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A Study of Mental Health Problems in Adolescent School Children

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Abstract

Introduction: Mental health problems in adolescents are inadequately researched in our area. We aimed in this study to assess the prevalence of mental health problems and correlates in school children aged 14-17 years and compare differences between urban and rural schools in Kalaburgi District, Karnataka.

Methods and Analysis: This study was conducted in schools and colleges. 1000 students with 558 of boys and 442 girls belonging to 9th to 12th grades were included in the study. Strengths and Difficulties Questionnaire (SDQ) was used to assess the mental health status of the students, and total difficulties scoring was used to categorise into normal (0-15) and borderline (16-19) and abnormal (20-40)). Socio-demographic were used to assess associated medical and psychosocial factors. Clearance was obtained from the institutional ethics committee before conducting the study.

Results: 13.2% participants had a high SDQ score and 17.1% had borderline SDQ score. Girls had more emotional problems and hyperactive problems, while the rest of the problems were more prevalent in boys. Urban children were found to have more mental health Issues than that of rural students and problems are more prevalent in students studying in kannada medium schools. Keeping physically fit and having friends were associated with normal SDQ Score, having friends and after-school entertainment like watching movies decreased odds of high SDQ score.

Conclusion: At least one in ten adolescents in this study was at risk of mental health problems. A significant proportion of school-going adolescents harbor problems, which accounted for 13.2% of the students who participated in our study. SDQ questionnaire may be used as a screening modality to identify at-risk students. This study can bring awareness about the mental health of children among their teachers and parents and can guide them to take necessary intervention.

Introduction

WHO defines adolescence comprising the age group 10-19 years, youth between 15-24 years and young people between 10-24 years of age. It is a period of maturation between childhood and adulthood heralded by various physiological signs and surging hormones of puberty. The change a child undergoes through this period is enormous. They have several physical and psychological changes, including sexual maturation. All these changes put the young individual in a dilemma or confusion known as "adolescent crisis" [1].

Psychiatric problem in adolescents, like anxieties, depressiveness, conduct problem, hyperactivity inattention and peer relationship problems are major health issues in adolescence and these are of great public health concern.

Adolescents spend majority of their time in school when away from home. School teachers are often helpful in identifying the mental healthcare needs of adolescents. However, in the current context, they are not well trained or oriented to pick up the early warning signs. Primary healthcare providers, on the other hand, may lack the time and patience required to identify and manage these disorders in their routine already-busy practices. This is where the use of screening tools or procedures would benefit the situation, Strengths and Difficulties Questionnaire (SDQ) is one such easy to use behavioral screening tool.

Mental health of children is not adequately explored in India especially in north karnataka. If untreated, these conditions severely influence children's development and their potential to live fulfilling and productive lives. This study is aimed to assess the prevalence of the mental health problems.

Materials and Methodology

Study type and setting: It's a school based descriptive observational study was conducted among schools of both rural and urban areas of Kalaburgi District of Karnataka, between 1st November 2019 to 30th 1st April 2021 [18 months]. The schools were chosen in and around Kalburgi as per feasibility. Permission was sought from the head of the institutions and the respective class teachers of the selected schools. Students belonging to grades 9-12 (13-17 years) who were present on the day of the study were all included. A total of 1000 students were recruited in the study [2].

Procedure: The study questionnaire consisted of socio-demographic data, kannada and english version of SDQ. SDQ was used to assess the mental health status of the students.

The SDQ is a screening instrument for the children aged 3-17 years, which surveys their mental health symptoms and positive attitudes. It can be completed by parents, teachers or the adolescents of age 11 years or older. Although SDQ is a relatively new instrument it has already seen widespread use as a brief psychiatric screening of children and adolescents and has been translated into more than 80 languages. SDQ measures positive or negative behavioural attributes using 25 items focused on the following dimensions: emotional symptoms, conduct problems, hyperactivity/inattention, peer relationship problems and pro-social behaviour. SDQ scale items are rated on a 3-point scale:

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'not true', 'somewhat true' or 'certainly true'. The sum of the first four problem areas (excluding pro-social behaviour as per scoring manual available at http://www.sdqinfo.com) generate a total difficulties score ranging from 0 to 40, which is further categorised as normal (score ≤ 15) and high (borderline (16-19) and abnormal (20-40)). Children with high SDQ scores (16-40) are likely to have greater rates of existing mental disorders compared with their cohorts with 'low' SDQ scores [3].

Statistical analysis

Primary outcome variable (SDQ score) was categorized as normal or high as per the previously stated cut-off. Univariate analysis was used to study the frequency of various factors and determine the associations with the SDQ. Statistical analyses were performed using IBM SPSS Statistics for Windows, Version 25.0. Armonk, NY: IBM Corp. Results on categorical measurement is presented as Frequency and percentage. Inferential statistics like Mann-Whitney U test, Chi-square test/Fisher's Exact test was used. The significance of level adopted was 5% [4].

Results

The study was conducted on a total number of 1000 students of the age group of 13-17 years attending schools studying in classes 9th TO 12th drawn from English and kannada Medium schools in Karnataka, located both in rural and urban areas of Kalaburagi district. The overall degrees of Mental Health problem (Total Difficulty) of the total adolescent school going children is shown in Table 1.

Out of the total students (N=1000), 132 students i.e 13.2% showed very high score of SDQ in total difficulty. This indicates that they fall under abnormal category, which suggests that these children have definite problems in coping with the difficulties of daily life, these students need intervention. Another 171 students (17.1%) scored high and are in borderline, they may have problems if not taken care of. Rest of the students may have minor or no difficulty scoring or slightly raised and as close to average in SDQ score, which can be termed as normal Table 2 [5].

Discussion

The major findings emerged through the present study would be important contributions for improvement of our understanding about Mental Health problem of the adolescent school going children and its various dimensions. The study investigated overall degrees of Mental Health problems with respect to different demographic variables such as age, gender, medium of instruction, locality, family type the child belongs to [6].

The present study estimated that out of the total students under study, 13.2% had overall Mental Health problem and another 17.1% were on the borderline on the basis of SDQ scores. The rate of prevalence

Table 1: Mental health problem (total difficulty) of the total adolescent school going children.

	Normal N(%)	Borderline N(%)	Abnormal N(%)
Emotional Problem	783(78.3)	100(10.0)	117(11.7)
Conduct Problem	631(63.1)	194(19.4)	175(17.5)
Hyperactivity	825(82.5)	105(10.5)	70(7.0)
Peer Problem	653(65.3)	185(18.5)	162(16.2)
Pro Social Score	758(75.8)	118(11.8)	124(12.4)
Total Difficulty Score	697(69.7)	171(17.1)	132(13.2)

Table 2: Different classes of children and their categories.

		Abnormal N(%)	Borderline N(%)	Normal N(%)	P value
Age	14	20(2.0)	36(3.6)	104(10.4)	0.124
	15	21(2.1)	38(3.8)	168(16.8)	
	16	47(4.7)	53(5.3)	247(24.7)	
	17	44(4.4)	44(4.4)	178(17.8)	
Sex	Female	71(7.1)	73(7.3)	298(29.8)	0.049*
	Male	61(6.1)	98(9.8)	399(39.9)	
Medium	English	88(8.8)	92(9.2)	421(42.1)	0.073
	Kannada	44(4.4)	79(7.9)	276(27.6)	
Address	Rural	44(4.4)	79(7.9)	277(27.7)	0.044*
	Urban	88(8.8)	92(9.2)	420(42.0)	
Type of Family	Nuclear	94(9.4)	131(13.1)	529(52.9)	0.643
	Joint	97(9.7)	38(3.8)	157(15.7)	
	Extended	01(0.1)	02(0.2)	11(1.1)	

found in this study is higher as compared to the studies conducted by ICMR (2005) in Chandigarh among 963 school going children which was estimated as 9.34%; and 9.4% found in Kerala by Hacket (1999) in 8-12 year olds.

This study shows a lower prevalence rate of Mental Health problem than the studies conducted by Ahmad (2006-2007) in Aligarh (17.9%), Gupta (2001) in Ludhiana (14.6%), Pathak (2011) in Chandigarh (30.0%), Anita (2003) in Rohtak (16.5%), Bansal (2011) in Bhatinda (20.2%), Sarda (2013) in Hapur, Western U.P., Kaur (2015) in Faridkot (16.8%), Sharma (2014) , Prakash (2008) in Delhi (42%) and Malhotra (2014) in her meta-analysis (23.33%) [7].

The selected literatures reviewed in the present study suggest that the prevalence rate of Mental Health problems of Indian adolescents as per the present study is lower than other countries. It is less than the studies using SDQ in Karachi, Pakistan (35.8%) by Syed (2009) and 48.5% by Hussein (2010); but more than the studies in America (7%) by Pastor (2012), in Germany (6.6%) by Ravens-Sieberer (2008) and in Ireland (8.7%) by Greally (2010).

This study revealed a statistically significant difference in prevalence rate of Mental Health problem between male and female students with female students having more than the male students. This result goes with the studies conducted by Reddy (2011) and Pathak (2011) with significant difference in the rates of prevalence. As opposed to these findings the prevalence rate of Mental Health problem was found more in males than in females in the studies of conducted by ICMR (2005), Kaur (2015) and Hussein (2010) [8].

According to the present study, the prevalence rate of overall Mental Health problem was found more in the adolescents studying in English medium schools than that of children studying in kannada medium schools and the difference was statistically insignificant. It is presumed that the students study through regional medium or through mother tongue fare better in Mental Health than students studying through English as medium of instruction.

So far, the location of schools the children were attending was concerned, this study revealed a statistically significant difference in the rate of prevalence of Mental Health problem with children of urban schools showing more than the children of rural schools, keeping with the findings of Sharma (2014). Ahmad (2006), Srinath (2005), Sarda (2013) and Kaur (2015) found insignificant difference in prevalence between urban and rural children. Studies of Anita (2003) and Yan (2006) also showed the prevalence rate of Mental Health problem more

in urban students than in rural students [9].

The present study showed conduct Problem to be the most prevalent Mental Health problem among adolescent school going children followed by peer problem, emotional problem and pro-social problem with hyperactivity problem being the least prevalent. These results are similar to studies conducted by researchers like Srinivasan (2014), Reddy (2011), Anita (2003) and UK Govt's record (2015) revealed conduct problem to be the highest prevalent problem.

In this study, four components (dimensions) i.e. emotional problem, conduct problem, hyperactive problem and peer problem were considered as predictors that had influence on Mental Health. The multiple regression considered only emotional problem, hyperactive problem and conduct problem to have high correlation with Mental Health problem. Emotional problem showed the highest influence (45.885%) on Mental Health problem followed by hyperactive problem (21.815%), conduct problem (17.886%), and peer problem (14.434%) being the least. Emotional problem was found to be the principal component influencing the overall Mental Health [10].

Conclusion

Mental health problems are highly prevalent among adolescent population in India. A significant proportion of school-going adolescents harbor mental health problems, which accounted for 13.2% of the students who participated in our study. All mental health issues were found to be more prevalent among the urban students except for conduct and hyperactivity problems. Emotional and hyperactivity problems were more common in girls, while the remaining domains were more common in boys. The kannada and English versions of the self-report SDQ are simple, useful strategies to identify at-risk population and associated factors. This study can bring awareness about the mental health of children among their teachers and parents and can guide them to take necessary intervention.

Conflict of Interest

The authors declare that they are no conflict of interest.

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