

## Documents

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**SMARTPHONE OVERUSE AS HABIT OF PLEASURE SEEKING IN MOROCCAN ADULTS**

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**Abstract**

Background: The smartphone has become an indispensable device in modern life, consequential psychosocial problems such as smartphone addiction have gained worldwide attention. The aim of the present study is to assess the relation between smartphone overuse and seeking pleasure linked with reward system overstimulation and dopa-mine continuous release. Material/ Methods: A survey instrument using a web-based questionnaire distributed via social media was developed after a thorough literature review and was deployed to collect data from smartphone users. The study participants in total numbered 374 users from different age groups, with the average age being between 19 and 25 years old; with 227 females (60.9%) and 147 (39.1%) males. Responses to the Smart-phone Addiction Scale – Short version (SAS-SV) test including 10-items were rated on a 6-point Likert scale, and their percentage mean score (PMS) was calculated. Factors associated with these outcomes were identified using descriptive and regression analyses. Statistical significance was set at  $P < 0.05$ . Results: Over 76% of smartphone users declared having pleasure feelings during repetitive utilization. The result obtained by the SAS-SV test showed that subjects with higher scores presented high levels of addiction. The majority of the participants in this study had a university degree  $n=344$  (91.9%), while  $n=30$  (8%) had diplomas of completing secondary and primary school. The PMS of addiction was  $39.2 \pm 20.3$ , while the mean score (MS) of seeking pleasure was  $76 \pm 10.0$ . A significant positive correlation was present between smart-phone overuse and seeking pleasure ( $y=76+0.8x; P<0.001$ ). Significantly, higher smartphone addiction scores were associated with pleasure and enjoyment feelings, ( $\beta = -0.203$ , adj.  $P=0.004$ ). The addiction scores were higher in single status users when compared to married users ( $\beta = -2.03$ , adj.  $P=0.01$  vs. ( $\beta=0.194$ , adj.  $P < 0.001$ ). Factors associated to higher addiction scores were gender, namely the affected being females and single status users when compared to males and married users as these had higher smartphone addiction scores. Conclusions: The positive correlation between smartphone addiction and seeking pleasure is alarming. Reasonable usage of smartphones is advised, especially among younger adults who could be at higher risk of control loss. © 2023, MEDSPORTPRESS Publishing House. All rights reserved.

**Author Keywords**

behavioral addiction; dopamine; loss of control; reward system; seeking pleasure; Smartphone addiction

**Index Keywords**

dopamine receptor stimulating agent; adult, Article, avoidance behavior, behavioral addiction, decision making, female, human, Likert scale, major clinical study, male, mobile phone addiction, Moroccan, nucleus accumbens, pleasure, prefrontal cortex, questionnaire, regression analysis, reward, smartphone addiction scale-short version, social media, statistical significance, ventral tegmentum

**Tradenames**

spss, IBM, United States

**Manufacturers**

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**References**

- (2013) *Diagnostic and statistical manual of mental disorders*, (5th ed)
- (2007) *Journal of Neuroscience* 14 Novembr, pp. 12700-12706. 27 (46)
- Robinson, W., Simon, B.  
**LittleBigPlanet: la créativité numérique à l'œuvre**  
(2015) *Tracés. Revue de sciences humaines*, (28), pp. 99-118.
- Kwon, M, Lee, JY, Won, WY, Park, JW, Min, JA  
**Development and Validation of a Smart-phone Addiction Scale (SAS)**

- (2013) *PLOS ONE*, 8 (2), p. e56936.
- Billieux, J., Maurage, P., Lopez-Fernandez, O.  
**Can Disordered Mobile Phone Use Be Considered a Behavioral Addiction? An Update on Current Evidence and a Comprehensive Model for Future Research**  
(2015) *Curr Addict Rep*, 2, pp. 156-162.
  - Noël, X.  
**On a triadic neurocognitive approach of decision-making to addiction**  
(2015) *Neuropsychological Trends*, (17), pp. 7-15.
  - Arnsten, AF, Raskind, MA, Taylor, FB, Connor, DF.  
**The Effects of Stress Exposure on Prefrontal Cortex: Translating Basic Research into Successful Treatments for Post-Traumatic Stress Disorder**  
(2015) *Neurobiological Stress*, 1, pp. 89-99.  
2015 Jan 1; PMID: 25436222; PMCID: PMC4244027
  - Lian, L., You, X., Huang, J., Yang, R.  
**Who overuses smartphones? Roles of virtues and parenting style in smartphone addiction among Chinese college students**  
(2016) *Computers in Human Behavior*, 65, pp. 92-99.
  - Porter, G., Kakabadse, N. K.  
**HRM perspectives on addiction to technology and work**  
(2006) *Journal of Management Development*, 25 (6), pp. 535-560.
  - Rosen, L.D., Whaling, K., Carrier, L.M., Cheever, N.A., Rokkum, J.  
**The Media and Technology Usage and Attitudes Scale: An empirical investigation**  
(2013) *Computers in Human Behavior*, 29, pp. 2501-2511.  
Pages ISSN 0747-5632
  - Oulasvirta, A., Rattenbury, T., Ma, L.  
**Habits make smartphone use more pervasive**  
(2012) *Pers UbiquitComput*, 16, pp. 105-114.
  - Bianchi, Adriana, Phillips, James G.  
**Psychological Predictors of Problem Mobile Phone Use**  
(2005) *CyberPsychology & Behavior*, pp. 39-51.  
and Dr
  - Goodman, A.  
**Neurobiology of addiction: An integrative review**  
(2008) *Biochemical pharmacology*, 75 (1), pp. 266-322.
  - Widyanto, L., Griffiths, M.  
**'Internet Addiction': A Critical Review**  
(2006) *Int J Ment Health Addiction*, 4, pp. 31-35.  
1
  - Young, K. S.  
**Internet addiction: A new clinical phenomenon and its consequences**  
(2004) *American Behavioral Scientist*, 48 (4), pp. 402-415.
  - Kwon, M, Lee, J-Y, Won, W-Y, Park, J-W, Min, J-A, Hahn, C  
**Development and Validation of a Smartphone Addiction Scale (SAS)**  
(2013) *PLoS ONE*, 8 (2), p. e56936.
  - Bianchi, A, Phillips, JG.  
**Psychological predictors of problem mobile phone use**  
(2005) *Cyberpsychol Behav*, 8 (1), pp. 39-51.  
PMID: 15738692

- Billieux, J.  
**Problematic use of the mobile phone: a literature review and a pathways model**  
(2012) *CurrPsychiatr Rev*, pp. 299-307.  
8D4]
- Fischer-Grote, L, Kothgassner, OD, Felnhofer, A.  
**Risk factors for problematic smartphone use in children and adolescents: A review of existing literature**  
(2019) *Neuropsychiatrie*, 33 (4), pp. 179-190.
- Liu, CH, Lin, SH, Pan, YC, Lin, YH.  
**Smartphone gaming and frequent use pattern associated with smartphone addiction**  
(2016) *Medicine*, 95 (28), p. e4068.
- Lu, June, Liu, Chang, Wei, June  
**How Important Are Enjoyment and Mobility for Mobile Ap-plications?**  
(2017) *Journal of Computer Information Systems*, 57 (1), pp. 1-12.
- Thomée, S., Härenstam, A., Hagberg, M.  
**Mobile phone use and stress, sleep distur-bances, and symptoms of depression among young adults – a prospective cohort study**  
(2011) *BMC Public Health*, 11, p. 66.
- Lin, Min-Pei, Ko, Huei-Chen, Yung-Wei Wu, Jo  
**Prevalence and Psychosocial Risk Factors Associated with Internet Addiction in a Nationally Representative Sample of College Students in Taiwan**  
(2011) *Cyberpsychology, Behavior, and Social Networking*, pp. 741-746.

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