"Understanding Academic Attention and Concentration among School-Going Students in Srikakulam"

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ABSTRACT

The present study focuses on the development and standardization of the Student Attention & Concentration Questionnaire (SACQ) for school students. Attention and concentration are essential cognitive functions influencing academic performance, classroom participation, learning efficiency, and behavioural adjustment. Rising academic demands have increased concerns about declining attention and concentration among adolescents. The scale was designed in a bilingual format (English and Telugu) to improve comprehensibility and applicability among students from diverse linguistic backgrounds. It assesses attentional focus, distractibility, classroom behaviour, memory-related attention, emotional influences, and task persistence. A total of 200 school students participated in the study to standardize the scale and analyse the data. Inclusion Criteria were students studying in 6th to 10th classes, aged 9 to 16 years, who were willing to participate in the study. Students are able to understand the Telugu or English language. The findings support the assessment of attention and concentration among school students by gender and class of study.

Keywords: School-going Students, Attention, Concentration, Gender. Class of study

INTRODUCTION

Observing Reduced Patience for Long Tasks, along with Extended academic tasks, lengthy lectures, and monotonous classroom environments, may reduce engagement and concentration among students. These characteristics make attention and concentration an important area of psychological and educational research among school students. Students with effective attentional control often demonstrate better classroom discipline, increased confidence, greater motivation toward studies, and improved learning efficiency. Academic achievement largely depends upon the ability of students to maintain sustained attention during classroom teaching and study activities. Previous studies have emphasized that concentration and memory are closely interconnected cognitive abilities and that proper classroom concentration improves students' memory retention and examination performance. On the other hand, students with poor attention and concentration frequently experience academic difficulties such as careless mistakes, inability to complete tasks, poor understanding of lessons, forgetfulness, reduced classroom engagement, low examination performance, and declining interest in studies. Lack of concentration often results in distractibility during learning activities, reduced comprehension, incomplete assignments, and poor retention of learned information. These academic difficulties may eventually reduce students' self-confidence, increase frustration, and negatively affect their psychological well-being. Research findings indicate that poor concentration disturbs students' interest in studies and contributes significantly to poor scholastic performance among school children. Therefore, early assessment and identification of attentional difficulties are important for promoting students' academic and psychological development. Assessment of attention and concentration is highly important in educational psychology, school

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counselling, and psychological assessment. Standardized psychological scales help psychologists, counsellors, teachers, and researchers systematically evaluate attentional functioning and identify students requiring intervention. Although several attention-related assessment tools are available internationally, there remains a need for culturally relevant and bilingual psychological instruments suitable for Indian school students, especially in regional language contexts.

REVIEW OF LITERATURE

Podila (2019) conducted a study on concentration, memory, and gender among high school students in Andhra Pradesh, India. The study included 2132 students studying from 8th to 10th classes in different high schools. The researcher observed concentration and memory problems among students and reported that a large number of students experienced classroom concentration difficulties. The study emphasized that concentration and memory are closely related cognitive processes and that poor classroom concentration negatively affects memory retention and academic performance. The findings also revealed that male students expressed more concentration and memory problems compared to female students. The study concluded that effective concentration is essential for successful learning and examination performance among school students.

Metha et al. (2023) assessed the level of attention and concentration among high school students in Tamil Nadu, India. The study highlighted that attention and concentration are necessary for effective learning, reading, writing, and listening skills among school children. The researchers found that students with poor concentration experienced academic difficulties and reduced interest in studies. The study further emphasized that attention training and concentration improvement strategies are important components of the educational process. The findings indicated that many school students demonstrated average attention and concentration levels, while poor concentration significantly affected classroom learning and academic performance.

Research related to adolescent cognitive development has shown that attention and concentration are strongly connected with brain maturation and executive functioning. Gignac et al. (2021) explained that adolescence is a critical developmental stage during which important structural and functional brain changes occur, particularly in the frontal lobes and executive attention systems. The study reported that attentional functioning among adolescents is highly influenced by biological, psychological, environmental, and social factors. The researchers also found that factors such as poor peer relationships, emotional distress, lack of social support, and excessive technology use negatively affect attention performance among adolescents. Several studies have identified technological distractions as major contributors to reduced concentration among students. Excessive mobile phone usage, social media exposure, online gaming, and prolonged screen time have been found to interfere with sustained attention and classroom engagement. Previous research has shown that frequent mobile phone use reduces students' ability to maintain concentration during academic activities and increases distractibility. The growing dependency on digital technology among adolescents has become a significant concern in educational psychology because it affects cognitive control, attentional stability, and academic productivity.

Defi Yajun (2025) reviewed factors affecting concentration among school-age children and identified both internal and external variables influencing attentional abilities. Internal factors included nutrition, sleep quality, emotional stability, health condition, stress, anxiety, and physical well-being. External factors included learning environment, technology use, peer interaction, classroom atmosphere, and family support. The study emphasized that balanced nutrition, proper sleep, emotional support, and supportive educational environments are essential for improving concentration among children and adolescents. The researcher further explained that poor sleep quality, emotional disturbances, and excessive technology use reduce children's ability to focus effectively during learning activities. Environmental and classroom-related factors have also been reported to influence concentration and attentiveness among students. A study conducted among students in South India identified that classroom noise, poor lighting, inadequate ventilation, peer distractions, ineffective teaching methods, and emotional stress negatively affect attentiveness during classroom sessions. The study highlighted that supportive classroom environments, interactive teaching methods, and effective teacher-student interaction improve concentration and learning outcomes among students.

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Need for the Study

Short Attention Span Continuous exposure to fast digital content, multitasking, attention, and concentration are among the most important cognitive processes involved in learning, academic achievement, and behavioural regulation among school students. Attention refers to the ability to selectively focus on relevant stimuli while ignoring irrelevant distractions, whereas concentration refers to the ability to sustain mental effort and maintain focus on a specific task for a prolonged period. These cognitive functions are essential for effective classroom learning, listening, reading, writing, comprehension, memory retention, problem-solving, and academic success.

Students with good attention and concentration are generally able to understand lessons effectively, complete academic tasks accurately, actively participate in classroom activities, and perform better in examinations. In contrast, poor attention and concentration may negatively affect academic performance, classroom participation, memory, motivation, and emotional well-being. Attention and concentration significantly influence the academic life of school students. Students with higher levels of concentration are usually better able to understand concepts quickly, follow classroom instructions, complete homework on time, retain information longer, and achieve better academic results. Good concentration also improves reading ability, writing skills, listening comprehension, analytical thinking, and problem-solving capacity. Students with effective attentional control often demonstrate better classroom discipline, increased confidence, greater motivation toward studies, and improved learning efficiency. Academic achievement largely depends upon the ability of students to maintain sustained attention during classroom teaching and study activities.

Previous studies have emphasized that concentration and memory are closely interconnected cognitive abilities and that proper classroom concentration improves students' memory retention and examination performance. On the other hand, students with poor attention and concentration frequently experience academic difficulties such as careless mistakes, inability to complete tasks, poor understanding of lessons, forgetfulness, reduced classroom engagement, low examination performance, and declining interest in studies. Lack of concentration often results in distractibility during learning activities, reduced comprehension, incomplete assignments, and poor retention of learned information. These academic difficulties may eventually reduce students' self-confidence, increase frustration, and negatively affect their psychological well-being. Research findings indicate that poor concentration power disturbs students' interest in studies and contributes significantly to poor scholastic performance among school children.

METHODOLOGY:

Research Design: The present study adopted a descriptive survey research design for the development and standardization of the Student Attention & Concentration Questionnaire (SACQ). The study was conducted to assess the level of attention and concentration among school students and to identify factors influencing attentional functioning in the educational environment.

Objectives of the Study

To assess the level of attention and concentration among school students in the gender groups.

To assess the level of attention and concentration among school students by class of study group.

Hypothesis

There will be no significant difference in attention and concentration among school-going gender groups.

There will be no significant difference in attention and concentration among the school-going class of study groups.

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Participants

The participants of the study consisted of school students studying from 6th to 10th classes. Students within the age group of 9 to 16 years were included in the study. Both male and female students from different educational backgrounds participated in the research. The participants were selected from schools located in Andhra Pradesh using a convenience sampling method.

Sample Size

A total of 200 school students participated in the study for scale standardization and data analysis. Inclusion Criteria were students studying from 6th to 10th classes, those Students within the age range of 9 to 16 years who are willing to participate in the study. Students are able to understand the Telugu or English language.

Exclusion Criteria

Students with severe physical or mental health problems. Students were absent during the data collection period. Incomplete questionnaire responses were excluded from analysis.

Tool Used

The major tool used in the study was the Student Attention & Concentration Questionnaire (SACQ) developed by the investigator. The questionnaire consisted of two sections: Section A: Demographic Information. This section included variables such as age, gender, class. Attention and Concentration Scale: The scale included items related to classroom attention, distractibility, sustained concentration, listening ability, memory-related attention, task completion, academic focus, mobile phone distraction, and emotional influence on concentration. The questionnaire was prepared in a bilingual format (English and Telugu) to improve comprehension among school students. Sample Scale Items

Scoring Procedure

The result indicates that the items included in the scale consistently assess the same underlying construct and demonstrate adequate homogeneity. Hence, the Academic Attention and Concentration Scale can be considered a reliable instrument for assessing students' attention and concentration levels in the digital era. The Academic Attention and Concentration Scale demonstrated satisfactory internal consistency reliability (Cronbach's α = .795), indicating that the instrument is reliable for research and educational assessment purposes. The final 15-item scale was administered to 200 students. The scale followed a Likert-type response format. Students responded to each item based on the frequency of their behaviour or experience. The scoring pattern was as follows: Never – 0, Sometimes – 1, Often – 2, Always – 3. Negative items were reverse-scored during data analysis. Higher scores indicated better attention and concentration levels, whereas lower scores indicated concentration difficulties. The Academic Attention and Concentration Scale demonstrated satisfactory internal consistency reliability (Cronbach's α = .795), indicating that the instrument is reliable for research and educational assessment purposes.

Validity Analysis

Content validity was established through expert evaluation by professionals in Psychology, Educational Psychology, and Guidance & Counselling. The experts assessed relevance, clarity, age appropriateness, and cultural suitability. All items were retained after minor language revisions. Face validity was established through student feedback indicating that the items were understandable and relevant to attention and concentration behaviours.

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Procedure of Data Collection

Prior permission was obtained from the concerned school authorities before conducting the study. The investigator explained the purpose of the study to the participants and established rapport with the students. Instructions regarding questionnaire completion were clearly provided. The questionnaires were administered individually and in group settings during school hours. Students were encouraged to answer honestly, and confidentiality of responses was assured. Adequate time was provided for completion of the questionnaire.

Statistical Analysis

The collected data were analysed using the Statistical Package for Social Sciences (SPSS). Both descriptive and inferential statistics were used for analysis. The following statistical methods were applied: Descriptive statistics, t-test, and F-test.

Ethical Considerations

Ethical principles were maintained throughout the study. Participation was voluntary, and confidentiality of participants' information was assured. Students were informed that the collected data would be used only for research purposes.

Results and discussion

Table 1: Descriptive Statistics of demographic variables as of 200 samples

	N	Mean	Std. Deviation	Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Std. Error
Gender	200	1.5650	.49700	-1.950	.342
Class	200	2.1450	.78553	-1.333	.342
mobile usage	200	1.0450	.20782	17.740	.342

The table presents the descriptive statistics of selected demographic variables of the participants included in the study. A total of 200 students participated in the research. The variables analysed include gender, class, and mobile usage in relation to attention and concentration. The mean score for gender was found to be 1.5650 (SD = 0.49700), indicating a relatively balanced distribution of male and female participants within the sample. The kurtosis value (-1.950) suggests a platykurtic distribution, indicating that the responses were moderately spread across categories. For class, the mean score was 2.1450 (SD = 0.78553), reflecting moderate variability among students belonging to different academic classes. The kurtosis value (-1.333) indicates a relatively flatter distribution compared to the normal distribution. Regarding mobile usage, the mean score was 1.0450 (SD = 0.20782), indicating that the majority of participants reported using mobile phones. The very high kurtosis value (17.740) suggests that responses were highly concentrated within a single category, demonstrating that mobile phone usage was almost universal among the participants. Overall, the descriptive statistics indicate that the demographic variables were adequately distributed within the sample and provide a foundation for further inferential statistical analysis related to attention and concentration.

Table 2: Descriptive Statistics of Attention and Concentration Scale as of 200 samples

	N	Mean	Std. Deviation	Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Std. Error
Attention and concentration	200	1.4600	.58318	-.263	.342
Valid N (listwise)	200				

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The above Table presents the descriptive statistics of the attention and concentration scores among the participants included in the study. A total of 200 valid responses were analysed. The mean score for attention and concentration was found to be 1.4600 with a standard deviation of 0.58318, indicating a moderate level of variability among the participants. The obtained mean suggests that students demonstrated an average level of attention and concentration within the study context. The kurtosis value (-0.263) indicates that the distribution is slightly platykurtic in nature, suggesting that the responses are relatively close to a normal distribution without extreme peaks or heavy tails. This reflects a balanced spread of scores among the participants. The Valid N (listwise) value of 200 confirms that all participant responses were included in the analysis without missing data. Overall, the descriptive statistics indicate that the data related to attention and concentration were normally distributed and suitable for further inferential statistical analysis.

Table 3: Group comparison for gender as on Attention and Concentration for 200 samples

Study variable	Gender	N	Mean	SD	t-value	P-value
Attention and concentration	male	87	1.6897	.63448	5.196**	.000
	female	113	1.2832	.47187		

*. The mean difference is significant at the 0.05 level. **. The mean difference is significant at the 0.01 level.

Table presents the comparison of attention and concentration scores between male and female students using the independent samples t-test. A total of 87 male students and 113 female students participated in the study. The mean score of male students was found to be 1.6897 (SD = 0.63448), whereas female students obtained a mean score of 1.2832 (SD = 0.47187). The results indicate that male students demonstrated relatively higher attention and concentration levels compared to female students. The obtained t-value was 5.196 with a p-value of 0.000, which is statistically significant at the 0.05 level. Since the significance value is less than 0.05, the null hypothesis is rejected. Therefore, the findings reveal that gender has a significantly differed on attention and concentration among students. The observed difference suggests that attention and concentration levels vary between male and female participants within the study

Table 4: Group comparison for the class of study on Attention and Concentration for 200 samples

		Sum of Squares	df	Mean Square	F	Sig.
Between Groups		2.734	2	1.367	4.146	.017
Within Groups		64.946	197	.330		
(I) Class		(J) Class	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval
					Lower Bound	Upper Bound
8 th class	9 th class	.30389*	.10604	.013	.0535	.5543
	10 th class	.15829	.10466	.287	-.0889	.4055

*. The mean difference is significant at the 0.05 level. **. The mean difference is significant at the 0.01 level.

Description of Class-wise Differences in Attention and Concentration The above Table presents the results of the one-way Analysis of Variance (ANOVA) conducted to examine the differences in attention and concentration among students belonging to different claThe ANOVA results revealed that the between-group sum of squares

was 2.734 with 2 degrees of freedom, while the within-group sum of squares was 64.946 with 197 degrees of freedom. The obtained mean square value for between groups was 1.367, whereas the within-group mean square was 0.330. The calculated F-value was 4.146, indicating a statistically significant difference among the class groups in attention and concentration levels. Since the obtained significance value is less than the 0.05 level, the null hypothesis is rejected. Therefore, the findings suggest that class level has a significant influence on students' attention and concentration. The observed differences indicate that students from different academic classes vary in their levels of attention and concentration. Description of Multiple Comparisons (Tukey HSD) for Class-wise Differences in Attention and Concentration Table presents the post hoc multiple comparison analysis using Tukey HSD to identify the specific class groups that differ significantly in attention and concentration. The results revealed a statistically significant mean difference between 8th-class and 9th-class students (Mean Difference = 0.30389, SE = 0.10604, p = 0.013). Since the significance value is less than 0.05, the difference between these two class groups is considered statistically significant. The 95% confidence interval ranged from 0.0535 to 0.5543, which does not include zero, further confirming the significance of the difference. In contrast, the comparison between 8th-class and 10th-class students did not show a statistically significant difference (Mean Difference = 0.15829, SE = 0.10466, p = 0.287). The confidence interval included zero, indicating the absence of a meaningful difference between these groups. Therefore, the findings suggest that attention and concentration levels significantly differ, particularly between 8th and 9th class students, while no significant difference was observed between 8th and 10th class students.

FINDINGS

The study revealed that the overall mean score of attention and concentration among school students was 1.46 with a standard deviation of 0.58, indicating moderate levels of attention and concentration among the participants. The descriptive statistics showed variations in demographic variables such as gender, class, among the participants. Significant gender differences were observed in attention and concentration levels among school students. Male students obtained higher mean scores (M = 1.6897, SD = 0.63448) compared to female students (M = 1.2832, SD = 0.47187). The obtained t-value was statistically significant (t = 5.196, p < .001). The findings indicated that class level significantly influenced attention and concentration among students. The ANOVA results revealed a statistically significant difference among students belonging to different class groups (F = 4.146, p = .017). Post hoc analysis showed a significant mean difference between 8th class and 9th class students regarding attention and concentration levels (Mean Difference = .30389, p = .013). The study indicated that poor attention and concentration may negatively affect students' classroom learning, memory retention, academic performance, listening ability, and task completion.

CONCLUSION

The present study focused on the assessment and standardization of the Student Attention & Concentration Questionnaire (SACQ) among school students. The findings of the study revealed that attention and concentration play a significant role in students' academic functioning, classroom participation, learning ability, and overall educational performance. The descriptive statistics indicated that the mean score of attention and concentration among the participants suggested moderate levels of attention and concentration among school students. Male students obtained higher mean scores compared to female student statistical significance at the 0.05 level.

The findings also revealed significant differences in attention and concentration across class levels. significant mean differences between 8th-class and 9th-class students regarding attention and concentration levels. These findings suggest that educational level and developmental stage influence attentional The Student Attention & Concentration Questionnaire (SACQ) demonstrated usefulness as a psychological assessment tool for evaluating attention and concentration among school students. The bilingual format of the scale enhanced students' understanding and response accuracy, making it suitable for use in Indian educational settings. Overall, the study concluded that attention and concentration are important determinants of students' academic success and

psychological functioning. Early identification of attentional difficulties among school students may help teachers, psychologists, counsellors, and parents provide appropriate educational and psychological interventions. The developed scale may contribute significantly to educational psychology, school counselling, psychological assessment, and future research related to attention and concentration among school students.

Suggestions:

1. Schools should conduct regular awareness programs regarding the importance of attention and concentration in academic performance and psychological well-being.
2. Teachers should adopt interactive and student-cantered teaching methods to improve classroom attention and reduce distractibility among students.
3. Parents should monitor excessive mobile phone usage, screen time, and online gaming habits of children, as these factors may negatively affect concentration and academic performance.
4. Students should be encouraged to maintain healthy study habits, proper sleep schedules, balanced nutrition, and regular physical activity to improve cognitive functioning and concentration abilities.
5. Schools may organize counselling sessions, concentration improvement activities, mindfulness exercises, and stress management programs to enhance students' attentional control.
6. Classroom environments should be made more supportive, calm, and distraction-free by reducing noise, overcrowding, and unnecessary disturbances during teaching sessions.
7. Teachers and parents should provide emotional support to students experiencing stress, anxiety, peer pressure, or academic difficulties, as emotional instability may negatively affect concentration.
8. Psychological screening and early identification of students with attentional difficulties should be encouraged to provide timely educational and counseling interventions.
9. Educational institutions may use the Student Attention & Concentration Questionnaire (SACQ) as a screening tool to assess attentional difficulties among school students.
10. Further studies may be conducted using larger samples and different educational settings to improve the standardization and applicability of the scale.
11. Future research may also examine the relationship between attention and concentration with academic achievement, memory, emotional intelligence, mental health, and mobile phone addiction among students.
12. Comparative studies may be conducted between rural and urban students, government and private school students, and different age groups to understand variations in attention and concentration levels.

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