

SMARTPHONE ADDICTION AMONG THE UNIVERSITY STUDENTS ON SMARTPHONE USAGE – A GLOBAL VIEW

SEETHARAMAN R

Research Scholar, College of Management, SRM Institute of Science and Technology, Kattankulathur, Tamilnadu, India. Email: seetharr1@srmist.edu.in

RAJESWARI P.S

Associate Professor, College of Management, SRM Institute of Science and Technology, Kattankulathur, Tamilnadu, India. Email: rajeswap1@srmist.edu.in

Abstract

Smartphones are fervently used by about more than five billion people athwart the world now, derives closer to two-thirds of the world's population and the number is still escalating upward. India surmounts the second position next to China in the smartphone usage. Though there are many special and salient features that attract the users, the harmful side of the smartphone is also to be profoundly noticed as it impacts desperately on psychological and physiological part of the users. This conceptual study mainly emphasizes on vigour and considered importance of smartphone usage and also synthesised based on the several meta-analysis pertaining to different countries of the world.

Keywords: Smartphone usage, smartphone addiction, University students, global view

INTRODUCTION

Smartphone usage is on the rise across all economic social, gender and age groups, with students of university being one of the utmost imperative marked customers, major consumers of the smartphone amenities. [17]. Many inventions have sprung from the technological revolution. Every invention, on the other hand, has brought with it both benefits and drawbacks. Same is for smartphones also [18]. Students develop reliant on smartphones since they use the smartphones for an assortment of purposes, comprising those that are analogous to those provided by the Internet, as well as for discovering new programmes that provide new functionalities. These allow people to connect with others not only face to face but also instantly, an excellent approach for reluctant students for socialising, but also to involve in various practices of amusement. Consumers can also obtain information on surfing the web, assists them acquire out of unfriendly circumstances. As a result, many students appear to be overly reliant on their smartphones, ultimately leads to increased usage. [1]. Hong et al. [5] argued stating Smartphones are standard amongst students as they improve societal communication; give them more opportunity to form social bonds. However, Bianchi and Phillips [19] demonstrate the largest rate of awkward smartphone usage is seen amongst the young users, implying that this type of addiction is more prospective to airstrike this age group. A variety of problems and methodological challenges can be detected by reviewing the research on smartphone addiction among students. This article also discloses that studies on the consequences of addiction to smartphone on student academic accomplishment are inconclusive. Javid et al. [24] highlighted a there are numerous disadvantages and bad

possessions of technology on student success. They remain busy writing and referring pointless messages, receiving and sending missed calls,

They were wasting their time and money by heeding to music and looking movies in this manner. A lack of focus among pupils when class was also discovered to be one of the symptoms. Smartphones compromise unrestricted messages and a diversity of apps of social media, which are together useful and amusing. Nevertheless, they do have unintentional significances; permitting them for sending free messages and chats anywhere they have admittance to Wi-Fi. On the other hand, while a variety of factors have been linked to Smartphone addiction, many researches have absorbed the associations between demographic factors like education, sex and age etc. These results, diminutive has recognized near the degree to which socioeconomic features (parental education and family income) impact smartphone addiction among them. Furthermore, complexities of smartphone addiction are reproduced in, among other things, the heights at which it has been investigated and the approaches used to do so. Despite the fact that both are required, many studies on smartphone addiction appear to emphasise the length of time spent using this device by considering phone calls made, phone calls received, messages sent, and messages received, or the incidence of smartphone addiction indicators. The majority of these studies use qualitative data, which is remarkable given the complexity of the subject. Qualitative data is inextricably tied to meaning and values in all of their complexity, requiring a considerable lot of interpretation and judgement. To gain a thorough knowledge of Smartphone addiction and its impact on student academic attainment, a mixed-methods study using both quantitative and qualitative methods is proposed. Hence, this paper focuses on conferring the breaches notorious in preceding studies concerning the following:

- 1) Determination of the symptoms and degrees of smartphone addiction among students
- 2) An examination of the link between smartphone addiction and academic achievement among undergrads.
- 3) The significance of age, gender, parental educational level, field of study and family economic background in the smartphone addiction amongst students is conferred.

SMARTPHONE ADDICTION INDICATIONS AND STAGES AMONG UNIVERSITY STUDENTS

Bianchi and Phillips [19] suggested that excessive smartphone use could be a sign of a lack of impulse control or depression in one of the first studies on the subject. They used dependent criteria to predict smart phone addiction, such as reported time per week spent merely using the device, reported proportion of socially based use, and reported percentage of business related use, to address the fundamental problem as well as incorrect smart phone use. Other variables were taken into account as well, such as the percentage of additional characteristics that have been reported to be used. The findings signposted that technical addictions provided a suitable starting place for a discussion of problematic smart phone usage. Moreover, it was shown that youngsters, in specific, seem to prone to excessive, problematic usage. These people

are the most frequent subscribers to the SMS service and other smart phone capabilities. James and Drennan [25] conceded a study on the university students of Australia smartphone usage and revealed huge usage rate - 1.5-5 hours per day. Their conclusions displayed an array of features connected with the addictive usage. Impulsivity, building tension before to utilising the device, and withdrawal symptoms were among them. Consequences too recognized key factors linked to customer participation in addictive or compulsive behaviour. Excessive use was impacted by situational factors such as special events, alcohol consumption, and depressive circumstances. Financial troubles, ruined relationships, emotional stress, and decreased literacy were only a few of the numerous negative outcomes of smart phone addiction among consumers.

Symptoms of addiction to smartphones had been reported as common among the students of Mauritius University, according to Perry and Lee [16]. Between 6% and 11% of students showed signs of smartphone addiction symptoms had been reported to be common amid Mauritius University students. From 6% to 11% of adolescents displayed obsession signs such as diversion from focus from college and employment, tolerance and incompetence to reduce usage. The quantity of texts that were sent and students' perceptions of their ability to use SMS were both significant predictors of smart phone addiction. Text message usage was twice as high as the rest of the population sample investigated among the small fraction of people who showed signs of addiction.

Walsh et al. [26] conceded out a qualitative study for inspecting happenings of university students concerning smartphone usage. They also used behavioural addiction standards to look for the start of addictive facts. Participants' comments of their smart phone use included varied levels of behavioural and intellectual salience, euphoria, restoration, withdrawal and relapse. This approach found that students of the university are addicted to their smartphones to the point where they displayed signs of behavioural fixation. Walsh et al. [28] investigated the possessions of contribution with smart phone usage on people's using them. Findings have demonstrated, having a great rate of smart phone usage differs from having a high level of involvement with smart phones, since the relationship between the two was weak. Each behaviour's predictors were also different. Many people check their phones for missed calls or messages without really using them, therefore regularity of smartphone usage methods usually analyse the number of times each day students use their phone for calls or text messages. Other people's approval and self-identity are considered as decoders of both types of smartphone behaviour. Only self-identity predicted frequency of usage, but both self-identity and validation from others predicted smart phone use. Hassanzadeh and Rezaei [14] described text message dependence as obsessive text-messaging behaviour that creates psychological or behavioural symptoms that have negative social consequences. Their study focused on the link between psychosocial factors and psychological or behavioural symptoms associated with students' text messaging use. University students are addicted to text texts, according to the findings. According to the report, SMS addiction has now become a serious mental and health worry among them. Additionally, problematic smartphone use may conceal physiological and psychological disorders.

To assess smart phone addiction, Park [7] asked offenders to report their minutes of smart phone usage and divided them into light users who reported less than nine minutes of use and heavy users who reported more than nine minutes of use. "Light" users were those who indicated they used the app for less than nine minutes, while "heavy" users were those who said they used it for more than nine minutes. Smartphone addiction was assessed using seven different indicators of dependency. Despite the fact that smart phones can cause concerns such as high phone bills and public outcry, the research found that smart phone users have become more accepting of them. Users become more worried and annoyed when their smart phone was unavailable for an extended amount of time. This behaviour continued despite the knowledge that these were concerning signs of addiction. Igarashi et al. [29] looked into how university students' self-perceptions of text message dependence led to psychological/ behavioural indicators. They used a self-report questionnaire to gather information on text message frequency, self-perceptions of text message dependency, and psychological and behavioural symptoms. Awareness of excessive use, emotional response, and link maintenance were the three components of self-perception of text-message dependency. The evidence pointed to a relationship between message frequency and psychological/behavioral issues. Text message dependency was also found to have a significant impact on psychological and behavioural problems.

Abu-Jedy [3] looked into the relationship between smart phone addiction and self-disclosure among Jordanian university students. The study also looked into drug abusers' physiologies. The fundamental characteristics of smart phone addiction, as well as the motivations for using them and the amount of time they spend doing so, are discussed with students. Addictive students made up 25.8% of the total sample, according to the statistics. Addiction was shown to be twice as common in women as it was in men. Furthermore, private university students were more addicted than public university students. Hooper and Zhou [30] investigated different types of smart use behaviour. Six potential categories derived from original motives were discovered among university students. Addictive, compulsive, dependent, required, and voluntary behaviour all had these characteristics. A survey was performed to put these groups to the test. The strongest type of use was determined to be mandatory behaviour, whereas the weakest was addicting behaviour. Smart phone use should be perceived as compulsory, altruistic, or necessary behaviour rather than habitual, compulsive, or addicted, according to the research. In another study, Takao et al. [11] investigated the relationship between problematic smart phone use and other personality factors among university students. Gender, self-monitoring, approbation motivation, and loneliness were all factors that were found to be predictive. The number of persons with whom participants chatted on a regular basis, the amount of time spent writing and reading text messages each week, and the number of people with whom participants discussed text messages often were the dependent variables. According to the study, problematic smart phone use is influenced by gender, self-monitoring, and endorsement purpose, but not loneliness.

These findings show that the ability to propagate and interfere with addictive personality traits may be helpful. Satoko et al. [13] investigated the association between personality and reliance on smartphones. This dependency was described as a constant or overpowering demand to

utilise these phones. Multiple regression analysis found that socialness and neuroticism scores were positively related to the smart phone score. Smart phone addiction was also connected to high degrees of friendliness and neuroticism in female college students, as well as a corrupt lifestyle, according to the findings. Ahmed et al. [4] looked into the pattern of smart phone use among Pakistani university students to see how addictive it was. According to the data, the majority of students were able to set clear priorities for their activities and responsibilities, as well as their smart phone usage. Only a tiny fraction of kids (4.8 - 18.5 percent) displayed extremely addictive behaviour, according to their findings. As a result, experts concluded that university students used their smartphones responsibly and did not participate in excessive behaviours that could lead to addiction. Szpakow et al. [8] investigated the function of smart phones in the lives of university students in Belarus and looked for evidence of smart phone addiction.

According to the data, roughly a tenth of the students showed signs of addiction, and 68.8% thought smart phones were dangerous. Nearly a third of those polled believe that smartphones should be turned off in a cinema (30%) and a church (30%). (33.8 %). Only 28.8% of those asked were familiar with the term of monophobia. On the other hand, 71.9 percent have never turned off their phones. Casey [1] observed addiction signs among Chinese university students that were directly connected to smartphone use. Exploratory factor analysis of the Smartphone Addiction Scale revealed five symptoms: scorn for negative consequences, preoccupation, and trouble regulating demand, productivity loss, and feeling scared and lost. According to the findings, the more one's loneliness and shyness ratings are, the more likely one is to get hooked. The researchers also discovered that Smartphone addiction symptoms were both positively and negatively connected to the level of direct communication, as well as being positively related to current absence. Furthermore, the strongest factors affecting closeness social capital were sex, grade, while the largest factor affecting linking social capital was face-to-face connection with friends. Krajewska-Kuak et al. [10] investigated the relevance of having a smart phone in the life of students, indicators of addiction, and whether there were any differences in how Polish and Belarusian students utilised their phones. According to the statistics, the majority of children owned smartphones. They generally used them to send text messages, snap photos, and surf the web. 35.2 % of Polish students and 68.8% of Belarusian students say that using a smartphone has negative consequences. However, Poles were more aware than Belarusians of the dangers of smartphone addiction. Smartphone addiction was found in nearly a fifth of Polish pupils and one tenth of Belarusian students. In Korea, Kwon and colleagues [2] developed the first Smartphone addiction scale. It's a self-diagnostic scale based on the Korean Internet addiction self-diagnostic programme that can determine the difference between Smartphone addicts and those who aren't. The participants were divided into three categories: high-risk, low-to-medium-risk, and general.

Adolescent and adult smartphone addiction rates were 2.2 and 9.3 percent in the high-risk category, respectively, and 1.0 and 6.7 percent in the low-to medium-risk category. Based on component analysis results, the following subscales for the Smartphone Addiction Scale (SAS) were created: A cyberspace-oriented connection, overuse, and tolerance are all aspects to consider. Belwal and Belwal [32] investigated smart phone usage among university students,

despite the fact that no previous studies on smart phone addiction had been conducted in Oman. These students spent more than ten Omani Rials each month on smart services, made fewer than 10 phone calls per day, but sent more than ten SMS per day, according to the research. They were also financially reliant on their parents. Students also indicated that they preferred more expensive models. They felt uncomfortable without their smartphones, so they always had them on.

SMARTPHONES ADDICTION AND UNIVERSITY STUDENTS' ACADEMIC ENACTMENT

According to the report, some research has highlighted the beneficial role of Smartphones in enhancing student learning. Advances in smart technology, according to Cheon et al. [33], are rapidly widening the scope of learning outside of formal schooling by providing flexible and instant access to rich digital resources. Within traditional education, smart learning can also play an important and complementary role. Markett et al. [34] discovered that student use of smart phones has a positive effect and recommended that SMS be used in classrooms. They discovered that enhancing student participation during the lecture by using SMS, which increased interactivity, helped them learn more. Javid et al. [24], for example, looked examined the impact of smart phones on university students' performance. The majority of students stated they utilised smart phones to connect with professors and peers about school-related difficulties in this study. They also utilised the phone to communicate crucial information with their classmates and look up words in dictionaries and thesauruses for educational purposes. Regardless, everyone agreed that using a smart phone is a waste of time and money. On the other hand, many studies have connected smartphone use to lower academic achievement. Based on their findings, many experts have emphasised the negative consequences of smart phone usage among university students. Bianchi and Phillips [19], Monk et al. [35], and Palen et al. [33] all mentioned how difficult it is for university students to use smart phones. Extensive use of technology for recreational purposes is highly connected to low academic performance, according to Kubey et al. [31]. According to Sheereen and Rozumah, Malaysian university students have embraced smart phones in large numbers. Personal and familial situations, on the other hand, had an impact on university students' usage behaviour, according to the data. Despite the fact that the students in the study exhibited suitable smart phone computing behaviour, there are a number of factors that could increase the intensity of their smart phone usage. As a result, "although smart phones have become increasingly crucial to many college students, they may potentially have an impact on students' academic performance," they found. Male students and students in higher grades were more likely to use their smartphones to seek information, according to Casey [1].

He also noted that many students in the United States make late-night phone conversations, resulting in less sleep and other worries that could affect their performance. The effects of smart communication technologies such as SMS, emails, and online forums on students' learning motivation, pressure, and performance were also studied. Instant messaging was found to be useful in efficiently bonding the two roles of student and instructor in the instructional process. It can have a huge influence when utilised in conjunction with Internet

Communication Media because it can increase student pressure, which can harm their performance [29]. Devs-Devs et al. [24] investigated the negative consequences of inappropriate Internet and smart phone use. 365 undergraduate university students specialising in four different fields filled out the scales (psychology, education, journalism and broadcasting). Females scored higher on the smart phone questionnaire than males, indicating more negative consequences of its abuse. Students studying in journalism and broadcasting exhibited a more maladaptive pattern of Internet use than students majoring in other disciplines, according to the main study. Motivate students' intrinsic drive without increasing their stress levels. Communication channels need public speaking rather than private talk, which should be done with caution. Additionally, students' perspectives toward smart phone use and how it affects their learning differed between countries. In this context, Sung and Mayer [14] contrasted college students' attitudes about smart gadgets vs. desktop PCs in the United States and South Korea. They exposed that American students preferred desktop computers to smart devices for positive attributes such as speed, sharpness, meaning, good, and realistic, whereas South Korean students preferred smart devices for positive attributes such as openness, attractiveness, change, stimulation, immediateness, and excitement.

FACTORS INFLUENCING SMARTPHONE ADDICTION

The next section examines the characteristics that influence Smartphone addiction among university students, such as gender, field of study, parents' educational level, and family income level, because the goal of this research is to learn more about them.

1. Gender Differences in Smartphone Addiction

The gender differences in Smartphone addiction have piqued the interest of many experts.

Although there is no consensus on which group is more prone to addiction, various studies have discovered gender disparities. According to Turner et al. [15], "user personality and individual attributes such as age and gender were found to be differentially linked with numerous elements of phone-related behaviours." (p. 1). Gender variations in impulsion and problematic smart phone use among young individuals were explored by Billieux et al. [9]. According to the data, men use their smart phones more frequently in dangerous situations, while women are more dependent on them. According to the data on impulsion, men have much higher levels of sensation seeking and lower levels of perseverance, while women have significantly higher levels of urgency. Jenaro et al. [16] investigated the pathological Internet and smartphone use of 337 Spanish college students and discovered that excessive cell-phone use is associated with being female, as well as high anxiety and insomnia. According to Walsh et al. [33], gender was linked to smart phone engagement but not frequency of use. Gender variations in smart phone use, as well as users' views and attitudes regarding using them in public and private places, were investigated by Howell et al. [18]. They concluded that, while the service was highly regarded by the ladies, the service was universally disliked by the men, regardless of location. Kawasaki et al. [9] investigated the use of smartphones among Thai university and high school students. A survey form was distributed to 181 female Thai university students and 177 male Thai secondary school students. A factor study of female high

school students demonstrated a strong reliance on smartphones as compared to male university students, male high school students, and Japanese female university students. Similarly, Hakoama and Hakoyama [5] investigated gender disparities in smartphone usage across a range of topics. According to the data, females, particularly white women, are more likely to rely heavily on their phones to maintain social bonds. According to Chóliz [12], girls used their phones more than boys, and they were also more likely to engage in phone misuse and have confrontations with their parents as a result of their excessive use. Chung [7] wanted to figure out what was leading girls to spend so much time on their phones. He anticipated that they would form a deep friendship and that their peers would retain interpersonal solidarity. He noticed that people who were more likely to become addicted sent a lot of text messages from places where excessive use of smart phones is a concern, such as schools. In a study by Devs-Devs et al. [40], however, the usage of smart phones produced different results. They compared how boys and girls utilised Facebook and discovered that boys spent more time on it. They explored that university students used these communication channels more on weekends than throughout the week. This indicated that a number of factors influenced how people used their phones. Villella et al. [22] found that boys were more likely than girls to develop behavioural addiction. However, user motivation differed significantly across men and women. According to Pawowska and Potembska [6, women used mobile phones more frequently than men to satisfy their desire for acceptance and connection, build and maintain social ties, and communicate their sentiments.

Messaging than men, who preferred to use their phones to listen to music, take photos, shoot movies, play games, and connect to the Internet? Balakrishnan and Raj [33] looked into why Malaysian university students used smart phones and discovered that female students used them more to interact, gossip, and as a safety measure. Females, on the other hand, have been proven in multiple studies to be more addicted to their phones than males. Gender affects individual types of smart phone addiction, according to one of the most well-known research [19]. They discovered that women used their cellphones to maintain social ties more frequently than men, while men used their phones to make professional calls. Despite this, no statistically significant differences in the number of text messages sent by men and women were observed. Girls utilised text messages to develop interpersonal relationships more frequently than boys, according to Igarashi et al. [16].

Similarly, according to Wilska [17], girls used smart phones more frequently to send text messages and make phone calls than boys, who were more interested in new technology and focused on the phone's trendy looks and technical functions. Between 1997 and 2001, guys were more likely than girls to use smart phones, according to Ling [28], who discovered that they were first seen as a technical novelty by boys. After 2001, however, girls began to use smart phones far more frequently than boys, as they became their major tool for forming interpersonal relationships. According to Geser [19], while boys were significantly slower to acquire the smart phone than girls, they utilise it on a similar scale, producing the same monthly bills. In other words, while the numeric intensity of use was the same for both genders, the qualitative patterns and goals of use were vastly different. Men and women have traditionally

had divergent perspectives on smartphones. Gender and smartphone usage are unrelated, according to other studies.

Males used text messaging more than females, according to Perry and Lee [16], who found no gender differences in addiction markers among university students in impoverished nations. On the other side, Takao et al. [11] claimed that gender was a weak predictor of problematic smart phone use, with females having more issues. They contend that a woman's cultural or ethnic background may influence her addictive behaviour. In Western countries, gender disparity is less stark than in Asian countries such as Japan, where females are expected to behave modestly.

3. Smartphone Addiction and Students' Field of Study

A few studies have looked into the relationship between smartphone addiction and student majors. In light of this, Abu-Jedy [3] investigated smart phone addiction and its link to self-disclosure in a group of Jordanian university students and students from Amman Al-Ahliyya University. He noticed that addiction levels differed significantly depending on the students' topic of study. Students in the humanities had a higher rate of addiction than students in the natural sciences, he discovered. Furthermore, private university students were more likely to be addicted than public university students. Hassanzadeh and Rezaei [14] investigated the effect of students' courses on SMS addiction among students at Islamic Azad University. SMS addiction differed significantly among students in various courses or degrees, according to the research.

4. Smartphone Addiction and Family Income Level

According to Castell et al. [13], users' income is a crucial predictor of smart phone use. Income is frequently a role in smart customers' decisions to continue or stop using breakthrough technologies. Because wireless technology, such as smart gadgets, is becoming more sophisticated and applications are becoming more expensive, it was predicted that it would have a stronger relationship with income. As a result, higher socioeconomic groups are more likely to use smart devices. Zulkefly [14] looked into the factors that determine how people utilise their phones. The data found a strong link between family income and the amount of time spent on the phone and monthly spending. Finally, children from higher-income families were shown to spend more time and money on their smartphones. Lower-income kids used their smart devices for the Internet at a significantly higher rate than students from higher-income families, according to Brown et al. [15]. (\$30,000) per year used their smart phones to access the Internet, compared to (23%) of students from families earning more than (\$30,000). Lower-income students may not have access to other forms of information communication technology, such as PCs and tablets, which could explain the disparity. As a result, low-income students use smart phones to access the Internet.

According to the data, students who paid their own phone bills used more features and services than students who did not pay their own monthly charges. In reality, only 4% of students from higher-income families pay their own phone bills, but 23% of students from low-income families do. Rice and Katz [16] explored that low-income populations in the United States and

developing countries embraced smart technology first, due to a lack of alternative wireless communication technology. According to James and Drennan [25], university students, regardless of wealth, engaged with their phones for an average of 6.5 years. All of the participants had upgraded their smartphones for the third or fifth time. Moreover, the average monthly cost was \$140, which was too expensive given students' meagre financial resources. Students from lower socioeconomic backgrounds used their smart phones less to make phone calls, according to [17]. However, there was no significant change in status for the other uses.

5. Smartphone Addiction and Parent Education Level

A majority of parents believe that smart phones may be beneficial educational tools for their children, according to a new survey by Grunwald Associates and the Learning First Alliance [27], because their applications enable engaging ways of learning as well as interacting and communicating. According to the survey, "most parents believe (completely or partially) that smart gadgets open up learning opportunities (71 percent), help children learn (62 percent), and include them in the classroom (62 percent) when it comes to smart gadgets and education" (59 percent). Using smart gadgets to aid their child's development is useful to 39 percent of parents, regardless of the app used." [27]. In Malaysia, however, Zulkefly [14] discovered that parents' education level was linked to university students' monthly phone spending. In this study, the parents' age was also found to be a significant predictor in problematic phone use. Adolescents with younger parents are more likely to become addicted to their smartphones, according to these findings. In contrast, Ahn [22] investigated the relationship between parental education and university students' use of mobile social networking sites.

Parents' education was not found to be a significant predictor of their children's use of social networking sites, according to the research (SNS). Those students appeared to have found a method to communicate. Similarly, Toda et al. [19] used a questionnaire to poll 155 Japanese female students to investigate the relationship between smart phone reliance and parental parenting attitudes. When it comes to mother parenting attitudes, there was a statistically significant difference in scores between respondents who fell into the categories of high care/high protection and low care/low protection. There was no obvious shift in attitudes toward father parenting. According to the study, a child's relationship with his or her mother may be connected to smartphone addiction. Loneliness may also play a part in this connection. These changes in family structure have resulted in Many university students are increasingly taking responsibility for their families' smart phone purchases, according to Koutras [23]. University students typically purchase smart phones to compensate for their parents' absence when both parents work full-time. In many cases, a single-parent family is forced to act on behalf of an absent parent.

SUMMARY AND CONCLUSION

Further research has highlighted the negative effects of smartphone addiction on university students. They described the signs of this type of addiction, classified the levels, and developed instruments to assess it [19,7,25,30,16,9,29,3,26,11,13,28,14,4,8,6, 5,1,10,31,12,2]. Smartphone addiction has been linked to decreased academic performance in numerous studies

[7, 5, 24, and 8]. Despite the fact that multiple studies have looked into gender differences in Smartphone addiction, no consensus has emerged on which group is more vulnerable. While some studies have discovered gender differences in Smartphone addiction [9, 12, 6], others have discovered no such link. A small number of studies have looked into the relationship between addiction and a student's topic of study. According to some of these research [3,] humanities students are more prone to addiction than physical science students. At this moment, the degree of the link between socioeconomic factors (such as parental education and family income), smart phone usage, and addiction among university students is unknown. The results were mixed when it came to Smartphone usage and family income.

According to Castell et al. (2004) and Zulkefly [14], students from higher-income households spent more time and money on their smartphones, whereas Brown et al. [15] and Rice and Katz [16] found that lower-income students used their smartphones more. While Zulkefly [14] found a significant link, Ahn [21] argued that parental education was not a major predictor of social networking site use on smart phones. Despite the fact that both are important, most studies concentrated on either the quantity of time spent using by measuring calls made, calls received, messages sent, or messages received, or the frequency with which addiction symptoms emerged. A mixed-methodologies investigation using both quantitative and qualitative methods is recommended to acquire a complete understanding of addiction and its impact on students' academic achievement.

REFERENCES

- 1) Casey BM. Linking psychological attributes to smartphone addiction, face-to-face communication, present absence and social capital. Unpublished Master's thesis. The Chinese University of Hong Kong, Hong Kong, China; 2012.
- 2) Lee Kwon M, Won JY, Park WY, Min JW, Hahn JA, Kim DJ. Development and validation of a smartphone addiction scale (SAS). *PloS one*. 2013;8(2):1-7. DOI:10.1371/journal.pone.0056936.
- 3) Abu-Jedy A. Smart phone addiction and its relationship with self-discloser among sample of students from University Of Jordan And Amman Al-Ahliyya University. *Jordan Journal of educational science*. 2008;4(2):137-50.
- 4) Ahmed I, Qazi TF, Perji K. Smart phone to youngsters: necessity or addiction. *African Journal of Business Management*. 2011;5(32):12512-19.
- 5) Hong FY, Chiu SI, Huang DH. A model of the relationship between psychological characteristics, smart phone addiction and use of smart phones by Taiwanese University female students. *Computers in Human Behaviour*. 2012;28:2152–59.
- 6) Pawłowska B, Potembska E. Gender and severity of symptoms of smart phone addiction in Polish gymnasium, secondary school and university students. *Curr Probl Psychiatry*. 2011;12(4):433-38.
- 7) Park WK. Smart phone addiction, computer science, smart communications, computer supported cooperative work. 2005;31(3):253-272.
- 8) Szpakow A, Stryzhak A, Prokopowicz W. Evaluation of threat of smart phone – addition among Belarusian University students. *Prog. Health Sci*. 2011;1(2):96- 101.
- 9) Billieux J, Linden M, Rochat L. The role of impulsivity in actual and problematic use of the smart phone. *Applied Cognitive Psychology*. 2008;22:1195–1210.

- 10) Krajewska-Kułał E, Kułał W, Stryzhak A, Szpakow A, Prokopowicz W, Marcinkowski JT. Problematic smart phone using among the Polish and Belarusian university students: A comparative research. *Prog Health Sci.* 2012;2(1):45-50.
- 11) Takao M, Takahashi S, Kitamura M. Addictive personality and problematic smart phone use. *Cyber psychology Behaviour.* 2009;12(5):501-7.
- 12) Chóliz M. Smart-phone addiction in adolescence: The test of smart-phone dependence (TMD). *Prog. Health Sc.* 2012;2(1):33-44.
- 13) Satoko F, Masahiro Kimio T, Aki YN, Rei D, Kanehisa M. Relationships of personality and lifestyle with smart phone dependence among female nursing students. *Social Behaviour and Personality: An International Journal.* 2009;37(2):231-38.
- 14) Hassanzadeh R, Rezaei A. Effect of sex, course and age on SMS addiction in students. *Middle-East Journal of Scientific Research.* 2011;10(5):619-25.
- 15) Perry S, Lee K. Smart phone text messaging overuse among developing world university students. *Communication.* 2007;33(2):63–79.
- 16) Head M, Ziolkowski N. Understanding student attitudes of smart phone features: Rethinking adoption through conjoint, cluster and SEM analyses. *Computers in Human Behaviour.* 2012;8(6):2331–39. DOI:10.1016/j.chb.2012.07.003.
- 17) Ahmed I, Ramzan M, Qazi TF, Jabeen S. An investigation of smart phone consumption patterns among students and professionals; is there any difference? *European Journal of Economics, Finance and Administrative Sciences.* 2011;39:136-43.
- 18) Bianchi A, Phillips J. Psychological predictors of problem smart phone use. *Cyber Psychology and Behaviour.* 2005;8(1):39-51.
- 19) Javid M, Malik MA, Gujjar AA. Smart phone culture and its psychological impacts on students' learning at the university level. *Language in India.* 2011;11(2):416-22
- 20) James D, Drenn J. Exploring addictive consumption of smart phone. *Journal of Adolescence.* 2005;27(1):87-96. 26. Walsh SP, White KM, Young RM. Over connected?
- 21) A qualitative exploration of the relationship between Australian youth and their smart phones. *Journal of Adolescence.* 2008;31(1):77-92.
- 22) Brown RIFA. Theoretical model of the behavioural addictions - applied to offending. In J. E. Hodge, M. McMurrin and C. R. Hollin (Eds.), *Addicted to crime.* Chichester, UK: John Wiley; 1997.
- 23) Walsh SP, White KM, Young RM. Needing to connect: The effect of self and others on young people's involvement with their smart phones. *Australian Journal of Psychology.* 2010;62(4):194–203.
- 24) Igarashi T, Motoyoshi T, Takai J, Yoshida T. No smart, no life: Self-perception and text-message dependency among Japanese high school students. *Computers in Human Behaviour.* 2008;24:2311–24.
- 25) Hooper V, Zhou Y. Addictive, dependent, compulsive? A research of smart phone use. A paper presented at the 20th Bled e-Conference e-Mergence: Merging and Emerging Technologies, Processes and Institutions, Bled, Slovenia; 2007
- 26) Belwal R, Belwal S. Smart phone use behaviour of university students in Oman. *New Trends in Information and Service Science. NISS '09. International Conference.* 2009;954-962.
- 27) Cheon J, Lee S, Crooks SM, Song J. An investigation of smart learning readiness in higher education based on the theory of planned behaviour. *Computers and Education.* 2012;59:1054–64.

- 28) Markett C, Sánchez IA, Weber S, Tangney B. Using short message service to encourage interactivity in the classroom. *Computers and Education*. 2006;46(3):280-93.
- 29) Monk A, Carroll J, Parker S, Blythe M. Why are smart phones annoying? *Behav. Info. technol.* 2004;23:33-41.
- 30) Palen L, Salzman M, Youngs E. Discovery and integration of smart communications in everyday life. *Personal Ubiquitous Comp.* 2001;5:109-22.
- 31) Kubey RW, Lavin MJ, Barrows JR. Internet use and collegiate academic performance decrements: Early findings. *Journal of Communication*. 2001;51:366–82.