SHORT ARTICLE

Smartphone use and its addiction among Jammu adolescents

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ABSTRACT

Background: Smartphones play a crucial role in our everyday life. Smartphones help users to develop social connections with others, gain information and entertain themselves through various applications. With the widespread use of smartphone, the number of smartphone users has been increasing worldwide. As smartphones are getting popular, smartphone addiction has become a serious mental health problem among adolescents. **Objectives:** To find out significant differences in smartphone addiction among adolescents with respect to their gender and locale. **Methodology:** Descriptive survey method was used for conducting the study. The sample consists of 200 adolescents of government and private schools from Jammu and Kathua. 'Smartphone Addiction Scale' (2021) developed by Vijayshri and Masaud Ansari was used for data collection. **Results:** It was found that smartphone addiction was significantly higher among female adolescents (M=65.34) as compared to their male counterparts (58.61). Further, it was also found that smartphone addiction was significantly higher in urban adolescents (M=64.37) than rural adolescents (M=59.08). **Conclusion:** In order to combat smartphone addiction among adolescents, we advise the creation of healthy environment at the family and school levels. Teachers should provide knowledge to the students about smartphone security tips and educational programmes should be organized for protecting psychological well-being of the adolescents.

KEYWORDS

Technology Addiction; Smartphone Applications; Adolescent; Gender Identity; Geographic Locations.

INTRODUCTION

Smartphones are becoming an integral part of our daily routine for meeting various needs such as entertainment, information, communication, business, commerce and education (1). Smartphones provide convenience to the users so that they can acquire information anywhere and anytime. These modern communication tools have also become an important part of the life of adolescents (2). The data published by Statista in 2014 reveals that adolescents are more addicted to their smartphones, which is around 34% when compared to other age group (3).

Adolescents use smartphones for various activities such as gaming, shopping, social media etc. Sarwar and Soomro (2013) stated

that "Smartphones can help students to take photographs of subject matter rather than taking notes, improve academic performance and communication between teachers and students" (4). Smartphones bring a massive amount of convenience to our lives but on the contrary, excessive smartphone use can lead to one of the major societal problems known as smartphone addiction (5).

Smartphone addiction is defined as "a psychological dependence on smartphone and is associated with behavioural addiction due to its clinical symptoms and the incompetence of the users to limit their use. (6). Smartphone addiction can cause several problems, including, anxiety, depression and family problems (7,8). The objective of this study was to find significant differences in smartphone addiction among adolescents with respect to their gender and to find significant differences in smartphone addiction among adolescents with respect to their locale.

MATERIAL & METHODS

Study Type & design: The current descriptive study was conducted among adolescents.

Study Population: School-going adolescents (14 to 18 years old).

Study setting & duration: The study was conducted in government and private schools of Jammu and Kathua, for a duration of 3 months, from October 2023 to December 2023.

Sample size calculation: The study enrolled a total of 200 adolescents from government and private schools. The sample size is calculated by using the formula:

$n=z^2 X \hat{p} (1- \hat{p})/ Ɛ^2$

where z is the z score at 95% confidence level = 1.96

Ɛ is the margin of the error= 5% = 0.05

N is the population size

$\hat{p}$ is the population proportion = 50% =0.5 in case of large unknown population.

Therefore, the sample size for the current study is 200

Inclusion Criteria: 1. Adolescents of age group 14 to 18 years.

2. Adolescents who gave assent and whose school authorities and parents gave consent for the present study.

Exclusion Criteria: 1. Adolescents who failed to complete the questionnaire in its entirety.

2. Adolescents who had history of medical or psychiatric disorders.

Study tool: Smartphone Addiction Scale (SAS) by Vijayshri and Masaud Ansari (2021) was used to collect data. The scale consists of 23 items and addresses the 6 dimensions namely compulsion (7 items), forgetfulness (2 items), lack of attention (2 items), depression (4 items), disturbed hunger/sleep (4 items) and social withdrawal (4 items). The original authors of the scale reported good internal consistency (Cronbach's a= 0.85). Each item of the scale is marked on a Five Point Likert Scale with the options of Strongly Agree, Agree, Undecided, Disagree and Strongly Disagree. Thus, the minimum possible score of the scale is 23 and the maximum possible score is 115. The higher the score indicates higher level of smartphone addiction and lower the score indicates low level of smartphone addiction.

Data Collection: Students were selected on the basis of their availability. The questionnaire was administered on students fulfilling the inclusion/exclusion criteria of the study. Respondents were informed that they were not obliged to participate, that all the answers were anonymous and that they were free to deny to answer any questions. The respondents were given 30 minutes to answer the questionnaire. Two attempts were made through their class schedule to reach out the proposed sample size.

Ethical issues & informed consent: The study was conducted after obtaining approval from the Institutional ethics committee and permission from the head of the institute. Written informed consent was obtained from each of the participant. The students were informed that all the data and information provided by them would be kept confidential and only be used for the research purpose.

Data Analysis: The data was entered using Microsoft Excel and analysed using statistical package SPSS software version 20. Independent t-test was used to determine

whether there is a significant difference between the means of the two groups.

RESULTS

According to Table 1, the t-value for smartphone addiction with respect to gender is 3.33 which is significant at 0.01 level. It implies that male and female adolescents differ significantly on smartphone addiction. Further as mean score of female was found higher than that of male adolescents, it may further be concluded that female adolescents are more addicted to smartphone as compared to their male counterparts. Therefore, hypothesis 1 stating "Male and Female adolescents do not differ significantly on the variable of smartphone addiction" stands rejected.

Table 1 Comparison of smartphone addiction among adolescents on the basis of Gender

Variable	Gender	N	Mean	Standard Deviation	t-ratio
Smartphone Addiction	Male	105	58.61	14.06	3.33**
	Female	95	65.34	14.45	

According to Table 2, the t-value for smartphone addiction with respect to locale is 2.59 which is significant at 0.01 level. It implies that rural and urban adolescents differ significantly on smartphone addiction. Further as mean score of urban was found higher than that of rural adolescents, it may further be concluded that urban adolescents are more addicted to smartphone as compared to their rural counterparts. Therefore, hypothesis 2 stating "There exists no significant difference in smartphone addiction among adolescents with respect to locale" stands rejected.

Table 2 Comparison of smartphone addiction among adolescents on the basis of Locale

Variable	Locale	N	Mean	Standard Deviation	t-ratio
Smartphone Addiction	Rural	97	59.08	13.20	2.59**
	Urban	103	64.37	15.45	

DISCUSSION

The results also revealed that female adolescents are more addicted to their smartphones as compare to males. The outcome obtained matches with various results found in different research studies in distinct age groups.

A study showed that the more academic procrastination among female, the more the frequency of checking smartphones while studying (9). In older adolescents, studies have also been done and it has been found that smartphone addiction was higher among female students than male students; in particular study in which the previous result was found, smartphone addiction was measured using Smartphone Addiction Scale-Short Version (10). Likewise, a recent study found that the male adolescents have a higher tendency to be phubbed and female adolescents are more internet addicted. Self-controlling behavior was less in female adolescents as compared to their counterparts and so, were more addicted to their smartphones (11). Likewise, a recent study found that girls had higher degree of smartphone dependence than boys. Girls use smartphones to improve their mode of communication (12). In contrast, an investigation whose purpose was to investigate the correlation between smartphone addiction, social anxiety and self-esteem where the mean age was 20 years found that male students have higher level of smartphone addiction as compared to female, but an important limitation was that the simple size of the study (N= 164) was small and only performed in a single university campus as compared to another article mentioned which included 514 high school students studying in grades 9-12 in various schools of Turkey, therefore raised more accurate results (9).

The second hypothesis of the study was that there exists no significant difference in smartphone addiction among adolescents with respect to locale. The hypothesis was not accepted since our results revealed that rural and urban adolescents differ significantly on smartphone addiction. The results also revealed that urban adolescents are more addicted to their smartphones as compared to rural adolescents. These findings are in line with the Kibira et al (2015) (13), indicating that smartphone addiction was higher among urban preschoolers compared to rural ones.

Other studies have also included adults in their population, such as the one performed by Sapienza et al (2023) (14) where it was observed that rural users spend less time on their smartphones as compared to urban users. It was also observed that smartphone users in rural areas tend to use their smartphones for activities such as gaming and social media where as users in urban areas preferentially use their smartphones for activities such as navigation and business. Even though these studies were performed in different countries, with different economic, social, cultural and educational background, the results have been similar (15,16,17). We can conclude that smartphone addiction among adolescents is one of the biggest emerging issue in today's world, and that there is indeed a significant difference in smartphone addiction among adolescents with respect to locale in which urban adolescents are more prone to smartphone addiction as compared to rural counterparts.

Conclusion

In conclusion, the obtained results revealed that female adolescents have more smartphone addiction than male adolescents. Further, it was also found that urban adolescents have more smartphone addiction as compared to their rural counterparts.

Recommendation

It is recommended to organize regular motivational sessions to embrace healthy lifestyle like focus on health and wellness, eating balanced diet, cultivating good habits like exercise, reading, cycling etc., and involvement in extracurricular activities to avoid overdependence on smartphones to pass the free time. Additionally, adolescents should undergo periodic health checkups to determine whether they manifest any symptoms of smartphone addiction. At-risk adolescents should be detected and offered prevention programs.

Limitation of the Study

The present study was limited to 200 adolescents only.

Relevance of the Study

Smartphones are both boon and bane for teenagers; this study examines smartphone addiction among adolescents in a particular setting. The current study also provided empirical evidence to increase our knowledge of smartphone use and its addiction among adolescents.

Authors Contribution

All authors have contributed equally.

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Conflict of Interest

The authors declare that there is no conflict of interest

Declaration of Generative AI and AI Assisted Technologies in the Writing Process

The authors have not used any AI tools or services in writing process.

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