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## Gender differences in smart phone addiction among physical education trainees: A cross sectional analysis

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### Abstract

The modern society is characterized by extensive use of technology in day today life for various purposes. Technology has facilitated teaching-learning process, evaluation, research and development of study material like MOOCs. The technology has been imbibed in almost all Teacher training programs including Physical Education. Smartphone are devices that have the capability to process information, store information and enable communication. During tough times of Covid19, it has become inevitable for Teacher trainees to get equipped with mobile phones and internet specifically for communication and accessing information. The unprecedented increase in smartphone usage has led to smartphone addiction. There can be consequences where addiction can lead to depression, anxiety and destroy social relationships. The purpose of the present study was to investigate the smartphone addiction in Undergraduate male and female Physical Education Trainees of Kuvempu University. The study intended to find the differences in smartphone addiction between male and female trainees at Kuvempu University during 2019-20. For the purpose of this study thirty-three physical education trainees pursuing B.P.Ed. IVth semester at Kuvempu University were selected from Jnanasahyadri campus, Shankaraghatta. Purposive sampling was employed to gather information on smartphone addiction from physical education trainees at Kuvempu University. Male and female physical education trainees of Kuvempu University were included in the study. Their age ranged between 21-26 years. These subjects were studying at Jnanasahyadri campus during the year 2019-20. In order to test the hypothesis of this study smart phone addiction was assessed with the help of a standard questionnaire by Kwon, *et al.*, (2013). The questionnaire consisted of thirty-three questions. Each item was rated on a 6-point scale, from 1 (strongly disagree) to 6 (Strongly agree), based on their past experiences. Descriptive statistics like Mean and Standard Deviation were employed and results on mobile phone addiction was obtained. Further, for understanding the differences in stress between male and female subjects 't' test was employed. On the basis of the results of the present investigation it can be concluded that there is significant difference in mobile phone addiction between male and female physical education trainees pursuing Bachelor's Degree at Kuvempu University during 2019-20. Male exhibited higher mobile phone addiction than female trainees.

**Keywords:** Smartphone, addiction, health, physical education, trainees, technology

### Introduction

The modern society is characterized by extensive use of technology in day today life for various purposes. Technology has become a part of our life with its uses ranging from recreation to daily living. Different people use technology for different purposes to make their living easy. Professionals like Doctors, Lawyers, Teachers and many others make use of technology in their professional life. This has in turn led to too much dependence on technology rather than manual work. Nowadays technology has the ability to distract and evade people from their problems, but it can also result in addictions or become an unhealthy escape from the real world (Sanchez-Zafra *et al.*, 2019) <sup>[15]</sup>.

Globally, "People around the world have adopted this new and exciting technology as one of the most important required facility in their everyday life" (Fawareh & Jusoh, 2017) <sup>[6]</sup>. Teaching profession is a noble profession which creates all other professions. The Teachers nowadays have been using technology in their professional life for various purposes. Technology has facilitated teaching-learning process, evaluation, research and development of study material like MOOCs. In due course of time the teachers have been completely dependent on the technology for all their professional endeavors. It has given a cutting edge to the efficiency of Teachers in almost all walks of professional life of teachers.

Globally, the explosion of smartphones and its related devices has greatly transformed teaching and learning in developed nations where developing nations are not an exception (Tagoe, 2014) [16].

The technology has been imbibed in almost all Teacher training programs including Physical Education. Subjects like Education Technology, Information and Communication technology in Physical Education, Computer applications in Physical Education etc. have made Teacher trainees to get equipped with latest technology in the field of communication. The objective behind this transformation is effective delivery of subject matter to students. Smartphone are devices that have the capability to process information, store information and enable communication. They include a variety of features such as access to internet, social media, videos, multimedia, navigations and many more. There has been spurt of Mobile companies in the competitive market (Ganapathy and Monisha, 2020) [7]. All mobile companies promise to provide mobile phones embedded with latest features, higher memories and enhanced internet speed. This makes them increasingly attractive to children, young and adults, causing certain problems and situations when there is excessive and continuous dependence on these devices (Rozgonjuk, Kattago and Tath, 2018) [14].

As one of the most widely used of these technologies in the modern world, the Internet is playing an increasingly significant role in revolutionizing peoples' lives (Qadri, Esmaili and Ahmad, 2014) [12]. During tough times of Covid19, it has become inevitable for Teacher trainees to get equipped with mobile phones and internet specifically for communication and accessing information. Smartphones and internet usage has tremendously increased than ever before in the history of mankind. Although the Internet offers many advantages in the era of global communication, its improper or excessive use can produce many negative consequences. Excessive Internet use, which is also called uncontrolled use of the Internet, pathological Internet use, net addiction or Internet addiction, causes problems at work and in social life (Odaci and Celik, 2013) [11]. The unprecedented increase in smartphone usage has led to smartphone addiction. Smartphone addiction can lead to not only physical, but social and psychological problems as well (Adams and Kisler, 2013) [1]. In a Korean study, it was reported by An, *et al.*, (2014) [2] it was found that 87% of smartphone users are college students, beginning their usage from the year of 2011. The rate was 56% in the year of 2013 at United States and 79% in Switzerland. In the first half of 2012, in UK the addiction rates varied from 72% to 86% among college students.

There can be consequences where addiction can lead to depression, anxiety and destroy social relationships. Smartphone addicts tend to neglect their work, isolate themselves from friends and family and depend on the smartphone in order to communicate with others (Arora, *et al.*, 2014) [3]. Using them too often in daily life, smartphones are one of the biggest physical activity and leisure constraints recently. With 4.48 hours daily average use of smartphone users the most smartphone-addicted country on the world-wide is Brazil according to Statista's research. Brazil is followed by China with 3.03 hours, the United States with 2.37 hours and Italy with 2.34 hours. (Haberturk News, 2018) [8].

## Objective of the study

The purpose of the present study was to investigate the smart phone addiction in Undergraduate male and female Physical Education Trainees of Kuvempu University. The study intended to find the differences in smartphone addiction between male and female trainees at Kuvempu University during 2019-20.

## Methodology

### Sample

For the purpose of this study thirty-three physical education trainees pursuing B.P.Ed. IVth semester at Kuvempu University were selected from Jnanasahyadri campus, Shankarghatta. Purposive sampling was employed to gather information on smartphone addiction from physical education trainees at Kuvempu University. Male and female physical education trainees of Kuvempu University were included in the study. Their age ranged between 21-26 years. These subjects were studying at Jnanasahyadri campus during the year 2019-20.

### Tool

In order to test the hypothesis of this study smart phone addiction was assessed with the help of standard questionnaire by Kwon, *et al.*, (2013). The questionnaire consisted of thirty-three questions. Each item was rated on a 6-point scale, from 1 (strongly disagree) to 6 (Strongly agree), based on their past experiences. The respondents had to carefully read each statement and give their response by selecting an appropriate number best suitable to them. The scoring was done in the following manner.

1	2	3	4	5	6
Strongly disagree	Highly disagree	Slightly disagree	Slightly disagree	Highly agree	Strongly agree

The data required for this study was collected at Kuvempu University campus during spare time of the subjects. The questionnaire was distributed personally to selected subjects and a day or two was given for filling it. Any ambiguity in understanding the questions was cleared by the investigator either personally or telephonically. The research scholar approached the subjects for the second time and collected the filled-in questionnaires from the subject with gratitude.

### Statistical technique

Descriptive statistics like Mean and Standard Deviation were employed and results on mobile phone addiction was obtained. Further, for understanding the differences in stress between male and female subjects 't' test was employed.

### Findings and Interpretation

Table 1 provides descriptive results including Mean and Standard Deviation of Physical Education Trainees of Kuvempu University on Mobile phone addiction levels.

**Table 1:** Descriptive results of Mobile phone addiction of Physical Education Trainees

Gender	N	Mean	Std. Deviation
Male	18	115.11	21.04
Female	15	101.40	9.25

From table 1 it is evident that the Mean Mobile phone addiction of Physical Education Trainees at Kuvempu

University in male is  $115.11 \pm 21.04$  and in female is  $101.40 \pm 9.25$ . The results in the above table is normally distributed and exhibits acceptable homogeneity of sample. The above results were further subjected to independent

sample 't' test in order to find significant differences in mobile phone addiction between male and female physical education trainees with 05 levels of significance. The results are provided in table 2.

**Table 2:** Summary of comparison in Mobile phone addiction between male and Female Physical Education Trainees Kuvempu University

t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
2.338	31	.026	13.71111	5.86390

From table 2 it is evident that there is significant difference in mobile phone addiction between male and female physical education trainees of Kuvempu University Jnanasahyadri campus. Male physical education trainees had

higher addiction than their female counterparts. It was found that the obtained 't' value is higher than the table value 2.021. The above results are graphically depicted in Figure 1 as below.



**Fig 1:** Graphical illustration of different in mobile phone addiction between male and female physical education trainees of Kuvempu University

### Discussion on findings

There was significant difference between male and female staff of Kuvempu University in terms of mobile phone addiction. This fact makes it clear that the sex is a determining factor for mobile phone addiction for Physical Education Trainees at Kuvempu University. In other words, the mobile phone addiction in physical education trainees at Kuvempu University is dependent of gender. Male physical education trainees of Kuvempu University will have to take care of their mobile phone addiction in order to retain their health, especially mental health. In a similar study by Romero-Rodríguez, *et al.*, (2020) [13] to analyze the influence of smartphone addiction and Instagram use intensity on the self-esteem of Physical Education students it was concluded that the gender and age were factors that influenced the problematic use of the smartphone.

Haug, *et al.*, (2015) [9] provided the first insights into smartphone use, smartphone addiction, and predictors of smartphone addiction in young people from a European country. Carbonell, *et al.*, (2018) [4] analyzed the prevalence of the perception of problematic Internet and smartphone use in young people over the period 2006–2017. It was concluded that the diagnosis of technological addictions is influenced by both time and social and culture changes.

Demirci, Akgonul and Akpinar (2015) [5] investigated the relationship between smartphone use severity and sleep quality, depression, and anxiety in university students. The

results indicate that depression, anxiety, and sleep quality may be associated with smartphone overuse. Such overuse may lead to depression and/or anxiety, which can in turn result in sleep problems.

Zhang, *et al.*, (2021) [17] analyzed the relationship between alexithymia and learning burnout, as well as the mediating effect of mobile phone addiction, and provide clues for future interventions to deal with learning burnout among Chinese medical students. It was concluded that 39.6% had learning burnout. Alexithymia can positively predict learning burnout, and this relationship is partially mediated by mobile phone addiction. Marín-Díaz, Vega-Gea, & Passey, (2019) [10] carried out an analysis of the uses of social networks by students from the Early Childhood Education Degree and the Primary Education Degree at the University of Cordoba (Spain). It was stated that teachers in training do not evidence a harmful use of social networks. Explored the relationship of smartphone addiction with psychological health and neuroticism among medical students. study suggested a high prevalence of smartphone addiction among medical students, particularly in male medical students. The smartphone addiction might lead to psychological problems and the most vulnerable group is the medical student with the neurotic personality trait.

### Conclusion

On the basis of the results of the present investigation it can be concluded that there is significant difference in mobile

phone addiction between male and female physical education trainees pursuing Bachelor's Degree at Kuvempu University during 2019-20. Male exhibited higher mobile phone addiction than female trainees.

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