

Original Research Article

Behavioural and socio-emotional issues among primary school students and their association with academic performance: a descriptive cross-sectional study using strength and difficulties questionnaire

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ABSTRACT

Background: Behavioural and socio-emotional challenges are vital in shaping students' academic performance and overall development. Understanding these issues early can guide targeted interventions, helping students succeed academically and emotionally. This study investigated the prevalence and impact of these challenges among primary school students.

Methods: To estimate the prevalence of emotional problems, conduct problems, hyperactivity-inattention, peer problems and pro-social behaviour among primary school students. To assess the association of the above factors with their academic performance. To assess the gender differences in mental health status among primary school students. Using the teachers- strength and difficulties questionnaire (T-SDQ), a descriptive cross-sectional study was carried out on 450 primary school students. Data on socio-demographics, domain-specific impairments, and academic performance were obtained. The objectives were evaluated through prevalence rates, correlation analysis, and independent samples t-tests. The relationship between SDQ parameters and academic performance was analysed.

Results: As per SDQ questionnaire Total score, 48% of the students reported with slightly raised difficulties, and 27.33% had very high difficulties. A statistically significant negative correlation ($r=-0.29$, $p<0.001$) was found between the total difficulties score and academic performance. Gender analysis revealed higher total difficulties scores in males than females ($t=6.59$, $p<0.001$).

Conclusions: The study highlighted the prevalence of socio-emotional and behavioural difficulties among primary school students and how these challenges negatively influence their academic outcomes. The results emphasize the SDQ as a valuable tool for assessing students at risk and aiding the development of targeted educational and psychological support interventions.

Keywords: Academic performance, Behavioural and socio-emotional, Primary school students,

INTRODUCTION

Behavioural and socio-emotional development is crucial in shaping both the learning outcomes and overall well-being of primary school students. During these formative years, children undergo rapid emotional, social, and

cognitive growth. However, many also face challenges such as hyperactivity, inattention, anxiety, and aggression, which appear in varying degrees.¹

Gender plays a significant role in how these behavioural and socio-emotional issues manifest. Research indicates

that boys are more likely to show externalizing behaviours like aggression and hyperactivity, while girls tend to experience internalizing problems such as anxiety, depression, or social withdrawal.² These gender-related behavioural patterns influence students' academic performance and highlight the need for gender-sensitive interventions to effectively address their distinct needs.³ If teachers don't consider the differences in how boys and girls show behavioural problems, the methods they use might not help- and could make learning harder for those students.⁴

There is extensive research linking behavioural and socio-emotional challenges with academic performance.⁵ Children dealing with these issues often struggle with lower engagement in class, reduced motivation, and conflicts with teachers and peers- all of which contribute to weaker academic outcomes.⁶ Identifying these difficulties early and providing targeted support is critical in reducing their impact. If left unaddressed, socio-emotional struggles can evolve into more serious complications in later developmental stages.⁷

This study set out to examine how common behavioural and socio-emotional difficulties are among primary school students, to explore the differences across genders, and to assess how these challenges influence academic performance. Using a descriptive cross-sectional approach, it aimed to offer valuable insights for educators, psychologists, and policymakers. Ultimately, the goal was to support the creation of learning environments that promote both emotional well-being and academic success.

Aim of the study

The aim of the study was to assess the behavioural and socio-emotional issues among primary school students and their association with academic performance.

Objectives

To estimate the prevalence of behavioural and socio-emotional issues (emotional problems, conduct problems, hyperactivity-inattention, peer problems and pro-social behaviour) among primary school students. To assess the association of behavioural and socio-emotional issues with their academic performance. To assess the gender differences in mental health status among primary school students.

METHODS

Study design

Descriptive cross-sectional design was used to examine behavioral and socio-emotional issues among primary school students and their association with academic performance.

Study setting and participants

There are 06 schools in an urban locality of a district in western Maharashtra. We obtained data using a two-step procedure. In the first step, the principals of all the six primary schools were contacted and asked if their school was interested to participate in the study. Five out of six schools did not agree to participate in the study. Only one school agreed to participate in the study. Once the principal showed interest to participate, the study was started involving students aged 6-12 years and the information about the study was sent to all parents (n=492) through class teachers, and 450 parents gave informed consent that teachers could provide information about their child to the research team.

A confirmation letter was sent to participating parents and teachers including the questionnaires. Teachers knew their students for at least six months at the moment of filling out their questionnaires. We included 450 students in the study. We got IEC clearance on 28 February 2025. The study was conducted from 01 March to 30 May 2025

Inclusion criteria

All students enrolled in the school between 6 and 12 years of age. Only those students who were in school for a minimum duration of six months were included in the study.

Exclusion criteria

Students diagnosed with neurodevelopmental disorders identified based on their medical certifications and of the teachers' reports, were excluded from the study. The students whose parents didn't give consent and the students who did not give assent to the study were excluded.

Tools for data collection

Socio-demographic proforma

A socio-demographic proforma was constructed for the purpose of this study with domains like age, sex, family details, academic performance and other details.

Strengths and difficulties questionnaire (SDQ)

SDQ is a brief standardized, structured questionnaire for screening psychiatric disorders in students and adolescents. The strength and difficulties questionnaire (SDQ) contains 25 questions that consist of 5 subscales of emotional, hyperactivity, relationship, and conduct problems and prosocial behaviours with 5 items in each. The sum of the first four subscales consists of the total difficulties score. The questionnaire has 3 forms: parent-report, teacher-report and self-report. Teacher-reported questionnaire was used for the study.

RESULTS

Demographic characteristics

There were 492 eligible students in the school, out of which the study examined a total of 450 students, consisting of 232 boys and 218 girls, aged between 6 and 12 years (Table 1). The largest group were 8-year-olds, with 96 students, and 11-year-olds, with 88 students (Figure 1). On an average, the participants were 8.9 years old, with a standard deviation of 1.6 years.

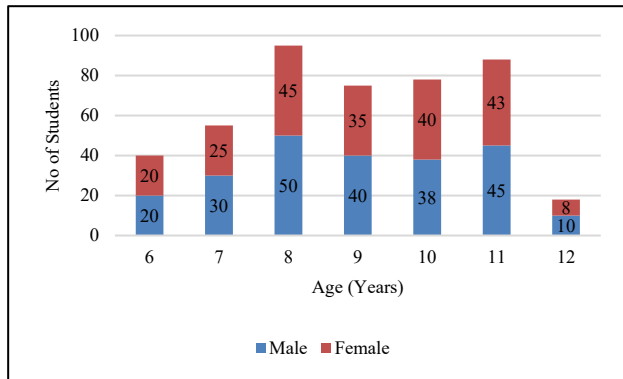


Figure 1: Age and gender distribution.

Table 1: Gender distribution of participants.

Gender	Count	Percentage
Male	232	51.56
Female	218	48.44
Total	450	100.00

Prevalence of behavioral and socio-emotional issues

The SDQ total difficulties scores among our study group ranged from 11 to 27, with a mean score of 16.65 (SD=3.80). Based on SDQ categorization scores according to newer 4 band categorisation of SDQ scores (Figure 2).

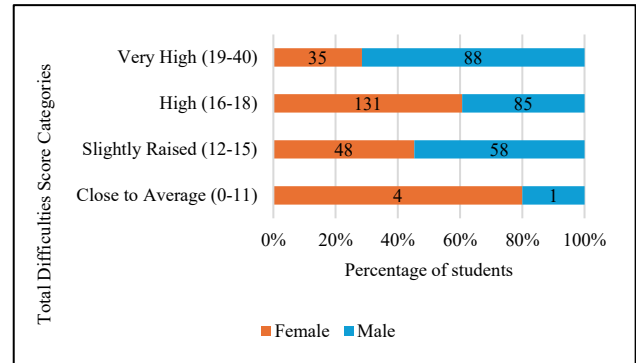


Figure 2: Distribution of total difficulties score by gender.

216 students (48%) had slightly raised Difficulties scores (12-15). 123 students (27%) fell into the very high Difficulties category (19-40). 106 students (24%) were categorized as having high difficulties (16-18). Only 5 students (1%) had scores categorized as close to average (0-11).

This indicated that 51% of students experience significant behavioral and socio-emotional challenges, warranting further attention from educators and mental health professionals.

Table 2: Prevalence of behavioural and socio-emotional issues under SDQ scales.

SDQ scales	Total difficulties score		Emotional		Conduct		Hyperactivity -inattention		Peer		Pro-social	
	M	F	M	F	M	F	M	F	M	F	M	F
Close to average	1	4	0	0	0	0	166	198	176	185	230	216
Slightly raised	85	131	232	218	232	218	34	16	50	30	2	2
High	58	48	0	0	0	0	32	4	6	3	0	0
Very high	88	35	0	0	0	0	0	0	0	0	0	0

Table 3: Gender wise mean, std deviation of total difficulties score.

	Gender	N	Mean	Std Deviation	95% CI	
					Lower	Upper
Total difficulties score	Female	218	15.50	3.193	1.580	2.929
	Male	232	17.75	4.011		

Table 2 shows how boys and girls differ in their behavioral and emotional challenges, as measured by the strengths and difficulties questionnaire (SDQ). Boys were more likely to fall into the “high” and “very high”

categories for overall difficulties, suggesting they face more serious behavioral concerns than girls. Issues like hyperactivity and trouble with peer relationships are particularly common among boys, while girls tend to

display stronger prosocial behavior, such as kindness and cooperation. Encouragingly, most children fall within the “close to average” range for hyperactivity and prosocial skills, reflecting generally typical development.

Gender differences in behavioral and socio-emotional issues

When analyzed by gender, males had a slightly higher mean SDQ total difficulties score ($M=17.2$, $SD=3.9$) compared to females ($M=16.1$, $SD=3.7$). Boys exhibited higher scores in hyperactivity, conduct problems, and peer issues, consistent with findings from previous studies (Table 3). However, girls displayed slightly higher emotional symptoms and prosocial behavior scores. Figure 3 displays the gender-wise distribution of total difficulties scores using a box plot.

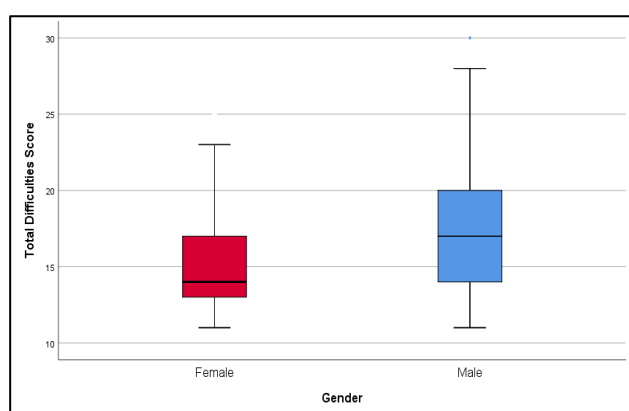


Figure 3: Gender wise distribution of total difficulties score.

Age-wise distribution of behavioral issues

Behavioral difficulties varied across different age groups.

The highest mean total difficulties score was observed in the 7-year-old group ($M=17.5$, $SD=3.8$).

The lowest mean total difficulties score was observed in the 12-year-old group ($M=14.3$, $SD=2.9$), suggesting a potential decline in behavioral issues with increasing age.

A one-way ANOVA test showed a statistically significant difference in SDQ scores among different age groups ($p<0.05$), suggesting that younger students exhibit higher behavioral difficulties.

The line chart (Figure 4) shows how students' behavioral issues vary with age. The scores are highest around age 7, indicating more difficulties at that stage. As children grow older, the challenges seem to lessen around ages 9 and 10, before rising again slightly by ages 11 and 12. This pattern reflects how behavioral concerns can shift during different phases of childhood development.



Figure 4: Age-wise distribution of behavioral issues.

Correlation between total difficulties score and academic performance

A Pearson correlation analysis revealed a statistically significant negative correlation between total difficulties score and academic performance ($r=-0.289$, $p<0.001$). This indicates that students with higher difficulties score tend to have lower academic performance.

Further analysis showed: students having very high difficulties score ($M=12.8$, $SD=4.2$) had significantly lower academic performance compared to those in the slightly raised category ($M=16.5$, $SD=3.7$), high category ($M=15.3$, $SD=3.8$), and close to average category ($M=18.1$, $SD=2.9$).

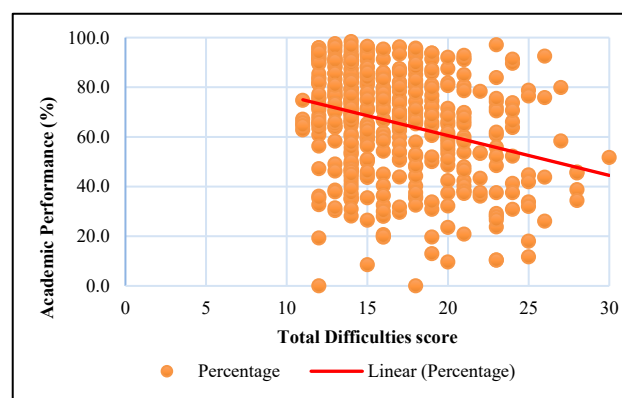


Figure 5: Correlation between total difficulties score and academic performance.

Regression analysis indicated that total difficulties score accounted for 8.4% of the variance in academic performance ($p<0.05$), confirming that total difficulties score was a significant predictor of poor school performance (Figure 5).

Key findings and implications

Over half of the students (51%) had behavioral and socio-emotional challenges, with 27% falling into the very high-risk category.

Younger students exhibited higher behavioral difficulties, which declined with age. Boys had higher hyperactivity and conduct problems, while girls showed more emotional problems and prosocial behavior. Students with higher total difficulties score had lower academic performance, reinforcing the need for early intervention strategies in schools.

DISCUSSION

The results of this study provide evidence of the close connection between primary school students and academic achievement and behavioural and socioemotional problems. Socio-emotional challenges are a major concern for educators, parents, and policymakers given that more than half of the students (51%) have significant behavioural difficulties and 27% fall into the very high-risk category. This matches with the findings of Kusi-Mensah et al, who also noted that mental health problems were highly prevalent among primary school students and their association with poor academic performance.¹²

The clear gender difference in behavioural issues is among the most significant findings. In contrast to girls, who displayed more emotional symptoms and prosocial behaviour, boys displayed higher levels of hyperactivity, conduct issues, and peer relationship difficulties. These trends are in line with global research showing that girls are more likely to internalize emotional difficulties, whereas boys are more likely to externalize behaviors.^{4,8,10} Similar patterns were noted by Chen in preschoolers, who pointed out that boys exhibited aggressive and hyperactive behaviours more often than girls.⁴ Emam et al corroborated these trends in middle school students in Oman, underlining the universal nature of gender-related behavioural differences.⁸ Kristoffersen et al also showed that academic results at all school levels were significantly impacted by gender differences in behavioural issues.¹⁰

The age-related variation in behavioural difficulties is another important finding. In our study, older students showed a decline in difficulty scores, while younger students, particularly those who were around seven, had the highest scores. This developmental trend provides support to the concept that as children grow in cognitive and emotional maturity, their ability to regulate their behaviour and emotions improves. The relevance of age-specific intervention strategies is further supported by Pirskanen et al's observation that teacher perceptions of emotional development differ depending on the teacher's age and cultural background.³ Similarly, structured socio-emotional competency training can be particularly effective in early childhood for developing emotional control and conflict resolution skills, according to Santamaría-Villar et al.⁶

The impact of socio-emotional problems on learning is quantitatively supported by the regression analysis that

accounts for 8.4% of the variance and the statistically significant negative correlation between total difficulties scores and academic performance ($r=-0.29$, $p<0.001$). Numerous studies support this association, such as those conducted by Dias et al and Kusi-Mensah et al, who both emphasized the negative impact of emotional and behavioural issues on academic engagement and results.^{9,12} These studies support the identification of at-risk students and the promotion of early support mechanisms through the use of behavioural screening tools such as the SDQ.

Students in the very high-risk group exhibited the most severe behavioural problems, especially in hyperactivity, conduct issues, and peer difficulties, according to the subscale analysis of our study. Students with near-average SDQ scores, on the other hand, demonstrated more prosocial behaviours. This pattern suggests that developing interpersonal and emotional intelligence can act as a buffer against poor academic achievement. Santamaría-Villar et al. showed how teaching socio-emotional skills enhanced peer relationships and democratic coexistence in schools.⁶ The benefits of comprehensive SEL (social and emotional learning) programs in fostering academic resilience and psychological well-being have been pointed out by Cahill et al.⁷

Our findings have implications that go beyond academic achievement. Socioemotional challenges can lead to long-term mental health problems into adolescence and adulthood if they are not addressed. Early educational interventions, especially those that focus on gender-sensitive violence prevention and socio-emotional skills, can have long-lasting effects on both individual development and societal well-being, as highlighted by Villardón-Gallego et al.¹ Therefore, the findings of this study support further changes in educational policy and school-based mental health frameworks in addition to highlighting the urgent need for behavioural and emotional support in primary schools.

This study's single-school design with convenience sampling limits generalizability to broader populations, while the cross-sectional methodology prevents establishing causal relationships between behavioral difficulties and academic performance.

CONCLUSION

This study highlighted that behavioural and socioemotional issues have a considerable negative impact on primary school students' academic performance. Given that over half of students experience these difficulties, it highlights the necessity of an all-encompassing educational strategy that combines academic learning with emotional health. To establish supportive environments that promote social competence, academic drive, and emotional resilience, educators, parents, and legislators must work together. To guarantee

that no student is left behind because of untreated emotional or behavioural problems, it is essential to invest in teacher training, school-based mental health initiatives, and family awareness.

Recommendations

Early screening and intervention: schools should implement routine screening using standardized tools like the SDQ to identify at-risk students early. Psychological support services should be integrated within schools to provide timely interventions.

Gender-sensitive approaches: boys and girls exhibit different behavioural challenges; thus, intervention programs should be customized accordingly. While boys may benefit from structured behaviour management strategies, girls might need support in emotional expression and stress management.

Parental involvement: parents should be educated on identifying behavioural issues and supporting their students at home. Workshops and counselling sessions can help parents create a nurturing environment that promotes positive emotional development.

Teacher training: educators should be equipped with skills to recognize and manage behavioural and socio-emotional difficulties in the classroom. Training programs should focus on positive reinforcement strategies, conflict resolution, and inclusive teaching methods.

Social-emotional learning (SEL) programs: implementing SEL programs within school curricula can help students develop emotional intelligence, resilience, and interpersonal skills, which in turn improve academic performance.

Policy implementation: policymakers should prioritize mental health in school education policies. Schools should receive adequate funding to employ psychologists, counsellors, and social workers to address behavioural and emotional concerns effectively.

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Conflict of interest: None declared

Ethical approval: The study was approved by the Institutional Ethics Committee Armed Forces Medical College, Solapur Road, Pune

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