

Unveiling Smartphone Dependency: Contrasting Patterns in Athletes and their Non-Athletic Peers

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Abstract

This study aims to explore the influence of sports participation on Mobile Phone Dependency, comparing scores between athletes and non-athletes. Additionally, it investigates potential variations between males and females within these categories. The research involved 120 participants aged 18-25, with 60 categorized as athletes and 60 as non-athletes. The sample consisted of an equal distribution of boys (N=60) and girls (N=60) from various colleges in Kerala. Data were collected using the Test of Mobile-phone Dependence (TMD) by Chóliz (2012) on randomly selected subjects. The mean comparison was conducted using the independent t-test. Results reveal a significant difference in all TMD factors, indicating that individuals with sports exposure display lower mobile phone addiction compared to those without sports training. Notably, boys and girls exhibited significant differences in the lack of control factor and total TMD, with males scoring higher than females. These findings underscore the significance of well-structured sports programs in enhancing crucial life attributes and promoting a better quality of life through the positive impact of sports on mental well-being.

Key words

Mobile phone dependency, Athletes, Non-athletes, Sports participation.

Introduction

Over the last decade, there has been a notable increase in mobile phone usage, accompanied by a surge in issues related to excessive use and addiction. While smartphones offer valuable productivity tools, compulsive usage can disrupt work, school, and relationships. Unfortunately, the prevalence of cell phone addiction may rise, especially with the growing introduction of mobile devices to children. The term "mobile phone addiction" refers to a persistent attachment to one's device driven by psychological needs and external demands, often resulting in decreased productivity and the development of chronic side effects, including depression, loneliness, impaired social behavior, compromised sleep quality, and various health issues. Smartphone addiction manifests as an inability to control smartphone use despite negative consequences on well-being. Smartphone use not only provides pleasure and reduces feelings of pain and stress but also leads to a failure to control usage despite significant harmful consequences in financial, physical, psychological, and social aspects of life (Shaffer, 1996; Van Deursen et al., 2015; Young, 1999). Children using cell phones display more behavioral problems such as nervousness, temperament issues, mental distraction, and indolence, and these problems are exacerbated if the children start using cell phones at an early age (Divan et al., 2012). The emergence of smartphone addiction has become a significant health concern, prompting global health policymakers to address this evolving issue swiftly. Adolescents, in particular, are vulnerable to smartphone addiction compared to adults, as they are still developing self-control in smartphone use. Additionally, adolescents with working parents may face an increased risk of smartphone addiction due to a lack of parental supervision and guidance after school hours. The combination of adolescent susceptibility and limited

parental oversight underscores the need for comprehensive strategies to address and mitigate the risks associated with smartphone addiction among this demographic.

Participation in sports offers numerous benefits for both psychological and physical well-being, including reducing anxiety, depression, and stress (Hassm_en et al., 2000; Salmon, 2001; Scully et al., 1998; Warburton et al., 2006). Previous studies have particularly highlighted the impact of physical exercise and sports participation on self-control. In a 2016 study by Jae-Ahm Park et al., the relationship between sports participation, self-control, and Internet addiction among Korean adolescents was explored. The study found a significant effect of sports participation on Internet addiction, mediated by self-control, highlighting the effectiveness of sports and physical activity in treating Internet addiction. Gender differences in impulsion and problematic mobile phone use among the youth were examined by Billieux et al. (2008). The results indicated that men use mobile phones more frequently in risky situations, while women show higher dependence. Regarding impulsion, men exhibit higher levels of sensation-seeking and lower levels of perseverance, while women display higher levels of urgency. Females are more likely to be engaged with their mobile phones than males, with differences attributed to the purposes of mobile phone use. A study on the gendered nature of mobile phone culture in Israel suggested that males are more inclined to use phones for functional purposes, such as work-related activities. In contrast, females primarily use phones to stay in contact with valued individuals (Lemish & Cohen, 2005). These findings indicate distinct smartphone use patterns between males and females.

Purpose of the study

The study aims to investigate the influence of sports participation on Mobile Phone Dependency by comparing scores between athletes and non-athletes. Additionally, the research seeks to determine if there is a significant difference between boys and girls within these categories regarding mobile phone dependency.

Methodology

Sample: The study comprised 120 college students, including male and female athletes and non-athletes aged 18 to 25. The subjects were classified into two groups: athletes (N = 60) and non-athletes (N = 60).

Tool: Mobile phone addiction levels were evaluated using the Test of Mobile-phone Dependence (TMD) developed by Chóliz (2012). The questionnaire, exhibiting good reliability (Cronbach's $\alpha = 0.94$), comprises 22 items grouped into three factors: (a) abstinence, measuring discomfort associated with mobile phone deprivation and the use of phones to resolve affective problems related or unrelated to mobile phone abuse; (b) lack of control and problems derived from use, assessing difficulty in controlling behavior; and (c) tolerance and interference with other activities, examining how addiction interferes with other incompatible activities due to excessive time spent on phone-related activities. The instrument, previously validated for use in adolescents, consists of 22 items rated on Likert-type scales. The first ten items are answered on scales ranging from 0 (never) to 4 (frequently), while the remaining 12 items use a scale ranging from 0 (completely disagree) to 4 (completely agree).

Statistical Analysis: The statistical analysis was conducted using the SPSS package. The mean served as a measure of central tendency, while the standard deviation (S.D) was used to measure dispersion. The independent t-test was employed to determine the significance of differences between various groups in different factors of mobile phone dependence.

Results and Discussions: The study investigated the distribution of mobile phone dependence variables within the sample and explored whether significant differences existed between athletes and non-athletes and between males and females. The ensuing discussion delves into the findings obtained from the analysis.

Table 1: Comparison between Athletes and Non-Athletes in the dimensions of test of Mobile Phone Dependence (TMD)

Variables	Groups	N	Mean	Std. Deviation	T value	Sig.
Abstinence	Athletes	60	13.64	4.89	-15.43	.000
	Non-athletes	60	28.78	5.83		
Lack of control	Athletes	60	8.57	4.42	-7.84	.000
	Non-athletes	60	14.33	3.60		
Tolerance	Athletes	60	10.33	4.05	-6.02	.000
	Non-athletes	60	14.13	2.75		
TMD Total	Athletes	60	32.53	10.91	-13.78	.000
	Non-athletes	60	57.25	8.63		

Table 1 presents the results for both athletes and non-athletes in all dimensions of mobile phone dependence. The findings reveal a significant difference in all dimensions between athletes and non-athletes, with the total mobile phone dependency score significantly lower for athletes than non-athletes. This discrepancy may be attributed to students engaged in sports having less free time for mobile phone use, as they are actively involved in training and competitions. The sporting environment, along with the overall sports process, shapes individuals by providing engaging opportunities and indirectly imparting psychological lessons. Active involvement in games and socializing on the field may reduce the reliance on smartphones among athletes. Osman Gumusgul's (2018) research on the impact of smartphone addiction on physical activity, recreational sports participation, and educational success aligns with the current findings. Gumusgul found that participants involved in physical and recreational sports exhibited lower smartphone addiction scores, supporting the notion that sports engagement may contribute to reduced dependency on smartphones.

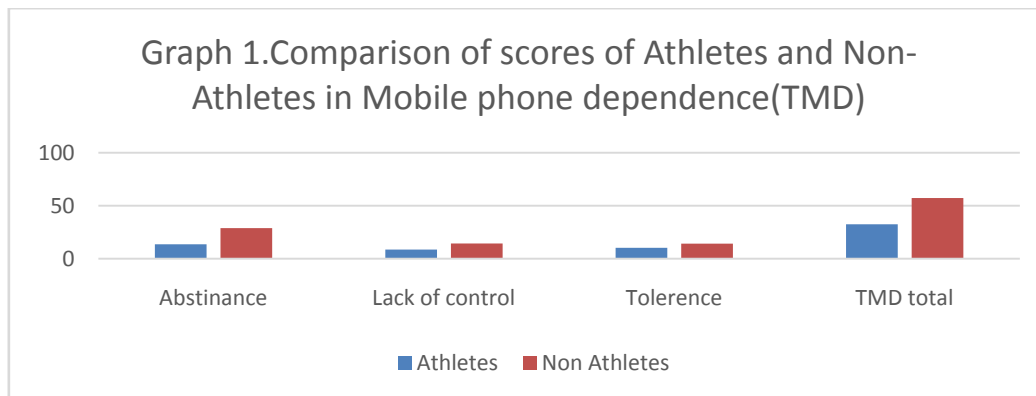
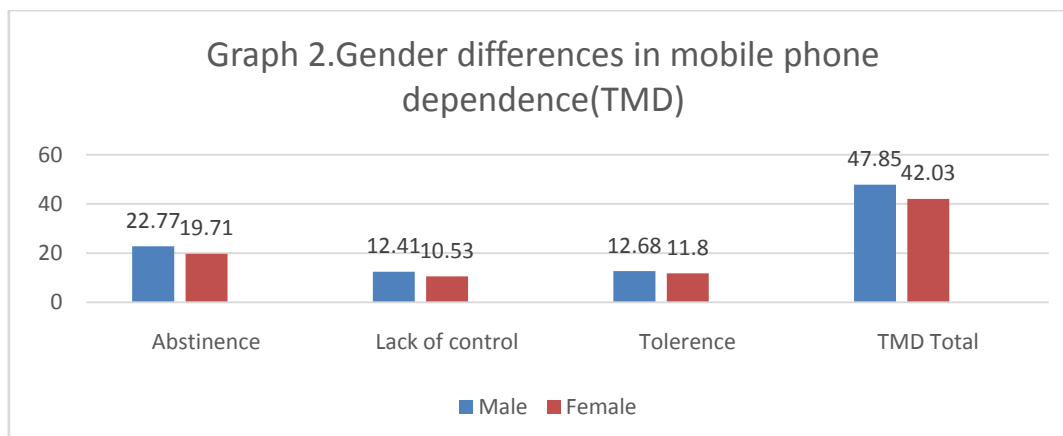


Table 2: Comparison between males and females in the dimensions of the test of mobile phone dependence (TMD)

Variables	Gender	N	Mean	Std. Deviation	T value	Sig.
Abstinence	Male	59	22.76	10.13	1.82	.073
	Female	61	19.71	8.25		
Lack of control	Male	59	12.41	4.62	2.11	.036*
	Female	61	10.53	5.13		
Tolerance	Male	59	12.68	3.28	1.22	.224
	Female	61	11.80	4.47		
TMD Total	Male	59	47.85	15.39	2.04	.044*
	Female	61	42.03	15.82		

Table 2 illustrates the significance of differences between male and female athletes in the variable of mobile phone dependence. The findings indicate a significant difference in lack of control and total TM (Total Mobile Dependency). Interestingly, males exhibited higher scores on all dimensions compared to females. This trend might be attributed to the cultural context, as college-going girls in the Indian family system often experience greater parental control. Consequently, they may have fewer opportunities to own or use mobile phones than their more privileged male counterparts, influencing the differences in mobile phone dependence between genders.



Conclusions

The study aimed to compare mobile phone dependence and its dimensions in both male and female athletes and non-athletes. The results revealed significant differences in all dimensions of mobile phone dependency (abstinence, lack of control, and tolerance) between athletes and non-athletes. Athletes consistently demonstrated significantly lower scores across all dimensions of TMD (Total Mobile Dependency), suggesting a positive impact of sports participation on mobile addiction. This emphasizes the potential effectiveness of integrating sports and physical activity into mobile addiction treatment programs, extending to other forms of addiction as well.

The findings underscore the broader psychological, sociological, and physical benefits of sports participation compared to conventional medical rehabilitation programs. Hence, sports should not only be regarded for physical development but also as a means to address various psychological issues among adolescents. When examining gender differences, females exhibited significantly lower scores in lack of control and total TMD. This outcome suggests that sports participation can serve as both a remedial and preventive measure against mobile phone dependency, applicable to children and adults. The results highlight the potential role of sports in mitigating mobile phone addiction and promoting overall well-being.

Future Research Recommendations

1. Develop adaptive sports programs that can accommodate diverse populations in addressing smartphone dependence.
2. Investigate the potential benefits of combining sports interventions with other therapeutic approaches, such as cognitive-behavioral therapy or mindfulness training, to create comprehensive treatment plans for smartphone dependence.
3. Examine the feasibility and impact of incorporating sports activities as part of a broader strategy to address smartphone dependence among different populations.
4. Assess the broader health and well-being outcomes associated with sports participation in the context of smartphone dependence.

By addressing these areas in future research, scholars can contribute valuable insights into the role of sports as a remedial tool for smartphone dependence, leading to the development of targeted and evidence-based interventions.

Credit authorship contribution statement

All authors approved the final manuscript as submitted and agreed to be accountable for all aspects of the work.

Ethical statement

Nil

Data availability

The data supporting this study's findings are available from the corresponding author upon reasonable request.

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Conflicts of interest

There are no conflicts of interest.

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