

Gender Differences in Smartphone Addiction: Its Impact on Emotional Awareness

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Abstract

Indian adolescents are greatly affected by high smartphone engagement and are currently driving Smartphone's market in India. With the rapid rise of smartphone usage in recent years, smartphone devices have become a ubiquitous part of our culture and revolutionized how we live. The present study focused on to see gender differences in smartphone addiction and its effect on emotional awareness among adolescents. The sample composed of 300 students were screened, out of which 200 students selected randomly from Bathinda and Mansa. For this purpose, Smartphone addiction scale (Kwon et al.,2013) and Emotion Awareness Questionnaire (Rieffe C et al.,2007) were used to assess the levels of smartphone addiction and emotional awareness in adolescents respectively. It was hypothesized that 1) Girls would score high on smartphone addiction than boys; 2) The subjects having low level of smartphone addiction would have better emotional awareness as compared to their counterparts; 3) Girls would have better emotional awareness than boys. T-test revealed significant gender difference on smartphone addiction ($t=2.434^*$). Girls ($M=157.30$, $SD=11.06$) scored higher on smartphone addiction as compared to boys ($M=151.66$, $SD=12.07$). Analysis of variance revealed that the result did not support the second hypothesis that the subjects having low level of smartphone addiction would have better emotional awareness as compared to their counterparts $\{F(1,196) = 3.635, p>0.05\}$, whereas the main effect of gender came out to be significant for emotional awareness ($F=15.122^{**} p<0.01$).

Keywords: Smartphone Addiction, Emotional Awareness

Introduction

Technology plays a very important role in communication and data transmission within the world. The Smart phone (cellular-phone) technology is one amongst the foremost necessary and widely-used tools among varied social groups, particularly among adolescents. The mobile phone has attained a robust position in modern life and the human society and is considered as an indicator of communication technology. Mobile phones are utilized by a vast majority of the population, particularly by young people in developing countries. Smartphones provide services and features such as calls, sending and receiving text, audio and video messages as well as accessing the Internet and social networks. These facilities could be used anywhere anytime and have become so attractive to people that they have become as an integral part of people's life. Internet addiction disorder is often described as a serious problem involving the inability to control use of various kinds of technology, in particular the Internet, smartphones, tablets and social networking sites like Facebook, WhatsApp, Twitter and Instagram. Whang, Lee, and Chang (2003) found internet addiction as "an impulse-control disorder with no involvement of an intoxicant; therefore, it is akin to pathological gambling". If the Internet was initially the technological addiction par excellence, the mobile phone soon emerged as a source of potentially addictive behavior, particularly since the arrival of smartphone devices (Lin YH, et al., 2015; Lane W, Manner C 2011), along with the evolution from a global approach to a progressive differentiation of addictions by contents and concrete applications. The number of smart phones sold worldwide in 2011 reached 472 million, accounting for 31% of the total sales of all mobile phones, an increase of 58% compared with 2010 (Silva, 2012). The studies have shown that college students check their phones 60 times a day on average, with daily usage of more than 4 h (Harman & Sato, 2011; Kang & Jung, 2014; Lepp, Barkley, & Karpinski, 2014). In a 2015 study by the Pew Research Center, nearly half of Americans (46%) reported that they "couldn't live without" their smartphones, and 93% of young people (aged 18-29) used their

smartphones throughout the day just to avoid boredom. In another survey (Secur Envoy, 2012), it was found that 66% of smartphone users employed in the U.K. reported having “nomophobia,” which is the fear of being out of contact with one’s smartphone. With over 460 million internet users, India is the second largest online market, ranked only behind China. By 2021, there will be about 635.8 million internet users in India. This steady rise in smartphone use has triggered interest in the psychological consequences of smartphone dependency.

Human differentiation on the basis of gender is a fundamental phenomenon that affects virtually every aspect of people’s daily lives. Gender difference regarding users addicted to the Internet and mobile phones is a potential element which can affect the increase of Internet and mobile phone addiction. Men and women have always been found to maintain quite different attitudes toward the phone and to give it a different place in their whole “communicative economy” (Rakow, 1992; Moyal 1989). They exhibit different behavioral patterns and motivations of Internet usage. Men appear to have a different concept of communication. In contrast to women, they give an “objective reason” for the “usefulness” of their call. Men maintain that they mainly arrange appointments, exchange short snippets of news or information and discuss defined questions or problems. Women admit to calling “for the sake of it”, to speak with one another and to exchange general news. The shorter duration of men's calls seems to be connected with their different understanding of communication & its embodiment in the smartphone (Lange, 1993). Women have a central role in maintaining any kind of social network especially among family members and kin (Wellman 1992; Ling 2001). Boys at adolescence make greater effort in their self-presentation to appear autonomous and free from their families, whereas girls worry more about appearing connected, both to families and increasingly at adolescence, to romantic partners” (Stern, 2004). Similarly, Skog (2002) observed that girls valued social functionality of the mobile phone higher than boys, who on the other hand stressed technical functionality and non-interactive uses like gaming. women use the mobile more for lengthy talks about personal and emotional matters, while males make shorter calls dedicated more frequently for instrumental purposes (e.g. for coordinating meeting times and places) (Kunz Heim 2003; Mante & Piris 2002). Wilska (2003) emphasized that girls overused mobile phones to send text messages and to make phone calls more frequently than boys, who focused more on the stylish looks and technical features of a phone because they were more interested in new technologies. Ling (2001) found that during the period between 1997 and 2001, mobile phones were more often used by boys than girls, as they first treated them as a technical innovation. However, after 2001 girls started to use mobile phones significantly and more frequently than boys, as they became their main tool for developing interpersonal relationships.

There is no agreement on which group is at the higher risk of addiction, some studies have revealed gender-related differences. Virtually all the studies indicate that females have higher levels of dependence and problematic use than males. Female cell-phone use is typically related to sociability, interpersonal relationships and the creation, and maintenance of contacts and indirect communication, and texting and instant messaging, on the other hand, cell-phone use is simultaneously based on text messages, voice conversations and gaming applications. Males show a higher tendency than females to use their cell phone in risky situations. Gender differences emerge quite early on and are maintained as females average more text messages per day than males. Similarly, Grellhesl and Punyanunt-Carter (2012) found that females use text messaging for relaxation and escape more than males. Eldridge & Grinter, (2001) conducted research in south Cambridge shire among 15-16-year-old boys and girls and revealed that the average number of messages sent and received by girls was higher than boys. The factor analysis of female high school students confirmed a heavy dependence on cellular phones compared to male university students (Mirza, Anie, et. al, 2013). However, mobile phones use showed different results in the study by Devís-Devís et al., (2009). They compared girls' and boys' usage and found that boys spent more time on this. They also found that university students used these communication tools more on weekends than on week days. This showed that there were different factors responsible for phone usage. Confirming this, Villella et al. (2011) found that behavioral addiction was more common among boys than girls. Likewise, Balakrishnan and Raj (2012) examined the motives of use among Malaysian university students and found that female students used their mobile phones more to socialize, gossip and as a safety device.

However, irrespective of gender differences in smart phone addiction, it has led to a new type of fear, called “**Nomophobia -No-Mobile-Phone Phobia**”, a term coined by the UK Post Office during 2010 in their study focusing on anxieties suffered by mobile phone users. The study found that nearly 53 percent of mobile phone users in Britain tend to be anxious when they “lose their mobile phone, run out of battery or credit, or have no network coverage.” This new kind of health disorder among adolescents is now challenging health policy makers globally to think on this rapidly emerging issue.

There is evidence that the smartphone, with its breadth of applications and uses, tends to induce greater abuse than regular cell phones (Taneja C., 2014). Many studies have mentioned its detrimental effects of excessive use on psychosocial and physical health which include personal stress, insecurity, low self-confidence and frequent mood changes, sleep disturbances and insomnia (Sansone RA & Sansone LA, 2013); anxiety due to inadequacy of access to mobile services at time, or due to social isolation (Ha JH, Chin B, Park Dh et al, 2008). Adolescents are known to be the group most at risk of smartphone addiction because they have poor impulse control and use a smartphone as a device to manage their emotional social status. Kim and Flanagan (2013) studied that smartphone overuse can be a sign of smartphone addiction which often results in number of problems such as depression, anxiety, loneliness, etc. (Yen et. al 2008) and emotional distress (Drennan, 2005). *This research paper highlights the effects of smartphone addiction on emotional awareness.*

Emotional awareness is a fundamental skill to emotional intelligence (Lane, 2000), emotional competence, and affective social competence (Halberstadt, Denham & Dunsmore, 2001; Saarni, 1999). Lane and Schwartz (1987) posit that emotional awareness is integrated into the very structure upon which emotion regulation emerges. Scholars in the field have shown emotion regulation efforts to be highly related to awareness of emotion (Izard et al., 2011; Mayer et al., 2001; Saarni, 1999), e.g., low emotional awareness has been found to correlate positively with non-constructive emotion inhibition and dysregulation, and inversely with positive, constructive coping of sadness and anger (Penza-Clyve & Zeman, 2002). Lane and Pollerman (2002) found high emotional awareness to be related to greater self-reported impulse control. Children with low levels of emotional awareness, in not being able to understand or differentiate their feelings, often feel overwhelmed which in turn compromises their ability to regulate their emotions and modulate their responses (Schwartz & Proctor, 2000). Thus, emotional awareness is a critical precursor to effective emotion regulation (Gottman, Katz, & Hooven, 1997; Izard, Woodburn, Finlon, Krauthamer-Ewing, Grossman, & Seidenfeld, 2011; Mayer, Salovey, Caruso, & Sitarenios, 2001).

Daniel Goleman says that the expanding hours spent alone with gadgets and digital tools could lower emotional intelligence due to shrinkages in the time young people spend in face-to-face interactions. Whenever we move closer to technologies, it diverts our attention away from a realistic present which poses the danger of disconnect with others resulting in decreased emotional intelligence. Emotional intelligence can be quantified by the dimensions of self-awareness, self-regulation, motivation, empathy and social skills. How does technology impact each of these dimensions? The digital age has a sizable impact on self-awareness. It is the capacity for introspection and the ability to recognize oneself as an individual separate from the environment and other individuals. Digitization and the proliferation of data are creating a new kind of self-awareness among the digital natives. The action of posting a thought on to Twitter, Facebook or some other social networks available, could, depending on its reception by peers, cause an ego boost (bordering narcissism) or slump, more likely the latter. MIT Professor Sherry Turkle states that social media and technology are actually causing us to disconnect. A similar refrain is played by Stephen March as “we are more connected, yet we feel less connected” in, as Goleman calls it, “a kind of cauterized life.” Self-regulation, the ability to stay focused and alert, is affected most by technology. Ability to focus is very closely related to the emotional health of the individual. It seems that technology does not bode particularly well for Emotional Intelligence. We have made technology cater to our “intelligence”; as emotional beings, how difficult could it be to make it serve our emotional quotient as well?

Derakhshani and Shirazi (2015) conducted a study to predict role of addiction to smartphones on emotion regulation of high school students. The results showed that smartphone addiction is able to predict variables affecting emotion regulation. Excessive use of the Internet may, at the same time, lead to distress in individuals (Juneja and Sethi, 2015). Hormes et al., (2014) conducted a study to evaluate tangled online social networking utility and to assess its relationship with emotion dysregulation. The results revealed significant positive relationship between disorder online social networking, Internet enslavement, emotion dysregulation. Yu, et al; (2013) assessed the relationship of emotional regulation with internet addiction among the adolescent population. The study reported significant positive correlation between deficits in emotion regulation and internet addiction. Students with high levels of Internet addiction were found to have negative expectation of future and low level of subjective well-being.

Studies have shown that people who spend long hours on the internet will experience failure in their academic, career, and family performance, and will be socially isolated. They also incur a lot of financial pressures, and the pressures that have an important role in accelerating their anxiety, aggression, and mental and emotional fatigue. A possible reason for these results is that since people spend a lot of time surfing the internet, they are inevitably deprived of social interaction, which was an important source of reinforcement for individuals. As a result of this reduction in resources of social reinforcement, such individuals are prone to depression. Beliefs such as the “individual only has control power on the internet, and is only respected in such an environment”, “nobody likes me outside the internet”, and “Internet is really the only place where one can know other people” are some problematic cognitive thoughts in this regard. These beliefs, in turn, produce more depression, anger and feelings of hostility towards the outside world. Continuous use of smart phones has been found to make the users more psychological weak and produce pressure on the family bonds. Mobile phone users have been observed to become more individualistic and they form of culture of introverted and isolated people. They become unable to deal with real interpersonal relations and have difficulty in maintaining close and intimate social relationships. On the basis of review of literature, the following hypotheses have been formulated:

Hypotheses

1. Girls would have high level of smartphone addiction as compared to boys
2. The subjects having low level of smartphone addiction would have better emotional awareness as compared to their counterparts.
3. Girls would have better emotional awareness than boys

Design

Total 200 adolescents (100 Boys & 100 girls) with the age range 14-17 years, were randomly selected, on the basis of their scores i.e. low (1-66) and high (133-198) on Smartphone Addiction Scale (Kwon et al, 2013). Then, Emotional Awareness Questionnaire (Rieffe C., et al., 2007) was administered to assess their level of Emotional Awareness.

Results & Discussion

Table No 1: Mean, SD and t-Values for Gender Differences in Smartphone Addiction

Gender	Means	S.D.	N	t –value
Girls	157.30	11.06	50	2.434*
Boys	151.66	12.07	50	

t (98) = 2.434*, P < 0.05

The first hypothesis that the Girls would have high level of smartphone addiction as compared to boys came out significant as girls (M = 157.30) scored more on smartphone addiction as compared to boys (M = 151.66) as shown in table number 1. Gender difference in smartphone addiction came out to be significant {t (98) = 2.434*, p < 0.05}. Mobile phones for girls sustain the nurturing quality of womanhood with which they mature. Females more often than males commented on how they sought out support, acceptance, and comfort through on-line relationships. Virtual communities gave women a sense of belonging and the ability to share the company of others in a non-threatening environment. Females are more involved in gossip, because men also tend to gossip primarily with women, not with other males (Fox 2004). Such findings are in accordance with the more general socio-psychological regularity that girls are more prone to disclose personal information and emotions and to discuss their subjective tastes and interests than boys (Jourard, 1971; Stern 2004), and that they are more disposed to talk about their anxieties (O'Neill 1976). The results gain support from previous researches such as Faulkner and Culwin (2005) founded in Finnish users that 70% of women kept their phones on all the time and about 50% of men turn their phones off at night. Interestingly, Davie et al. (2004) in their study of school children found that girls were more likely to keep their mobiles with them than boys. Furthermore, the girls were more likely to carry their phones at all times than the boys (63% vs. 48%). Fielden and Malcolm (2008) found that girls were more likely to bully others with SMS messages, than boys. Woman call talk on phone for longer time than men do including phone calls to family member, relatives, customer services and sales calls (Friebel & Seabright, 2010). Similar trend was seen in

Chóliz (2012) study who evaluated mobile phone dependence in adolescents. The results showed that girls had a higher degree of dependence on mobile phones than boys. They use mobile phones to improve their mode of information and communications. Analysis by Ling (2001) revealed that although both boys and girls were enthusiastic users of mobile phones, girls tend to be the driving force for social networking to gain relatively larger and intense social groups than young male adults. Occasions such as birthdays and anniversaries were remembered and nurtured, mainly by women, in order to maintain the fiber of family bonds and social relationships. Even though electronic media brought the public realm into the home, and private female sphere of home (intuition, emotion, intimate topics, images, and sounds) into the public sphere. Jenaro et al. (2007) argued that 28.6% of all male college students and 56.3% of all female college students were classified as heavy mobile phone users.

Table 2: Means, Standard Deviations and F-ratios for Emotional Awareness as a function of Smartphone Addiction and Gender

Variables	Levels	Means	SDs	F-Ratios
Smartphone Addiction	High	55.61	11.00	3.635
	Low	51.42	9.25	
Gender	Girls	55.66	9.46	15.122**
	Boys	52.87	10.78	

Table 3: ANOVA summary for Emotional Awareness as a function of Smartphone Addiction and Gender

SOURCE OF VARIANCE	SS	DF	MSS	F
Smartphone	389.205	1	389.205	3.635
Gender	1618.805	1	1618.805	15.122**
Interaction (Smartphone X gender)	41.405	1	41.405	0.386
Within Group	20981.54	196	107.0487	
Total	23030.96	199		

The results did not support our second hypothesis that subjects having low level of smartphone addiction would have better emotional awareness as compared to their counterparts { $F(1,196) = 3.635, p > 0.05$ }. The hypothesis was framed in this direction on the basis of Goleman's affirmation that the expanding hours spent alone with gadgets and digital tools could lower emotional intelligence due to shrinkages in the time young people spend in face-to-face interactions. Whenever we move closer to technologies, it diverts our attention away from a realistic present which poses the danger of disconnect with others resulting in decreased emotional intelligence. But in the present study it did not come out true due to the sample characteristics and collectivistic culture of Punjab. Living together with extended families (joint family system) has been in vogue for ages in Punjab where actual sharing, caring and love still exists. Peer relationships in joint families are usually more reciprocal, and provide opportunities to explore identity and emotional support. Parent attachment remains important with securely attached teenagers experiencing continued support while they explore their independence. However, this often stems from secure early attachment. In joint families, people experience secure attachments and are more likely to have higher self-esteem, be well-adjusted, enjoy better social relationships, and experience satisfying relationships which nullifies the negative effects of smartphone. The frequent interactions between family members in collectivistic culture decrease use of online social networks, text messaging, and email can collectively result in the decreased of face-to-face interaction. Few studies support our hypothesis that smartphone had not effects the emotional awareness among adolescents. The results are in line with Alexander (2016) who found that smartphone had not influence the emotional intelligence on addictive or habitual smartphone behavior, and Yu, et al (2013), who assessed the relationship of emotional regulation and parenting style with Internet addiction among the adolescent population and reported significant negative correlation between deficits in emotion regulation and internet addiction.

The results did not support the third hypothesis too that the level of emotional awareness among girls would be better than males { $F(1,196) = 15.122^{**}$, $p < 0.01$ }. As per Emotion Awareness Questionnaire (Rieffe C., et al., 2007), Previous researchers show that women, on average, are more aware of their emotions, show more empathy, and are more adept interpersonally, men, on the other hand, are more self-confident, optimistic, and adaptable. But the reason for non-acceptance of this hypothesis could be that the digital age has a sizable impact on these dimensions of emotional intelligence i.e. self-awareness, self-regulation, motivation, empathy and social skills, and the girls found to be more addicted towards smartphones in the present study. It, therefore, can be inferred that digitization has blunt the emotional awareness more in girls in comparison to boys. Self-awareness is the capacity for introspection and the ability to recognize oneself as an individual separate from the environment and other individuals. Digitization and the proliferation of data are creating a new kind of self-awareness among the digital natives. Moreover, the popular belief that women are not more emotionally intelligent than men, justifies non-acceptance of our hypothesis. Lisa Feldman Barrett (2000) examined sex differences in the complexity and differentiation of people's representations of emotional experience. Female participants consistently displayed more complexity and differentiation in their articulations of emotional experiences than did men. Differentiated emotions provide more information about the situation, and greater options for responding. Indeed, the ability to differentiate emotion is linked to more frequent use of emotion regulation, and use of a wider range of emotion regulation strategies (Barrett et al., 2001). To sum up, the studies seems to suggest that male college students tend towards internet addiction while their female counterparts seem to develop an addiction to smartphones.

Conclusion

This study was successful in elaborating the effects of smartphone addiction on emotion awareness. Further, it also successfully explored gender differences in smartphone addiction and emotion awareness. However, the results revealed no significant difference in emotion awareness of high and low level of smartphone addiction. It may be happening due to specific sample size, cultural variations etc. Thus, to explore more effect of smartphone on digital dementia, studies comprising of large sample and subjects belonging to different culture is required. Considering harmful effects of smartphone addiction, educational seminars based on concrete examples or experiences of the negative results can be held, with the aim of raising awareness among adolescents., its etiology and prevention among adolescents. Parents must be oriented to express their availability for their wards so that could feel comfort and frankly share their issues with them rather than via virtual world. Modern Youth should be motivated to participate in physical activities as sports or meditation. This could help them in cutting down their excessive time spent on smartphone with an ease and would further result in high well-being.

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