

Cell Phone Addiction and Personality Traits: A Gender-Based Study

Durba Chatterjee Mukherjee¹,

Research Scholar

Ph.D (Psychology),

Department of Psychology,

School of Arts and Humanities,

Eklavya University, India,

chatterjee.durba5@gmail.com

Mobile: 6290222175

Vandana Pandey²,

Assistant Professor,

Department of Psychology,

School of Arts and Humanities,

Eklavya University, India,

dr.vandanapanapandey3@gmail.com

Mobile: 9893187719

Introduction

The pervasive use of cell phones in modern society has brought about significant changes in how individuals communicate, access information, and entertain themselves. However, the ubiquitous presence of mobile phones has also led to the emergence of cell phone addiction, a phenomenon characterized by excessive and compulsive use of mobile devices. Cell phone addiction can lead to a range of negative outcomes, including reduced productivity, impaired social interactions, and adverse mental health effects such as anxiety and depression.

Research indicates that personality traits play a crucial role in determining individuals' susceptibility to various forms of addiction, including cell phone addiction. The Big Five personality traits—extraversion, agreeableness, conscientiousness, neuroticism, and openness to experience—provide a comprehensive framework for understanding how individual differences in personality can influence addictive behaviours. For instance, individuals high in extraversion may be more prone to excessive use of social media and mobile communication due to their sociable and outgoing nature, while those high in neuroticism might use their phones as a coping mechanism for stress and anxiety.

Gender differences in both cell phone addiction and personality traits have been observed in numerous studies. Males and females often exhibit different patterns of mobile phone use and have distinct personality profiles, which may contribute to variations in the prevalence and nature of cell phone addiction. Understanding these gender-based differences is essential for developing targeted interventions and strategies to mitigate the negative impacts of cell phone

addiction. This study aims to delve deeper into these gender-based differences, examining how personality traits mediate cell phone addiction among males and females.

Review of Literature

Research on cell phone addiction has identified several psychological and behavioral impacts. Billieux et al. (2015) highlighted the detrimental effects of excessive cell phone use, including increased anxiety, depression, and disrupted sleep patterns.

Kuss et al. (2018) emphasized the role of mobile phones in providing instant gratification, which can reinforce addictive behaviours. The need for constant connectivity and social approval often drives individuals towards excessive smartphone use, leading to addiction.

The Big Five personality traits provide a comprehensive framework for understanding individual differences in behaviour. McCrae and Costa (2008) described these traits as follows:

Extraversion: Sociability and enthusiasm for social interactions.

Agreeableness: Compassion and cooperativeness towards others.

Conscientiousness: Organization, dependability, and goal-oriented behaviour.

Neuroticism: Emotional instability and susceptibility to negative emotions.

Openness: Creativity and openness to new experiences.

Personality traits influence how individuals interact with technology. For example, Andreassen et al. (2013) found that individuals high in extraversion are more likely to engage in social media activities, potentially increasing their use of mobile phones. Similarly, individuals high in neuroticism may use smartphones as a means to alleviate anxiety and stress.

Gender differences in cell phone addiction and personality traits have been observed in numerous studies. Bianchi and Phillips (2005) reported that males are more likely to use mobile phones for entertainment and information, while females are more inclined towards social communication.

Schmitt et al. (2008) found that females tend to score higher in agreeableness and neuroticism, whereas males exhibit higher levels of openness. These differences may contribute to variations in mobile phone addiction patterns between genders.

Methodology

a) Objectives

1. To examine the differences in cell phone addiction between males and females.
2. To investigate the differences in personality traits (extraversion, agreeableness, conscientiousness, neuroticism, and openness) between males and females.

b) Hypotheses

1. There will be a significant difference in cell phone addiction between males and females.
2. There will be a significant difference in personality traits (extraversion, agreeableness, conscientiousness, neuroticism, and openness) between males and females.

c) Sample: The study sample consisted of 400 participants, with an equal number of males (200) and females (200). Participants were selected through stratified random sampling to ensure a representative sample of both genders.

d) Tools:

1. Smartphone Addiction Scale (SAS): The scale was developed and validated by Kwon et al (2013). Smartphone addiction scale (SAS) is a scale for smartphone addiction that consists of 33 items with a six-point Likert scale (1: “strongly disagree” and 6: “strongly agree”) based on self-reporting. In this study, the internal-consistency test result (Cronbach's alpha) of SAS was 0.966.

2. Big Five Inventory (BFI): 44-item inventory that measures an individual on the Big Five Factors (dimensions) of personality (Goldberg, 1993). Each of the factors is then divided into personality facets. Big Five Dimensions are Extraversion vs. introversion, agreeableness vs. antagonism, conscientiousness vs. lack of direction, neuroticism vs. emotional stability, openness vs. closedness to experience. All of the items are scored on five-point scale (1-5) (among them, some of the items are reversed scored item).

e) Statistical Analysis: Participants were administered the SAS and BFI. Data were analysed using independent t-tests to compare the mean scores of males and females for both cell phone addiction and personality traits.

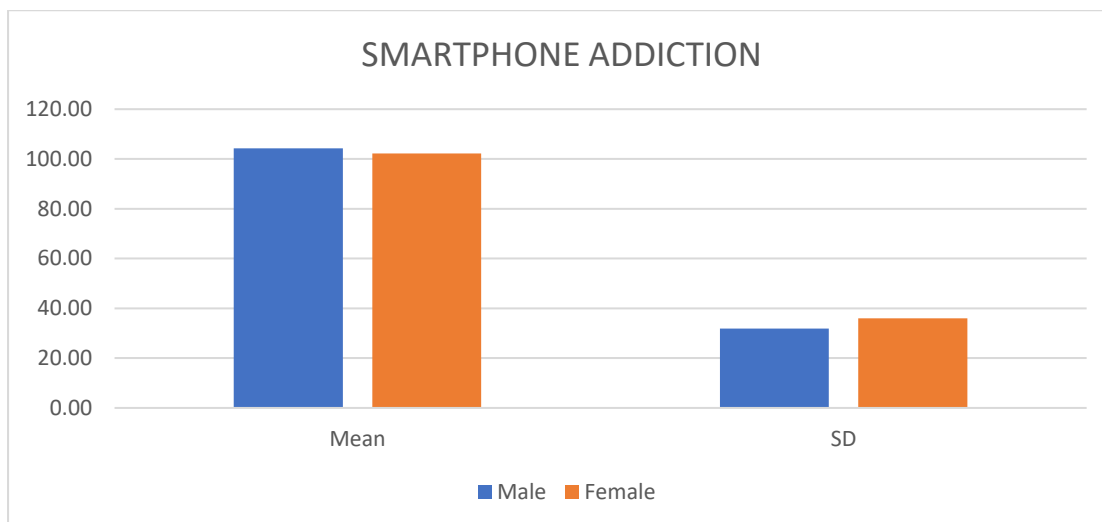
Results:

Hypothesis 1: There will be a significant difference in cell phone addiction between male and female.

Table 1: shows mean, SD and t-value of cell phone addiction among male and female.

SMARTPHONE ADDICTION					
Gender	Sample Size(N)	Mean	SD	t-value	df
Male	200	104.30	31.863	0.60	398
Female	200	102.27	36.00		

Figure 1: shows mean, SD and t-value of cell phone addiction among male and female.



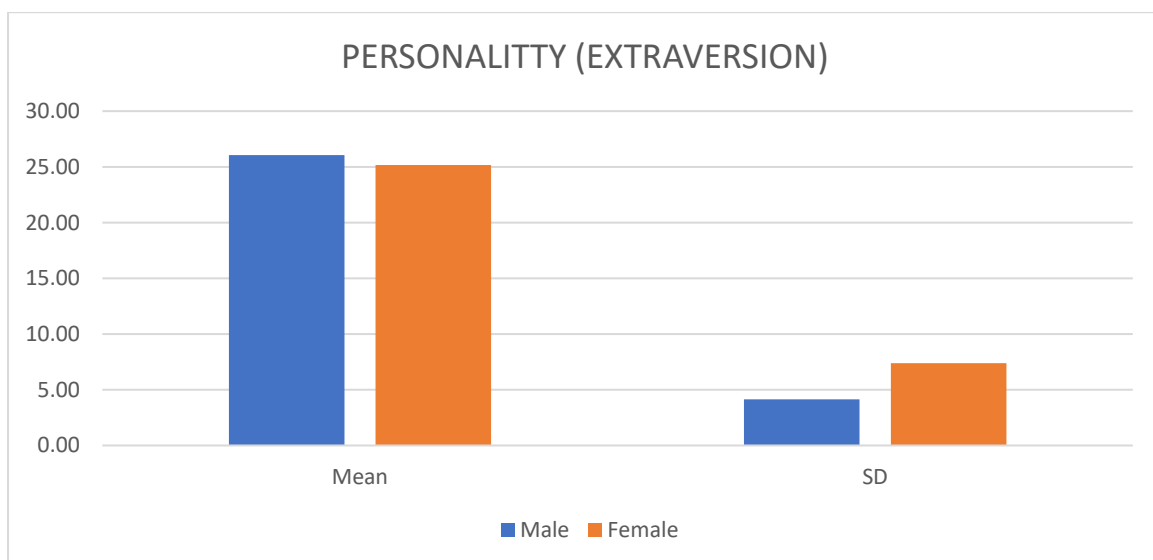
From the table and figure, it has been seen that mean and SD of male sample cell phone addiction are 104.3 and 31.9 respectively. For female group the mean and SD are 102.3 and 36. The 't' value is found 0.60, which has been found to be insignificant at .05 level. So the alternative hypothesis is rejected. It means there is no significant difference in cell phone addiction between male and female.

Hypothesis 2: There will be a significant difference in personality (extraversion) between male and female.

Table 2: shows mean, SD and t-value of personality (extraversion) among male and female.

PERSONALITY (EXTRAVERSION)					
Gender	Sample Size(N)	Mean	SD	t-value	df
Male	200	26.06	4.15	1.51	398
Female	200	25.16	7.38		

Figure 2: shows mean, SD and t-value of personality (extraversion) among male and female.



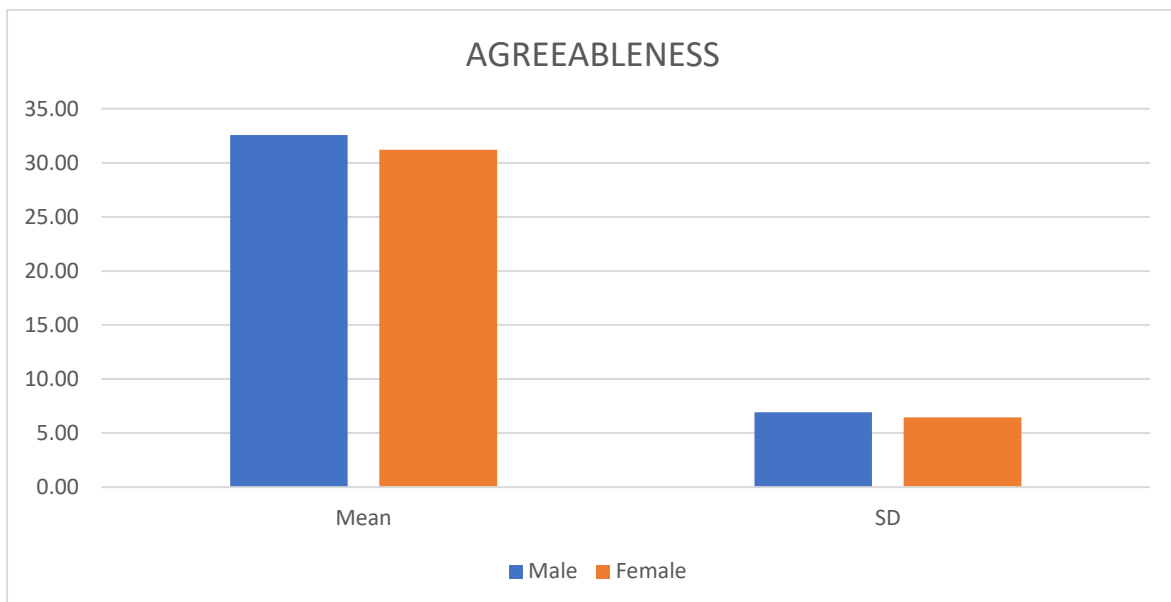
From the table and figure, it has been seen that mean and SD of male sample's extraversion are 26.06 and 4.15 respectively. For female group the mean and SD are 25.16 and 7.38. The 't' value is found 1.51, which has been found to be insignificant at .05 level. So, the alternative hypothesis is rejected. It means there is no significant difference in extraversion in between male and female.

Hypothesis 3: There will be a significant difference in personality (agreeableness) between male and female.

Table 3: shows mean, SD and t-value of personality (agreeableness) among male and female.

AGREEABLENESS					
Gender	Sample Size(N)	Mean	SD	t-value	df
Male	200	32.57	6.92	2.02*	398
Female	200	31.22	6.46		

Figure 3: shows mean, SD and t-value of personality (agreeableness) among male and female.



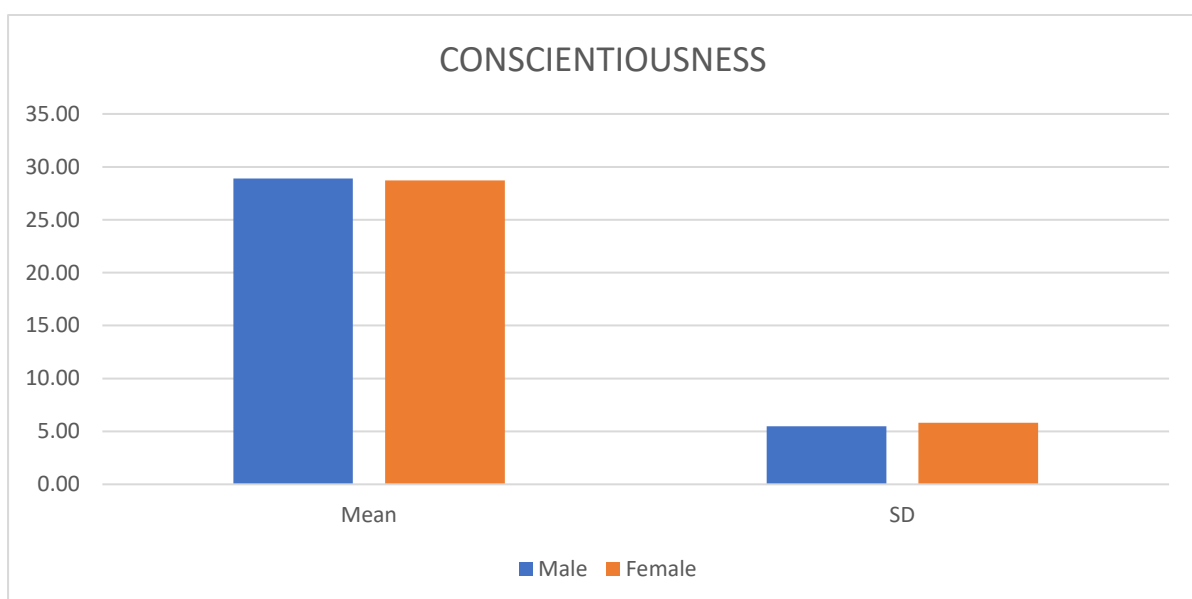
From the table and figure, it has been seen that mean and SD of male sample's agreeableness are 32.57 and 6.92 respectively. For female group the mean and SD are 31.22 and 6.46. The 't' value is found 2.02, which has been found to be significant at .05 level. So the alternative hypothesis is accepted. It means there is significant difference in agreeableness in between male and female.

Hypothesis 4: There will be a significant difference in personality (conscientiousness) between male and female.

Table 4: shows mean, SD and t-value of personality (conscientiousness) among male and female.

CONSCIENTIOUSNESS					
Gender	Sample Size(N)	Mean	SD	t-value	df
Male	200	28.90	5.50	0.33	398
Female	200	28.72	5.82		

Figure 4: shows mean, SD and t-value of personality (conscientiousness) among male and female.



From the table and figure, it has been seen that mean and SD of male sample's conscientiousness are 28.90 and 5.50 respectively. For female group the mean and SD are 28.72 and 5.82. The 't' value is found 0.33, which has been found to be insignificant at .05 level. So, the alternative hypothesis is rejected. It means there is no significant difference in conscientiousness in between male and female.

Hypothesis 5: There will be a significant difference in personality (neuroticism) between male and female.

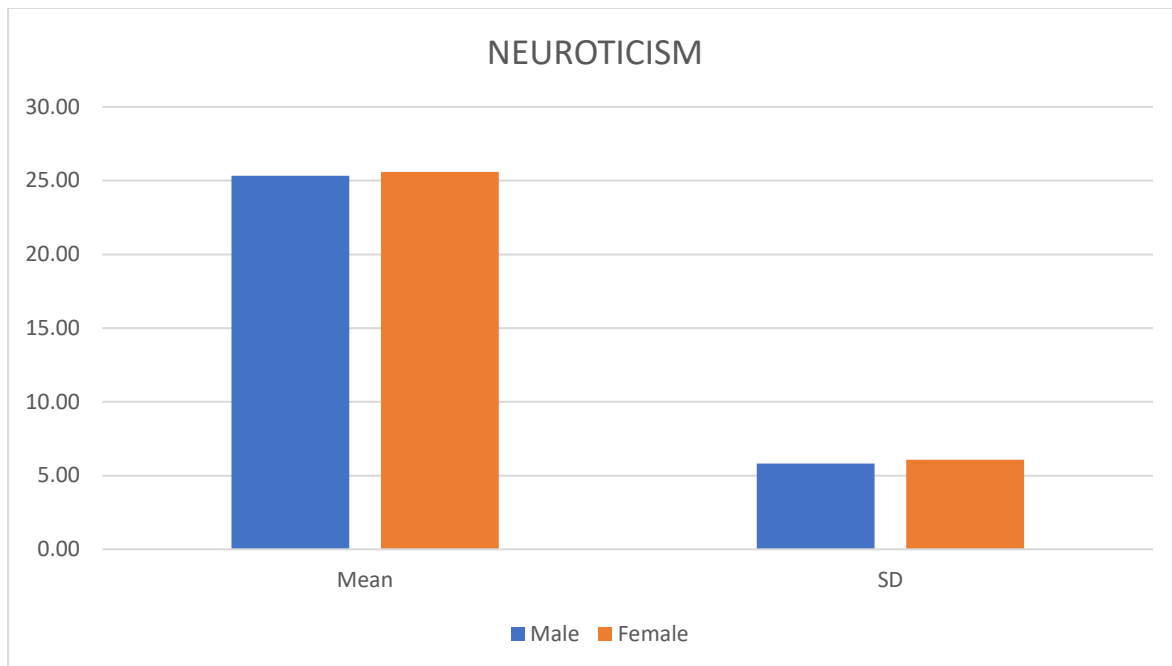
Table 5: shows mean, SD and t-value of personality (neuroticism) among male and female.

NEUROTICISM					
-------------	--	--	--	--	--

Exploring Innovation Research Methodologies in a Variety of
Multidisciplinary Fields and Their Prospective Future Impact
February 2024

Gender	Sample Size(N)	Mean	SD	t-value	df
Male	200	25.32	5.81	0.45	398
Female	200	25.59	6.08		

Figure 5: shows mean, SD and t-value of personality (neuroticism) among male and female.



From the table and figure, it has been seen that in neuroticism, mean and SD of male sample are 25.32 and 5.81 respectively. For female group the mean and SD are 25.59 and 6.08. The ‘t’ value is found 0.45, which has been found to be insignificant at .05 level. So, the alternative hypothesis is rejected. It means there is no significant difference in neuroticism in between male and female.

Hypothesis 6: There will be a significant difference in personality (openness) between male and female.

Table 6: shows mean, SD and t-value of personality (openness) among male and female.

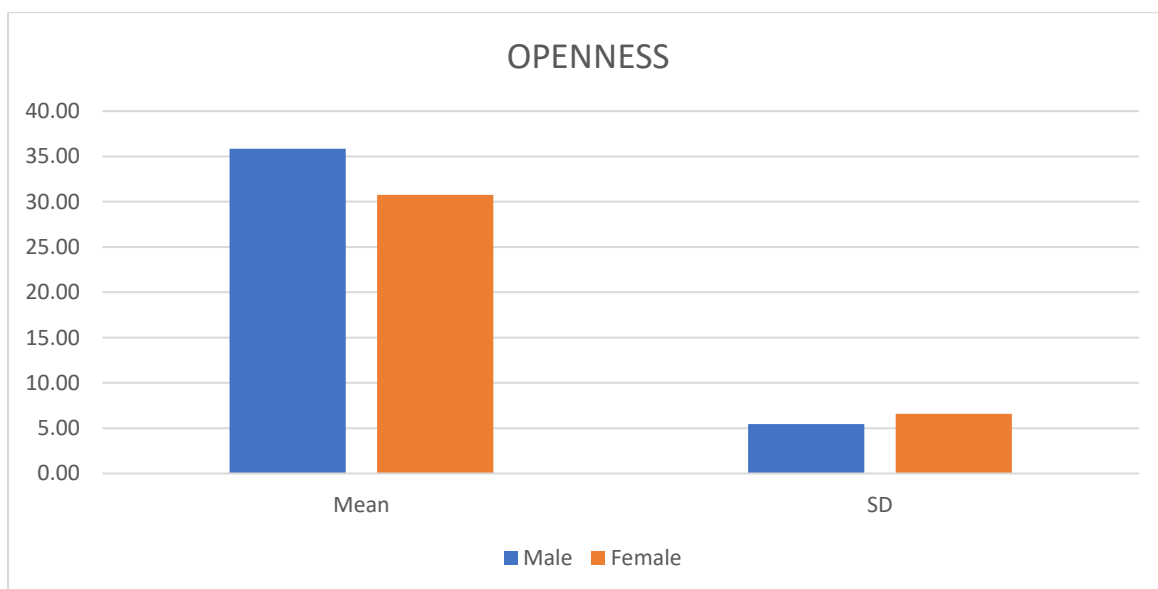
OPENNESS

Exploring Innovation Research Methodologies in a Variety of Multidisciplinary Fields and Their Prospective Future Impact

February 2024

Gender	Sample Size(N)	Mean	SD	t-value	df
Male	200	35.84	5.46	8.40**	398
Female	200	30.76	6.59		

Figure 6: shows mean, SD and t-value of personality (openness) among male and female.



From the table and figure, it has been seen that mean and SD of male sample's openness are 35.84 and 5.46 respectively. For female group the mean and SD are 30.76 and 6.59. The 't' value is found 8.40, which has been found to be significant at .01 level. So, the alternative hypothesis is accepted. It means there is significant difference in openness in between male and female.

Discussion

The results indicate no significant difference in cell phone addiction levels between males and females, as evidenced by the t-value of 0.60, which is insignificant at the 0.05 level. This suggests that gender may not be a determining factor in the propensity for cell phone addiction. These findings align with Billieux et al. (2015), who found that cell phone addiction is influenced more by individual psychological needs and behavioural patterns than by gender.

The analysis showed no significant difference in extraversion between males and females (t -value = 1.51). This implies that both genders exhibit similar levels of sociability and enthusiasm for social interactions, which could explain the comparable levels of cell phone addiction. Previous research by Andreassen et al. (2013) supports this finding, indicating that extraversion drives social media use and smartphone engagement equally among both genders.

A significant difference was found in agreeableness (t -value = 2.02), with males scoring higher than females. This contrasts with Schmitt et al. (2008), who reported higher agreeableness in females. This discrepancy may be due to cultural or sample-specific factors. Higher agreeableness in males could indicate a greater tendency towards cooperative and compassionate behaviour, potentially affecting their mobile phone use patterns.

No significant difference was observed in conscientiousness between genders (t -value = 0.33). This suggests that both males and females demonstrate similar levels of organization and dependability. McCrae and Costa (2008) noted that conscientiousness is a stable trait that may not vary significantly across genders, thereby having a uniform influence on cell phone use.

The study found no significant gender difference in neuroticism (t -value = 0.45). This finding is consistent with Schmitt et al. (2008), who observed that neuroticism levels are relatively stable across genders. Individuals with high neuroticism may use smartphones as a coping mechanism for stress, regardless of gender, leading to similar addiction levels.

A significant difference was found in openness, with males scoring higher than females (t -value = 8.40). This suggests that males are more likely to engage in activities that involve creativity and new experiences, which may include exploring various functionalities of smartphones. This finding aligns with Bianchi and Phillips (2005), who reported that males tend to use mobile phones more for entertainment and information-seeking purposes.

Conclusion

This study concludes that cell phone addiction levels are similar across genders, highlighting the universal nature of mobile phone dependency. However, significant gender differences in personality traits such as agreeableness and openness were observed, which could influence the manner and context of cell phone use. These insights underscore the importance of considering personality traits in understanding and addressing cell phone addiction.

References

- Andreassen, C. S., et al. (2013). 'The relationship between addictive use of social media, narcissism, and self-esteem: Findings from a large national survey'. *Addictive Behaviours*, 39(3), 206-213.
- Billieux, J., et al. (2015). 'Problematic mobile phone use: A literature review and a pathways model'. *Current Psychiatry Reviews*, 11(1), 1-10.
- Bianchi, A., & Phillips, J. G. (2005). Psychological predictors of problem mobile phone use. *Cyber Psychology & Behaviour*, 8(1), 39-51.
- John, O. P., & Srivastava, S. (1999). The Big- Five trait taxonomy: History, measurement and theoretical perspectives.
- Kuss, D. J., et al. (2018). Internet addiction: A systematic review of epidemiological research for the last decade. *Current Pharmaceutical Design*, 20(25), 4026-4052.
- Kwon, M., Kim, D.J., Hyun, C., and Yang 3, S., (2013). The Smartphone Addiction Scale: Development and Validation of a Short Version for Adolescents PLoS One. 2013; 8(12): e83558.
- McCrae, R. R., & Costa, P. T. (2008). The Five-Factor Theory of Personality. *Handbook of Personality: Theory and Research*, 159-181.
- Pervin, L. A., & Jhon, O. P. (1999). *Handbook of personality: Theory and research*. New York: Guilford Press, 2, 102-138.
- Schmitt, D. P., et al. (2008). Why can't a man be more like a woman? Sex differences in Big Five personality traits across 55 cultures. *Journal of Personality and Social Psychology*, 94(1), 168-182.