

No Mobile Phobia Phenomenon _ A Review

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Abstract

The No Mobile Phone Phobia or Nomophobia notion is referred to the psychological condition once humans have a fear of being disconnected from mobile phone connectivity. Hence, it is considered as a recent age phobia that emerged nowadays as a consequence of high engagement between people, mobile data, and communication inventions, especially the smart phones. This review is based on earlier observations and current debate such as commonly used techniques that modeling and analyzing this phenomenon like statistical studies. All that in order to possess preferable comprehension concerning human reactions to the speedy technological ubiquitous. Accordingly, humans ought to restrict their utilization of mobile phones instead of prohibiting it, due to the fact that they could not evade the power of technological progression. In that matter, future perspectives would be employing data mining techniques to explore deep knowledge, which represents correlated relationship between the human and the mobile phone.

KEYWORDS: Nomophobia, smartphone addiction, ubiquitous, anxiety, NMP-Q, data mining.

I. INTRODUCTION

The term Nomophobia (NMP) is developed according to the depicted definitions in the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV), it is named as a “phobia for particular/specific things”. Different mental variables are included once an individual abuses the cell phone, e.g., low self-confidence, extrovert personality. The burden of this predicament is presently expanding universally. As well as there are several mental disorders such as social phobia, social anxiety, and panic disorder could also precipitate the Nomophobic indications [1], [2]. In the contemporary era of virtual and digital society, anxiety is the distress of life. Hence, the stress list is extended by “Nomophobia”, the fear of disconnecting the mobile phone. This disorder is a consequence of technological evolution, which facilitates virtual telecommunication. NMP indicates the anguish, nervousness, anxiety, or discomfort arising from being out of mobile phone connection [3]. It is expected since young people are tremendously tied to their mobile phone in view of the mobile phones integration in human life, and its functions number. However, the smart phones differ from standard mobile phones in respect of their operating system, and they are empowered with more advanced 3G or 4G

proficiencies and features such as socializing, viewing, and posting video on YouTube or Facebook. For these reasons they have expeditiously ubiquitous [4][5]. Accordingly, the smartphone has become an extension of their ear for many people, starting from their wake up till their fall asleep.

Thus, a highly attached mobile phone is both enabling and obstructing concurrently. The augmenting exploitation of new technological devices and virtual communication concerning tablets, personal computers, and smart phones cause alterations in people behavior and their quotidian habits. Although they yield many advantages, however these modern technologies may lead to multiple social problems such as social isolation, economic and financial problems like larger debts endured to purchase or use the smart phones. As well as, it could cause physical and psychological pathologies for instance damages related to electromagnetic field radiation, car accidents, distress related to the fear of being unable to consume up-to-date technological devices [1][2].

Mobile phones had been launched in some markets in the 1980s, and they had proliferated solely in the mid-1990s. While the subscribers are rising from 12.4 million in 1990 to 500 million in 2000, and 3.3 billion in 2008, also 7 billion by 2014, at the penetration ratio of 95% [6][7]. With considerable technological advancements and cost reduction of smart phones, then mobile dependence has been growing universally. Although, the smart phones have been adopted in a growing population over the past decade at pace [8][9]. With its extensive and comparatively modern features, Smart phones vary from mobile phones such as Wi-Fi connectedness, high-resolution, touch screens, web browsing, and advanced integrated software. In addition, with smart phones running on mobile systems like Google Android, Apple IOS, and Nokia Symbian, they can operate



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a range of free paid apps, turning mobile phones, once dedicated, into powerful, personally-friendly mobile computers [10], [11]. These devices have become more and more accessible and have become increasingly important in the daily lives and worlds of learners and their significance is evident in their use of smart phones for learning, entertainment, social networking and identity building [12]. Consequently, addiction to smart phones is nowadays a popular phenomenon [13]. The mobile phones utilization is currently substantial where in several countries the phone subscriptions exceeded the population [8]. Thus, Google study outcomes indeed emphasizes the occurrence of Wi-Fi technologies, so the further smartphone use is adopted, then higher implications for the supplying of wireless networks can be noted. So far, the wireless technologies improvement implies that people may have access to free net connection in Wi-Fi zones with their smart phones much more smoothly. These outcomes of Wi-Fi technology enhancement in turn elevates the smartphone utilization throughout the world [4]. Despite the fact that users' profiles could possibly differ, smart phones are frequently utilized by especially the people who are in search of socialization and the experience of being preferred equally demonstrated that the smart phones and mobile net utilization are there mainly for music, social networks, communication, research, education, games, photographs, and videos. On the other hand, even the smart phones usage could obviously give convenience to people specially to younger people in various aspects of life (internet connection, addresses and route discovering, ticket reservations, banking, shopping, enjoying games photos capturing, radio and music listening, news following etc.). However, this technologic device motivates people to fluctuate their life patterns, distinguish their social relationships, and restrict their lives to this telecommunications world [14]. Regarding the discussions mentioned above, which offer a sturdy proof for the reality that mobile technologies have also damaging consequences regardless of their advantages. Whereas, mobile technologies set off the subsequent seven worries: cyberbullying, regarding whom users interact with online, digital gap between families and adolescents, friendships and offline socialization experiences, attainable risks for cognitive performance and sleep, also damaging identity and self-sense [15]. This review study has an importance in its attracting attention to a serious problem, which affects the emergence generations negatively, since it has a side effects on the psychological and physical health, as well as the academic level dwindling.

II. LITERATURE REVIEW

The idiom No Mobile Phone Phobia (NoMoPhobia) is to be afraid and nervousness which a person encounters in the absence of a mobile phone, is regarded to be one of the detrimental consequences caused by modern age technology.

Hence, people would possibly have psychological issues owing to no longer have their phones and connect via phone. Notwithstanding there is no longer sufficient statistical data about people personality who have this phobia. Many literature surveys were accomplished to uncover this phenomenon and. According to [4] this disorder is alternatively frequent amongst people. While [15] presented a study to analyze, and investigate the smart phones effect on young generation living style. Diverse scholarly databases have been accessed to determine the most authoritative and quantified information related to the study. Meanwhile, [16] suggested an expression named "ubiquitous technostress" to indicate the stress yielded by excessive use of mobile. Regarding this, a model of creators and ubiquitous technostress consequences in organizations is formed, this support manager to better recognize the reasons and subsequent effects of this stress type specifically. A survey was performed on personnel that use mobile phones regularly in the work, so 714 questionnaires had been obtained that covered 622 legitimate ones. The empirical outcome realized ubiquitous technostress creators possess a good impact on personnel job stress, but a bad impact on productivity. Where the stress inhibitors (stress management training, organizational rewards, job control) have no influence on personnel job stress instead they have an influence on their productivity. When personnel have a sense of stress, then almost their productivity will be negatively impacted. As well as, [16], [17] submitted a study endeavoured to analyze the NMP by determining and explaining the NMP dimensions, and formulating a questionnaire for assessing NMP. This study assumed experimentally two-phase successive mixed approaches design. Hence, the first phase used to be a qualitative examination of NMP via semi-structured interviews carried out on nine undergraduate college students at Midwestern University in the USA. The qualitative outcomes from this preliminary investigation were then formulated into a questionnaire assessing NMP. Then, the New NMP Questionnaire (NMP-Q) was investigated in the second phase with a big sample of 301 undergraduate college students. Thus, in the first qualitative study phase, four NMP dimensions were determined, particularly dropping connectedness, not being capable to access information, no longer being capable of communicating, and abandoning convenience. Regarding the outcomes of this phase, a 20-issue NMP-Q had been established. The second phase quantitative findings explored that the four dimensions had been related to the theoretical NMP construction, and that the NMP-Q generated dependable and valid outcomes. Figure 1 represents mobile phone addiction in the USA for the period 2004-2019.

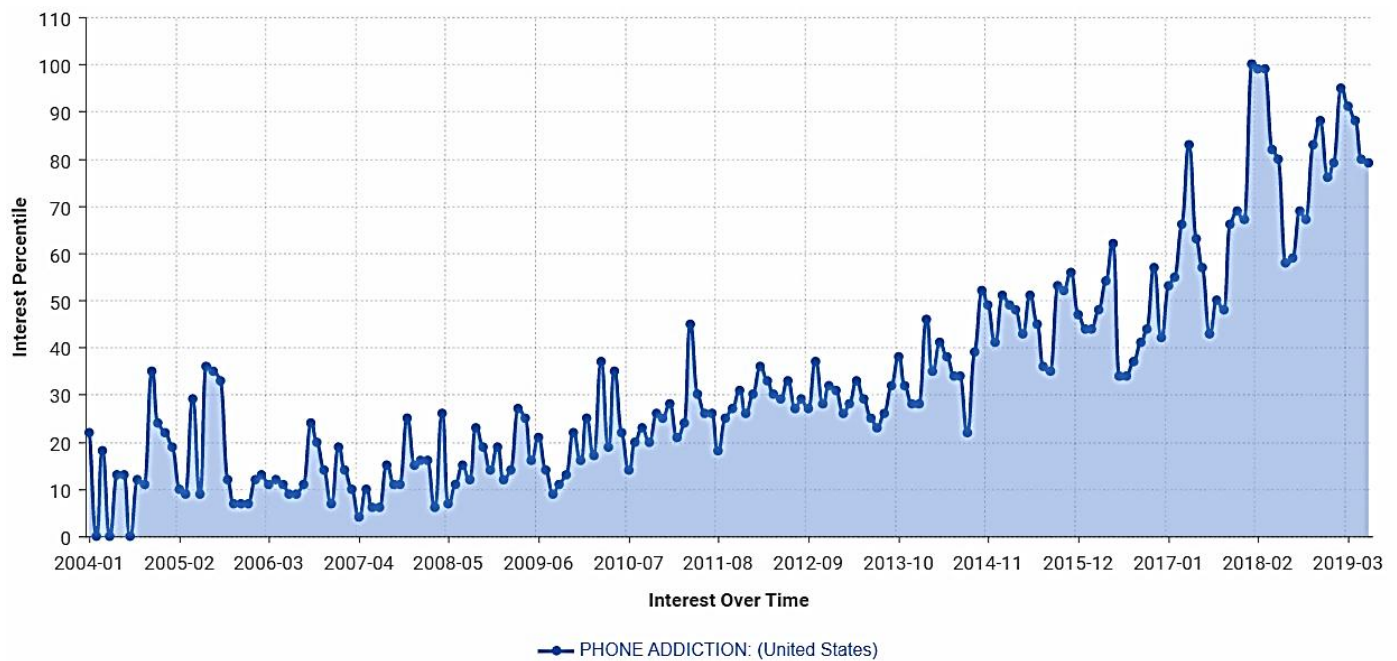


Fig.1 Statistical representation for the increased intersting with smartphone for years 2004-2019 in USA [32].

Moreover, [12] proposed research to comprehend the young people smartphone usage, and to reveal their lived expertise with mobile phones, under the formal and informal learning perspectives. 12 young people ranging between 16 and 19 years old have been incorporated into the study. They are involved in three rounds of semi-structured interviews through a 6 months interval. It is concluded that the learners' importance attached to this kind of mobile learning, and the portability of this knowledge and skills through time, spaces, and dimensions is seriously a function of specific smartphone usage at a cultural instead of pedagogical level. Further tests carried out with [18], in this research examined the intermediate impacts of depression and loneliness on the interrelationship between smartphone addiction and adult attachment in the student population of university. Thus, 200 students contributed to this investigation. The tested data were examined through statistics, structural equation modeling, and correlation analysis. Thus, considerable interrelationships were founded among attachment anxiety, depression, loneliness, and smartphone addiction. Although, the attachment anxiety was not substantially correlated with smartphone addiction. As well as, the examinations concluded that loneliness had no direct relation between smartphone addiction and attachment anxiety. Although, loneliness and depression are related sequentially between attachment anxiety and smartphone addiction. Another study [3], is a cross-sectional research, which was implemented on the medical college students of Wayanad. The NMP pervasiveness was determined using NMP-Q. This study estimated NMP pervasiveness ratio at 97%. Whereas, 99.06% of students had used smart phones to call their relatives, 91.84% to call friends, and 88.57% for listening to music. In addition to [19], which exposed the usage patterns of mobile phones, and its influences on the student's academic performance. Also, a descriptive cross-

sectional investigation was implemented on 554 students of D. J. College of Dental Sciences and Research. That's performed based on a self-administered questionnaire for data gathering with regard to the usage and related anxiety to the mobile phone. Hence, approximately 39.5% of students concurred that their poor marks in exams are due to long time consumption on mobile phones. It has been shown that 24.7% of students are regularly checked on their mobile phone in course of classes, or during clinical work. Consequently, 24.12% of total students had been discovered to be nomophobic, and 40.97% of them were in danger of being nomophobes. Likewise, [20] tried to realize the interrelationship between personality and temperament and the nomophobia development. This study used a sample constituted of 968 participants, they were elected from the Andalusian population, there were 182 men and 785 women's aged around 19-23 years old. It had been discovered that collaboration is a significant property which decreases nomophobic levels, specifically considering two elements of negative consequences and mobile phone addiction. Meanwhile in [4] the authors checked the interrelationship between loneliness and NMP with the influence of smartphone and mobile internet utilization by adolescents. The investigated sample was composed of 301 adolescents, and the data were collected using UCLA Loneliness Short-Form (ULS-8) Scales and NMP-Q. This work was based on a relational survey model employing ANOVA, linear regression, Pearson correlation, and descriptive statistics. The results showed nomophobic behaviors adolescents at a modest level. Whereas, there was no statistical significant correlation regarding duration of smartphone ownership, and mobile internet GSM ratio per month, but it had been found significant variation regarding the duration of mobile internet ownership, the duration of mobile internet use per day, and smartphone checking time

per day. In [21] the authors investigated and quantified the gamification strategies usage, and tactics (on-screen features) amongst present mobile apps for smoking cessation in United Kingdom. The tested items were 15 iOS 125 Android apps, they had been tested separately via two reviewers for elementary functionalities, in compliance to the 5 A's smoking cessation guidance, with adopting tactics and gamification strategies. The differences among platforms were examined with χ^2 tests. As well as the correlation coefficients were estimated for exploiting the interrelationship between gamification and the guidance compliance. Thus, highly frequent functionality of observed 140 mobile apps, so the users were permitted to track the days during since-till the smoking quit date 86.4%. And the almost common gamification strategy over the platforms of feedback performance 91.4%. While the most apps approved middle level of gamification strategies 55.0%, also tactics 64.3%. While a little were approved with high levels of gamification strategies 6.4%, and tactics 5.0%. However, it was found that no statistically significant variance between these platforms with regard to level of gamification $p > 0.05$, and weak intercorrelations had been discovered between adherence to 5 A's and gamification strategies $r = 0.38$, and tactics ($r = 0.26$). Alternatively, research [22] assessed NMP influence on the academic efficiency for 157 students of Physiotherapy (SPPC) University. So, Google Form platform had been used to implement online cross-sectional survey, and validated NMP questionnaires (NMP-Q) considered. Thus, smartphone usage information, demographic data, last academic performance, and presence of musculoskeletal disorders had been regarded to accomplish a self-reported questionnaire. Then, the collected data had been automatically tested by Google Form. The findings presented the mean student age was 22.2 ± 3.2 years, and 42.9% male and 57.1% female of total tested students. Approximately 45% of students were using smart phones for more than 5 years, while during their extended use of smart phones 54% of them suffer from musculoskeletal disorders. With a confidence interval of 95%, the mean NMP score was 77.6 between 72.96 and 82.15. There exists an inverse relation between the NMP scores (NMPS) and student's academic performance, as well as there isn't substantial difference between NMP scores. As well as, the [13] was intended to establish the prevalence of NMP among smart phones via 303 medical students and 305 engineering college students of West Bengal. Then compare the nomophobic attitudes, their predictors and their utilization of smart phones. Hence, they were implicated in a cross-sectional analysis with a validated NMP questionnaire composed of 4 factors. Thereafter, comparing the individual questions means with the factor scores. However, nomophobic clusters for the two groups were specified by implementing two-stage cluster analysis. The NMP predictors comparison had been established using binary logistic regression. So, the findings showed that engineering students had a higher proportion of nomophobics in 44.6% higher than medical students in 42.6%. Accordingly, considerably higher means noted for the "giving up convenience" factor among engineering students. Also,

individual variables as "scared due to running out of battery", "nervous due to disconnection from online identity", "uncomfortable when unable to stay up-to-date with social media", and "anxious when unable to check E-mails." As well as, a higher nomophobics portion between the 2 groups. Whereas, females who owned smart phones more than 2 years, paid mobile bills over Rs. 200 per month, and spent above 4 hours per day on their smart phones. Besides the observation [23], which studied fear impacts of smartphone disconnection, it had been performed on 300 students of Multan University, they aged between 18-30 years old. This observation explored the NMP existence among smartphone users. Moreover, it investigated the resulting anxiety from mobile separation. Hence, two conditions were appointed to the participants randomly. So, the tests in this study comprised Yildirim's NMP-Q, and Spielberger's State Care Anxiety Inventory (STAI). Finally, the outcomes showed 68% of the students had moderate NMP levels, also a gradual rising level of anxiety in accordance with increasing periods of phone separation. Additionally, [24] intended to analyze the relationship between NMP, smartphone overuse manifestation, and life satisfaction gained by psychological well-being and academic accomplishment. Also, it focused on reversing the procedure, in other words if the life satisfaction gained by both psychological well-being and academic accomplishment induces NMP. A large-scale random systematic sampling about 10,000 responses was designed for the empirical test of the developed model. While a questionnaire gathered the demographic information and actual average grades (GPAs) details and answers to scales, namely NMP, psychological well-being which include perceived stress, depression, and loneliness, and life satisfaction. It concluded that smart phones affect academic performance negatively, while influencing psychological factors positively such as anxiety and stress, so NMP may have an indirect, negative effect on life satisfaction. On the other hand, people found modern methods to remain in touch with others in their world. In order to demonstrate, if anyone is going to meet his friends, then the time he goes down the path to visit someone would be decreased due to the fact that almost people nowadays simply text friends to connect, so once friends are a few clicks away they feel comfortable and happy, which is a key human requirement [25]. Indeed, while this situation in which people are kept increasingly affiliated to their phones, then they progressively increase virtual connection. Hence, it is concluded that it makes them insulated from the reality of the world. Therefore, smartphone usage allows people to avoid contacting others face to face, or even vocally, also escape from awkward situations publicly, so enjoy a virtual, private mobile informatics world [26]. In this context, overuse of smart phones and NMP can be said to correlate to loneliness. There are several concepts for loneliness: First of, loneliness is a consequence of deficiencies in social relationships of a person. Second, loneliness is not the same as objective social isolation, and is a personal experience. Lastly, it is ultimately uncomfortable and distressing to loneliness. In this respect, NMP and loneliness can be said to be identical to these characteristics. Yet, NMP could be

summarized as a fear of deficiency, which is a kind of addict and subjective perception which can cause anxiety [4]. In recent years, numerous news has shown that the ubiquitous nature of mobile phone technology has adversely affected sentimentally phone users. For instance, 45 cases of suicide have occurred with the use of Blackberry's mobile phone in France's Telecom (22 succeeded and 13 failed) as employees have suffered from great stress in using their mobile phones while responding to the large volume of mail and messages. Whereas, in the United Kingdom, a research discovered almost 53% of smartphone users in Britain are worried that they are out of touch with mobile phones that include: network outfit, battery failure, or loss of mobile phones [27]. Notwithstanding, mobile phones have a positive impact on human life. Definitely, smartphone technology is a fantastic tool to help various services, and the people more suitable with it. In order to provide better connections between people, studying, business and other applications, smart phones with accessible social media channels play key roles. Thus, [28] said that smart phones have supreme benefits relevant to education, entertainment, social life etc. Smart phones have created a significant shift in people lifestyles, and they are comfortable in providing users a large platform to access and communicate with a broad spectrum of applications. whereas, [29] see that people benefit from different and simpler services they provide such as the opportunity to learn things, knowing about developing their personalities, and ideas for business success. As well as, smart phones hands free, e-mails, free calls, chat, Wi-Fi connectivity, saving the time, providing thousands of apps, etc. provides access to internet, emails and websites for social networking, in addition to performing multiple tasks concurrently. While, [3] shows that smart phones maintain a link between one and social networks, enabling one to shop online, to update news and to sport. Although, [30] thinks that Smart phones enhance the lifestyle and enhance the lives of people through the provision of multifunctional features such as Keeping people safe even if they are alone, detecting Earthquakes, making doctors mobile, always on the scene, aiding people to cope with diseases and disabilities etc. Additionally, smartphone technology is a really substantial element of life, so people feel imperfect without it. It provides a variety of services, including taking pictures, directions (GPS), tracs appointments and contacts, also useful in business objectives. According to the mentioned observations, it might be realized that this technology revolutionized the people's lifestyles in the whole affairs of human progression, and flatten the way for acquiring numerous properties to enjoy people's life.

III. SMARTPHONE ADDICTION SYMPTOMS AND SIGNS

Smartphone addiction grows into a serious dilemma, since 87% of young adults' state that they never leave their smartphone, though 80% of smartphone users are checking their phone 15 minutes after waking up. There are several addiction signs like frequently using the phone at mealtimes. Spending more time on the phone than interacting with others personally. Repeatedly use the phone while knowing

something else more fruitful should be done. Repeatedly using a smartphone during executing tasks requires concentration, such as driving, accomplishing assignment, writing reports. Also, feeling uncomfortable if the phone isn't in touch. Thus, there are 5 issues that can help to overcome it. First off, turning off the notifications, many people get overwhelmed by infinite notifications from Twitter, Facebook, Spotify, Instagram, plus other apps. The person doesn't need to know instantly when someone "likes" his updated status, or if his profile had been followed on Instagram. The more frequent person checked his phone, then more it becomes rooted habit. Thus, must turn off notifications, be less obligated to use the phone. The exceptions of turn off notifications might be text messaging app, and calendar app. This is due to the fact that sometimes it's urgently waiting for a text, or calendar app notifications keep updates on track for schedule. In the second place, when anyone may feel the urge to check the phone, he could close his eyes and breathe deeply. Supermodels' secret lives. Then watching a cat video, and a baby video. But, 20 minutes had passed before it had been realized – when it was just decided to take a 3-minute break. Looks familiar? The surge for checking the phone comes in waves. However, if the person holds out for seconds, then this surge will disappear. Thereafter to get back to work. Hence, some suggestions can be raised: once there are feelings like just having to check the phone, so it is recommended to close eyes, and breathe deeply for three seconds, then exhale for three seconds also. So, the surge will normally pass away. Nevertheless, if the surge still exists, then breathe deeply again, it is supposed to have the willingness to resume the initial task. In spite of the procedure simplicity but it is an effective one, which aids in breaking the smartphone addiction. And, thirdly eliminating all social media apps on the smartphone. It looks like an extreme measure, but not. Yet it is possible to access social media sites via phone Internet browser. The website is mobile friendly for Facebook, YouTube, Twitter, and Instagram. Of course, the mobile web experience is incompatible with the app. Any game on the smartphone should be removed. While, in fourth place, uninstall any unneeded software to reduce the time spent checking apps, and to reduce the smartphone irritation. Alike, it is much easier to overcome smartphone addiction. The elimination of unused or unexploited programs, which enhances the smartphone power and battery life, as well as releases space to improve the capacity. Eventually, in fifth place [31], set clear boundaries for smartphone utilization. There are common observed issues for people with different degrees of smartphone addiction [32] such as difficulty completing work or chores because of focusing problems. Isolation from family and friends, or using smartphone during the conversation. Masking smartphone usage, e.g. sneaking away at work, worrying about missing out on something, feeling anxious, or irritable whenever going without a smartphone. As well as having sleeping problems.

IV. THE TIME SPENT ON SMART PHONES

There are several concerns about people spending time ratios a day on their smart phones, so how much time do they actually spend in 2019? Humans become higher integrated with technology, whereas the connection line is drawn between requirement and the obsession with smartphone addiction. Smart phones have an average time spent about 171 minutes a day tantamount to 2 hours and 51 minutes, this ratio on smart phones AND tablets has an average time of 261 minutes daily tantamount 4 hours and 33minutes. Meanwhile, the user utilizes top 5 social media apps in average 76 minutes daily tantamount 1hr and 16 minutes. Also, the user swipes, tapes, taps 2,617 times per day on their smartphone. Of smartphone owners who are surveyed from 18-29 years old, whereas 22% of them are checking their smart phones each few minutes, and 51% are checking many times an hour [32]. Generally, this might be acceptable, since people spend so much time on their smart phones. Several surveys have been conducted around the world showing that every country has a disparity in everyday use. Hence, top 10 countries according to Smartphone utilization Brazil, China, United States, Italy, Spain, South Korea. While, the mobile phone usage statistics are: The average time for people to use a mobile phone and tablets in the US is 4 hours daily. Thus, by incorporating these devices into human personal and digital lives, this rise in time reflects a change in both culture and technology. Major mobile phone usage statistics indicates that the average user in Brazil spends more than 5 hours daily on their mobile phone, that means 1/5 days is wasted on their phone. Furthermore, in [33] a survey of 2245 adults 18-above years old, of 903 interviews for mobile phones owners. In general, these owners are significantly to consider their phones as time savers not as time wasters. Around 33% of these owners agree with the declaration that their mobile phones save time because they are regularly accessing the required data, when just 3% agree that the mobile phone is wasting time since it causes continually to be interrupted or confused. Almost all of these owners are too related to their phones, 56% of them said that mobile phones are equally balanced between wasting time and time savings, but most of them don't think it's too bad. Many of them consider mobile phones as a key device, so they are checking them regularly, keeping attached constantly, and they could have operating problems without. Hence 67% of mobile phone owners check their phones for text messages, calls, or alerts despite they didn't hearing their mobile phones ringing or vibrating. While 18% of them said that they do this regularly. Meanwhile, 44% of these owners are slumbering bedside their mobile phones to be sure no calls, text messages, or any alerts they missed at night. Also, 29% of them can't imagine their lives without their mobile phones. Notwithstanding their relating to their phones, a majority of them don't concern themselves too much, or obtaining claims from friends about getting so much time with their mobile phones. Thus, 11% of them said they are occasionally worried about spending too much time on their mobile phones. On the other hand, 12% of them, people are told they are wasting so much time with their mobile phones.

Actually, lots of these owners have friends who claim them because they don't dedicate sufficient time to monitor their mobile phone communications. About 39% of them state that people they know complained since they don't reply quickly to text messages or calls. As Additionally, 33% of them affirm that people they know also complained since they don't check mobile phones constantly. Therefore, the mobile phone users state some defects to their own mobile phones, though they are optimistic about acquired advantages from mobile phone access. Notably, they are such beneficial devices according to maintaining relations to family and friends. However, 65% of mobile phone owners affirm that their phone made it very smoother to keep in touch with their related people. Also, 28% of them state that their phone is much facilitated to schedule and program their quotidian routine. Then, 26% of them consider their phone has facilitated personal productivity during doing tasks such as sitting in traffic or standing in line. Conversely, comparatively limited numbers of mobile phone users realize a drawback in terms of growing interruption and difficulty in distracting them from their work. So, 9% of these owners claim that their mobile phones make it very hard to turn off from working lives. This worry is notably deep among mobile phone users in high incomes families. Hence, 7% of these owners claim that it is more difficult to pay people attention. While 7% of them claim they have much trouble concentrating on a single task without distracting themselves as represented in figure 2.

A. Daily Smartphone Duration

There many studies indicate substantial differences in the NMP level of adults suffer from and the frequency of daytime tests. People who check their mobile phones more repeatedly have more nomophobic behavior. Thus, [34] estimates that young persons regularly review missed calls, text messages, and notifications. While according to [8], one feature of mobile phone addiction and NMP is the habit and behaviour of checking the phone screen regularly. As well as, it had been conceived that the need for a person to be appreciated by others such as liking what he shares, having his/her profile looked at, how often he receives messages, he keeps in touch with is related to checking smart phones oftenly. The report of Global Mobile Users, which had been published by the international advisory firm Deloitte Global relied on study including 18-50 years old mobile phone users in Turkey, it is stated that the participants check their phones screen around 71 times per day, which is roughly once each 15 minutes. As well as, there are several studies that prove the existence of a substantial relation between NMP and the frequent smartphone checking [8][35]. So, because of the usage simplicity, and accessibility for various and attainable features anytime in mobile phones, they become a snare for some users that formulate defective behaviours and habits, like frequently checking mobile phones with no particular objectives [36], which had been developed fast into problematical usage [37].

B. Mobile Internet Ownership Duration

A number of works have shown that the period of owning a smartphone and NMP in adults was substantially different. As in [38] the results explore that the more people use the mobile network, the higher the NMP level. In this work with the participation of 475 high school secondary students, state that students used the Internet more than 4 years, having higher NMP levels as opposed to those with lesser Internet usage durations. In this analysis it was found that there is a correlation between internet addiction and NMP. [39] Also recorded a distinction in favor of internet users for more than four years. Furthermore, they explain that NMP and Internet addiction have a positive relationship. The reasons behind the widespread use of Smart phones are

believed to be the opportunities provided by them to consider social networking, viewing videos and/or television, radio listening, online shopping, internet browsing, and so forth [49]. The utilization of wireless systems jointly with smart phones increased smart phones utilization. Hence, [40] stated that it is because of the widespread availability of wireless technology, thus mobile Internet becomes an Internet core. Given that increased mobile network usage provides comfort for smart phones users, it is understood that this can intensify the smart phone dependency [41]. In addition, it is also recognized that mobile applications like WhatsApp promote addiction and smartphone overuse, triggering prevailing adult syndromes [42].

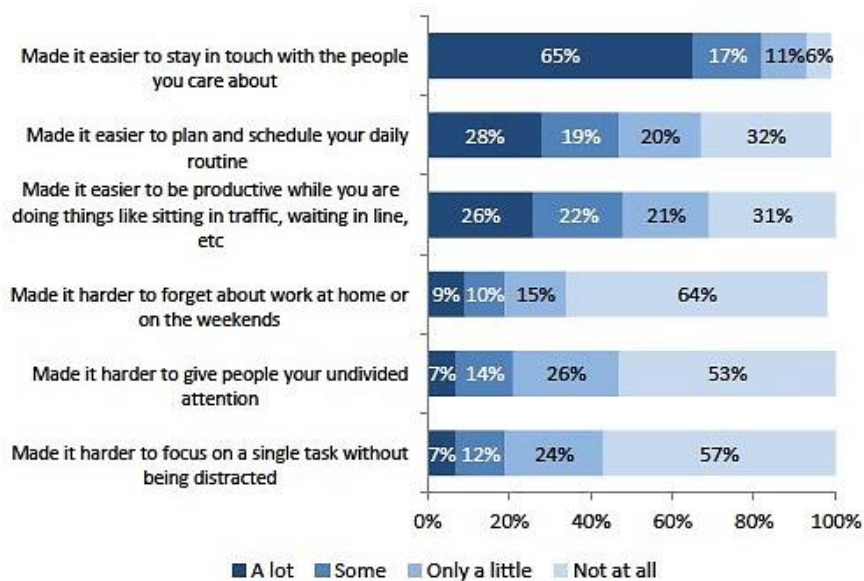


Fig.2: Mobile phones addiction statistics for users in USA the blue gradients indicates the ratios as a lot, some, only a little, and not at all [33].

C. Daily Mobile Internet Use Duration

Another issue is the considerable distinction between frequent use of the Internet by adults and NMP suffering from. Indeed, [43] reported that the NMP level in adolescents browsing the Internet is superior. This study elaborates that students use their smart phones for about 5-6 hours per day, and they are susceptible to NMP related conditions such as fear, anxiety, sleeplessness, stress, interest loss in learning, etc. This observation is implemented on various age groups of 1151 participants, which are playing games on social media [44]. Consequently, it assessed that people utilizing the Internet more than 3 hours per day would have higher degrees of NMP than those utilizing the Internet less this duration. Moreover, applications like social networks [45] and games magnifies the Internet utilization.

D. Children Spent Time On Smartphone

The parents have many concerns about their children utilization for smart phones, they have a right, especially according to [32], which realized that 67% of teachers inspected are considered mobile phones to distract students negatively. While, 90% of inspected teachers are considered the students with emotional problems are increased. It has been reported that teenagers who pass 5 hours daily on electronic tools are 71% higher likely to have risk factors for suicides than teenagers using only 1 hour. Meanwhile, teenagers who pass 5 hours daily with electronic tools have a 51% higher probability to be sleeping less than 7 hours in comparison to 1-hour usage. As well as, long-term complications linked to hypertension and overweight. In addition to 27% higher risk of depression among 8th graduates that are heavy users of social media. Whereas, the responsibility of the mobile phone usage of children is blamed by 89% of parents and careers, 5% blame children

themselves, 3% blame manufacturers of devices and applications. Thus, 47% of parents believe their child is smartphone addicted. Eventually, 50% of parents worried about mobile phones impact on children mental health issues [32]. Therefore, it has become necessary to reduce children dependence on smart phones. According, looking to solve teenagers mobile phone addiction. So, the clear alternative solution is to take a mobile phone away from the child, which often doesn't work well, this can literally lead to the symptoms of withdrawal from online and technology addiction. Instead, there are other tactics to provoke healthier utilization. such as monitoring utilization via apps, the new iOS Digital Health and Android monitoring system would track the usage, in order to help for knowing how much the child is really using the device, also the usage nature like emails, apps, messages. Manage the person usage, anyone needs to be the role model in this case. So, if anyone spent hours looking at a mobile phone, then it must have been checked during interactions, then allow it to occur between the user and his family interactions, he would be a bad example. Also, set rules around the home by building a much healthier atmosphere via limiting smartphone usage in certain parts of the house or/and at certain times. For instance, no smart phones at the dinner table, or at night after certain times, perhaps even at night prohibit them from using phones in their rooms. And, developing new interests, which is an alternative way to minimize how children are addicted to mobile phones by engaging them in more social and physical practices such as hobbies/sports. This could help them to reduce stress throughout practice and develop their actual activities. After all, interaction and communication by spending time with the family without mobile phones, and being close enough with children in order to realize whether there are hidden difficulties, which are concealed by smartphone overuse. These difficulties may be depression or stress might be related to home or school problems [32].

V. THE SMART PHONES AND STUDENTS RELATIONSHIP

Technical knowledge exploitation has a universal prominence because of its participation in human life, and because it strengthens socio-economic relations internationally. Whereas, telecommunications have proved as the most promptly propagating media on the globe, and supporting the emerging "mobile culture" among the young generation. The mobile phone has many labels like cell phone, cellular phone, or hand phone, it has enabled life easier by calling and receiving phone calls through radio links among furthestmost places in the world regardless of a presence at any place. In the past, people relied on phones for communication only, although today they have a thirst for it because of the innumerable advantages it offers. Mobile phones today, become a key component of the present lifestyle. The provided utilities like internet, email, social networking, calculator, calendar, personal diary dispatcher, camera, music player, and video game player. In [46] it has been explored that Indian market has become obvious as China's second-largest smartphone market for mobile phones. According to the Indian Telecom

Regulatory Authority (TRAI), the country is the second largest mobile user in 2015, which is approximately 980,81 million mobile phone subscribers. There is no question that there is an orientation into a new epoch in which mobile phones are not for talking and texting only, but for internet usage and its associated activities. Whenever the battery is drained out, there is no network coverage, or there is no balance, then students become confused without their mobile phones. Thus, lack of mobile phones communication would certainly adversely impact people focusing. In spite of teenagers belief that mobile phones made their lives comforting and safer. On the other hand, mobile phones overuse provoking bad sensed health including stress, tiredness, headaches, and focusing problems. It has been spread amongst the teens, the overused and overreliance behavior on these devices. This has produced distracted academic activities because of the exaggerated time spent on them. The investigations indicated that there is a direct relation between academic excellence and student achievement. Whereas the others who use mobile phones, have plus distraction and are less considerate at lecture and other academic activities. Thus, mobile phone ownership has social, economic, psychological and educational ill implications for students as this generally affects their behaviour and attitude regarding academic activities [46]. Furthermore [47] reported that in the USA, it has deteriorated to 65%, or about two in three students sleep with or beside smart phones. However, It's much higher for college students. While 34% acknowledged responding to their mobile phone in their intimacy with their partner, as elaborated in figure 3. Additionally, one in five people prefer to walk without shoes for a week rather than disconnect from their phones. More than half of them never turn off their phone. This study concluded that 66% of all adults have NMP. Due to the fact that younger people feel incomplete without the smartphone usage, and this alters dramatically all affairs of human progression through Business, Health, Education and Research, Entertainment etc. The use of smart phones has been extremely augmented since several years now. In any particular occasion whether in a public place, workplace or any family gathering, everyone one remains in-touch with it. [3] States that most people, especially the young generation, keep on busy with calls, messages, watch/send videos, up-date apps etc. Therefore, it evolves into an inevitable part of human life. With the internet access, anything, anytime, anywhere occurs and is well-known in seconds, similarly spreads rapidly around the world. However, the use of smart phones has negatively impacted psychological, social, and physical life of humans, particularly young generations. Therefore, mobile phone safety guidelines have to be followed, in order to decrease the risk among young generations. Do not give mobile phones to the children to minimum, since they are susceptible to radiation effects. It is recommended to take special caution when there is a mobile phone tower above or near home, or even near children school because their radiation exposure would be more than normal. Ensure that children don't take mobile phones to school with them. Keep the school contact number and provide them with the contact number of parents for any emergency event. Keep mobile

phones safely and out of sight from children overnight. Since they may silently attempt to take it and use it in secrecy. Therefore, parents must supervise whatever their kids watch on mobile phones. As well as, parents must be involved to enlighten their kids about the benefits and drawbacks of Smart phones [3].

VI. DISCUSSION OF ASSESSING AND TREATING NOMOPHOBIA

According to [45], until now researchers in this field are examining on a 20-question scale (NMP Questionnaire NMP-Q). This scale encompasses four classes which are unable to communicate, losing connectivity, unable to acquire information, and abandoning convenience. This study distinguished that this questionnaire states only those at risk of promoting NMP, rather than diagnosing. Whereas, therapeutics of NMP ranging from interpersonal counseling, and addiction therapy, cognitive therapy. Also, the exposure therapy may be used for people who first reveal themselves to their phobia in counseling, that means abandoning the mobile phone before entering the room, and thereafter step into real life situations. This includes stepping away from the mobile phone to any other room for periods of time that are rising slowly. The significant result found among women, they have mindfulness to decrease NMP tendencies

[48]. Therefore, it's necessary to modify smartphone usage with some effective actions in order to avoid NMP. Hence, the easiest way to break down mobile phone addiction is to think of it as physical addiction such as drinking, smoking, or eating. The goal is to identify patterns/habits, then to reduce their time slowly into manageable quantities. Its recommended to restrict times of looking for and checking mobile phones. These actions like avoiding checking mobile phones till the end of meals, avoid taking mobile phones to bathroom and bedroom. As well as, switch off mobile phone or put it away. During work, putting a mobile phone in a drawer, or laying it down in another room, this might minimize the tracking anxiety. Prevent mobile phones from disrupting sleep patterns, since checking the tablet, mobile phone, or laptop prior to bed could affect the sleep quality. So, it's better to turn it off, and concentrate on alternative activities in boredom. It's recommended to avoid just watching TV and scroll on a mobile phone without a goal. Alternatively, going to the gym, having a hobby, or going to meeting friends, this could reduce playing games or looking at social media times. In addition to deleting social media apps which are wasting so much time on, especially social media that are considered as a primary reason for NMP addiction [32].

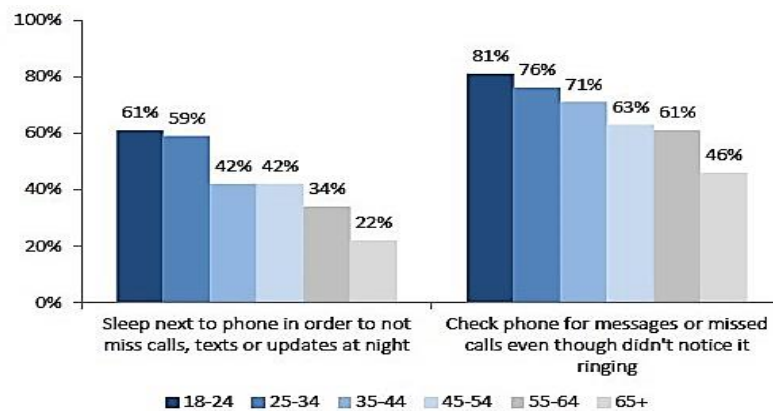


Fig.3: People sleeping besides their mobile phones with regular checking even without notification, the results grouped by age [47].

VII. CONCLUSIONS

With regards to the researches and studies results, which showed that mobile phone usage dependency may affect both physical and mental health attributes of people quotidian patterns. Whereas, the anxiety that resulted from keeping track of the mobile phone all times would lead to reducing personnel productivity, and the users addiction level. By other hand, the stress or higher stress levels that are related to business orientated roles, where working lives are interrelated with personnel devices (mobile phones). In addition to narcissism, where people who become addicted to social media on their phones begin exhibiting features of self-absorption that originate from reporting on their life or selfies regularly. As well as, depression and loneliness, which stands for mostly attributed to people who use high social media on their mobile phones, have higher numbers in teens. And, an attention deficit disorder, which refers to

the information flow that reduces the brain focusing on any task for more than few minutes. Also, sleep deprivation that affects long-term mental health. Finally, it is the disease of the twenty-one century, so as future perception it's recommended to construct another detailed questionnaire for deep investigations, then employ data mining techniques to gain more knowledge and uncover hidden patterns. Consequently, establishing predetermined strategies to face this phenomenon. This review has no Iraqi case study, so it is recommended to hold a collaboration between Iraqi researchers of informatics and psychiatrist, so the data mining techniques can support the psychiatrists in discovering the hidden patterns and relationships of the symptoms and signs of this disease. Hence, it is recommended to have a questionnaire for Iraqi students to uncover some of their academic problems that are related to the smartphone addiction.

CONFLICT OF INTEREST

The authors have no conflict of relevant interest to this article.

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