



INTENRET ADDICTION IN RELATION TO ACADEMIC ACHIEVEMENT OF SEOCNDARY SCHOOL STUDENTS

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Abstract:

This study investigates the relationship between internet addiction and academic achievement among secondary school students in Guntur District, Andhra Pradesh, India. A sample of 1,000 students from Classes 8–10 was selected using stratified random sampling from 72 schools. IA levels were assessed using the Internet Addiction Scale (IAC) developed by Damandeep Kaur Gulati, Jose J. Kurisunkal, and Mamta Bakliwal, while academic achievement was measured by aggregate annual examination marks. Descriptive statistics (mean, SD) and inferential statistics (t-tests, Pearson's correlation) were employed. Results revealed that 50% of students exhibited moderate IA, 35% normal, and 15% severe. Significant differences in IA were found by gender (males higher, $t=6.44$), locality (urban higher, $t=7.24$), and medium of study (English higher, $t=5.45$). A strong negative correlation ($r=-0.45$) existed between IA and academic achievement. Findings underscore the need for interventions addressing digital literacy and demographic disparities to mitigate IA's impact on scholastic performance.

Keywords: Internet addiction, Academic achievement, Secondary school students

Introduction:

In the digital age, secondary school students aged 12-18 navigate a pivotal developmental phase marked by identity formation, academic pressures, and social exploration, yet this period is increasingly disrupted by internet addiction (IA). Characterized by excessive and compulsive online engagement, IA affects an estimated 7% of adolescents globally, with higher rates in Asia (8-26%) and India (2.5-51.3%), where over 1 billion people have internet access as of 2025 (Pan et al., 2020; Duc et al., 2024; TRAI, 2025; Singh et al., 2022; Sharma et al., 2024). This addiction erodes personal well-being, correlating with extended daily usage and undermining academic resilience the ability to adapt amid challenges—along with mental health stability and scholastic achievement. The multifaceted impacts intertwine psychological, social, and cognitive dimensions, leading to diminished focus, heightened anxiety, reduced motivation, and structural brain changes affecting decision-making and emotional regulation (Loh & Kanai, 2014; He et al., 2023; Young, 1998; Griffiths, 2010).

In India's diverse socio-economic landscape, urban-rural disparities amplify access inequalities, exacerbating IA risks and calling for integrated interventions under policies like the National Education Policy (NEP) 2020, which emphasizes holistic education, digital literacy, and well-being (Goel et al., 2013). IA manifests as a behavioral addiction, prioritizing digital interactions over obligations, aligning with neurodevelopmental vulnerabilities in adolescents and impeding socio-emotional maturation (Young, 1998; Grover et al., 2018; Balhara et al., 2018). This study explores IA's definitions, nature, types, influencing factors, and consequences on academic resilience, mental health, and achievement, drawing on theories like Piaget's and

Vygotsky's to advocate supportive environments balancing technological benefits with safeguards against dependency (Piaget, 1954; Vygotsky, 1978).

The exponential rise in internet accessibility positions secondary students at the intersection of opportunities and vulnerabilities, necessitating research into IA's ramifications, with global prevalence at 7% and Indian rates up to 51.3% amid 1 billion users (Pan et al., 2020; TRAI, 2025; Sharma et al., 2024). IA disrupts mental health through anxiety, depression, and brain alterations, with Indian studies showing correlations in adolescent girls and foreign meta-analyses confirming global exacerbations compounded by sleep issues and isolation (Grover et al., 2018; Cutipa-Quilca et al., 2023; Pedrero et al., 2012). It undermines academic resilience by eroding perseverance and self-efficacy, with gender differences noted in India and buffering effects in international models, highlighting gaps in context-specific data (Das & Mandal, 2023; Khodadadi et al., 2024; Li et al., 2018).

IA adversely affects academic achievement, causing 12-18% reductions via distractions and procrastination, with negative correlations in Indian and international studies urging interventions aligned with NEP 2020 (Singh & Kumar, 2024; Rajput, 2025; Hossain et al., 2023). Literature gaps in holistic Indian contexts, particularly urban-rural divides, demand this study to advance theories like resilience models and inform subtype-specific strategies, reducing prevalence and economic burdens (Machimbarrena et al., 2021; Kuss & Griffiths, 2012). Its significance lies in policy reforms for digital literacy, fostering equitable development, and empowering youth for resilient, healthy futures in a hyper-connected world (OECD, 2023; UNESCO, 2024).

Review of related Literature:

Cheng, Bai, and Fu (2026) examined school disconnectedness, relative deprivation, and internet addiction among junior high school students in China. The sample included 2,485 adolescents aged about 13 years. Internet addiction is associated with impaired academic motivation and achievement. Positive correlations were found between school disconnectedness and IA ($\beta=0.36$). It was concluded that school disconnectedness leads to internet addiction, which contributes to academic decline in secondary students.

Imrani and Touri (2025) examined internet addiction, academic performance, and cognitive difficulties among high school students in Morocco. The sample included 329 adolescents. Internet addiction was associated with academic decline. IA accounts for 31% of variance in academic performance. It was concluded that excessive internet use leads to academic decline and cognitive issues in secondary students.

Aswad and Hassan (2024) examined internet addiction and school achievement among secondary school pupils in Iraq. The sample included 400 pupils aged 13-18 years. Higher internet addiction was associated with lower school achievement. Significant associations were found between addiction levels and socio-demographic factors influencing performance. It was concluded that excessive internet use leads to lower academic performance in secondary students.

Kumar and Ruhela (2024) examined internet addiction among high school students in rural Southern Karnataka, India. The sample included 424 students in grades 8–10 (mean age 14.4 years). The prevalence of internet addiction was 14.6%, with moderate risk in 12.5% and high risk in 2.1%. Addiction was significantly higher among females and those using the internet for both academic and non-academic purposes (e.g., social media, entertainment, gaming). No strong correlation was found with daily usage time alone, but mixed-purpose use increased risk. It was concluded that excessive non-academic internet use leads to addiction, isolation, and academic decline among secondary students, emphasizing the need for parental monitoring and school-based education programs.

Kumar et al (2022) examined the prevalence of internet addiction among adolescents in a cantonment school in Western Maharashtra, India. The sample included 1325 students aged 10–19 years. Severe internet addiction was found in 2.5% of students, with 26.7% showing possible addiction. Risk factors included online gaming, pornography viewing, loneliness/boredom-driven use, and parental tobacco/alcohol consumption, while protective factors were academic-only use and regular outdoor play. Higher daily usage (>4 hours) was significantly associated with addiction. It was concluded that excessive internet use contributes to isolation, emotional issues, and academic decline in school adolescents, requiring targeted preventive interventions.

Objectives of the Study:

1. To find out the Internet addiction of secondary school students classify them.
2. To find out the Internet addiction among secondary school students with respect to the variables Gender, Locality and Medium of study.
3. To find out the correlation between Internet addiction and Academic Achievements of Secondary School Students.

Hypotheses of the study:

1. There is no significant difference in Internet addiction between male and female secondary school students.
2. There is no significant difference in Internet addiction between rural and urban secondary school students.
3. There is no significant difference in Internet addiction between secondary school students studying in English medium and those studying in Telugu medium.
4. There is no significant relationship between Internet addiction and academic achievement of secondary school students.

Delimitations of the study:

1. The present study was confined to Guntur District of Andhra Pradesh only.
2. The study was restricted to students of Classes 8, 9, and 10 only.
3. The sample was limited to 1000 secondary school students only.
4. The study was delimited to the following demographic variables only: Gender, Locality and Medium of Study.

Sample of the study:

A sample is a small proportion of the population selected for observation and analysis. The sampling unit was the school. A total of 72 secondary schools were selected using stratified random sampling technique to ensure proportional representation.

Tools used in the study:

The Internet Addiction Scale (IAS) developed by Daman Deep Kaur Gulati, Jose J. Kurisunkal, and Mamta Bakliwal was used.

Data Collection:

The investigator obtained formal permission from the Heads of the selected schools to conduct the research. The data was collected from secondary school students of Classes 8, 9, and 10 with the assistance of the concerned class teachers after clearly explaining the purpose, significance, and confidential nature of the study. The aggregate percentage of marks obtained in the most recent annual examination was taken as the measure of their academic achievement.

Statistical Techniques Used to Analyze the Data:

Mean and Standard Deviation were employed to describe the levels of Internet addiction and Karl Pearson's Product Moment Correlation was used to examine the relationship between the variables.

Analysis of the Data:

Levels and Classification of Internet Addiction in the Sample:

Table-1: Distribution of Sample on Internet Addiction (N=1000)

Total Sample	Internet Addiction Levels		
	Normal	Moderate	Severe
1000	350 (35%)	500 (50%)	150 (15%)

From the table 1, The overall distribution showed 350 students (35%) in the Normal level, 500 students (50%) in the Moderate level, and 150 students (15%) in the Severe level. This indicates that a majority of the students exhibited moderate levels of internet addiction, while a smaller proportion displayed severe addiction.

Hypothesis - 1: *There is no significant difference in Internet addiction between male and female secondary school students.*

Table 2: Significance of Difference in Mean Scores on Internet Addiction According to Gender (N=1000)

Gender	N	Mean	S.D	“t” Value
Male	500	54.20	15.8	6.44*
Female	500	48.0	14.6	

* Significant at 0.05 level

From the table – 2, The mean Internet addiction score for male students was 54.20 and SD=15.80, higher than for female students (M=48.00, SD=14.60). The difference in means was 6.20, indicating moderately higher addiction levels among males. The calculated t-value (6.44) was significant at the 0.01 level. This shows a statistically significant difference in internet addiction between male and female secondary school students, with males exhibiting higher levels. Therefore, the null hypothesis “There is no significant difference in Internet addiction between male and female secondary school students” was rejected. It can be seen in graphic representation in Figure 1.

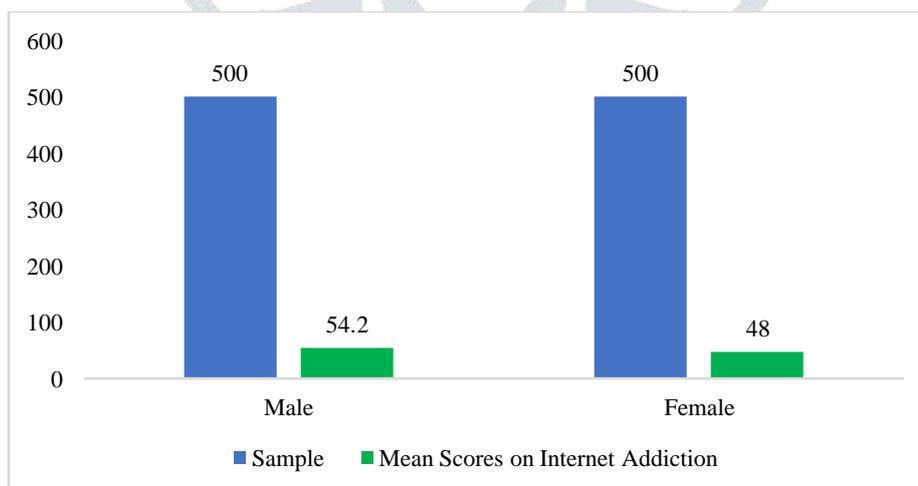


Figure – 1: Mean Scores on Internet Addiction of Secondary school students according to the Gender

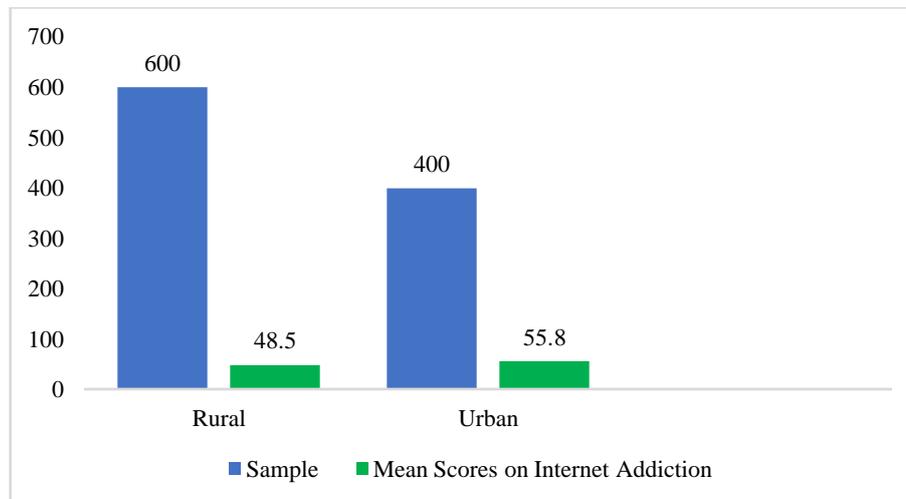
Hypothesis - 2: *There is no significant difference in Internet addiction between rural and urban secondary school students.*

Table 3: Significance of Difference in Mean Scores on Internet Addiction According to Locality (N=1000)

Locality	N	Mean	S.D	“t” Value
Rural	600	48.50	14.20	7.24*
Urban	400	55.80	16.50	

* Significant at 0.01 level

From the table 3, The mean Internet addiction score for urban students was 55.80 (SD=16.50), higher than for rural students (M=48.50, SD=14.20). The difference in means was 7.30, indicating moderately higher addiction levels among urban students. The calculated t-value (7.24) was significant at the 0.01 level. This shows a statistically significant difference in internet addiction between rural and urban secondary school students, with urban students exhibiting higher levels. Therefore, the null hypothesis “There is no significant difference in Internet addiction between rural and urban secondary school students” was rejected. It can be seen in graphic representation in Figure 2.

**Figure – 2: Mean Scores on Internet Addiction of Secondary school students according to the Locality**

Hypothesis - 3: *There is no significant difference in Internet addiction between secondary school students studying in English medium and those studying in Telugu medium.*

Table 4: Significance of Difference in Mean Scores on Internet Addiction According to Medium of Study (N=1000)

Medium of study	N	Mean	S.D	“t” Value
English Medium	550	53.50	15.90	5.45*
Telugu Medium	450	48.20	14.80	

* Significant at 0.01 level

From the table 4, The mean Internet addiction score for English medium students was 53.50 (SD=15.90), higher than for Telugu medium students (M=48.20, SD=14.80). The difference in means was 5.30, indicating moderately higher addiction levels among English medium students. The calculated t-value (5.45) was significant at the 0.01 level. This shows a statistically significant difference in internet addiction between English medium and Telugu medium secondary school students, with English medium students exhibiting higher levels. Therefore, the null hypothesis “There is no significant difference in Internet addiction between secondary school students studying in English medium and those studying in Telugu medium” was rejected. It can be seen in graphic representation in Figure 3.

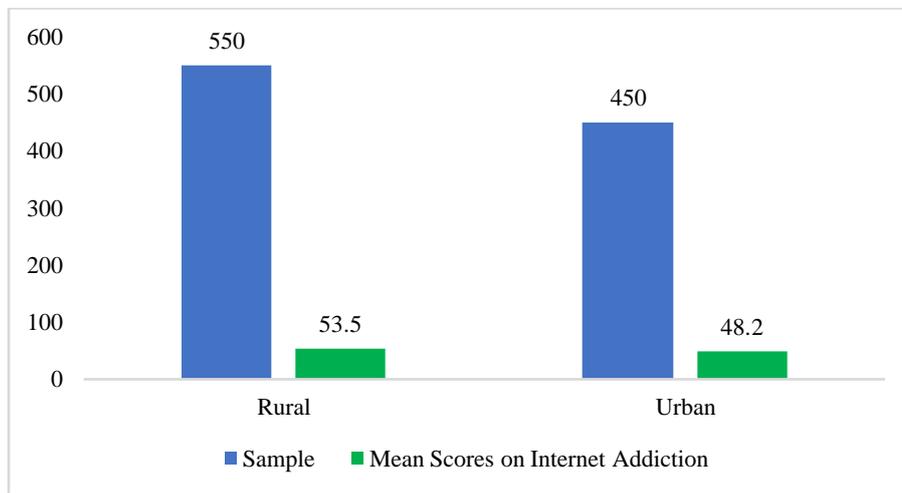


Figure – 3: Mean Scores on Internet Addiction of Secondary school students according to the Medium of study

Hypothesis - 4: *There is no significant relationship between Internet addiction, and academic achievement of secondary school students.*

Table 4: correlation between Internet Addiction and Academic Achievement (N=1000)

Variables	Sample	Correlation
Internet Addiction	1000	-0.45**
Academic Achievement	1000	

** Correlation significant at the 0.01 level

Internet addiction showed strong negative correlations academic achievement ($r = -0.45$). Therefore, the null hypothesis “There is no significant relationship between Internet addiction and academic achievement of secondary school students” was rejected.

Findings of the study:

1. Out of 1000 secondary school students, 35% (350) exhibited normal levels, 50% (500) showed moderate levels, and 15% (150) displayed severe levels, indicating a majority with moderate addiction.
2. Male students had a higher mean score (54.20, $SD=15.8$) compared to females (48.0, $SD=14.6$), with a significant t-value of 6.44, rejecting the null hypothesis and showing males have higher addiction levels.
3. Urban students had a higher mean score (55.80, $SD=16.50$) than rural students (48.50, $SD=14.20$), with a significant t-value of 7.24, rejecting the null hypothesis and indicating urban students exhibit higher addiction.
4. English medium students had a higher mean score (53.50, $SD=15.90$) compared to Telugu medium students (48.20, $SD=14.80$), with a significant t-value of 5.45, rejecting the null hypothesis and showing English medium students have higher addiction levels.
5. A strong negative correlation ($r = -0.45$) was found between internet addiction and academic achievement, rejecting the null hypothesis and indicating higher addiction is associated with lower academic performance.

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