EFFECTOF MOBILEPHONEDEPENDENCE ON BEHAVIOR AND SCHOLASTIC PERFORMANCE OF CHILDREN IN SELECTED SCHOOLS OF UP

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ABSTRACT

One of the most effective gifts of the 21st century is the mobile phone, which is especially well-liked by kids. Mobile phones today are equipped with limitless resources that can be used for a wide range of purposes. Excessive usage of it can affect children's behavior and physical health. This research examines the strong link between mobile phone usage and mental disorders as well as the relationship involving cellphone usage and significance, eye, and elbow growth. A cross-sectional research included 400 students, 45% female and 55% male, from a few chosen classrooms in Uttar Pradesh, in India. Using a straightforward random-sample approach, both the UCLA Loneliness Scale and the Mobile Phones Abuse Test were utilised to analyse the behavioural changes brought about by the usage of mobile phones. Survey distribution was used to track academic success. Statistical methods such as descriptive statistics were used to analyse the data that was gathered. The study found that the most prevalent mobile phone activities among participants were making or "receiving phone calls (72.49%), typing and sending messages on online services (66.39%), and watching videos on YouTube (65.42%). A significant relationship was seen between mobile phone dependency with ($P < 0.001$) seen among adolescents. By using binary logistic regression, this was investigated. as mental and physical health problems are present, there is a larger likelihood of a negative personality influence as compared to people who do not have these problems.

Keywords: academic performance, mobile phone, children, physical health, online services.

Introduction

The widespread use of mobile phones in daily life in recent years has given rise to serious worries about the effects these devices may have on different facets of human behavior and functioning. Children between the ages of 9 and 18 are one group that has been significantly impacted by this technological boom. This is a crucial developmental period when social, cognitive, and academic progress converge. The possible effects of a reliance on cell phones on behavior and academic performance have come under increased attention and scrutiny as these young people get more and more enmeshed in the digital world (Hockenberry et al., 2014). Social interactions, attention spans, and general mental health are among the behavioral changes linked to mobile phone reliance. Extended screen time has also sparked worries about its potential effects on academic achievement, as it may derail cognitive growth and draw attention away from academic obligations. This study aims to evaluate the impact of mobile phone reliance on the behavior and academic performance of students aged 9 to 18 in certain schools, in recognition of the necessity for a systematic investigation of these dynamics. Teenagers are being exposed to a constant impact during their early years as a result of children getting and using cell phones at younger and younger ages. Adolescents who grow up in environments where cell phone usage is engrained from an early age are more likely to develop compulsive behaviors related to electronic media or cell phones.It's important to keep in mind that human brain development continues until about age 25. A young kid or adolescent who becomes addicted to their phone may face bad outcomes as a result of the brain's normal maturation processes being impeded. Dependency on cellphones is strongly related to Internet dependency, which is recognized as an issue with impulse control. Teens who become enmeshed in Internet addiction frequently exhibit a variety of negative symptoms (Worldwide Mobile Phones, 2017). Impact on mental health and sensations including anxiety, depression with obvious symptoms, substantial weight loss, dietary changes, irregular sleep patterns, chronic exhaustion, and mood swings between depression and agitation.

Materials and Methods

Research design: Descriptive research design

Sampling techniques: Random sampling method

Sample size: 400 participants (Gender distribution: 45% females, 55% males, Mean age: 24.45 ± 3.45 years).

Education level: 67.5% graduates, 32.5% undergraduates.

Demographic Analysis:Conducted t-tests and chi-square tests to analyze demographic differences between Low Cell Phone Users (LCPU) and High Cell Phone Users (HCPU)", identified significant differences in age, gender, and education.

Physical Health Analysis:Identified prevalence of eye strain, neck/back pain, and weight gain and established significant correlations between "cell phone usage and mental health issues".

Mental Health Analysis:Higher levels of depression, loneliness, and mood disorders in HCPU and utilized binary logistic regression to measure the impact on overall personality.

Mobile Phone Activities (Children):Focused on active usage with permanent internet access and analyzed common activities: making/receiving calls, typing messages, watching YouTube videos.

Mobile Phones in Schools:Explored regulations on mobile phone use.Examined break time activities in "schools with and without mobile phone restrictions".

- The methodology provides a comprehensive assessment of adverse effects on children's physical health and behavior due to mobile phone usage.

Results and Discussions

The study findings indicate significant differences between LCPU and HCPU across various demographic and attribute categories. The mean age of HCPU (24.437 ± 6.259 years) is slightly lower than LCPU (25.343 ± 6.74 years), with a significant test statistic of 1.798 and a p-value of 0.042 (< 0.05), suggesting a notable age difference between the two groups. Additionally, cell phone use duration per day shows a significant contrast, with HCPU (7.28 ± 2.13 hours) spending more time on their phones compared to LCPU (5.06 ± 2.54 hours), resulting in a test statistic of -1.345 and a p-value of 0.004 (< 0.05).Regarding gender distribution, the study highlights a notable distinction between these two classes, with 110 males in LCPU and 98 in HCPU (test statistic: 2.687, p-value: 0.001 < 0.05). Educational status also plays a role, as evidenced by the significant difference in the distribution of pre-graduate and postgraduate individuals between LCPU (127 and 75, respectively) and HCPU (143 and 55, respectively) with a test statistic of 4.776 and a p-value of 0.001 (< 0.05). These findings underscore the influence of age, gender, and educational background on the extent of cell phone usage, providing valuable insights into the demographics of cell phone users in the study.

Table 1: "Comparison of the proportions between two groups (LCPU and HCPU)".

"Physical and Mental Health Variables"		"Low Cell Phone Users" "(LCPU) N = 202"	"High Cell Phone" "Users (HCPU) N = 198"	"Test-Statistic"	"*p*- Value"
Eyestrain	Yes	22 (10.5)	65 (33.5)	191.11	0.021 ***
	No	46 (22.5)	54 (27.0)		
	Sometimes	134 (67.0)	79 (39.5)		
Neck Pain	Yes	25(12.5)	110 (55.0)	175.23	0.000 ***
	No	18(8.5)	10 (6.0)		
	Sometimes	159(79.0)	78 (39.0)		
Weight gain	Yes	19 (0.09)	72 (36.0)	187.14	0.000 ***
	No	24 (11.8)	60 (30.3)		
	Sometimes	159 (78.7)	66 (33.0)		
Back pain	Yes	43 (21.5) 5 (0.2)	54 (27.0)	217.12	0.037 ***
	No		34 (17.0)		
	Sometimes	"154 (76.5)"	"110 (56.0)"		
"Depression"	"Low depression level (<median)"	"102 (50.5)"	"40 (20.2)"	87.883	0.000 ***
	"High depression level (> median)"	"100 (49.5)"	"158 (79.7)"		
Loneliness	"Low loneliness level (<median)"	"104 (51.5)"	"141 (71.2)"	16.935	0.003 ***
	"High loneliness level (> median)"	98 (48.5)	57 (28.8)		
Mood disorder	"Low level of mood disorders (<median)"	"182 (90.5)"	"62 (31.3)"	"147.318"	0.001 ***
	"High level of mood disorders (> median)"	"20 (9.5)"	"136 (68.7)"		

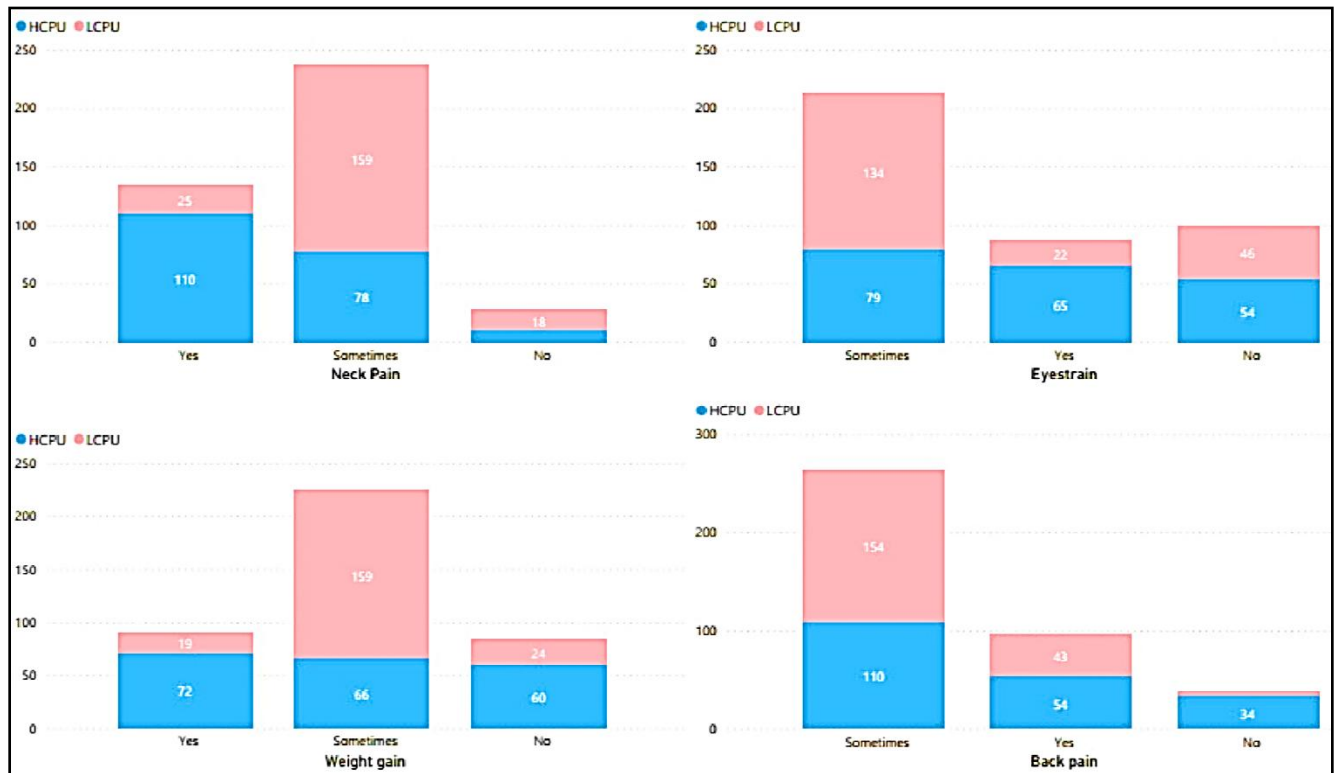"Chi-square Test of Association, *** significant if *p* < 0.05."

Figure 1: "Proportion of neck pain, eye strain, weight gain and back pain based on LCPU and HCPU".

The HCPU arm had higher levels of depression than the LCPU group ($\chi2$ = 74.713, p = 0.000). Using a phone was likewise linked to loneliness, albeit the LCPU unit had higher levels of solitude than the HCPU category ($\chi2$ = 16.935, p = 0.003). In the HCPU sample of those questioned, a history of mood disorders was also noted with an upward trend ($\chi2$ = 147.318, p = 0.001) as opposed to the LCPU group. The graphics depiction of the percentage of behavioural problems relying on the LCPU as well as HCPU.
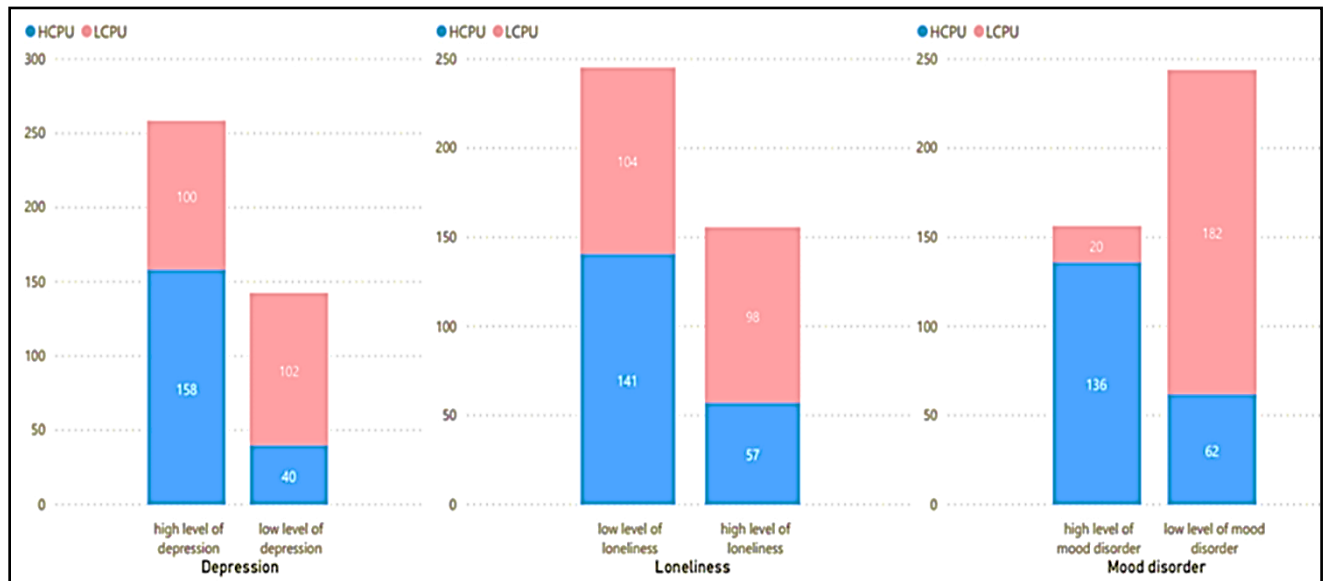
Figure 2: "Proportion of depression, loneliness and mood disorder based on LCPU and HCPU".

Conclusion

The study also investigated the relationships between several aspects of physical and mental health and cell phone usage patterns. There was a higher prevalence of eyestrain, "neck pain, weight gain, back pain, depression, loneliness, and mood disorders among high cell phone users," according to significant connections discovered. These results demonstrated the significant negative effects of cell phone use on mental and physical health.

Reference

1. Hockenberry MJ, Wilson D. *Wong's Essentials of Pediatric Nursing.* 8th ed. New Delhi: Elsevier India Private Limited; 2014. p. 492.

2. Worldwide Mobile Phone Users; 2017. [Last accessed on 2020 Jun 02]. available from: https://vaciniti.com/mobile-phone-users-worldwide .

3. Kopecký K, Fernández-Martín FD, Szotkowski R, Gómez-García G, Mikulcová K. Behaviour of Children and Adolescents and the Use of Mobile Phones in Primary Schools in the Czech Republic. Int J Environ Res Public Health. 2021 Aug 6;18(16):8352.

4. Yadav MS, Kodi SM, Deol R. Impact of mobile phone dependence on behavior and academic performance of adolescents in selected schools of Uttarakhand, India. J Educ Health Promot. 2021 Sep 30;10:327.

5. Kumar S, Kumari N, Anshari S, Kumari N. A Study to assess the Behavioral Changes Related to Mobile Phone usage Observed by Parents of School Going Children in Selected Areas of Sasaram.