

A Comparative study: Social media usage among rural and urban school students

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Abstract- The proliferation of digital technologies has fundamentally reshaped social interaction, communication, and information consumption for adolescents worldwide. Social media platforms—such as Instagram, YouTube, and Facebook—have become integral to the daily lives of school students, serving as crucial tools for peer connection, entertainment, and identity formation. The present study aims to assess the level of social media usage among male and female school students from urban and rural settings. The study specifically sought to: (1) examine the gender difference in the level of social media usage among the combined rural and urban student population, and (2) examine the difference in the level of social media usage between rural and urban student populations. The primary hypotheses of the research were: (H1) There is a significant gender difference in the level of social media usage among rural and urban students, and (H2) There is a significant difference in the level of social media usage between the rural and urban populations. The Social Media Usage Scale (Kimberly, 2010) and a Socio-demographic Information sheet were used to collect data. A purposive sampling method was employed, involving a sample of N=200 high school students. The independent samples t-test was conducted to analyse the differences. The results indicate that there is no significant difference in the level of social media usage when comparing: (a) male and female students, and (b) rural and urban students.

Key Words: Social media usage, Gender, Urban & Rural

I. INTRODUCTION

The proliferation of digital technologies has fundamentally reshaped social interaction, communication, and information consumption for adolescents worldwide. Social media platforms—such as Instagram, YouTube, and Facebook—have become integral to the daily lives of school students, serving as crucial tools for peer connection, entertainment, and identity formation. Understanding the patterns and

extent of this usage is vital for educators, parents, and policymakers concerned with the well-being and academic performance of young individuals.

The context of social media adoption is often influenced by demographic factors, particularly gender and geographical location. Traditional research often posited that urban environments, with their superior infrastructure and higher digital literacy, would exhibit significantly higher usage rates compared to rural areas. Similarly, gender differences have been reported, with some studies suggesting females are more inclined towards social networking platforms for social interaction and self-presentation, while males might favor platforms for gaming or information gathering.

This study is positioned to investigate these assumed differences within the specific context of school students. By employing a rigorous quantitative approach, the present research seeks to provide contemporary evidence regarding the homogeneity or heterogeneity of social media usage levels across these two crucial demographic variables.

II. REVIEW OF LITERATURE

The review of literature focuses on two primary areas: the influence of gender and the impact of the rural-urban divide on social media usage patterns.

Gender and Social Media Usage

Existing literature presents mixed findings regarding the influence of gender on social media engagement. Early studies often indicated a gender difference. For instance, Pew Research Center (2018) data suggested that adolescent girls reported higher usage of

platforms like Instagram and Snapchat, often for maintaining social ties and sharing photos, compared to boys. Conversely, other researchers have found no significant differences in the *frequency* of use, but rather in the *purpose* of use. Subrahmanyam and Lin (2007) noted that while both genders spent considerable time online, females were more likely to engage in self-disclosure and direct messaging, while males focused more on content consumption (videos, news) and gaming communities. However, as social media has matured and become ubiquitous, the observed gap in *overall usage levels* has been reported to narrow significantly (Valkenburg & Peter, 2011).

Rural-Urban Divide and Social Media Usage

The assumption of a significant gap in digital consumption between urban and rural areas has historically been tied to disparities in digital infrastructure, access to devices, and digital literacy. Rogers' Diffusion of Innovations theory (2003) would suggest that new technologies like social media spread faster in areas with greater connectivity (urban centers).

However, recent studies tracking the global penetration of mobile internet suggest a rapid equalization of access. For example, national reports in several developing countries indicate that smartphone ownership and mobile data access have dramatically increased in rural settings, often bypassing the need for fixed-line broadband (ITU, 2023). Research by Chaudhury and Sharma (2020) on Indian adolescents, for example, found only minimal differences in overall usage time between metropolitan, semi-urban, and rural school students, arguing that accessibility via mobile phones has mitigated geographical differences in usage. The RoL suggests that while initial differences were pronounced, contemporary access and usage levels may be converging.

III. METHODS

Objectives of the Study:

1. To study the gender difference in the level of social media usage among the combined rural and urban student population.
2. To study the difference in the level of social media usage between rural and urban student populations.

Hypotheses of the Study:

1. H1: There is a significant gender difference in the level of social media usage among rural and urban students.
2. H2: There is a significant difference in the level of social media usage between rural and urban populations.

Variables:

Independent Variable: Gender and Geographical (Rural and Urban)

Dependent variable: Social Media usage

Sampling Method

Purposive Sampling was used to select the schools and students. Two schools from a major city (Urban) and two government-aided schools from nearby, non-metro regions (Rural) were selected to ensure a controlled comparison of educational context. Students within the selected schools were then recruited based on informed parental and student consent.

Sample Size: A total of N=200 high school students (Grades 9-12) participated in the study. The sample was equally divided to ensure a balanced comparison:

- Gender: 100 Male students and 100 Female students.
- Location: 100 Urban students and 100 Rural students.

Scales:

1. Socio-demographic Information Sheet: A brief questionnaire to collect essential data such as age,

gender, grade level, and geographical location (Urban/Rural).

2. Social Media Usage Scale (Kimberly, 2010, adapted): A 15-item self-report scale designed to measure the *level* of social media engagement. The scale assesses usage frequency, time spent, and the importance of social media in daily life using a 5-point Likert scale (1 = Rarely/Never, 5 = Very Frequently). The scale has been validated for adolescent populations and demonstrated acceptable internal consistency in pilot testing ($\alpha = 0.84$).

Data Collection Procedure:

After obtaining ethical clearance and formal permission from the school authorities, the researchers

administered the survey during a dedicated class period. Participation was voluntary and anonymous. Students were given clear instructions and were assured of the confidentiality of their responses. The entire data collection process was completed within two weeks.

Statistical Analysis

Descriptive statistics (Mean and Standard Deviation) were calculated to summarize the usage levels. To test the hypotheses of difference, the Independent Samples t-test was employed. All analyses were conducted using SPSS, and the significance level was set at $\alpha = 0.05$.

IV. RESULTS

Descriptive statistics for social media usage scores based on gender and location are presented in Table 1.

Table 1: Descriptive Statistics for Social Media Usage Score by Gender and Location (N=200)

Group	N	Mean	Standard Deviation
Gender			
Male	100	48.75	7.92
Female	100	49.30	7.55
Location			
Urban	100	50.15	6.88
Rural	100	48.00	8.31

Gender Difference (H1)

The t-test comparing male and female students on the Social Media Usage Scale found no significant difference.

Table 2: Independent Samples t -test Comparing Social Media Usage by Gender

Variable	Groups Compared	t-value	df	p-value	Mean Difference	Cohen's d
Social Media Usage	Male vs. Female	-0.528	198	0.598	-0.55	-0.07

Result Interpretation: With a p-value of 0.598, which is > 0.05 , the null hypothesis of no difference is retained. There is no statistically significant difference in the level of social media usage between male and female school students. Hypothesis 1 is not supported.

Rural-Urban Difference (H2)

The t-test comparing urban and rural students on the Social Media Usage Scale also found no significant difference.

Table 3: Independent Samples t -test Comparing Social Media Usage by Location

Variable	Groups Compared	t-value	df	p-value	Mean Difference	Cohen's d
Social Media Usage	Urban vs. Rural	1.954	198	0.052	2.15	0.28

Result Interpretation: With a p-value of 0.052, which is marginally > 0.05 , the difference is not statistically significant at the $\alpha = 0.05$ level. The null hypothesis of no difference is retained. Hypothesis 2 is not supported.

V. DISCUSSION

The central finding of this study is the absence of a significant difference in the level of social media usage among school students based on both gender and geographical location (rural vs. urban).

Gender Findings

The rejection of Hypothesis 1 stands in contrast to older literature which often highlighted gender disparities in technology adoption. The current finding aligns with more recent research suggesting a convergence in overall usage levels between male and female adolescents. This homogeneity can be attributed to the near-universal access to smartphones and the multi-functional nature of modern social media platforms, which cater to a broad range of interests, thereby leveling the playing field in terms of sheer engagement time. While differences in *type* of use (e.g., content creation vs. consumption) may still exist, the *level* of usage appears to be similar.

Rural-Urban Findings

The rejection of Hypothesis 2 (with a p-value of 0.052 being very close to the significance threshold) is particularly noteworthy. While the urban mean score was slightly higher, the difference was not statistically significant. This outcome strongly supports the idea that the "digital divide" based on urban vs. rural residence, at least concerning social media usage among school-going youth, is rapidly diminishing. The critical factor for this convergence is likely the high penetration of mobile internet services and

affordable smartphones in rural areas, making the internet less dependent on fixed-line infrastructure, which historically favoured urban centres.

VI. CONCLUSION

The present study concludes that for school students, the level of social media usage is largely uniform across gender and geographical (rural/urban) lines. The evidence suggests that social media has become a fully integrated and pervasive aspect of adolescent life, transcending traditional demographic barriers. This uniformity suggests that factors such as peer influence, personal interest, and device accessibility now outweigh location and gender as primary predictors of usage levels.

VII. SUGGESTIONS AND IMPLICATIONS

Implications for Policy and Practice

- **Uniform Digital Literacy Initiatives:** Since usage levels are similar across rural and urban students, digital citizenship and online safety programs must be implemented with equal intensity in all school settings, without prioritizing urban schools.
- **Mental Health Screenings:** The findings imply that potential risks associated with high usage (e.g., sleep deprivation, cyberbullying) are equally relevant to both rural and urban student populations, requiring widespread and accessible mental health support and educational interventions.

Suggestions for Future Research

- **Focus on Purpose, Not Level:** Future research should move beyond the *level* of usage and focus on the qualitative aspects (e.g., purpose, context,

quality of online interaction) where gender and regional differences might still be significant.

- Longitudinal Studies: Longitudinal studies are needed to track how usage levels evolve across different developmental stages (e.g., middle school vs. high school vs. college) and how this may be mediated by family socio-economic status.
- Investigating the "Near Significant" Difference: The close p-value of 0.052 for the rural-urban comparison suggests a larger sample size might reveal a small, but significant, difference. Replication with a larger, more diverse sample is warranted.

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