Journal of Educational Technology & Online Learning
Volume 6 | Issue 2 | 2023
http://dergipark.org.tr/jetol

The investigation of feeling stuckness and smartphone addiction in sport sciences students (gender difference approach)

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Suggested citation: Erçok Güler, S. C., Cengiz, R. & Günay, E. (2023). The investigation of feeling stuckness and smartphone addiction in sport sciences students (gender difference approach). *Journal of Educational Technology & Online Learning*, 6(2), 438-446.

Highlights

- Highlight 1 In the sports sciences faculty students included in the study; 19% of male students and 51% of female students were found to be addicted to smartphones.
- Highlight 2 Female students have higher smartphone addiction scores than male students.
- Highlight 3 It has a positive correlation with the scores of smartphone addiction and the feeling of being psychologically stuck.
- Highlight 4 The study especially emphasizes the need for awareness training for female students.

Article Info: Research Article

Keywords: *University Students, Feeling of Stuck, Smart Phone Addiction, Deppresion*

Abstract

The aim of this study is to examine the feeling of being stuck and phone addiction levels of student participants in Manisa Celal Bayar University Faculty of Sport Sciences. The study group of the research consists of 97 female and 193 male students from Manisa Celal Bayar University Faculty of Sport Sciences. Personal information form prepared by the researcher, Smartphone Addiction scale and Feeling Stuck scale were used as data collection tools in the research.SPSS 25.0 package program was used in the analysis of the data. Independent T test was used for pairwise comparisons, one of the parametric tests for normally distributed values, and One Way Anova test was used for more than two encounters. In addition, Pearson correlation analysis was used. A significant difference was found in the comparison of smartphone addiction scores between genders ($p<0.05$). In addition, it was found that there was a positive and significant correlation between the participants' feelings of stuckness scores and their smartphone addiction scores ($p=0.01$). According to the results, female students have a higher prevalence of smartphone addiction compared to males. Additionally, the study found that smartphone addiction exacerbates the feeling of being "stuck" often associated with depression.

1. Introduction

The feeling of being stuck (FS) is a psychological condition that is defined as a sub-dimension of depression and threatens the inner world of individuals. It is defined as a behavior pattern that individuals reveal as a solution to the stresses they experience (Gilbert & Allan 1998). In another definition, it is defined as the increase in responsibilities of the individual and the FS in a corner, as well as various psychological disorders such as depression and anxiety, in the rush of survival (Brown et al., 1995). It also includes mental mood disorders such as subjective negative perception (Taylor et al. 2011). Psychological problems such as chronic stress and depression occur in individuals who are exposed to the FS for a long time (Gilbert, 2000).

The FS, which is frequently observed in older populations in research, is also remarkable in research on young people (Bjørkløf et. al., 2015). University life processes, in which processes such as anxiety about

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Doi: http://doi.org/10.31681/jetol.1268467
Received 23 Mar 2023; Revised 2 May 2023; Accepted 3 May 2023
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the future, social relations, financial issues, and having a career increase the stress level in the daily life of the middle-aged and young population. In light of this information, observing the preliminary reflections of the FS can create an important protective effect in terms of taking precautions.

Smartphone addiction (SPA) is a complex condition in which excessive psychological cravings and excessive smartphone use lead to serious physiological, psychological, and social disorders (Goswami & Singh, 2016). These devices, which have been integrated into human life in a short time with the development of technology, continue to push for radical changes in daily routines, habits, social behaviors, values, family relationships, and social interactions (Samaha & Hawi, 2016). It has been stated that the continuous use of smartphone applications causes problems such as stress, anxiety, depression, deprivation, deterioration in health status, decrease in scientific performance, and decrease in physiological activity, especially sleep disorder (Samaha & Hawi, 2016). However, with research indicating that SPA can impair attention, SPA can have a serious negative effect on a person's physiological and mental health (Seo et al., 2016).

Different questionnaires have been developed to measure SPA, each based on criteria formulated by Griffts. Some of these surveys are SMS Problematic Use Questionnaire (Rutland et al., 2007), Cell Phone Problematic Use Scale (Bianchi & Phillips, 2005), Smart Phone Addiction Scale (Kwon et al., 2013). These questionnaires were developed based on different definitions of SPA or behavioral addiction and aimed to measure problematic smartphone use with behavioral addiction criteria (Bianchi & Philips, (2005), Emelin et al., (2013)).

The relationship between the use of smart phones in university students, academic performance and general health is also among the topics under study by the researchers. A cross-sectional study of a sample of private college students in the United States found that cell phone use and video game use were associated with a low GPA. It has been determined that the multitasking of the smart phone, which hinders the learning process, negatively affects academic and other performances in the academic context (Boumosleh & Jaalouk, 2018). In another study, it was found that university students had a moderate addiction to smartphones, and women had higher addiction scores than men. It is reported that the risk of SPA increases as the intensity of using applications on the phone, listening to music, taking photos and videos, playing games, having fun and connecting to social media increases. Bal & Balcı (2020) and Li et al. (2020) reported in their study that SPA addiction negatively affects psychological health, the level of addiction is higher in men, and individuals with neurotic personality traits are more prone to SPA.

Interestingly, the SPA levels of students from different countries who study in different departments also show differences. For example; Kuang-Tsan & Fu Yuan (2017) conducted a study on the effect of life stress on SPA among university students in Taiwan. It has been suggested that they may be more likely to become high-risk groups for SPA. Li et al. (2020) stated that Chinese university students are more prone to unhealthy and irregular living habits and physical inactivity due to excessive cell phone use, processes that result in various health problems such as spending less time on physical exercise, obesity, or metabolic syndrome. They also reported that negative health outcomes such as low back, neck, and shoulder pain, blurred vision, and depression due to excessive smartphone use negatively affected their quality of life. El-Sayed Desouky & Abu-Zaid (2020) found that the prevalence of depression and trait anxiety, and problematic smartphone use scores were higher in women in their study of students at Taif University in Saudi Arabia. They found a significant positive relationship between the problematic smartphone usage score and the depression and trait anxiety scores, the duration of owning a smartphone, and the average duration of each daily call among 6th-grade students, theoretical college graduates, single students, and those using smartphones for more than 4 hours a day. Students reported that the problematic use of smartphones is on the rise.

When the literature was examined, no study was found that investigated the relationship between the feeling of being stuck and SPA. The aim of this study is to examine the relationship between the FS and SPA

among students studying at the Faculty of Sport Sciences. The second hypothesis of the study is to evaluate the gender differences in FS and SPA scores.

2. Methodology

The sample group of the study was composed of 1st and 4th year students studying at Manisa Celal Bayar University Faculty of Sport Sciences (97 female, 193 male, total 290). In the research, "descriptive and relational survey model" was used, one of the quantitative research methods (Sayım, 2015), which explains the numbers suitable for analysis by obtaining measurements. The data collection tools used in the research consist of two parts. The first part is the personal information form that includes the demographic information of the students; five questions, including gender, age, marital status, class, and department, were asked. The second part consists of the Feeling Stuck Scale (FSS) and the Smartphone Addiction Scale-Short Form (SPA-SF) applied for the purpose of the study. Permission to use the scale was obtained for each scale. The FSS was developed by Gilbert & Allan (1998) to determine the level of people's FS and to examine the individual experiences of university students about their FS and adapted into Turkish by Uysal et al. (2015). The questionnaire consists of sixteen items and two sub-dimensions. The first sub-dimension consists of 10 items (corresponding to questions 1, 2, 3, 4, 5, 6, 7, 8, 9, 10) that prevent the individual from getting rid of the positive situation he is in. The second sub-dimension (corresponding to 11, 12, 13, 14, 15, and 16 questions) consists of 6 items. The FSS is a 5-point Likert-type scale and is scored according to the appropriateness level of 1-5. The highest score that can be obtained from the scale is 64, and the lowest score is 0. On the scale, there is no positive coded judgment. As the score obtained from the scale increases, the level of stuckness increases in parallel. The Cronbach alpha internal consistency reliability coefficient was found to be 0.88 for extrinsic stuck feeling, and 0.93 for intrinsically stuck feeling. In the study, the Cronbach alpha internal consistency reliability coefficient was found to be 0.90 for extrinsic stuck feeling and 0.92 for intrinsically stuck feeling.

SPA-SF was developed by Kwon et al. (2013) and adapted into Turkish as a short form by Noyan et al. (2015). It is a scale consisting of 10 items and evaluated on a six-point Likert scale. The scale items were scored from 1 to 6. Scale scores range from 10 to 60. As the score obtained from the scale increases, it is considered that the risk for addiction increases. The scale has one factor and has no subscales. The cut-off point of the scale was 31 for male and 33 for female. The Cronbach's alpha coefficient of internal consistency and concurrent validity of the original form was 0.91. In the study, the Cronbach alpha internal consistency reliability coefficient was found to be 0.90 (Table 1). Data collection was carried out in the 2022 Spring academic term and was collected anonymously. The measurement tool was prepared both as a questionnaire and online, and the participants were reached and data were collected from those who participated voluntarily (https://l24.im/JjbYvIt). Descriptive statistics were made for the total sample and the quantitative values were summarized as mean ± standard deviation and n (%), respectively. In the reliability analysis conducted in the research, it was seen that all scales had values of 0.70 and higher. Büyüköztürk (2012) stated that if the reliability coefficient is 0.70 or higher, the test scores are reliable. The decision on the ethical suitability of the study was taken at the meeting of the MCBÜ Social and Human Sciences Ethics Committee, dated March 22, 2022, and numbered 2022/02.

2.1. Statistical Analysis

Utilizing the SPSS 25.0 package tool, data analysis was carried out. Statistical significance was defined as a p value 0.05. Descriptive statistics like the arithmetic mean (x), standard deviation (S. S.), and frequency values (f) are included in the statistical interpretations of the data. While the normalcy test analyses (Tabachnick & Fidell, 2013) took into account the kurtosis and skewness values (+1.5 and -1.5), the Levene test was employed for the homogeneity test. In parametric testing for normally distributed data, the Independent T test was used for pairwise comparisons, and the One Way Anova test was used for multiple comparisons. The association between the two variables was also investigated using a Pearson Correlation study.

3. Results

The sample group consists of 290 university students (66% male and 33% female) with a mean age of 21.49 years. According to their class-based distribution, 34.5% are studying in the 1st grade, 23.1% in the 2nd grade, 17.6% in the 3rd grade, and 24.8% in the 4th grade.The age distribution is 84.5% between 18 and 23 years old and 15.5% over 23 years old. When the department-based distribution rates of the Faculty of Sports Sciences are examined, 29.3% of them are from the Department of Physical Education and Sports Teaching, 8.3% from the Department of Sports Management, 36.2% from the Department of Coaching Education, and 26.2% from the Department of Recreation (Table 1).

Table 1. Demographic Information of Participants

SEXES		**Female**	**Male**	**Total**	**AGE (years)**		**18-23**	**23+**	**DEPARTMENT**		**Physical Education**	**Sport Management**	**Coaching Education**	**Recreation**
	f	97	193	290		*f*	245	45		*f*	85	24	105	76
	%	33,4	66,6	100		*%*	84,5	15,5		*%*	29,3	8,3	36,2	26,2

The sample group's normality test results show a normal distribution because the kurtosis and skewness values are (+1.5 and -1.5) (Tabachnick & Fidell, 2013), (Table 2). According to the total SPA scores between the genders of the participants, it was found that 51% of women and 19% of men were addicted. A significant difference was found between the SPA and gender variables in the results of the inter-sex comparisons (p = 0.004), (Table 3). In the results of the correlation analysis made to evaluate the relationship between SPA and FS; it was determined that there was a positive and significant relationship between FS and SPA (p = 0.01), and FS scores increased as SPA scores increased (Table 4).

Table 2. Normality Test Results of Participants

	x	**S.D.**	**Min.**	**Max.**	**Range**	**Skewness**	**Kurtosis**
External factors of FS	15,47	10,03	0,00	40,00	40	0,286	-0,680
Internal factors of FS	9,91	7,75	0	24	24	0,203	-1,222
SPA (SF)	31,11	11,65	10	60	50	0,188	-0,641

Table 3. T-Test results of FS and SPA averages by gender variable

	Sexes	N	x	S.D.	t	sd	p
FS (external factors)	*Female*	97	15,47	10,12	0,052	288	0,959
	Male	193	15,40	10,03			
FS (internal factors)	*Female*	97	10,38	8,197	0,724	288	0,470
	Male	193	9,68	7,504			
SPA	*Female*	96	33,88	11,44	2,883	287	**0,004***
	Male	193	29,74	11,54			

*p<0,05

Table 4. Correlation analysis results of FSS, SPAS, and Gender differences

		FSS	SPAS	Sexes
FSS	Pearson Correlation	1	**,363****	-,021
	Sig. (2-tailed)		,000	,722
	N	290	289	290
SPAS	Pearson Correlation	**,363****	1	**-,168****
	Sig. (2-tailed)	,000		,004
	N	289	289	289
Sexes	Pearson Correlation	-,021	**-,168****	1
	Sig. (2-tailed)	,722	,004	
	N	290	289	290

***. Correlation is significant at the 0.01 level (2-tailed).*
FSS: Feeling Stuck Scores, SPAS: Smart Phone Addiction Scores

4. Discussion

This study, it was aimed to examine the relationship between FS and SPA levels in sports sciences faculty students. The main finding of the study is that there is a positive and significant relationship between the SPA and FS scores of the students of the faculty of sports sciences. It was also found that the addiction rate of female students is higher than that of males.

Recently, there are studies in the literature showing that the duration of mobile phone use and SPA rates are higher in women. Qaisar et al. (2017) revealed that there are significant differences between genders in the problematic use of mobile phones in their study among university students. Süt et al. (2016) found that women's SPA scores were higher than men's. The study by Güneş (2018); revealed that the level of SPA is higher in women than in men on the gender variable of SPA, and it is similar especially in children of developmental age. In a study conducted with high school students, it was determined that the SPA levels of female students were higher than those of male students (Göymen and Tuncay 2019). Lee and Lee (2017) found that girls have a higher level of addiction than boys in their study on SPA in developmental children

living in Korea. In another study, Niklová et al. (2020) concluded that females are more addicted to smartphones than males in terms of adolescent SPA levels.

In light of the study findings, the addiction scores of female students suggest that situations such as constant notifications from mobile phones and social media updates may increase the potential for negative effects on the level of success due to the deterioration of sustained attention in academic tasks that require focus. However, high addiction scores can also negatively affect the quality of sleep, which is an important part of the daily life cycle. Furthermore, a preference for mobile phone-based communication instead of face-to-face communication has the potential to have a negative impact on the quality of learning. Based on the results of the research, it reveals the necessity of organizing some preventive trainings for uncontrolled cell phone use among female university students, increasing awareness of parents and increasing awareness on the subject in educational institutions.

The results of the research that associates high SPA and mobile phone usage time in women with psychological factors are remarkable. Augner & Hacker (2012) found that problematic mobile phone use is associated with chronic stress, mood disorders, depression, and extraversion. In another study; it has been reported that excessive phone use is more prevalent in women and that this situation is associated with stress, anxiety, and sleep disorders (Thomée et al. 2011). Aktan & Kutlay (2021) showed that the psychological effects of excessive daily phone use in women were depression and anxiety. Demirci et al. (2015) found in their study that women with high smartphone usage times were highly correlated with psychological depression, anxiety, and sleep quality disorders. Our findings and literature information reveal the fact that SPA can be used as an independent tool in observing the psychological state of women.

The study's findings demonstrate a strong and significant correlation between SPA and FS scores. Since it is the first study to discuss this relationship in the literature, there is no finding. However, the relationship between FS-related psychological conditions such as depression, anxiety, and loneliness, and SPA has been frequently investigated. In some studies with high participant groups ($n > 300$), a significant relationship was found between SPA and depression in university students (Gümüş (2018), Boumosleh & Jaalouk (2017)). Alsalameh et al. (2019) reported that individuals with long smartphone use have higher mental problems such as anxiety, depression, loneliness, low self-esteem, social maladjustment, and impulse control disorder. Akbal (2018) found a positive and significant relationship between smartphone use and social anxiety levels in university students. Geng et al. (2021), in his study on students studying at different universities in China; a significant relationship was found between SPA and depression and anxiety. In another study, it was determined that the anxiety levels of female university students with high cell phone usage time were significantly higher than male students (Aktaş & Yılmaz (2017)). Arpacı and Kocadağ (2020) found a significant relationship between neurotic behavior and SPA for women in their study. In another study; Kaya et al. (2021) found a significant relationship between smartphone use, poor sleep quality, and depressive symptoms in university students. Karaköse (2019) found a positive relationship between SPA and depression in the research he conducted on students. As seen in the literature information mentioned above, SPA is a factor related to depression and psychological disorders related to depression. Our study result emphasizes that there is a similar relationship between FS and SPA.

5. Conclusion

The findings of this study indicate that excessive smartphone use has a significant negative effect on the feeling of being stuck, particularly in female students. Additionally, our datas suggested that SPA scores can be considered an independent predictor of individuals' FS levels. For future research, it is recommended that the purposes of smartphone usage among sports science students, such as education, entertainment, socializing, and internet browsing, be comprehensively investigated.

Suggestion

As researchers, we recommend that university students be made aware of the scores obtained by applying a SPA questionnaire at regular intervals, that awareness training should be made especially for female students that the process is more serious, and that academic development and learning-oriented applications should be promoted with respect to phone usage times.

Author Contributions: S.E.G. and R.C. conceptualized the study. S.E.G. and E.G. were involved in the search and synthesis of the articles used and critical discussion in this study. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no funding.

Acknowledgments: In this research, the data of the master's thesis belonging to Sinem Can Erçok Güler were used. As researchers, we would like to thank Hakan Güler, who contributed to the statistical analysis, and the participants who participated in the study.

Conflicts of Interest: The authors declare no conflict of interest.

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