Assessing the Impact of Mobile Phone use on Psychological Health and Academic Achievement of Medical Students

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Abstract:- We have entered the era of the mobile phone. Without knowing the hazards, which may include cancer and other health concerns, using these drugs is not "quite" safe. While research on the cancers caused by mobile phone radiation is accessible, further research on the detrimental psychological and physiological effects is required, particularly for heavy users like college students. The purpose of this study was to investigate the relationship between the amount of time students spend on their mobile phones and their psychological well-being in urban educational institutions offering professional courses. Materials and procedures: We randomly chose high school and college students from urban and rural areas and gave them a survey to gauge their thoughts and feelings on the effects of mobile phone use on their wellbeing. Findings: Headaches were reported by 51.47 percent of patients, followed by irritation and anger at 50.79 and 50.79 percent, respectively. Apathy, poor academic performance, insomnia, and anxiety are among the frequent cognitive disorders. It is crucial to educate young people about the possible mental health hazards of excessive mobile phone usage and advise them to take precautions since they are the most likely to use cell phones often. The reason for this is because the demographic that uses mobile phones the most is the vounger generation. Some suggestions include spending less time chatting and more time communicating, as well as reducing dependence on technology.

Keywords:- Adolescent's, Mobile Phone, Addiction, Assessment.

I. INTRODUCTION

When mobile phones were first becoming popular among students, several school districts relied on outright restrictions on their use in the classroom (Holler, 2019). The goal was to lessen or eliminate issues related to bullying, disruptions to learning, cheating, harassment, and the overall state of the classroom. Because of their widespread availability and relative simplicity of use, mobile phones have become an integral component of students' daily life (Beland and Murphy, 2016). Because of this, some educators are starting to doubt that students' mobile phone usage enhances their learning experience in class. There was an investigation into whether or not the students' usage of these gadgets impacted their engagement and performance in class. Following the COVID-19 pandemic and the broad use of online education, many teachers have started to wonder if their students are getting too much screen time in class. Some

have even gone to extreme lengths to restrict students' use of cell phones during class (Pew Research Centre, 2021). As a result, more and more kids are beginning to wonder whether they are being too exposed to technology in the classroom. If administrators and educators can reach a consensus on the aspect of mobile phone use in secondary schools that disrupts learning the most, they may be able to collaborate to make the school a better place for the students in their charge. In order to improve students' educational opportunities, this study will be used to help teachers make informed judgements about regulating students' mobile phone usage in the classroom. Numerous aspects of students' use of mobile devices in the classroom have been the subject of studies, including but not limited to: security, student achievement, behaviour in the classroom, and even criminal activity. Consistent research points to a happy medium where students' usage of their phones is acceptable only when students consciously bring their phones to class and incorporate them into lessons. Research consistently finds a happy medium that allows students to use their phones in class, lending credence to this finding. Students are able to use their cell phones in class because they are in the middle ground. It could be quite disruptive to students' capacity to learn if they use their phones in an inappropriate way in class. It would seem that the most sensible thing for teachers to do would be to completely ban mobile phones in the classroom if they can't be incorporated and used in an organized manner (Schneider, 2018). If instructors are unable to properly integrate and regulate the use of mobile phones in the classroom, this seems like the fairest course of action to follow.

Background of the Study

A smartphone's built-in sensors may capture the user's actions as they happen in real time. For example, based on the data being collected, it could be able to deduce the level of physical activity that a user engages in daily. It is possible to know one's precise location at any moment with the use of a global positioning system, more often known as a GPS. Behavioral modelling approaches are necessary for collecting and condensing massive volumes of sensory data into a consistent depiction of user behaviour. It is crucial to use behavioral models. Users' actions must be replicated in order to do this. A set of behavioral features, derived from several modelling techniques, serves as the basis of our investigation. Using data collected from mobile devices, we will compare and contrast two methods for behaviour modelling in the section that follows. Figure out what the telltale signs of regular, daily activity are. An straightforward method that calculates daily summaries of all the sensor data makes behaviour modelling possible. In order to do it, this approach

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is necessary. Users' daily travel distance may be inferred from their location data, and their sociability can be reflected from their chat data. It is possible to utilise a user's activity data to depict their daily activity level, and their location and conversation data to characterize their social behaviour. For illustration's sake, let's say that a day is divided into epochs. The night would span from 12 am to 6 am, the morning from 6 am to 12 pm, the afternoon from 12 pm to 6 pm, and the evening from 6 pm to 12 am. Additionally, by doing this, we might get daily behaviour aggregates. Each of these titles corresponds to a different time of day: morning, afternoon, evening, and night. The division of the day into sections, or "epochs," may reveal important patterns in people's routines that impact their mental health. For instance, some people could be more alert at night and less so during the day. Integrating information gathered from several sensors in different systems.

> Problem Statement

"Cell phones are become an integral part of every student's daily life. In today's classrooms, students often bring their very sophisticated and costly mobile gadgets. All it takes to access the web and all those social media networks is a web browser, a camera, some applications, and a microphone. There is a lot of explicit information on these devices since students use them for conversation, streaming movies, downloading music, uploading images, and playing games."

Because of the portability and capacity of some of these devices, they could record content for viewing at their leisure.

It didn't matter when or where they did it; they could. These contents are protected from parents and teachers seeing them via the use of passwords and personal identification numbers (PINs) embedded on these mobile phones. Because of this, the vast majority of these teens' cell phones include pornographic material. When the 2014 West African Examination Council (WAEC) test was administered, the vast majority of Taraba State pupils failed both the English Language and Mathematics sections. One likely explanation for this phenomena is the widespread use of mobile phones as a means of communication. They were engrossed in their phones, which they used excessively in class, in the dorm, and even while playing football, diverting their focus from their schoolwork. Students' academic performance and achievements might be negatively affected by a variety of factors. Ineffective classroom management, a lack of necessary materials, and inadequate parental oversight are all contributors to these issues. The excessive use of cell phones by these students, both in and out of school, is severely affecting their performance in the classroom. What falls under this category includes their involvement in things like free night calls, chatting, instant messaging, social networking, test misconduct, and other such tasks. This being the case, the researchers in this study set out to learn how students' use of mobile devices affects their grades in the Nigerian states of Jalin and Taraba, which are in Malaysia (WAEC Chief Examiner report, 2014).

Conceptual Framework



Fig 1 Conceptual Framework

➢ Research Objective

- To find out the influence of mobile phone usage on academic performance among senior secondary schools students.
- To determine the influence of mobile phone usage on academic performance of senior secondary school students of different ages.
- To find out the influence of mobile phone usage on academic performance among senior secondary school students of different socio economic status.
- To find out the influence of mobile phone usage on academic performance among male and female senior secondary school students.

• To determine the influence of the frequency of mobile phone usage on academic performance among senior secondary school students.

II. LITERATURE REVIEW

Consistent with what has been found (Smale et al., 2021). Despite the fact that two primary study topics have emerged from studies examining the pros and downsides of permitting pupils to use mobile phones in secondary school classes, no clear agreement has been made. Problems arise for both educators and their pupils as a result of students' and instructors' reliance on mobile devices in the classroom. It may be challenging to overcome these obstacles. Some academics have argued that high school students should have access to mobile phones in the classroom, suggesting ways teachers can use the technology to their students' advantage,

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> Sampling:

A pilot study will be conducted with the questionnaire using a group of 20 dementia patients from China and final study will be conducted with the questionnaire on sample of 557 people .A total of questionnaires will be distributed among patients selected in a systematic random sampling. All the completed questionnaires will be considered for the study and any incomplete questionnaire will be rejected by the researcher.

> Data and Measurement:

Primary data for the research study will be collected through questionnaire survey. The questionnaire will be divided into two parts – (A) Demographic information (B) Factor determining the role of HRM in improving quality of life in dementia patients . Secondary data will be collected from multiple sources, primarily internet resources.

> Statistical Software:

MS-Excel and SPSS 25 will be used for Statistical analysis.

Statistical Tools:

Descriptive analysis will be applied to understand the basic nature of the data. Validity and reliability of the data will be tested through Cronbach alpha. The study will implement ANOVA, T and F test for data analysis.

IV. HYPOTHESIS

> Dependent Variable

• Academic Achievement

Historically, policymakers and educators have put a premium on students' grades as a measure of their overall well-being and potential for personal development. But recently, they've started to pay more attention to the students' interpersonal dynamics and social and emotional development (Chernyshenko, 2018). The fact that these aspects are more strongly linked to academic achievement may explain this change in focus. This shift in emphasis could be associated with the realisation that these characteristics significantly impact academic achievement. Especially in the realm of intellectual achievement. With the new year 2019 upon us, the OECD will expand its standard set of economic statistics to include social and emotional data as well. It will be instantly effective that these new additions are made. This is occurring right now, which is an indication that something is changing. Chernyshenko et al. state that having accomplished one's goals in life requires a person to have emotional control, competence in activities (which includes desire, persistence, and self-discipline), and compound skills. Six high-quality empirical investigations have been carried out on this subject. The intricacies of the factors that contribute to academic success are the subject of these research. Some of these factors are directly linked to academic success, while others are unconnected but nevertheless important. Although some of these traits are relevant even if they have nothing to do with academic success, others do have an impact. The pupils' academic achievements are considered by both Colmar, Liem, Connor,

to improve student outcomes" when it is "integrated into the curriculum and... put to a well-defined use." Beyond this, Beland and his coworkers noticed that, starting in 2016, pupils are more likely to be Murphy's book. There may be benefits for teachers and students alike from students using their phones in class, but only if the devices are used reasonably; the limits of this use are still debatable. However, the advantages could be wasted if the gadgets are misused. Permitting students to bring their own smartphones to class as a kind of instructional technology is still a bad idea, even in 2022. Given the wide range of tools available to public schools, it is possible that these resources may generate more frustration and chaos for both kids and teachers than they would bring about any beneficial changes. Including cell phone use in the curriculum is outside the scope of this investigation on the pedagogical effects of mobile phone bans in schools. Rather, the purpose of this study is to analyse the impact of a mobile phone ban on student learning. On the contrary, this research aims to determine whether students' academic performance is negatively affected by their usage of mobile devices in class. Despite the fact that the pros and cons of mobile phones in the classroom continue to be debated, many teachers have begun to depend on their students' ability to access cell phones and the various applications available on them to actively involve their students in class. Despite the fact that the topic of student phone usage in class is far from settled, this remains true. On top of that, a lot of schools depend on providing equitable access to education, which means that students may utilise school-issued devices that have learning management systems and enhancement programmes installed (Bingham, 2021). By using apps that students already have on their own mobile devices, teachers may bring elements of gaming into the classroom.

while others have found serious negative effects on students'

academic performance as a result of students' heavy use of

these devices. Experts in one area have bragged about how

great mobile phones are for use in the high school classroom,

describing ways in which teachers may An area of study has

praised the use of mobile phones in the classroom, suggesting

ways in which teachers can An article by Beland and Murphy

(2016) titled Communication: Technology, Distraction, and

Student Performance states that technology "has the potential

III. METHODOLOGY

➢ Research Design

This study will employ a descriptive quantitative research technique to examine the impact that mobile phones have on students' academic achievement. This will be accomplished by keeping track of and evaluating the mean student scores on a standardized reading test that is administered every other week. The academic performance of the student will be monitored, and the effect that the laws regarding mobile phones have had on that performance will be examined.

➢ Study Area

The study was conducted on govt. employee, healthcare and professional, engineer, businessman, pvt. Employee and consultant in global skills. and Martin, and Martinez, Youssef-Morgan, Chambel, and Marques-Pinto. Academic buoyancy, or the propensity for students to quickly recover from failures, was not identified as a significant predictor of academic success in the study by Colmar and colleagues.

➢ Independent Variable

• Interaction Competency

Nowadays, students can't resist the allure of social media. However, many K-12 and college courses lack opportunities for genuine human interaction. Like fish to water, students can't resist the allure of social media. It is common practise in most classrooms for the teacher and students to engage in a dialogue during class. When a child got home from his first day of school, he told his mom, "All the teachers do is talk, talk, talk." He made the identical comment while leaving his high school campus as he did upon leaving his college campus. His ideas do not represent a radical break with accepted norms of cognition. According to Goodlad in 1984, "the data from our observations in more than 1,000 classrooms support the popular image of a teacher standing in front of a class imparting knowledge to a group of students." The assertion made by Goodlad was supported by "the data from our observations in more than 1,000 classrooms." The image that most people have in their minds when they hear the word "teacher" conjures up the image of an authoritative figure standing tall over a group of students, passing on their knowledge and skills. If what Smith said in 1998 is to be believed, most classroom time is devoted to the teacher lecturing to the class. Frey, Fisher, and Allen assert that students are "expected to sit hour after hour, taking notes, and answering the occasional question with little interaction with peers."Because learning is inherently a social activity and because the person actually doing the task is the one receiving the knowledge, the assumption that teachers should do all the talking in class is problematic. Both time and energy are substantial resources that must be invested by the educator while planning classes. Teachers are essential because they scour a mountain of material for the most pertinent details, organise them into a coherent framework, and then impart this knowledge to pupils, who are usually too preoccupied with their own thoughts to actively participate in class. Someone has to be held accountable for the accuracy of each and every one of these procedures. The one responsible for imparting the knowledge to the students. The learning process include reading, writing, thinking, and communicating, all of which are guided by the teacher. In their research, Vacca and Vacca came to the conclusion that "the burden of learning must be transferred from teachers to students." The three researchers-Wilkinson, Soter, and Murphy-agree that there need to be "a gradual release of responsibility for control of the discussion from the teacher to the students." Probst has said that students "should be doing the majority of the work."Students may take on more responsibility for their education when they actively participate in social interactions with others. Among the possible approaches, this is one to consider. The hallmark of social engagement in the

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classroom, as shown by our study, is students engaging in meaningful discussion with one another. When students actively participate in class by adding to the debates and discussions, we say that they are engaged. It is essential, says Routman, that students have opportunities to contribute to class discussions and actively participate in their own education. To sum up, one of the most crucial aspects of learning is engaging in deep conversation with other people.According to Goodman, it is best to avoid teaching reading, writing, listening, and speaking as separate tasks whenever possible since doing so is unproductive. He argued that the best approach would be to teach both talents at the same time. He fought for the integration of literacy instruction throughout all parts of a student's day, from classroom time to homework to extracurriculars. To him, they were the bare minimum necessary for academic achievement. Classrooms should not be teacher-led monologues where students sit silently and take notes since reading, writing, and engaging with others are all parts of real life. Reason being, in the actual world, you can't get by without reading, writing, and interacting with other people. While speaking, listening, and interacting are all essential components of communication, reading and writing are intrinsic to these processes (Gee). "On the other hand, using language to think about and act on the world," he adds. "This is a very important distinction."Kasten points out that it is ironic that "teachers of another era spent so much time keeping their classes quiet and then wondered why so many students were terrified of occasional oral reports and even continued to be uncomfortable speaking in front of a group even into adulthood." Many students of that age were afraid to speak out in class since their teachers spent so much time maintaining class silence. In her words, "teachers and principals of the past who worked hard to keep children quiet (myself included) did not know how critical social interaction and collaboration are in learning." During her time as a teacher, she was unaware of this.Some students may have struggled to complete group projects because their teachers lacked the necessary skills. The problem is not that students aren't trying; rather, many teachers say they spend much of their days trying to keep their students from talking to one other. This is where the issue begins. The hardest part is coming up with creative ways to get students talking about the lesson.

- **H01:** There is no significant relationship between Interaction Competency and Academic Achievement.
- H1: There is significant relationship between Interaction Competency and Academic Achievement.

V. RESULT

> Demographic Information

In the demographics section of the questionnaire, students were asked questions such as their gender, age range, and academic level. The reason behind the demographic questions is to determine or find out basic personal information of the respondents.

Contract		Responses		
Construct		N	Percent	
Carla	Female	236	62.9	
Gender	Male	139 42	37.1	
	17-20	42	11.2	
	21-24	191	50.9	
Age range	25-28	97	25.9	
	29-32	29	7.7	
	33 and above	16	4.3	
	1st year	40	10.7	
	2 nd year	115	30.7	
Academic level	ademic level 3 rd year 121	121	32.3	
	4 th year	99	26.4	

Table 1 Demographic Information

The results shown in Table indicate that the majority of respondents were female. According to the findings, there were a greater number of women than there were males who took part in the study. According to the findings of the poll, the vast majority of respondents are young people (somewhere between the ages of 21 and 24). This would seem to suggest that the majority of the population was comprised of students. According to the findings, the vast majority of the students who participated in the poll were in their third year at the time it was being carried out. There is a disproportionate number of replies from students in their third year of undergraduate study. These students have more expertise with technology (such as smartphones).

➢ Regression Analysis

The statistical method known as regression analysis is used to investigate how one variable is anticipated to change in relation to another variable, or, to put it another way, how the value of the second variable may be derived from the value of the first variable. ion Analysis

Regression analysis is a statistical method that is used to analyse the likely change in a variable with regard to the amount of change in the other one. This implies that the value of the unidentified variable may be calculated from the identified value of the other variable. In other words, regression analysis allows one to identify the value of the unidentified variable based on the identified value of the other variable.

Table 2 Regression Analysis						
Hypothesis	Regression Path	Effect type	B-Coefficients	P Values	Remarks	
H1	BI -> AP	Direct effect	0.416	0.000	Supported	
H2	IC -> BI	Direct effect	0.245	0.001	Supported	
H3	IC -> SSE	Direct effect	0.199	0.077	Supported	

➤ Reliability

The reliability analysis scale that is being utilised has to be adjusted to accommodate the most recent finding. A course of action that the discoverer may take with his reliable observations if, and only if, two perceptions are equal with regard to the findings that are being measured.

Table 3 Reliability				
Construct	Cronbach's a	Items		
AP	0.920	5		
BI	0.780	4		
IC	0.589	6		
SSE	0.850	8		

VI. CONCLUSION

We discovered strong correlations between passively collected data and markers or aspects of mental health in persons suffering from schizophrenia. Patients and healthy individuals exhibited these correlations. Stress, melancholy, tranquilly, optimism, restful sleep, hallucinations, voices in one's head, and fear of harm are all signs of this disorder. Calmness, optimism, and restful sleep are some signs. We aimed to get a better understanding of how these metrics manifest themselves behaviorally. A variety of models with the ability to predict the participants' total EMA scores were constructed and assessed. The environmental momentary assessment (EMA) was used to quantify a broad variety of dynamic elements of the mental health and functioning of individuals with schizophrenia. Through analysis of data collected from a population of individuals diagnosed with schizophrenia, we discovered that it is possible to train Volume 9, Issue 5, May - 2024

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personalized models with enhanced adaptability and reduced data requirements for each unique user. This was made possible by making use of information gathered from a group of people diagnosed with schizophrenia. We pioneered the use of the 7-item BPRS to track how people with schizophrenia rate their symptoms when we created the Cross Check symptom prediction system. Thanks to our efforts, this was achieved.

VII. LIMITATION OF THE STUDY

There were a number of limitations and problems with the study, and we are aware of that. The reliability of the sampling method is questionable, and the accuracy of the results may depend on how well respondents understood the questions and the language employed. Everyone involved parents, educators, and students—may not have retained every detail of their screen-related experiences. It is conceivable that parents failed to keep track of their children's screen time since the calculation of screen time relies on parent answers. The study sample was tiny, and no evaluation of media content was conducted. Due to its limited geographic scope, the study may not have been representative of all of Malaysia.

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