

Original Research Article

A STUDY ON ACADEMIC, BEHAVIORAL, AND SOCIO-EMOTIONAL FUNCTIONING AMONG SCHOOL STUDENTS AGED 10–16 YEARS IN KOLAR DISTRICT - CROSS SECTIONAL STUDY

Ashwini A¹, Narendra RR², Murali Mohan BA³

¹Junior Resident, Department of Paediatrics, Sri Devaraj URS medical college, Kolar, Karnataka, India

²Associate Professor, Department of Paediatrics, Sri Devaraj URS medical college, Kolar, Karnataka, India

³Clinical Psychologist, Sri Devaraj URS medical college, Kolar, Karnataka, India

Received : 15/05/2026
Received in revised form : 06/07/2026
Accepted : 22/07/2026

Corresponding Author:

Dr. Narendra RR,
Associate Professor, Sri Devaraj URS
medical college, Kolar, Karnataka,
India.
Email: rnarendra@sduaher.ac.in

DOI: 10.70034/ijmedph.2026.3.266

Source of Support: Nil,
Conflict of Interest: None declared

Int J Med Pub Health
2026; 16 (3); 1675-1680

ABSTRACT

Background: Adolescence (10–16 years) is a critical developmental period involving significant cognitive, behavioral, and socio-emotional changes that influence academic performance and overall well-being. Teacher-based assessments offer valuable insights into these domains, yet limited data exist for adolescents in the Kolar district.

Materials and Methods: A cross-sectional study was conducted among 384 school-going adolescents aged 10–16 years in Kolar district. The Teacher Rating Scale of Academic, Behavioral, and Socio-Emotional Functioning (TRS-ABSF-10–16) was administered to class teachers to assess students' functioning across five domains. Data were analyzed using descriptive statistics, Chi-square tests, and t-tests, with significance set at $p < 0.05$.

Results: The majority of students demonstrated adequate to excellent functioning, with emotional regulation scoring highest among domains. Females exhibited significantly higher levels of excellent functioning compared to males ($p = 0.037$). Functioning levels were consistent across age groups. The integrated assessment revealed significant interrelationships among academic, behavioral, and socio-emotional domains.

Conclusion: Teacher ratings reveal that most adolescents in Kolar exhibit strong academic, behavioral, and socio-emotional functioning, underscoring the importance of integrated assessments to guide targeted support. These findings inform educational and mental health strategies aimed at promoting adolescent development in diverse socio-cultural contexts.

Keywords: Adolescents, Academic Functioning, Behavioral Adjustment, Socio-Emotional Competence, Teacher Rating Scale.

INTRODUCTION

School-age and early adolescent years (10–16 years) represent a critical developmental phase marked by rapid cognitive, emotional, behavioural, and social changes.^[1] During this period, children encounter increasing academic demands, evolving peer relationships, challenges in emotional regulation, and identity formation.^[2] Academic functioning encompasses attention, motivation, classroom engagement, and learning behaviours. Behavioural functioning includes self-regulation, impulse control, adherence to classroom norms, and conduct. Socio-

emotional functioning refers to emotional regulation, peer relationships, empathy, and social competence. Difficulties in any of these domains can negatively affect school adjustment and increase the risk of academic failure, emotional distress, behavioural problems, and later mental health disorders.

Academic performance in these years is closely linked with behavioural adjustment and socio-emotional competence, influencing long-term educational attainment, mental health outcomes, and psychosocial well-being.^[3] Academic performance, behavioral patterns in classroom settings, and socio-emotional well-being are interrelated factors that

collectively impact the developmental trajectory and future outcomes of school-aged children. Understanding these dimensions in a comprehensive manner is essential for identifying areas of strength and concern, thereby facilitating targeted interventions and support within educational and community contexts.^[4]

Teachers play a pivotal role in observing students' day-to-day academic behaviour, classroom conduct, and socio-emotional interactions.^[5] Teacher-based rating scales offer ecologically valid, cost-effective, and reliable assessments of student functioning across multiple domains. Such multidimensional assessments are especially valuable in school-based mental health screening and early intervention planning.^[6]

In the Kolar district, there is limited empirical data exploring the multifaceted aspects of adolescent functioning, particularly integrating academic, behavioral, and socio-emotional domains. Given the diverse socio-cultural and educational environments in this region, it is crucial to document and analyze these factors to inform educators, healthcare providers, and policymakers. This cross-sectional study aims to systematically assess academic achievement, behavioral functioning in classroom settings, and socio-emotional functioning as perceived by teachers among students aged 10 to 16 years. Additionally, the study seeks to explore the interrelationships among these domains to better understand how they collectively influence adolescent development.

The findings from this research will contribute to a holistic understanding of adolescent functioning in the Kolar district, providing a foundation for evidence-based strategies to enhance educational outcomes and promote mental health and well-being among school students.

MATERIALS AND METHODS

A cross-sectional study was conducted over a period of one month in April 2026. The sample size was calculated using Cochran's formula, $n = (Z^2pq)/d^2$, where Z was taken as 1.96 for a 95% confidence interval, p was assumed to be 0.5 due to the lack of prior Indian studies assessing integrated academic, behavioural, and socio-emotional functioning, q was $1 - p$ (0.5), and d was set at 0.05 as the absolute precision. Based on this calculation, the required sample size was determined to be 384.

A simple random sampling technique was used to select the study participants. A sampling frame consisting of eligible school-going children aged 10–16 years was prepared, and 384 students were selected randomly from the eligible population.

The study included all school-going children aged 10 to 16 years in Kolar district who provided consent to participate. Children who were known cases of neurodevelopmental or neuropsychological disorders were excluded from the study.

After obtaining approval from the Institutional Ethics Committee and administrative permission from the respective schools, written informed consent was obtained from the parents or legal guardians, followed by written assent from the participating students. Only students who provided written assent and whose parents or legal guardians provided informed consent were included in the study.

Following enrolment, class teachers were oriented regarding the objectives of the study and the procedure for completing the Teacher Rating Scale of Academic, Behavioral, and Socio-Emotional Functioning Questionnaire (TRS-ABSQ-10–16). The questionnaire was then provided to the respective class teachers of the participating students. Prior to administration, all items in the questionnaire were explained in detail, and any doubts were clarified to ensure uniform understanding. The rating scale used ranged from 0 to 4, where 0 indicated “never/not observed,” 1 indicated “rarely,” 2 indicated “sometimes,” 3 indicated “often,” and 4 indicated “always.”

Table 1: Teacher Rating Scale for Academic, Behavioral, and Socio-Emotional Functioning in School Students (TRS-ABSQ-10–16)

Sl/No	Items	0	1	2	3	4
1	Maintains focus during lessons					
2	Follows classroom rules					
3	Manages frustration					
4	Easily distracted by surroundings					
5	Cooperates with classmates					
6	Waits for turn to speak					
7	Shows interest in learning					
8	Responds appropriately to feedback					
9	Shows empathy toward peers					
10	Demonstrates positive self-confidence					
11	Participates actively in discussions					
12	Completes classwork on time					
13	Resolves conflicts constructively					
14	Persists with difficult tasks					
15	Controls impulses					

Table 2: Scoring Interpretation

Domain	Scores
Attention & Concentration: 1,4,12	0–10: Needs considerable support in classroom adjustment
Classroom Behavior & Self-Regulation: 2,6,15	11–20: Developing; occasional guidance required
Social Interaction & Peer Relationships: 5, 9,13	21–30: Adequate functioning; meets expectations
Motivation & Academic Engagement: 7, 11, 14	31–40: Excellent functioning; consistently positive behavior
Emotional Regulation: 3, 8, 10	

The reliability and validity of the instrument were established prior to its use in the study. Internal consistency was found to be good, with Cronbach's alpha ranging from 0.78 to 0.92 across subscales, based on adapted items from the Strengths and Difficulties Questionnaire (SDQ) and the ADHD Rating Scale (ADHD-RS). Test retest reliability demonstrated strong stability, with a correlation coefficient of 0.80 over a two-week interval, based on measures derived from the ADHD-RS and Social Competence Scales. Content validity was confirmed by experts in child psychology, and convergent validity was supported through significant correlations with academic performance and peer sociometric ratings.

Data were entered into a Microsoft Excel datasheet and analysed using SPSS version 22 software. Categorical data were represented in the form of frequencies and proportions. The Chi-square test was

used as a test of significance. Continuous data were expressed as mean and standard deviation. An independent t-test was applied to assess the significance of mean differences. A p value of less than 0.05 was considered statistically significant.

RESULTS

The largest proportion of participants were aged 15 years (22.7%), followed by 14 years (18.8%) and 13 years (17.7%), indicating that mid-adolescents formed the majority of the study population. Participants aged 12 years constituted 13.8%, while those aged 10 and 11 years accounted for 12.0% and 9.4%, respectively. The smallest proportion was observed among 16-year-olds (5.7%). The mean age of the study population was 13.13 ± 1.78 years.

Table 3: Age distribution of the study population

Age in years	Frequency	Percent
10	46	12.0
11	36	9.4
12	53	13.8
13	68	17.7
14	72	18.8
15	87	22.7
16	22	5.7
Total	384	100.0

Out of a total of 384 participants, 200 (52.1%) were males and 184 (47.9%) were females.

Table 4: Gender distribution of the study population

Gender	Frequency	Percentage
Males	200	52.1
Females	184	47.9
Total	384	100.0

The majority of students demonstrated positive functioning, with 181 (47.1%) rated as having excellent functioning with consistently positive behavior, followed by 159 (41.4%) who showed adequate functioning and met expectations. A smaller

proportion, 43 (11.2%), were categorized as developing, requiring occasional guidance. Only 1 student (0.3%) was identified as needing considerable support in classroom adjustment [Table 3].

Table 5: Teacher Rating Scale for Academic, Behavioral, and Socio-Emotional Functioning in School Students

TRS-ABSF-10-16	Frequency	Percent
Needs considerable support in classroom adjustment	1	.3
Developing; occasional guidance required	43	11.2
Adequate functioning; meets expectations	159	41.4
Excellent functioning; consistently positive behavior	181	47.1
Total	384	100.0

Among males, the majority demonstrated adequate functioning (47.0%), followed closely by excellent functioning (44.5%), while 8.5% were in the

developing category and none required considerable support. In contrast, among females, half of the participants (50.0%) exhibited excellent functioning,

followed by 35.3% with adequate functioning, and a higher proportion (14.1%) in the developing category; only 0.5% required considerable support. Overall, females showed a higher proportion of excellent functioning compared to males, whereas

males had a greater proportion in the adequate category. The difference in distribution between genders was found to be statistically significant ($p = 0.037$), indicating a meaningful association between gender and functioning levels.

Table 6: Gender wise distribution of TRS-ABSF-10–16 score

Gender					Total	P value
	Needs considerable support in classroom adjustment	Developing; occasional guidance required	Adequate functioning; meets expectations	Excellent functioning; consistently positive behavior		
Male	0	17	94	89	200	0.037*
	0.0%	8.5%	47.0%	44.5%	100.0%	
Female	1	26	65	92	184	
	0.5%	14.1%	35.3%	50.0%	100.0%	
Total	1	43	159	181	384	
	0.3%	11.2%	41.4%	47.1%	100.0%	

* p value < 0.05 ; Hence statistically significant

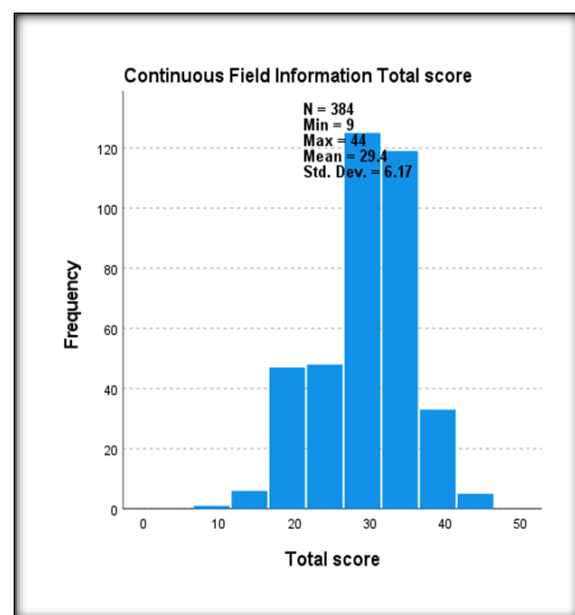


Figure 1: Graph representing the total score distribution of TRS-ABSF-10–16 score

Across all age groups, the majority of students were classified under adequate and excellent functioning, with very few requiring considerable support. At age 10, most students (56.5%) demonstrated excellent functioning, followed by 39.1% with adequate functioning. A similar pattern was seen at age 11, although one student (2.8%) required considerable support.

In the 12–13 years age group, a higher proportion of students showed adequate functioning (49.1% and 45.6%, respectively), with slightly fewer exhibiting excellent functioning. From 14 to 15 years, the proportion of students with excellent functioning increased again (50.0% and 48.3%, respectively), while the developing category ranged between 13–14%. At age 16, half of the participants (50.0%) demonstrated adequate functioning, with 40.9% showing excellent functioning. The association between age and TRS-ABSF-10–16 categories was not statistically significant ($p = 0.526$), indicating that functioning levels are relatively consistent across different ages.

Table 7: Age wise distribution of the TRS-ABSF-10–16 score

Age	TRS-ABSF-10–16				Total	P value
	Needs considerable support in classroom adjustment	Developing; occasional guidance required	Adequate functioning; meets expectations	Excellent functioning; consistently positive behavior		
10	0	2	18	26	46	0.526
	0.0%	4.3%	39.1%	56.5%	100.0%	
11	1	4	14	17	36	
	2.8%	11.1%	38.9%	47.2%	100.0%	
12	0	6	26	21	53	
	0.0%	11.3%	49.1%	39.6%	100.0%	
13	0	7	31	30	68	
	0.0%	10.3%	45.6%	44.1%	100.0%	
14	0	10	26	36	72	
	0.0%	13.9%	36.1%	50.0%	100.0%	
15	0	12	33	42	87	
	0.0%	13.8%	37.9%	48.3%	100.0%	
16	0	2	11	9	22	
	0.0%	9.1%	50.0%	40.9%	100.0%	
Total	1	43	159	181	384	
	0.3%	11.2%	41.4%	47.1%	100.0%	

The mean scores were fairly similar across all domains, with Emotional Regulation having the highest mean score (5.93), followed closely by Classroom Behavior & Self-Regulation (5.90), Attention and Concentration (5.89), and Social Interaction & Peer Relationships (5.88). Motivation & Academic Engagement had a slightly lower mean

score (5.76), indicating comparatively lower performance in this domain. The median score for all domains was 6.00, suggesting a consistent central tendency across the different areas of functioning. The standard deviations ranged from 2.46 to 2.55, indicating moderate variability in scores among participants.

Table 8: Domain wise score of the study population

	Attention and Concentration	Classroom Behavior & Self-Regulation	Social Interaction & Peer Relationships	Motivation & Academic Engagement	Emotional Regulation
Mean	5.89	5.90	5.88	5.76	5.93
Median	6.00	6.00	6.00	6.00	6.00
Std. Deviation	2.53	2.55	2.48	2.49	2.46
Minimum	.00	.00	.00	.00	.00
Maximum	12.00	12.00	12.00	12.00	12.00

DISCUSSION

The current study conducted in the Kolar district provides valuable insights into the academic, behavioral, and socio-emotional functioning of adolescents aged 10–16 years, using a teacher rating scale (TRS-ABSF-10–16). The findings reveal predominantly adequate to excellent functioning across domains, with emotional regulation scoring highest and significant gender differences favoring females in excellent functioning. Additionally, the study highlights a statistically significant interrelationship between academic, behavioral, and socio-emotional domains, underscoring their integrated role in adolescent development.

When compared to Pragadeeshwer et al.'s study of primary school students aged 6–12 years, the current study's findings of mostly positive adolescent functioning contrast with the higher prevalence of behavioral and socio-emotional difficulties reported in younger children.^[7] Pragadeeshwer et al. found that over half of primary students exhibited significant difficulties negatively impacting academic performance, with boys showing more behavioral challenges and girls more emotional symptoms and prosocial behaviors.^[7] This developmental difference suggests that behavioral and socio-emotional difficulties may decrease or change in nature as children transition into adolescence, as evidenced by the current study's higher overall functioning. Both studies, however, validate the critical role of teacher-based assessments in early identification and intervention, emphasizing the importance of gender-sensitive approaches.

The current study's emphasis on emotional regulation and behavioral adjustment aligns well with Marrone et al.'s large-scale South Australian study, which examined socio-emotional well-being, engagement, and learning readiness in students aged approximately 10–16 years.⁸ Marrone et al. identified learning readiness, including self-regulation and perseverance, as the strongest predictor of academic outcomes, resonating with the current study's findings on the importance of emotional regulation and behavioral functioning for

academic success.^[8] Both studies also observed gender differences, with socio-emotional well-being impacting male literacy outcomes more than females, paralleling the current study's gender-related functional disparities. The integration of socio-emotional well-being and academic engagement in both studies highlights the necessity of fostering these competencies to enhance educational outcomes.

Supporting the current study's implications, Durlak et al.'s meta-analysis of universal school-based social and emotional learning (SEL) interventions provides robust evidence that SEL programs significantly improve social-emotional skills, attitudes, behavior, and academic performance.^[9] The meta-analysis reports an average 11-percentile-point gain in academic achievement linked to SEL participation, reinforcing the current study's suggestion that emotional regulation and socio-emotional competencies contribute positively to academic and behavioral domains. Moreover, Durlak et al. emphasize that effective implementation and adherence to recommended SAFE practices (Sequenced, Active, Focused, Explicit) are critical to program success, which complements the current study's call for targeted, multidimensional assessments to guide interventions.^[9]

Sun et al.'s person-centered latent profile analysis of primary students further enriches the understanding of the interplay between social-emotional behaviors and academic outcomes.^[10] Although focusing on younger children (first and second grade), this study identifies distinct profiles characterized by varying social skills and problem behaviors, which differentially relate to math achievement and academic engagement. The current study's findings of integrated academic, behavioral, and socio-emotional functioning in older students reflect a developmental progression from the heterogeneity observed in younger children. Both studies underscore the heterogeneity of student functioning and the importance of tailored interventions that address specific behavioral and socio-emotional profiles to optimize academic outcomes.

CONCLUSION

The study conducted in the Kolar district demonstrates that the majority of adolescents aged 10 to 16 years exhibit adequate to excellent academic, behavioral, and socio-emotional functioning as assessed by teachers using the TRS-ABSF-10–16 scale. Emotional regulation emerged as the strongest domain, highlighting its critical role in adolescent development. Significant gender differences favoring females in overall functioning suggest the need for gender-sensitive approaches in educational and mental health interventions. Although functioning levels were consistent across age groups, the integrated assessment of academic, behavioral, and socio-emotional domains underscores their collective influence on adolescent adjustment and outcomes. These findings emphasize the value of teacher-based multidimensional assessments in identifying strengths and areas requiring support, facilitating early intervention and targeted strategies within school settings. The study contributes to a holistic understanding of adolescent functioning in a socio-culturally diverse context and provides an evidence base to inform educators, healthcare providers, and policymakers in developing comprehensive programs aimed at enhancing academic achievement and promoting mental well-being among school students. Future research should explore longitudinal trajectories and intervention effectiveness to further optimize support for adolescent development in similar settings.

REFERENCES

1. Choudhury S, Blakemore SJ, Charman T. Social cognitive development during adolescence. *Soc Cogn Affect Neurosci*. 2006 Dec 1;1(3):165–74. doi:10.1093/scan/nsl024
2. Povey J, Plage S, Huang Y, Gramotnev A, Cook S, Austerberry S, et al. Adolescence a Period of Vulnerability and Risk for Adverse Outcomes across the Life Course: The Role of Parent Engagement in Learning. In. 2022. p. 97–131. doi:10.1007/978-3-031-12224-8_6
3. Azpiazu L, Antonio-Aguirre I, Izar-de-la-Funtes I, Fernández-Lasarte O. School adjustment in adolescence explained by social support, resilience and positive affect. *European Journal of Psychology of Education*. 2024 Dec 11;39(4):3709–28. doi:10.1007/s10212-023-00785-3
4. Casale G, Herzog M, Volpe RJ. Measurement Efficiency of a Teacher Rating Scale to Screen for Students at Risk for Social, Emotional, and Behavioral Problems. *J Intell*. 2023 Mar 19;11(3):57. doi:10.3390/jintelligence11030057
5. Amerstorfer CM, Frein von Münster-Kistner C. Student Perceptions of Academic Engagement and Student-Teacher Relationships in Problem-Based Learning. *Front Psychol*. 2021 Oct 28;12. doi:10.3389/fpsyg.2021.713057
6. Volpe RJ, Briesch AM, Gadow KD. The efficiency of behavior rating scales to assess inattentive–overactive and oppositional–defiant behaviors: Applying generalizability theory to streamline assessment. *J Sch Psychol*. 2011 Feb;49(1):131–55. doi:10.1016/j.jsp.2010.09.005
7. S. P, Gupta J, Singh YV, Chatterjee K, Nimmonkar R, S. V. 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. *Int J Community Med Public Health*. 2025 Sep 30;12(10):4634–9. doi:10.18203/2394-6040.ijcmph20253264
8. Marrone R, Lam B, Barthakur A, Brinkman S, Dawson S, Gabriel F. The Relationship between Wellbeing and Academic Achievement: A Comprehensive Cross-Sectional Analysis of System Wide Data From 2016–2019. *Journal of Learning Analytics*. 2024 Nov 18. doi:10.18608/jla.2024.8357
9. Durlak JA, Weissberg RP, Dymnicki AB, Taylor RD, Schellinger KB. The Impact of Enhancing Students' Social and Emotional Learning: A Meta-Analysis of School-Based Universal Interventions. *Child Dev*. 2011 Jan 1;82(1):405–32. doi:10.1111/j.1467-8624.2010.01564.x
10. Sun T, Lei PW, DiPerna JC, Hart SC, Zhao H, Husmann K. Association Between Social-Emotional Behaviors and Academic Outcomes in Primary School Students: A Person-Centered Approach. *School Ment Health*. 2025 Sep 16;17(3):980–94. doi:10.1007/s12310-025-09787-6.