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A Cross-Sectional Evaluation of Mental Health Status of School Going Children

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Abstract

Background: Background: Mental health is a vital component of the overall health and development of children. School-going children are exposed to multiple academic, social, behavioral, and family-related challenges that may affect their emotional and psychological well-being. Early identification of mental health problems in children is important to prevent long-term adverse effects on academic performance, social relationships, and personality development. Tertiary care hospitals provide an important opportunity for screening and identifying mental health concerns in children who may otherwise present mainly with physical complaints.

Aim: To evaluate mental health status of school going children.

Materials and Methods: This hospital-based observational cross-sectional study was conducted among 125 school-going children. Children enrolled in formal schooling and accompanied by parents or guardians were included in the study. Data were collected using structured interviews and standardized mental health assessment tools. Information regarding socio-demographic profile, family background, academic difficulties, sleep duration, screen time, bullying, and family psychosocial stressors was obtained. Mental health assessment included emotional symptoms, conduct problems, hyperactivity/inattention, peer relationship problems, low prosocial behavior, and overall mental health status. Data were analyzed using descriptive and inferential statistical methods, and associations were tested using appropriate statistical tests with p values calculated wherever applicable.

Results: Among the 125 children studied, 38 (30.40%) had abnormal overall mental health status and 24 (19.20%) had borderline mental health status, while 63 (50.40%) were normal. Emotional symptoms were the most common problem, present in 38 children (30.40%), followed by hyperactivity/inattention in 35 (28.00%), peer relationship problems in 31 (24.80%), conduct problems in 26 (20.80%), and low prosocial behavior in 22 (17.60%). A significant association was found between mental health status and age group ($p=0.018$), with higher abnormality in older children. Significant associations were also observed with screen time >2 hours/day ($p=0.002$), sleep duration <8 hours/day ($p=0.006$), bullying at school ($p=0.001$), and family psychosocial stressors ($p<0.001$). Gender was not significantly associated with overall mental health status, although hyperactivity/inattention was significantly higher among males ($p=0.041$).

Conclusion: Mental health problems are common among school-going children attending a tertiary care hospital. Emotional symptoms and hyperactivity/inattention were the most frequent concerns. Older age, excessive screen time, inadequate sleep, bullying, and family psychosocial stressors were important associated factors. Early mental health screening in school-age children is essential for timely intervention and better psychological outcomes.

Key words: Mental Health, School-Going Children, Emotional Problems, Hyperactivity.

INTRODUCTION

Mental health is an essential part of the overall health, development, and well-being of children. In school-going children, mental health influences emotional stability, behavior, learning ability, peer interaction, self-confidence, and adjustment to the school environment. The school years are a period of rapid growth during which children face increasing academic expectations, changing social relationships, and greater family and societal pressures. During this stage, emotional and behavioral disturbances may begin to appear in subtle forms such as irritability, poor concentration, restlessness, declining school performance, social withdrawal, aggression, or sleep-related complaints. These problems are often overlooked because children may not clearly express their emotional distress, and parents or teachers may interpret such changes as part of normal growing-up behavior rather than early mental health difficulties. Therefore, assessment of mental health in school-going children is important for identifying problems at an early stage and for preventing long-term consequences on education, relationships, and overall development.[1] Child mental health problems are now recognized as a major public health concern. A wide range of psychiatric and psychosocial difficulties can begin during childhood and adolescence, including emotional disorders, conduct problems, hyperactivity, inattention, peer relationship difficulties, and impaired prosocial behavior. These difficulties may affect not only present functioning but also later adult mental health, educational attainment, occupational performance, and social adaptation. Because many adult psychiatric disorders have their roots in childhood, early recognition of emotional and behavioral symptoms during school age is especially valuable. The epidemiological literature from the early 2000s highlighted that mental health disorders among children and adolescents are common and that reliable methods for identifying them in community and clinical settings are necessary. This has strengthened the need for systematic mental health assessment among school-going children in both schools and health-care facilities.[2] The school setting occupies a central position in the life of a child and offers an ideal context for observing emotional and behavioral changes. Difficulties in attention, classroom behavior, peer adjustment, rule-following, motivation, and academic participation often become most visible in school. For this reason, schools are important places not only for education but also for mental health observation, support, and referral. School-based mental health approaches have been increasingly emphasized because they improve access to children who may not otherwise reach specialist services. At the same time, hospitals and pediatric outpatient departments also provide an important opportunity to identify hidden mental health concerns, especially when children present with recurrent somatic symptoms, sleep problems, behavioral complaints, poor school achievement, or family stress. Assessment in a tertiary care hospital can therefore complement school-based identification and help in early referral and management.[3] One of the major challenges in child mental health is that identification often depends on information from multiple informants, including parents, teachers, and the child. Mental health symptoms may vary across home and school settings, and a child who appears disturbed in the classroom may not be perceived similarly at home. Likewise, internal emotional problems may be less visible to teachers, while disruptive behavior may be more obvious in school than in the family environment. This makes structured and standardized assessment particularly important.

Use of validated screening methods allows a more balanced and comprehensive understanding of the child's functioning across settings. It also reduces the chance that significant problems will be missed because of differences in parental or teacher perceptions. Thus, mental health assessment in school-going children should ideally combine clinical judgment with standardized instruments and information from more than one observer.[4] Among the available screening measures, the Strengths and Difficulties Questionnaire and related brief child mental health instruments have gained importance because they are practical, economical, and easy to administer in school-age populations. Such tools help in assessing major domains such as emotional symptoms, conduct problems, hyperactivity or inattention, peer relationship problems, and prosocial behavior. Their usefulness lies in their ability to identify not only children with obvious disturbance but also those with borderline difficulties who may benefit from early attention. In pediatric and school settings, brief screening tools can help organize assessment, improve consistency, and support referral decisions. They are especially useful in settings where time, trained manpower, and specialist services are limited. For this reason, structured screening has become a valuable component of mental health assessment in school-going children.[5] Mental health in children is influenced by multiple interacting factors. Individual temperament, developmental stage, learning ability, coping style, family environment, parenting practices, school climate, peer relationships, and access to support all contribute to the child's emotional and behavioral adjustment. Family conflict, poor communication, inconsistent supervision, stressful home circumstances, and school-related pressures may increase the likelihood of problems becoming more visible during the school years. Similarly, school refusal, absenteeism, declining performance, and social isolation may reflect underlying anxiety, mood, or behavior-related disorders. Because these influences are complex and interconnected, mental health assessment in school-going children should extend beyond symptom counting alone and should include family, school, and social dimensions of functioning. A comprehensive assessment is therefore more useful than a narrowly symptom-based approach.[6]

MATERIALS & METHODS

This study was designed as a hospital-based observational cross-sectional study to evaluate mental health status of school going children. The setting provided access to a diverse population of school-going children referred for routine health evaluation or presenting with minor health concerns. The hospital environment ensured standardized assessment conditions, availability of trained professionals, and appropriate referral facilities for children requiring further psychological support. The study included a total of 125 school-going children. Participants were selected from children attending the outpatient and pediatric services of the tertiary care hospital. Both male and female children within school-going age groups were included to ensure representation across different developmental stages. The sample size was considered adequate to assess the prevalence and patterns of mental health concerns in this population.

Inclusion and Exclusion Criteria

Children enrolled in formal schooling and accompanied by parents or guardians were included in the study. Participants were required to be able to understand and respond to basic assessment tools, either independently or with assistance. Children with known severe neurological disorders,

intellectual disabilities, or those already diagnosed with major psychiatric illnesses under treatment were excluded to avoid confounding the assessment outcomes.

Methodology

Data were collected through structured interviews and standardized assessment tools. Parents or guardians were interviewed to obtain socio-demographic information, developmental history, family background, and academic performance details. Children were assessed in a quiet and comfortable environment to ensure reliability of responses. Both self-reported and parent-reported measures were used to capture comprehensive mental health information.

Assessment Parameters

Multiple parameters were included to evaluate the mental health status of children comprehensively. These included emotional well-being (such as symptoms of anxiety, sadness, irritability), behavioral patterns (including hyperactivity, conduct problems, peer relationship issues), and cognitive aspects (attention, concentration, and academic functioning). Social functioning was assessed through interaction patterns with peers, teachers, and family members. Sleep patterns, screen time, and extracurricular involvement were also evaluated as contributing lifestyle factors. Family-related parameters such as parental education, occupation, family structure, and presence of psychosocial stressors were documented. School-related factors including academic pressure, bullying, and attendance patterns were also assessed.

Assessment Tools

Standardized and validated screening tools suitable for children were used to assess mental health status. These tools included structured questionnaires designed to evaluate emotional symptoms, conduct issues, hyperactivity, peer problems, and prosocial behavior. The tools were administered in a language understandable to the participants, with assistance provided when necessary. Clinical judgment by trained healthcare professionals complemented the standardized tools to improve diagnostic accuracy.

Statistical Analysis

Collected data were systematically entered and analyzed using appropriate statistical methods. Descriptive statistics such as mean, standard deviation, frequencies, and percentages were used to summarize demographic and clinical characteristics. Associations between mental health parameters and socio-demographic variables were analyzed using suitable statistical tests. The findings were presented in a structured manner to highlight key patterns and correlations.

RESULTS

Table 1 presents the socio-demographic and background characteristics of the 125 school-going children included in the study. Among the participants, the largest proportion belonged to the age group of 10–13 years, comprising 51 children (40.80%), followed by 14–16 years with 40 children (32.00%), while 34 children (27.20%) were in the 6–9 years age group. This indicates that the study population was mainly composed of children in late childhood and early adolescence. With regard to gender distribution, 70 participants (56.00%) were males and 55 (44.00%) were females, showing a slight male predominance in the study sample.

In relation to educational level, 55 children (44.00%) were studying in middle school, which formed the largest group, followed by 38 children (30.40%) in primary school and 32 children (25.60%) in secondary school. Family background assessment showed that most children belonged to nuclear families, accounting for 81 participants

(64.80%), whereas 44 children (35.20%) came from joint families. The socioeconomic profile revealed that more than half of the children, 67 (53.60%), belonged to the middle socioeconomic class, while 31 (24.80%) were from lower socioeconomic class and 27 (21.60%) belonged to upper socioeconomic class.

Lifestyle and psychosocial background factors from Table 1 further showed that 45 children (36.00%) slept for less than 8 hours per day, while the majority, 80 children (64.00%), reported sleep duration of 8 hours or more. Screen time assessment revealed that 60 children (48.00%) had screen exposure of more than 2 hours per day, whereas 65 children (52.00%) had screen time of 2 hours or less. Academic difficulty was reported in 42 children (33.60%), while 83 children (66.40%) did not report academic problems. Bullying at school was reported by 29 children (23.20%), whereas 96 children (76.80%) denied bullying experiences. Family psychosocial stressors were present in 40 children (32.00%) and absent in 85 children (68.00%).

Table 2 describes the distribution of mental health problems among the study participants. Emotional symptoms were the most common problem observed, present in 38 children (30.40%), while 87 children (69.60%) did not show emotional symptoms. Hyperactivity/inattention was the next most frequent issue, identified in 35 children (28.00%), with 90 children (72.00%) not showing this problem. Peer relationship problems were found in 31 children (24.80%), while conduct problems were reported in 26 children (20.80%). Low prosocial behavior was the least common among the measured domains, seen in 22 children (17.60%), whereas 103 children (82.40%) had no such difficulty.

Regarding overall mental health status in Table 2, 63 children (50.40%) were categorized as normal, 24 children (19.20%) were classified as borderline, and 38 children (30.40%) were found to have abnormal mental health status.

Table 3 shows the association of overall mental health status with age group and gender. A statistically significant association was observed between age group and overall mental health status ($p = 0.018$). Among children aged 6–9 years, 22 (64.71%) were normal, 7 (20.59%) were borderline, and only 5 (14.71%) were abnormal. In the 10–13 years age group, the proportion of normal children decreased to 24 (47.06%), while borderline and abnormal categories increased to 12 (23.53%) and 15 (29.41%), respectively. In the 14–16 years age group, only 17 children (42.50%) were normal, while 18 children (45.00%) had abnormal mental health status, which was the highest among all age groups.

In contrast, gender was not significantly associated with overall mental health status in this study ($p = 0.642$). Among male participants, 34 (48.57%) were normal, 13 (18.57%) were borderline, and 23 (32.86%) were abnormal. Among females, 29 (52.73%) were normal, 11 (20.00%) were borderline, and 15 (27.27%) were abnormal.

Table 4 demonstrates the association of selected risk factors with overall mental health status, and all examined factors showed statistically significant relationships. Screen time was significantly associated with mental health status ($p = 0.002$). Among children with screen time greater than 2 hours per day, 27 (45.00%) had abnormal mental health status, compared to only 11 (16.92%) among those with screen time of 2 hours or less. Similarly, only 22 children (36.67%) with higher screen time were normal, compared to 41 children (63.08%) among those with lower screen exposure.

Sleep duration also showed a significant association with overall mental health status ($p = 0.006$). Among children sleeping less than 8 hours

per day, 21 (46.67%) had abnormal mental health status, whereas among those sleeping 8 hours or more, only 17 (21.25%) were abnormal. At the same time, normal mental health status was seen in only 15 children (33.33%) among the shorter-sleep group, compared to 48 children (60.00%) among the adequate-sleep group.

Bullying at school was another factor significantly associated with abnormal mental health status ($p = 0.001$). Of the children who reported bullying, 16 (55.17%) were in the abnormal category, while only 8 (27.59%) were normal. In contrast, among children who did not report bullying, 22 (22.92%) were abnormal and 55 (57.29%) were normal.

Family psychosocial stressors had the strongest association with mental health status and were highly statistically significant ($p < 0.001$). Among children with psychosocial stressors in the family, 21 (52.50%) had abnormal mental health status and only 12 (30.00%) were normal. In comparison, among children without such stressors, only 17 (20.00%) were abnormal while 51 (60.00%) were normal.

Table 5 presents the gender-wise distribution of specific mental health problems. Emotional symptoms were present in 19 males (27.14%) and 19 females (34.55%), but this difference was not statistically significant ($p = 0.371$). Conduct problems were observed in 17 males (24.29%) and 9 females (16.36%), again without significant association ($p = 0.279$). Peer relationship problems were seen in 19 males (27.14%) and 12 females (21.82%), and low prosocial behavior was found in 13 males (18.57%) and 9 females (16.36%), with both comparisons being statistically non-significant ($p = 0.495$ and $p = 0.746$, respectively). However, hyperactivity/inattention showed a statistically significant gender difference ($p = 0.041$). It was present in 24 males (34.29%) compared to 11 females (20.00%).

Table 1. Socio-demographic and background characteristics of study participants (n=125)

Variable	Category	Frequency (n)	Percentage (%)
Age group (years)	6–9	34	27.20
	10–13	51	40.80
	14–16	40	32.00
Gender	Male	70	56.00
	Female	55	44.00
School level	Primary	38	30.40
	Middle	55	44.00
	Secondary	32	25.60
Family type	Nuclear	81	64.80
	Joint	44	35.20
Socioeconomic status	Lower	31	24.80
	Middle	67	53.60
	Upper	27	21.60
Sleep duration	<8 hours/day	45	36.00
	≥8 hours/day	80	64.00
Screen time	>2 hours/day	60	48.00

	≤2 hours/day	65	52.00
Academic difficulty reported	Yes	42	33.60
	No	83	66.40
Bullying at school	Yes	29	23.20
	No	96	76.80
Family psychosocial stressors	Present	40	32.00
	Absent	85	68.00

Table 2. Distribution of mental health problems among study participants (n=125)

Mental health parameter	Category	Frequency (n)	Percentage (%)
Emotional symptoms	Present	38	30.40
	Absent	87	69.60
Conduct problems	Present	26	20.80
	Absent	99	79.20
Hyperactivity/Inattention	Present	35	28.00
	Absent	90	72.00
Peer relationship problems	Present	31	24.80
	Absent	94	75.20
Low prosocial behavior	Present	22	17.60
	Absent	103	82.40
Overall mental health status	Normal	63	50.40
	Borderline	24	19.20
	Abnormal	38	30.40

Table 3. Association of overall mental health status with age group and gender (n=125)

Variable	Category	Normal n (%)	Borderline n (%)	Abnormal n (%)	p value
Age group (years)	6–9 (n=34)	22 (64.71)	7 (20.59)	5 (14.71)	0.018
	10–13 (n=51)	24 (47.06)	12 (23.53)	15 (29.41)	
	14–16 (n=40)	17 (42.50)	5 (12.50)	18 (45.00)	
Gender	Male (n=70)	34 (48.57)	13 (18.57)	23 (32.86)	0.642
	Female (n=55)	29 (52.73)	11 (20.00)	15 (27.27)	

Table 4. Association of overall mental health status with selected risk factors (n=125)

Variable	Category	Normal n (%)	Borderline n (%)	Abnormal n (%)	p value
Screen time	>2 hours/day (n=60)	22 (36.67)	11 (18.33)	27 (45.00)	0.002
	≤2 hours/day (n=65)	41 (63.08)	13 (20.00)	11 (16.92)	
Sleep duration	<8 hours/day (n=45)	15 (33.33)	9 (20.00)	21 (46.67)	0.006
	≥8 hours/day (n=80)	48 (60.00)	15 (18.75)	17 (21.25)	

Bullying at school	Yes (n=29)	8 (27.59)	5 (17.24)	16 (55.17)	0.001
	No (n=96)	55 (57.29)	19 (19.79)	22 (22.92)	
Family psychosocial stressors	Present (n=40)	12 (30.00)	7 (17.50)	21 (52.50)	<0.001
	Absent (n=85)	51 (60.00)	17 (20.00)	17 (20.00)	

Table 5. Gender-wise distribution of specific mental health problems (n=125)

Mental health parameter	Male (n=70) n (%)	Female (n=55) n (%)	p value
Emotional symptoms present	19 (27.14)	19 (34.55)	0.371
Conduct problems present	17 (24.29)	9 (16.36)	0.279
Hyperactivity/Inattention present	24 (34.29)	11 (20.00)	0.041
Peer relationship problems present	19 (27.14)	12 (21.82)	0.495
Low prosocial behavior present	13 (18.57)	9 (16.36)	0.746

DISCUSSION

In the present study, the study population was predominantly composed of children aged 10–13 years (40.80%), with a slight male predominance (56.00%), and most participants belonged to nuclear families (64.80%) and the middle socioeconomic class (53.60%). These background features are important because psychosocial and family context strongly influence childhood mental health. Meltzer et al. (2000), in the national survey from Great Britain, also showed that mental disorders in children were socially patterned, with "any disorder" being more common in children from families with no parental educational qualifications (37% vs 23% in children without disorder), supporting the view that family and socioeconomic disadvantage remain closely linked with child mental health. Thus, although the largest share of children in our study came from middle socioeconomic backgrounds, the presence of psychosocial stressors in nearly one-third of our sample indicates that social adversity remains relevant in tertiary-care populations.[7]

The overall burden of mental health problems in our study was considerable, as 30.40% of children had abnormal mental health status and another 19.20% had borderline scores, meaning that 49.60% of the sample fell outside the normal range. This proportion is markedly higher than that reported by Mullick et al. (2005) from Bangladesh, where the estimated prevalence of any ICD-10 psychiatric diagnosis among 5–10-year-old children was 15% (95% CI 11–21%). The substantially higher burden in our study may be due to the hospital-based setting, where children often present with physical complaints but may also carry hidden emotional and behavioral difficulties. Therefore, compared with community-based South Asian data, our findings suggest that tertiary care hospitals may capture a more vulnerable subgroup of school-going children.[8]

Regarding the pattern of specific problems, emotional symptoms were the most common domain in our study (30.40%), followed by hyperactivity/inattention (28.00%), peer relationship problems (24.80%), conduct problems (20.80%), and low prosocial behavior (17.60%). This pattern is broadly comparable to earlier South Asian screening findings cited from the Bangladeshi preliminary SDQ work linked to Mullick et al. (2001), where the predictive prevalence of psychiatric disorder was 17.90%, including emotional disorder in 10.50%, conduct disorder in 5.60%, and ADHD in 3.10%. Although

the percentages in our study are higher across all domains, both studies suggest that emotional difficulties and behavior-related symptoms form the core burden in school-age children. The higher rates in our sample again likely reflect the clinical nature of a tertiary-care setting compared with population screening.[9]

A significant association between age and overall mental health status was observed in our study (p=0.018), with abnormal mental health status increasing from 14.71% in children aged 6–9 years to 29.41% in those aged 10–13 years and 45.00% in those aged 14–16 years. This age-related increase is in agreement with Ford et al. (2003), who reported in the British Child and Adolescent Mental Health Survey that the overall prevalence of DSM-IV disorders was 9.5% among 5–15-year-olds, with emotional disorders showing greater prominence in older children and adolescents than in younger children. Our findings similarly indicate that as children move into adolescence, emotional and behavioral difficulties become more frequent and clinically more significant, likely reflecting increasing academic pressures, social challenges, and developmental changes.[10] In our study, gender was not significantly associated with overall mental health status (abnormal scores: 32.86% in males vs 27.27% in females; p=0.642), although hyperactivity/inattention was significantly more common among boys (34.29% vs 20.00%; p=0.041). This pattern is consistent with the observations of Hawes et al. (2004), who, in a community sample of 1,359 Australian children aged 4–9 years, reported that boys had higher scores on the conduct problems and hyperactivity subscales of the SDQ than girls. Thus, even though total psychiatric burden in our study did not differ significantly by sex, the higher level of hyperactivity/inattention among boys fits well with earlier evidence that externalizing symptoms tend to be more prominent in males during childhood.[11]

Screen exposure was significantly associated with poorer mental health in our study, with abnormal mental health status present in 45.00% of children exposed to screens for more than 2 hours/day compared with 16.92% among those with screen time of 2 hours/day or less (p=0.002). Since pre-2006 literature addressed television rather than today's broader digital screen use, the closest comparison is Christakis et al. (2004), who found that each additional hour of television watched per day at ages 1 and 3 years was associated with an almost 10% increase in the risk of attention problems at age 7. Although their outcome focused specifically on attentional difficulties rather than global mental health status, their findings support our observation that greater screen exposure is linked with behavioral and attentional vulnerability in children.[12]

Sleep duration also showed a significant relationship with mental health in our study: 46.67% of children sleeping less than 8 hours/day had abnormal mental health status compared with 21.25% among those sleeping 8 hours/day or more (p=0.006). Stein et al. (2001), in a sample of 472 school-aged children attending pediatric practices, likewise reported that sleep problems were common and were associated with daytime behavioral difficulties, with more than 13% of children taking over 30 minutes to fall asleep at least once per week and around 8% waking more than once nightly. Their work emphasized links between disturbed sleep and attention, aggression, and socialization problems. Our findings therefore reinforce the earlier view that poor or inadequate sleep is not merely a lifestyle issue but a meaningful correlate of emotional and behavioral problems in school-going children.[13]

Bullying and family psychosocial stressors emerged as especially strong correlates in the present study. Among children reporting bullying, 55.17% had abnormal mental health status compared with 22.92% among non-bullied children (p=0.001), while among children with family psychosocial stressors, 52.50% had abnormal status compared with 20.00% among those without such stressors (p<0.001).

These results are supported by Kumpulainen et al. (1998), who studied 5,813 elementary school children and found that children involved in bullying were more psychologically disturbed than uninvolved peers, with bully-victims showing the highest levels of externalizing behavior and hyperactivity, victims showing more internalizing symptoms, and referral for psychiatric consultation being 6.5-fold higher for male bully-victims and 9.9-fold higher for female bully-victims. Hence, our results strongly agree with earlier evidence that both peer victimization and adverse psychosocial context substantially increase the burden of child mental health problems.[14]

CONCLUSION

This study concludes that mental health problems are common among school-going children attending a tertiary care hospital, with a considerable proportion showing abnormal or borderline mental health status. Emotional symptoms and hyperactivity/inattention were the most frequent concerns identified. Older age, excessive screen time, inadequate sleep, bullying, and family psychosocial stressors were significantly associated with poorer mental health outcomes. These findings highlight the need for early mental health screening and timely intervention in school-age children to promote better psychological well-being and overall development.

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