



SMARTPHONE ADDICTION OF UNDERGRADUATE STUDENTS WITH RESPECT TO GENDER, RESIDENCE AND FAMILY STRUCTURE

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RESEARCH ARTICLE



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DOI:
<https://doi.org/10.70096/tssr.240205017>

Abstract

Through this present study the researchers have tried to study the Smartphone addiction of undergraduate students of Purulia district. All the undergraduate students of Purulia district have been considered as the population of this study, from where a total number of 350 undergraduate students are selected as a sample through simple random sampling technique. A self-made Smartphone addiction scale was used by the researchers to collect responses from the respondents and descriptive survey type research method was adopted by the researchers' to conduct this study smoothly. The finding of this study revealed that there is no significant difference exists in Smartphone addiction between male and female undergraduate students of Purulia district. Another finding of this study also showed that there is no significant difference between rural and urban undergraduate students of Purulia district regarding their Smartphone addiction. Others findings of this study revealed that there is no significant difference exists in Smartphone addiction between nuclear family-joint family, 4th semester-2nd semester, 6th semester-2nd semester undergraduate students of Purulia district.

Keywords: *Smartphone Addiction, Undergraduate Students, Gender, Residence, Joint family, Nuclear family*

Introduction

We have no doubt that one of the most important and a necessary invention of modern science is the Smartphone. Smartphone is a very important thing for people in today's social life. By using this Smartphone, we solve many complex problems very quickly. Smartphone addiction is a dependence syndrome, which is a kind of psychological dependence seen among its certain users who exhibit problematic behaviours. The users might frequently check their phones unreasonably, they might feel anxious or restless without the phone, wake up in the middle of night to check notifications and communication updates, show delay in work performance as a result of prolonged phone activities, and get distracted due to use of Smartphone applications. This addiction and withdrawal from using the device might increase anger, tension, depression, or cause irritation and restlessness in an individual which affects his or her physiological behaviour and reduces work efficacy. Another adverse effect of Smartphone overuse is slowed reaction time and increased distraction, both of which are associated with accidents and injuries. In the light of this threatening public health issue, the scope of the study is to look into age and gender specific usage pattern and addiction level of Smartphone. Addiction to this Smartphone affects the academic performance of students. So, with the help of this study the researchers try to study the level of Smartphone addiction of undergraduate students of Purulia district.

Review of the Related Literature

Kwon et al. (2013) stated that Smartphone addiction based on the experts diagnoses despite those aforementioned limitations. Kumcagic and Gunduz (2016) revealed the relationship between the level of psychological well-being and use of Smartphone addiction. Bavli, Katra and Gunnar (2018) found that all participants used Smartphone's and the most common reason for Smartphone use was determined as "browsing social networks. Sunday, Adesope and Maarhuis (2021) showed that Smartphone addiction negatively impacts students learning and overall academic performance ($Q(43)=711.87, P<.001, r=-0.12$). Rathakrishnan et al. (2021) indicated that the greater the Smartphone addiction, the lower the academic performance of university students. Asheri, Ghodsi and Ghasemi(2024) showed that there are relationships between impulsivity, intolerance of uncertainty, and Smartphone management styles with Smartphone addiction mediated by warm executive functions. Jaiswalet

al. (2024) stated that there was no direct effect of gender on Smartphone addiction during lockdown ($B = -0.059$, $t = -0.887$, $P < 0.001$). Gayen and Mahato (2023) revealed that the different dimensions of Smartphone addiction like daily-life disturbances, positive anticipation, withdrawal, cyberspace oriented, overuse and tolerance of postgraduate students have statistically significant positive correlation among them. Nehra and Mehrotra (2022) suggested two important aspects to understand the influence of Smartphone addiction on the academic performance of adolescents. Roy et al. (2023), Ansary (2023a), Ansary (2023b), Ansary and Rakshit (2024), Ansary (2023c), Ansary (2023d) and Sutradhar, Sen and Adhikari (2023) have also conducted a variety of studies in this field.

So many researchers conducted a variety of studies and used different types of statistical approaches to perform their research work in the field of education, including the correlational studies [Adhikari et al. (2023c); Mahato et al. (2023); Sen et al. (2023b); Saha (2012a); Saha (2013); Sutradhar and Sen (2022b); Sutradhar et al. (2023); Gayen et al. (2023); Gayen and Sen (2021); Mahato and Sen (2023a); Kar and Saha (2021a); Kar and Saha (2021b)], t-test Gayen (2024); Saha (2012b); Mahanti, Mondal and Saha (2016); Mondal and Saha (2017); [Adhikari (2023b); Adhikari et al. (2023b); Mahato and Sen (2021a); Mondal et al. (2018); Saha (2021); Sen et al. (2013); Mondal and Saha (2013); Khatun et al. (2022); Karmakar et al. (2016); Ansary et al. (2022); Sen and Kar (2014); Sen et al. (2021c); Khan et al. (2023); Kar and Sen (2014); Mahato and Das (2024); Mahato et al. (2024)], non-parametric tests [Halder et al. (2022); Sutradhar and Sen (2022a); Das (2023); Das and Mahato (2024); Saha and Adhikari (2021); Adhikari et al. (2023a); Mahato et al. (2022); Sen et al. (2021a); Sen et al. (2021b)] and Clustering Techniques [Sen et al. (2023a); Mohanta et al. (2023a); Ansary et al. (2023); Saha, Sen and Adhikari (2021); Adhikari et al. (2023d); Mohanta et al. (2023b); Adhikari and Sen (2023a); Adhikari and Sen (2023b)]. Mahalanobis Distance [Sen and Pal (2020); Mahato and Sen (2021); Sen et al. (2023a); Ahmed et al. (2022); Mohanta et al. (2023); Adhikari (2023a); Mohanta et al. (2023b); Sen et al. (2023c); Sen et al. (2023c); Adhikari et al. (2023e)].

The present work reflects Smartphone addiction of undergraduate students of Purulia District of West Bengal by collecting data from undergraduate students, following different dimensions like gender, family structure and semester of study.

Research Gap: Although there has been work done in different countries and abroad on this topic, this work has not been done among the undergraduate students in Purulia district, so the researchers identified this research topic.

Objectives of the Study

1. To find out the difference between male and female undergraduate students regarding their Smartphone addiction
2. To find out the difference between rural and urban undergraduate students regarding their Smartphone addiction
3. To explore the difference between nuclear family and joint family undergraduate students regarding their Smartphone addiction
4. To explore the difference between 2nd semester and 4th semester undergraduate students regarding their Smartphone addiction
5. To explore the difference between 2nd semester and 6th semester undergraduate students regarding their Smartphone addiction
6. To find out the difference between 4th semester and 6th semester undergraduate students regarding their Smartphone addiction

Hypotheses of the Study

H₀₁: There is no significant difference between male and female undergraduate students regarding their Smartphone addiction

H₀₂: There is no significant difference between rural and urban undergraduate students regarding their Smartphone addiction

H₀₃: There is no significant difference between nuclear family and joint family undergraduate students regarding their Smartphone addiction

H₀₄: There is no significant difference between 2nd semester and 4th semester undergraduate students regarding their Smartphone addiction

H₀₅: There is no significant difference between 2nd semester and 6th semester undergraduate students regarding their Smartphone addiction

H₀₆: There is no significant difference between 4th semester and 6th semester undergraduate students regarding their Smartphone addiction

Research Design: In this study the researchers used descriptive survey type research method to conduct this study.

Population of the study: All the undergraduate level college students of Purulia district are considered as the population of this study.

Sample and sampling of the study: A total number of 350 undergraduate college students are selected as a sample in this study through the use of simple random sampling technique.

Delimitations of the Study

- i. This present study delimited to the college goers’ students of Purulia district West Bengal.
- ii. This study was confined to urban as well as rural college of Purulia district, West Bengal.
- iii. This study is also delimited to all that college which is affiliated to Sidho-Kanho-Birsha University.

Tools of the study: A self-developed Smartphone addiction scale has been used by the researchers to collect data from the students.

Statistical Technique: Mean, SD, t-test and correlation has been used to analyze the collected data in this study.

Operational Definitions: Smartphone Addiction: Smartphone addiction is a disorder involving compulsive overuse of the mobile devices, usually quantified as the number of times users access their devices and/or the total amount of time they are online over a specified period.

Data Analysis and Interpretation: Data analysis and Interpretation is one of the important parts of every research activity. In this chapter the researcher has tried to analysis and Interpretation the collected data.

Hypothesis Wise Analysis and Interpretation

H₀₁: “There is no significant difference between male and female undergraduate students regarding their Smartphone addiction”

Table 1: Presenting the ‘t’-Test for Smartphone Addiction between Male and Female Undergraduate Students

| | Variables | N | Mean | SD | t-value | df | Remark |
|----------------------|-----------|-----|--------|-------|---------|-----|--|
| Smartphone Addiction | Male | 88 | 146.81 | 27.14 | .319 | 348 | Not significant at 0.05 and 0.01 level |
| | Female | 262 | 145.73 | 27.36 | | | |

Form Table 1, it has been found that the mean scores of both male and female are 146.81 and 145.73 while the standard deviation is 27.14 for male and 27.36for female students respectively. The obtained value of the t-Test .319with df 348 and is not significant at the 0.05 and 0.01 level. The above computed data indicates that there is no significant difference exists in Smartphone addiction between male and female undergraduate students. So, the null hypothesis “There is no significance difference between male and female undergraduate students regarding their Smartphone addiction” is retained. Hence, there is no significant difference exist in male and female of undergraduate students regarding their Smartphone addiction.

H₀₂: “There is no significant difference between rural and urban undergraduate students regarding their Smartphone addiction”

Table 2: Presenting the ‘t’-Test for Smartphone Addiction between Rural and urban Undergraduate Students

| | Variables | N | Mean | SD | t-value | df | Remark |
|----------------------|-----------|-----|--------|--------|---------|-----|--|
| Smartphone Addiction | Rural | 304 | 145.01 | 26.492 | 1.762 | 348 | Not significant at 0.05 and 0.01 level |
| | Urban | 46 | 152.59 | 31.512 | | | |

Form Table 2, it has been found that the mean scores of both rural and urban are 145.01 and 152.59 while the standard deviation is 26.492 for rural and 31.512 for Urban students respectively. The obtained value of the t-Test 1.762 with df 348 and is not significant at the 0.05 and 0.01 level. The above computed data indicates that there is no significant difference in Smartphone addiction between rural and urban undergraduate students. So, the null hypothesis “There is no significant difference between rural and urban undergraduate students regarding their Smartphone addiction” is accepted. Hence, there is no significant difference exist in rural and urban of undergraduate students regarding their Smartphone addiction.

H03: “There is no significant difference between nuclear family and joint family undergraduate students regarding their Smartphone addiction”

Table 3: Presenting the ‘t’-Test for Smartphone Addiction between Nuclear and Joint Family Undergraduate Students

| | Variables | N | Mean | SD | t-value | df | Remark |
|----------------------|----------------|-----|--------|--------|---------|-----|--|
| Smartphone Addiction | Nuclear family | 82 | 150.33 | 28.775 | 1.645 | 348 | Not significant at 0.05 and 0.01 level |
| | Joint Family | 268 | 152.59 | 26.715 | | | |

Form Table 3, it has been found that the mean scores of both nuclear family and joint family are 150.33 and 152.59 while the standard deviation is 28.775 for nuclear family and 26.715 for Joint family students respectively. The obtained value of the t-Test 1.645 with df 348 and is not significant at the 0.05 and 0.01 level. The above computed data indicates that there is no significant difference between nuclear family and joint family undergraduate students regarding their Smartphone addiction. So, the null hypothesis, “There is no significant difference between nuclear family and joint family undergraduate students regarding their Smartphone addiction” is retained. Hence, there is no significant difference exist in Smartphone addiction between nuclear family and joint family of undergraduate students.

H04: “There is no significant difference between 4th semester and 2nd semester undergraduate students regarding their Smartphone addiction”

Table 4: Presenting the ‘t’-Test for Smartphone Addiction between 4th Semester and 2nd Semester Undergraduate Students

| | Variables | N | Mean | SD | t-value | df | Remark |
|----------------------|-----------|-----|--------|--------|---------|-----|--|
| Smartphone Addiction | 4th | 89 | 144.87 | 30.790 | -0.61 | 299 | Not significant at 0.05 and 0.01 level |
| | 2nd | 212 | 145.08 | 25.443 | | | |

Form Table 4, it has been found that the mean scores of both 4th semester and 2nd semester are 144.87 and 145.08 while the standard deviation is 30.790 for 4th semester and 25.443 for 2nd semester students respectively. The obtained value of the t-Test -.61 with df 299 and is not significant at the 0.05 and 0.01 level. The above computed data indicates that there is no significant difference between 4th semester and 2nd semester undergraduate students regarding their Smartphone addiction. So, the null hypothesis, “There is no significant difference between 4th semester and 2nd semester undergraduate students regarding their Smartphone addiction” is retained. Hence, there is no significant difference exist in Smartphone addiction between 4th semester and 2nd semester of undergraduate students.

H05: “There is no significant difference between 6th semester and 2nd semester undergraduate students regarding their Smartphone addiction”

Table 5: Presenting the ‘t’-Test for Smartphone Addiction between 6th Semester and 2nd Semester Undergraduate Students

| | Variables | N | Mean | SD | t-value | df | Remark |
|----------------------|-----------|-----|--------|--------|---------|-----|--|
| Smartphone Addiction | 6th | 49 | 152.08 | 27.956 | 1.705 | 259 | Not significant at 0.05 and 0.01 level |
| | 2nd | 212 | 145.08 | 25.443 | | | |

Form Table 5, it has been found that the mean scores of both 6th semester and 2nd semester are 152.08 and 145.08 while the standard deviation is 27.956 for 6th semester and 25.443 for 2nd semester students respectively. The obtained value of the t-Test 1.705 with df 259 and is not significant at the 0.05 and 0.01 level. The above computed data indicates that there is no significance difference in Smartphone addiction at the between 6th semester and 2nd semester undergraduate students. So, the null hypothesis, “There is no significant difference between 6th semester and 2nd semester undergraduate students regarding their

Smartphone addiction” is retained. Hence, there is no significant difference exist between 6th semester and 2nd semester of undergraduate students regarding their Smartphone addiction.

H06: “There is no significant difference between 6th semester and 4th semester undergraduate students regarding their Smartphone addiction”

Table 6: Presenting the ‘t’-Test for Smartphone Addiction between 6th Semester and 4th Semester Undergraduate Students

| | Variables | N | Mean | SD | t-value | df | Remark |
|----------------------|-----------|----|--------|--------|---------|-----|--|
| Smartphone Addiction | 6th | 49 | 152.08 | 27.956 | 1.360 | 136 | Not significant at 0.05 and 0.01 level |
| | 4th | 89 | 144.87 | 30.790 | | | |

Form Table 6, it has been found that the mean scores of both 6th semester and 4th semester are 152.08 and 144.87 while the standard deviation is 27.956 for 6th semester and 30.790 for 4th semester students respectively. The obtained value of the t-Test 1.360 with df 136 and is not significant at the 0.05 and 0.01 level. The above computed data indicates that there is no significance difference in Smartphone addiction between 6th semester and 4th semester undergraduate students. So, the null hypothesis, “There is no significant difference between 6th semester and 4th semester undergraduate students regarding their Smartphone addiction” is retained. Hence, there is no significant difference exist between 6th semester and 4th semester of undergraduate students regarding their Smartphone addiction.

Findings of the Study

- i. There is no significant difference between male and female undergraduate students regarding their Smartphone addiction.
- ii. There is no significant difference existing in rural and urban undergraduate students regarding their Smartphone addiction.
- iii. There is no significant difference existing in Smartphone addiction between nuclear family and joint family of undergraduate students.
- iv. There is no significant difference between 4th semester and 2nd semester undergraduate students regarding their Smartphone addiction.
- v. There is no significant difference existing between 6th semester and 2nd semester of undergraduate students regarding their Smartphone addiction.
- vi. There is no significant difference between 6th semester and 4th semester undergraduate students regarding their Smartphone addiction.

Conclusion

Smartphone addiction is a dependence syndrome, which is a kind of psychological dependence seen among it’s certain users who exhibit problematic behaviours. The main objective of this research study is to study the Smartphone addiction of undergraduate students of Purulia district in respect to gender, residence and locality of school. The findings of this study revealed that there is no significant difference exists in Smartphone addiction between male and female undergraduate students of Purulia district. But mean score of this study indicated that male undergraduate students are slightly more Smartphone addicted than their female counterpart. Other findings of this study also showed that there is no significant difference exists in Smartphone addiction between rural and urban, nuclear and joint families undergraduate college students of Purulia district. But the mean score of urban undergraduate students proved that they are more Smartphone addicted than rural undergraduate students.

Acknowledgement: No

Authors Contribution: *Dr. Karim Ansary:* Literature Review, Methodology, Analysis, Drafting, Referencing; *Barnali Bauri:* Data Collection

Funding: No funding.

Declarations/Consent for Publication: All the authors have given a consent for the publication.

Competing Interest: No

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