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Impact of Smartphone Addiction on Students' Academic Achievement at Government Universities in Mosul

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ABSTRACT

Background: University students are particularly vulnerable to smartphone addiction, according to recent studies, since they spend a lot of time using their devices, which exacerbates the negative impacts of excessive use. **Objective**: The study identifies levels of smartphone addiction and academic Achievement and finds the relationship between them. **Methods**: A descriptive study used a questionnaire based on demographical data, the Smartphone Addiction Scale Short Version, and an academic Achievement scale from 2024 until 2025. A purposive sample was 1700 students collected from five universities in Mosul City, Iraq. The targeted study is students in different colleges from the third and fourth year, divided between scientific and humanities colleges. The data was collected from November 2024 and continued until January 2025. **Results**: Data represented that 42.6% of participants have a severe addiction to smartphones, which leads to a decrease in academic Achievement, which is significant at p-value = 0.000. **Conclusions**: smartphone addiction does not serve as a strong predictor for their academic Achievement. **Recommendations**: activate awareness programs continuously. These programs aimed to encourage students about time management, the benefits and risks of smartphones, and the effects on health, daily activity, passion, psychology cases, and their future lives.

1. Introduction

A smartphone with several computer-like functionalities can download different applications (1). The purposes could range from entertainment or communication to information-seeking (2). Using this technology leads to efficiency in performing life activities. Moreover, the virtual life this technology allows to lead, combined with the allowance for digital identity, renders it all the more popular (3). Excessive use of smartphones in everyday living and affect human health and interpersonal communication. There are three types of problematic mobile phone usage: excessive, inappropriate, and dangerous uses(4). Smartphone addiction develops to disturb, which leads to a heightened psychological strain, such as anxiety and stress, physical problems , and increasingly feel the urge to reach for their smartphones(5). Addictive use

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of smartphones was reported to include tolerance, withdrawal, obsessive-compulsive symptoms, and functional disorders(6). Mobile phones are radio communications devices employing a cellular radio system that provides wide-ranging services without requiring physical connections to a network(7). As such, they are ubiquitous with today's standards of easy internet access for social networking, banking, shopping, or seeking information(8). Addiction of technology is now becoming a critical issue among students, altering badly the academic productivity profile because most would remain on the Internet for excessive hours. According to (9), spending long hours on the Internet would make it difficult for a student to plan time well, which affects the quality of doing assignments within the deadlines required or at times getting optimum focus in class. Recent studies have revealed that this group is prone to addiction due to their lengthy interactive time with smartphones 4-6 hours(10). According to epidemiological figures, 80% of students spend 5-7 hours on smartphones daily(11). College students are the ones who use cell phones the fastest. Studies have shown links between cell phone use, health, and academic success; the direction of the latter relationship depends in part on the type of task a student is performing on their phone(12). The terms academic achievement, academic Achievement, academic success, and others refer, in general, to a student's ability to meet the demands of the university study process to achieve high academic results, effectively graduate from university, and, ideally, find success in the workplace(13). Academic accomplishment and timely graduation become even more important in light of the alarming drop-out rates from university-level education(14). The call for academic achievement might also influence aspects of personality and mental state. It may either raise or lower the self-confidence and self-esteem of a learner (15).

2. Objectives of the study

a. To identifies levels of smartphone addiction and academic Achievement among students in Mosul government universities
b. To finds the relationship between smartphone addiction and academic Achievement among students in Mosul government universities.

3. Methods

Ethical approval

In accordance with Administrative Order number 54 dated October 2024, the Scientific and Ethical Committee for Postgraduate Studies at the College of Nursing/University of Mosul obtained initial approval. The College Committee for Medical Research Ethics then provided approval letters, and the five public Mosul universities also provided their approval.

Study Design

The current study selected a quantitative descriptive study carried out from October 2024 to March 2025 in Mosul universities to achieve objectives.

The Study Setting

The target population comprised third and fourth-year students from five public universities in Mosul: University of Mosul, Hamdaniya University, University of Nineveh, Northern Technical University, and Tal Afar University in Mosul City.

Sample and Data Collection

A purposive sampling technique was used to select participants. Each university's third and fourth-year students were divided into strata to ensure that both years were proportionally represented in the sample. The study targeted 1700 samples across the public universities in Mosul. The data for the current study have been collected from November 2024 and continued until January 2025, which depend on specific criteria first Inclusion criteria: The study focused solely on students third and fourth stage of public universities, while exclusion criteria was

:excluding private institutions to ensure consistency in sample characteristics and first and second stage of public universities.

Tool of the Study

Data were collected using a structured questionnaire that was taken from different literature and tested for validity and reliability. The content validation of the questionnaires was done by nine experts working on different sites and followed up with evaluation by expert reviewers or committees to facilitate the validation of the content. They agreed to use them after amending, while reliability was tested through a pilot study taking about 50 samples during 15 days in October 2024, and the Cronbach's alpha scale was 82.6%. The questionnaire included demographic information (age, sex, residence, university name, academic stage, and the number of hours spent using the mobile for the study). Smartphone Addiction: Assessed using the Smartphone Addiction Scale Short Version (SAS-SV) consists of 33 questions (16). and academic Achievement: it's a scale consist from 8 question.

Statistical Analysis

Data collection the was entered in to Microsoft excel and coding it the first: included a measure of Mobile phone addiction, represented by thirty three questions, and the second: a measure of seeing Academic Achievement: it's a scale consist from 8 question To score the scale, "Strongly Agree" is scored (5); "Agree" is scored (4); "Neutral" is scored (3); "Disagree" is scored (2); and "Strongly Disagree" is scored (1). then export these data into SPSS (Statistical Package for the Social Sciences) version 29 used frequency , percentage, regression and diagram explain the effect of smartphone addition on academic Achievement.

4. Results

Table (1) The frequencies for the demographic information (n=1700 students)

Variables	Classes	No.	%
Age	≤ 20 Years	244	14.4
	21 - 23 Years	934	54.9
	24 - 26 Years	421	24.8
	≥ 27 Years	101	5.9
Sex	Male	910	53.5
	Female	790	46.5
Residence	Urban	1273	74.9
	Rural	427	25.1
University Name	Mosul University	796	46.8
	Nineveh University	185	10.9
	North Technical University	88	5.2

	Tal Afar University	333	19.6
	Al-Hamdaniya University	298	17.5
Academic Stage	3rd Class	773	45.5
	4th Class	927	54.5
	6 - 10 Hours	757	44.5
	11 - 15 Hours	216	12.7
The Number of Hours Using the Mobile for the Study	No Use Mobile	65	3.8
	< 1 Hour	2	0.1
	1 - 5 Hours	1417	83.4
	6 - 10 Hours	154	9.1
	≥ 11 Hours	62	3.6

The table illustrates the high percent 54.9% for the age group 21-23 years. Regarding sex, the males were 53.5%, with a large number being live urban. About hours use of phone (83.4%) spend 1-5 hours daily studying over the phone.

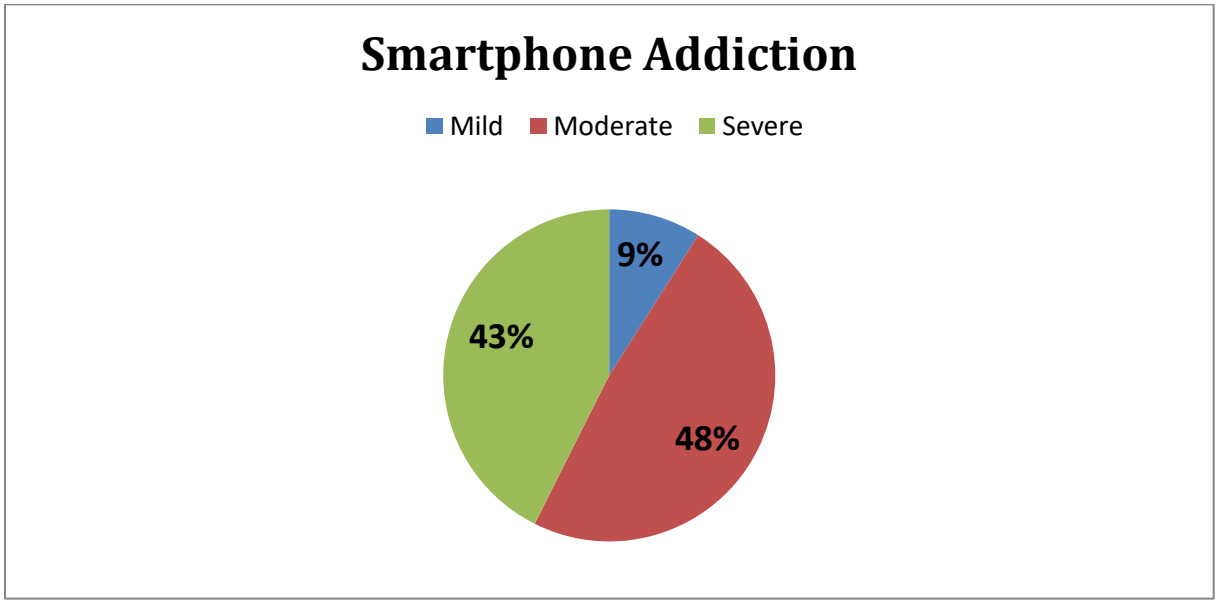

Figure (1) Represent the smartphone addiction among students in Mosul universities

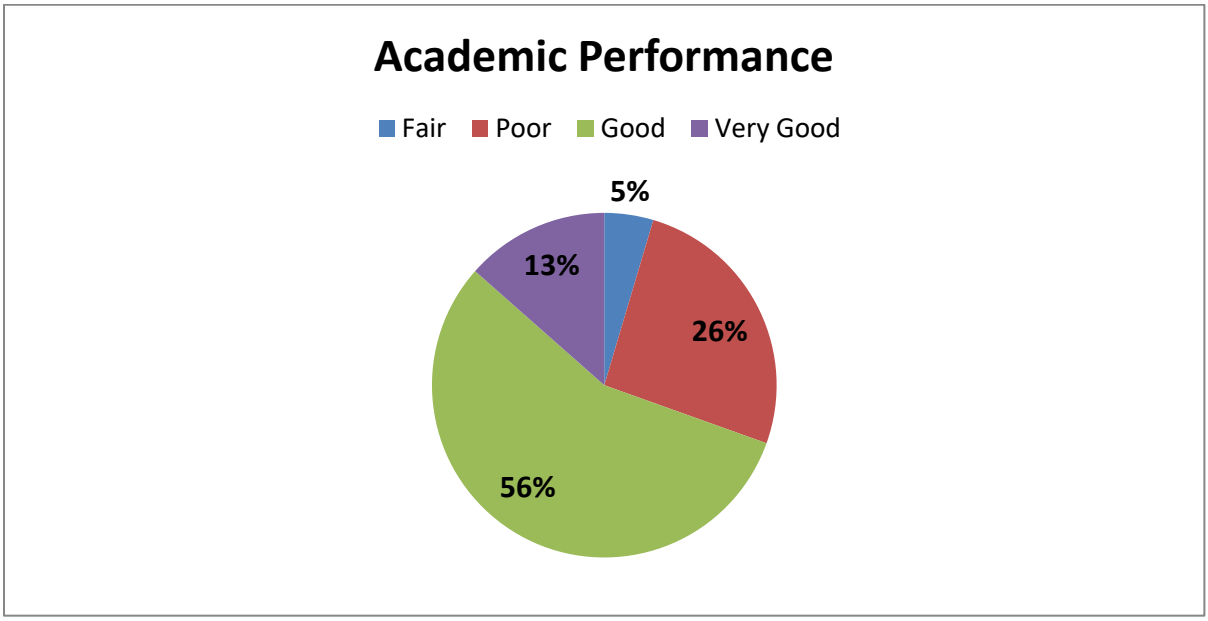

Figure (2) Show the academic Achievement among students in Mosul universities

Table (2) The Relation-shape between the Smartphone Addiction and the Academic Achievement

Coefficients[a]					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	3.821	0.089		43.059	0.000
Smartphone Addiction	-0.033	0.026	-0.031	1.271	0.204
a. Dependent Variable: Academic Achievement					

The table illustrates the regression investigation on smartphone addiction and academic Achievement. The constant B value suggests that academic Achievement in the absence of smartphone addiction would be 3.821 units; the B value for smartphone addiction amounts to -0.033. Therefore, for each unit increase in smartphone addiction, negative academic Achievement decreases at the rate of {0.033}. The t value confirms that there is no statistically significant difference and shows a slight negative correlation.

5. Discussion

The study indicates that smartphone addiction is widespread among university

students in Mosul; the data showed that 42.6% of the participants were suffering from very severe smartphone addiction, 48.4% suffered from moderate smartphone addiction, and only 9% suffered from mild smartphone addiction. These percentages indicate that excessive use of smartphones by students has become a common phenomenon which might affect their academic Achievement and general health. The study has shown a negative relationship between smartphone addiction and academic Achievement. The results of the t-test demonstrated that the difference between the groups was highly statistically significant. Since p-value=0.000, increasing levels of addiction lead to lower academic Achievement. Though, regression analysis revealed that the beta value of the standard correlation coefficient was -0.031, indicating the impact isn't quite strong but still significant .The sample consisted of subjects in a 21 to 23 age group (54.9%), while 24 to 26 was the least represented age group (24.8%). Statistically significant differences in smartphone addiction were found between the different age groups. Out of the total, 53.5% are males, while 46.5% are females, statistically significant differences (p-value = .004). The findings observed that 44.5% of the students were on the mobile phones for 6-10 hours every day, while 42.7%, for 1-5 hours, the issue here being a huge addiction. The data shows that the dominant study habit was of interacting with mobile phones under study for 1-5 hours, which is 83.4%. This shows an excessive use of smartphones, either recreational or educational. This study's findings are in line with those of earlier research. The most prevalent age group of study participants was 18–28 years old, was 64.2%. While 63% of participants were men. According to the majority of students (65%), utilizing cellphones can help them study more effectively. A statistically significant relationship between phone addiction and a decline in college students' academic Achievement is revealed by an analysis of the study's findings (17). In another study conducted in India, it was discovered that 43.9% of medical students were addicted to their phones, and an independent t-test revealed that these students' academic Achievement suffered (18). From the results my opinion first table show the biggest sample was age group from 21-23 ,table two show there is moderate level of smartphone addiction so that reflect their academic Achievement was very good (953) sample 56,1%. In 2022, a survey of undergraduate nursing students at Mosul University was conducted. The results indicated that only 0.4% of the pupils had low levels of addiction, compared to 68.7% who had high levels and 30.9% who had moderate levels. Concerns were raised by the excessive usage of smartphones, which was reported by the majority of pupils in this community. However, moderate to high levels of addiction point to the necessity of more research examining contributing variables and task-specific therapies meant to maintain students' fundamental academic performance. (19). In the same study, the sample of participants was composed of 164 third- and fourth-year students aged 20-25 who reported using smartphones for at least 1 hour a day. The results suggested that excessive use of smartphones could affect daily life in many negative ways, including poor concentration and attention, physical fatigue, and sleep disorders. In addition, psychological problems such as anxiety and depression may be observed. Thus, the mobile phone-related posture may also change, leading to postural syndromes such as text neck syndrome which are also likely to induce chronic pain and, consequently, the quality of life. Further addiction to smartphones causes less social interaction and nourishes a sense of isolation. Hence, limiting the duration of use and adopting healthy habits that circumvent these negative effects are recommended (20).

6. Conclusions

Even today, with the development of technology and phones becoming more easily available to everyone, according to the study conducted, the city of Mosul still does not witness poor academic Achievement among its university students, although the study showed that there is an average addiction to phones, but it will not be linked to poor Achievement.

7. Recommendations

Our recommendations for this study are to provide ongoing courses and publications for students groups that explain the negatives and positives of phones and how to use them correctly, and to conduct studies from time to time that measure the rate of increase in phone addiction and emphasize that the phone is a double-edged sword that must be used within reasonable limits.

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