

Smartphone Addiction in Young Adults

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Abstract:Background: The smartphone use is increasing day by day for various purposes as now almost everything can be done using a smartphone due to the internet facilities that a smartphone provides. The use of excessive smartphone leads to smartphone addiction. The excessive use of smartphone has various disadvantages like musculoskeletal, psychological and visual problems which can affect the health of an individual. Thus, the study aimed at assessing the smartphone addiction in young adults.

Materials and methods: Young asymptomatic adults (N=60) with 25 males (n=25) and 35 females (n=35) between the age group of 19-35 years (mean age= 21.85 years) were assessed for smartphone addiction and divided into three groups of low, medium and high smartphone addiction users and analyze the components of the scale that are affected.

Results: The overuse factor is the most affected component in all the three groups with affection of overuse in the low group 37.97%, medium group 62.28% and high group 85.83%.

Conclusion: Overuse is the factor that is maximally affected in all the groups suggesting that the smartphone users prefer to search using the smartphone rather than asking people, fully charged battery doesn't last a day using smartphone longer than intended and feeling the urge to use smartphone right after they stopped using it implying the dependence and compulsive habits developed when using a smartphone.

Keywords: Smartphone, overuse, smartphone addiction, young adults

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I. Introduction

Smartphone is a handheld personal computer with a mobile operating system and integrated mobile broadband cellular network for voice, SMS and internet data communication. They are typically pocket-sized and are able to run variety of apps.^[1] In this study smartphones are considered having the features of using internet, camera, sending or receiving calls, text messages, Bluetooth and media player. The easy access to internet that a smartphone provides gives convenience to the users.^[2] A smartphone allows users to track updates and emails and also make them accessible to colleagues, friends bosses and relatives. According to Global Deloitte Survey, 2015, smartphones have become a near necessity as checking the phone is one of the first and last things that consumers do everyday.^[3] Smartphone addiction, called “nomophobia” (fear of being without a mobile phone), is often fueled by an Internet overuse problem or Internet addiction disorder. After all, it's rarely the phone or tablet itself that creates the compulsion, but rather the games, apps, and online world it connects us to.^[4]

Addiction is defined as “the need or strong desire to do or have something or a very strong liking for something.”^[5] Using smartphone or being addicted to a smartphone has various physiological, psychological, musculoskeletal, visual and social effects which harm the health not only of an individual but also the general well-being of the society. Smartphone is known to cause reduced sleep, increased stress and increased distraction among its users.

Thus, the aim of the current study was to assess and classify smartphone addiction in young adults into low, medium and high smartphone addiction users and the objectives were to determine the maximally affected components in low, medium and high addiction smartphone users and to compare all the components in the low, medium and high smartphone users.

II. Materials And Methods

Departmental review was taken before beginning the study. The research was conducted at the research lab of K.J. Somaiya College of Physiotherapy. The subjects in the age group of 19 to 35 years and using a smartphone were included in the study. The participants not willing to participate were excluded from the study. A written informed consent was taken from all the participants. The Smartphone Addiction Scale^[6] was used for

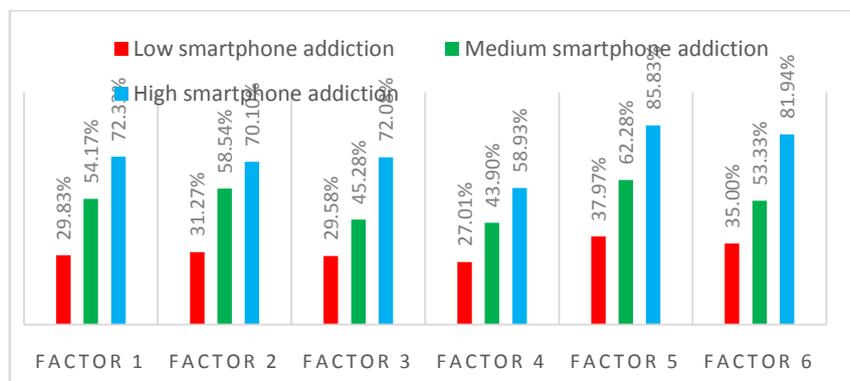
classifying the users into low, medium and high addiction grades. It is a 33 questions questionnaire in which each question was given a score using a 6-pointer Likert scale. The scoring of the scale is as follows: 33 to 66 low smartphone addiction users, 67 to 132 medium smartphone addiction users and 133 to 198 high smartphone addiction users. A total of 100 subjects were screened and depending upon the scores randomly 20 subjects were present in each of the three groups. Thus, 60 subjects including 25 males and 35 females were included in the study. The Smartphone addiction Scale consists of six factors: daily-life disturbance, positive anticipation, withdrawal, cyberspace-oriented relationships, overuse and tolerance.^[7]

The factor of daily-life disturbance (factor 1) includes missing planned work, having hard time concentrating in class, experiencing light-headedness or blurred vision due to excessive smartphone use, feeling pain in the wrists or back of neck, feeling tired and lacking adequate sleep all due to excessive smartphone. The factor of positive anticipation (factor 2) includes feeling calm, cozy, pleasant, excited, confident, liberal while using a smartphone, being able to get rid of stress, nothing more fun to do than smartphone use, life would be empty without smartphone. The factor of withdrawal (factor 3) includes won't be able to stand not having a smartphone, feeling impatient and fretful when notholding smartphone, having the smartphone in mind even when not using it, will never give up using even when their daily life is greatly affected by it, getting irritated when bothered while using a smartphone and taking smartphone to the toilet when they are in a hurry to get there. The factor of cyberspace-oriented relationship (factor 4) includes feeling great meeting people via smartphone use, feeling that their relationship with smartphone buddies is more intimate than real life friends, constantly checking their smartphone so as to not miss any conversation between other people on Twitter, Facebook, checking Social Networking Service like Twitter, Facebook right after waking up and preferring talking to smartphone buddies than hanging out with my real-life friends. The factor of overuse (factor 5) includes preferring searching from smartphone than asking other people, fully charged battery not lasting one whole day, using smartphone longer than intended and feeling the urge to use smartphone again right after they stopped seeing it. The factor of tolerance (factor 6) includes having tried to shorten smartphone use but failed all the time, always thinking that they should shorten their smartphone use time and people around them telling that they use their smartphone too much.

The score obtained in each component was multiplied by 100 and divided by the total score of that factor. The total score of each factor is as follows: daily-life disturbance 30, positive anticipation 48, withdrawal 36, cyberspace-oriented relationship 42, overuse 24 and tolerance 18. The mean of each of the factors was calculated in low, medium and high addiction groups.

III. Results

The data of 60 participants (N=60) with 25 males (n=25) and 35 females (n=35) in the age group of 19 to 35 years of age (mean=21.85 years) was collected. The mean of the percentages of each of the factors was calculated and graphically represented in Microsoft Excel. In low addiction smartphone users, the mean percentage of factor 1 is 29.83%, factor 2 is 31.27%, factor 3 is 29.58%, factor 4 is 27.01%, factor 5 is 37.97% and factor 6 is 35%. In medium addiction smartphone users, the mean percentage of factor 1 is 54.17%, factor 2 is 58.54%, factor 3 is 45.28%, factor 4 is 43.90%, factor 5 is 62.28% and factor 6 is 53.33%. In high addiction smartphone users, the mean percentage of factor 1 is 72.33%, factor 2 is 70.10%, factor 3 is 72.08%, factor 4 is 58.93%, factor 5 is 85.83% and factor 6 is 81.94%.



Graph 1: Affection of factors of smartphone addiction scale

Table I: Components of Smartphone Addiction Scale

Smartphone addiction grades	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6
Low	29.83%	31.27%	29.58%	27.01%	37.97%	35.00%
Medium	54.17%	58.54%	45.28%	43.90%	62.28%	53.33%
High	72.33%	70.10%	72.08%	58.93%	85.83%	81.94%

IV. Discussion

Some studies have revealed that excessive smartphone use has negative effects on human psychology.^{[8],[9]} Excessive smartphone use reduced individuals social implication in real world and therefore, his or her psychological wellbeing as it produces kind of isolation, loneliness and depression, individuals seek to ease by connecting to the internet.^[10] Thus, they meet their friends less often in person. According to a study, excessive users experienced difficulty in expressing emotions and had higher level of interpersonal anxiety than comparison group.^[8] Psychological researches have proved that smartphones are creating a new kind of stress for people at home, work and social settings. A research by Russell E. Johnson, a professor at Michigan University suggests that smartphone use by workers late-night interfered with sleep and left them more depleted in the morning and less engaged at work the next morning. The researchers found that light emitted by smartphone gives rise to sleep problems due to melatonin release which is a sleep promoter. A research done by Karla Klein Murdock, a psychology professor at Washington & Lee University found that higher daily text implied poor sleep due to compulsion to respond to text they receive during the night and increased difficulties in coping with stress.^[11] A study by Jocelyne MatarBoumosleh et al, aimed to assess prevalence of smartphone addiction symptoms and ascertain whether depression or anxiety contribute to smartphone addiction levels among Lebanese University study and concluded that several independent positive predictors of smartphone addiction emerged including depression and anxiety. Young adults with Type A personality experiencing high levels of stress and low mood lack positive stress coping mechanisms and mood management techniques are highly susceptible to smartphone addiction.^[12]

A report by US officials have stated smartphone use acts as a distraction for drivers as well as pedestrians contributing increase in pedestrian fatalities. Road Safety Manager Nick Lloyd said teenager and young adults are injured due to distractions as a result of road crossing while using phone which can be result of conversation, music listening, texting or using net.^[13] Use of cellphones has led to over 2100 deaths in India in 2016 (particularly 2138 lives) according to Transport Department Data. Officials have said accidents due to mobile use while driving or pedestrians is under-reported. The WHO has stated that those who use mobiles while driving are four times likelier to crash.^[14] Save Life Foundation, an NGO, revealed findings of study on distracted driving. The study aimed to find scope and depth of issue of distracted driving in India to understand the patterns behind mobile phone usage while driving and driver's perception of how dangerous this behavior is in various situations. The study was conducted on 1749 drivers. Findings included 47% people receiving calls while driving, 96% people feel unsafe when their driver is using their phones, 20% people have had a near-miss or crash due to use of phone, 34% people tend to apply sudden brakes when talking and driving. The WHO categorizes driver distraction as an important risk factor for road crash injuries. The US Department of Transportation terms distracted drivers as one of the most dangerous driver behaviors and an epidemic that increases with mobile proliferation. Due to high penetration of mobiles, use on the road has increased.^[15] Thus, the smartphone user not only puts his or her life in danger but also others life can be in danger as in while using a smartphone.

Due to the various effects that a smartphone has on the life of a human it is necessary to know what are the reasons due to which a person is getting addicted to a smartphone and what part of their lives are getting affected due to smartphone usage. Also, in the various factors that a smartphone addiction scale is divided into it is necessary to understand what factors are affected in all the groups and how these percentages change in low, medium and high smartphone addiction groups. Factor 1 (daily life disturbance) signifies how much a person's life is affected due to smartphone use. Thus, it is understood that smartphones have already become a crucial part of the smartphone user's life. The percentages in low, medium and high addiction groups are 29.83%, 54.17% and 72.33% respectively. The daily life disturbance is highest in the high addiction group implying that

their personal lives are disturbed due to smartphone use. Factor 2 (positive anticipation) signifies how a person feels having a smartphone. To most smartphone users, the smartphone is not just a calling device, game console but also a friend because it brings fun, excitement, relieves their stress and anxieties. The percentages in low, medium and high addiction groups are 31.27%, 58.54% and 70.10% respectively. Thus, the high addiction smartphone users have a high level of psychological affection. Factor 3 (withdrawal) implies how the smartphone users would react to not having a smartphone and having it in their mind even when they are not using it. The percentages of factor 3 affection in low, medium and high addiction groups are 29.58%, 45.28% and 72.08% respectively. Factor 4 (cyberspace-oriented relationship) signifies how smartphone users become more attached to smartphone buddies and do not want to miss anything that other people are talking about on social networking sites. This also tells how they go away from their real life events and want to become more and more active online. The percentages of factor 4 affection in low, medium and high addiction users are 27.01%, 43.9% and 58.93% respectively. Factor 5 (overuse) signifies how much smartphone a person uses. The percentages of factor 5 affection in low, medium and high addiction groups are 37.97%, 62.28% and 85.83% respectively. Factor 6 (tolerance) signifies smartphone users trying to reduce their smartphone usage as they also want to reduce the usage and other people telling them to reduce their usage. The percentages of factor 6 affection in low, medium and high addiction groups are 35%, 53.33% and 81.94%.

Overuse is the factor most affected in all the three groups. In the low addiction group, the descending order for affection of factors is as follows: 5, 6, 2, 1, 3 and 4 respectively. In the medium addiction group, the descending order for affection of factors is as follows: 5, 2, 1, 6, 3 and 4 respectively. In the high addiction group, the descending order of affection is as follows: 5, 6, 1, 3, 2 and 4 respectively. The least affected component is the cyberspace-oriented relationship in all the three groups. If the percentages are seen it is evident that in high addiction smartphone users, overuse is the most affected component but even tolerance is highly affected which means that though they are trying to reduce their smartphone use they cannot do so because of compulsiveness or dependence that they develop due to smartphone usage. Thus, it is like a web the more you use smartphone the more you get addicted, once addicted to a high usage it is difficult to stop its usage though lot of people want to reduce their usage and this in turn affects their, personal life, social life, stress, anxieties, depression as they the feeling of loneliness and no one to share their problems with. Once they get addicted they want to reduce the use but because they cannot they continue using it. Thus, all this affects the psychological, emotional and physical health of a person along with the family and social life of a person. The smartphone addiction is similar to a substance addiction in which withdrawal symptoms are also seen. Thus, it is necessary by smartphone users to use it to their benefits rather than causing troubles for themselves.

V. Conclusion

Thus, the study concluded that the usage of smartphone affected all factors i.e. personal-life, positive anticipation, withdrawal, cyberspace-oriented relationships, overuse and tolerance. Thus, all these factors affect the personal and social life of a person along with psychological and emotional health of a person.

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