rural-private schools in Kollam district, Kerala, India. The cluster sampling method was adopted for the collection of primary data. The school was taken as a cluster and divided into strata 1 (high school) and strata 2 (higher secondary school). In both strata, the type of school-government and private; and settings-rural and urban, were included. The total sample size was 600 school-going adolescents between the ages of 13–17 years and those studying in classes VIII to XII. From strata 1, 36 classes were randomly selected and 24 were selected from strata 2. Only one cluster was taken from a class with the cluster size being 10 school-going adolescents. The primary data were collected from July to October 2019 and ethical considerations such as written permission from school authorities, obtaining informed consent from school-going adolescents and their parents, were done before the study.

The tool of data collection was a structured questionnaire consisting of sociodemographic details, including age, sex, education, and school type; area and socioeconomic status of school-going adolescents. English and Malayalam versions of the SDQ were administered among school-going adolescents from government and English medium private schools. The subscales in the tools such as emotional, conduct problems, hyperactivity, peer problems, and pro-social behaviors. Each subscale had five questions, and a total of 25 questions were included in the SDQ scale. The scoring for each SDQ item is 0 for not true, 1 for somewhat true, and 2 for certainly true, and there is a reverse score for items 7, 11, 14, 21, and 25. The three versions had original 3-band (normal, borderline, and abnormal) categorized score in each domain and total score.<sup>[13]</sup> The descriptive and inferential statistical analysis was done using the Statistical Package for the Social Sciences (SPSS) IBM SPSS version 23.0 (Armonk, NY: IBM

Corp. Released 2015). The study was undertaken with the approval of the Academic Council of Mizoram University.

### RESULTS

The mean age of the respondents was calculated to be 14.98 years (standard deviation = 1.41); there were more female respondents (53%), and 68% belonged to the Hindu religion while 38.3% belonged to upper-middle socioeconomic class. The findings on emotional and behavioral problems among school-going adolescents can be observed in Table 1 were a little more than a tenth of school-going adolescents had emotional problems (11.5%) and those having conduct problems consist of a little less than a tenth (9.7%). School-going adolescents with hyperactivity consist of 8.5%, whereas 6% had peer-related problems. The overall emotional and behavioral problems establish that school-going adolescents had 10.3% abnormality.

The comparison of emotional and behavioral problems of school-going adolescents across gender is depicted in Table 2. High significant correlation across gender was found with emotional problems and hyperactivity, whereas other domains and SDQ total had no significance with gender.

Table 3 indicates the correlation between emotional and behavioral problems of school-going adolescents across the rural and urban settings. There was a highly significant correlation for the rural and urban settings with emotional, conduct problems, peer problems, and SDQ total. Only hyperactivity had no significance to the rural or urban settings.

**Table 1: Emotional and behavioral problems among school-going adolescents (n=600)**

	Normal, n (%)	Borderline, n (%)	Abnormal, n (%)
Emotional problems	480 (80)	51 (8.5)	69 (11.5)
Conduct problems	492 (82)	50 (8.3)	58 (9.7)
Hyperactivity	496 (82.7)	53 (8.3)	51 (8.5)
Peer problems	486 (81)	78 (13)	36 (6)
SDQ total	453 (75.5)	85 (14.2)	62 (10.3)

SDQ: Strengths and difficulties questionnaire

**Table 2: Comparison of emotional and behavioral problems according to gender**

SDQ domain	Boys		Girls		df	t	P
	Mean	SD	Mean	SD			
Emotional problems	2.61	1.90	3.54	2.48	598	-5.10	0.000**
Conduct problems	2.47	1.51	2.50	1.69	598	-0.21	0.82
Hyperactivity	4.01	2.22	3.04	1.98	598	5.60	0.000**
Peer problems	2.79	1.49	2.63	1.53	598	1.26	0.20
SDQ total	11.77	5.07	11.70	5.56	598	0.17	0.86

\*\*P<0.01. SD: Standard deviation, DF: Degree of freedom, SDQ: Strengths and difficulties questionnaire

The multiple regression analysis [Table 4] showed a highly significant association in self-reported SDQ among school-going adolescents with rural and urban settings and significant association with government and private schools, socioeconomic status but no significant association with age and gender.

### DISCUSSION

The current study found school-going adolescents undergo problems such as emotional problems (11.5%), conduct problems (9.7%), hyperactivity (8.5%), peer-related problems (6%), and abnormality while some are borderline. The behavioral problems most commonly identified among children were inattention to studies, addictive behavior, anger, disobedience, stealing, and poor school and home environment.<sup>[14]</sup> There was a report by Global Burden Disease in 2010 on conduct problems which established that one of the leading causes of disability was during the adjustment life years of children.<sup>[15]</sup> The current study also found that overall; a fourth (24.5%) of school-going adolescents had emotional and behavioral problems from the borderline to abnormal category. Other studies also found epidemiological rate on emotional and behavioral problems of adolescents from 7.8% to 26%.<sup>[8-12]</sup> The current study area was in the state of Kerala which has good health care facilities and community programs which may be one reason why the overall prevalence rate of emotional and behavioral problems was only a little more than a tenth of the study population.

The current study found that female adolescents had more emotional problems than their male counterparts while hyperactivity was found to be more among male adolescents. Emotional problems were found to be the highest among

other domains in government Special cum Children Home and Observational Home for Girls in Visakhapatnam.<sup>[16]</sup> Another study also depicts that boys had bullying behavior which is linked to fewer friends and being overweight.<sup>[17]</sup> Adolescents with persistent ADHD have been known to have significant deficits in academic performance and interpersonal relationships.<sup>[18]</sup> In addition, all SDQ domains have an association with gender and age of respondents.<sup>[2]</sup>

Emotional and behavioral problems were found to be more prevalent in the rural settings than in urban settings. A study by Nair *et al.* also indicates that the school-going adolescents in rural settings had a higher risk for emotional and behavioral problems.<sup>[10]</sup> The current study depicts that the emotional and behavioral problems had a significant association with the type of school and socioeconomic status. Multiple regression analysis in the current study shows that rural-urban settings, government-private schools, and socioeconomic status had an association with SDQ total score. This indicates that emotional and behavioral problems in the urban settings were higher than rural; government schools were higher than private and lower socioeconomic status had high risk than other statuses. The R square model was poor about the model because of less significant association with other sociodemographic variables with SDQ total score. The current study indicates that emotional and behavioral problems do exist among school-going adolescents in Kollam District. However, approaches for the implementation of strategies to cater to the child and adolescent mental health issues is grim in low-resource settings but systematic actions will help to reduce the burden and improve the development of children and adolescents.<sup>[19]</sup>

The implications of the study convey the need for periodical assessment, life skills education and student enrichment programmes; promotion of adolescent mental health programs especially in rural settings; holistic approach toward adolescents, teachers, and their parents. The study has a few limitations such as the use of only SDQ questionnaire; and noninclusion of causation factors such as academic performance, resilience, and coping strategies.

### CONCLUSION

The study concludes that the overall prevalence of emotional and behavioral problems among school-going adolescents in Kollam District, Kerala, India, was 24.5%. Gender and

**Table 3: Comparison of emotional and behavioral problems according to rural and urban settings**

SDQ domain	Rural		Urban		df	t	P
	Mean	SD	Mean	SD			
Emotional problems	3.45	2.36	2.76	2.13	598	3.77	0.000**
Conduct problems	2.75	1.77	2.21	1.39	598	4.18	0.000**
Hyperactivity	3.60	2.11	3.40	2.19	598	1.11	0.264
Peer problems	2.94	1.70	2.47	1.25	598	3.89	0.000**
SDQ total	12.76	5.84	10.70	4.55	598	4.81	0.000**

\*\*P<0.01. SD: Standard deviation, DF: Degree of freedom, SDQ: Strengths and difficulties questionnaire

**Table 4: Multiple regression analysis - predictor of self-reported strengths and difficulties questionnaire total score**

Values	B	P	95.0% CI	Model summary
Age	-0.01	0.74	-0.34-0.24	R=0.25
Gender	-0.01	0.65	-1.02-0.64	R <sup>2</sup> =0.06
Type of school - government or private	-0.09	0.04*	-1.86-0.04	F=8.18
Area - rural or urban	-0.17	0.000**	-2.71-1.01	P=0.000**
Socioeconomic status	0.10	0.01*	0.10-1.08	

\*P<0.05, \*\*P<0.01. CI: Confidential interval

rural-urban differences in emotional and behavioral problems indicate the need for emphasis on gender-sensitive interventions as well as mental health programs for rural students focusing on issues such as emotional problems, conduct problems, hyperactivity, and peer problems. A periodical assessment and psychosocial intervention with the aid of mental health professionals need to reach not just school-going adolescents but teachers and parents as well.

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### Conflicts of interest

There are no conflicts of interest.

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