The Prevalence of Problematic Mobile Phone Use amongst EFL Learners in Turkey

İngilizce'yi Yabancı Dil Olarak Öğrenenler Arasında Problemli Cep Telefonu Kullanımının Yaygınlığı[1]

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Abstract

Purpose: Despite the many benefits attributed to mobile phones in nearly all aspects of everyday life, concern over the problematic use of these smart devices has grown. This study investigates the prevalence of problematic mobile phone use in a sample of Turkish undergraduate EFL learners. Additionally, it verifies whether this particular assessment was equally applicable to male and female students in different age groups.

Design/Methodology/Approach: Problematic mobile phone use was assessed using a mobile phone addiction scale. After employing non-random convenience sampling, 267 students responded to the survey.

Findings: The results showed that neither age nor gender had a significant effect on mobile phone addiction levels. In this study, the prevalence of problematic mobile phone use was 5.2 per cent.

Highlights: Furthermore, the prevalence of problematic and at-risk mobile phone users constituted 19.8% of the study population and an overwhelming majority of the problematic mobile phone users were females, which indicated that they could potentially be considered as addicted to mobile phones. The implications of these findings for classroom practices and for the more inclusive language-learning environment are discussed.

Öz

Çalışmanın amacı: Cep telefonlarının yaşamın hemen hemen her alanındaki atfedilen yararlarına karşın, bu akıllı cihazların sorunlu kullanımlarına ilişkin kaygılar giderek artmaktadır. Bu çalışma sorunlu cep telefonu kullanımının yaygınlığını, İngilizce'yi yabancı dil olarak öğrenen Türk üniversite öğrencileri üzerinde incelemektedir. Buna ek olarak, bu çalışma sonucunda tespit edilen sorunlu cep telefonu kullanımının öğrencilerin yaş ve cinsiyetlerine göre farklılık gösterip göstermediği araştırılmaktadır.

Materyal ve Yöntem: Sorunlu cep telefonu kullanımı, cep telefonu bağımlılığı ölçeği aracılığıyla ölçülmüştür. Tesadüfi olmayan, kolayda örnekleme yöntemiyle çalışmaya 267 öğrenci dahil olmuştur.

Bulgular: Çalışmanın sonuçları cinsiyet ve yaş değişkenlerine göre cep telefonu bağımlılığının anlamlı bir farklılık göstermediğini ortaya koymuştur. Çalışmada, sadece problemli kullanıcı olarak sınıflandırılan öğrencilerin yaygınlığı %5,2 olarak hesaplanmıştır.

Önemli Vurgular: Sorunlu cep telefonu kullanma davranışları gözlenen öğrencilerin örneklemin %19,8'ine denk geldiği, büyük bir çoğunluğunu kadınların oluşturduğu ve bu kullanıcıların potansiyel cep telefonu bağımlısı olarak değerlendirilebilecekleri sonucuna ulaşılmıştır. Araştırmanın bulguları ışığında sınıf ortamı için bazı çıkarımlarda bulunulmuş ve yabancı dil öğrenme çevresinin herkes için kapsayıcı olması için öneriler geliştirilmiştir.

INTRODUCTION

In the information age in which we live, mobile phones are an integral part of our daily life. In recent years, the world has witnessed a dramatic rise in the ownership and use of smartphones and this reality has clearly brought as many challenges as opportunities for users of all ages. There are many benefits which mobile phone users get from the built-in capabilities of the phones and from the many applications which these smart devices can support (Winskel et al., 2019). The reported benefits which users receive, when taken to excess, might lead to problematic behaviour or even to behavioural addiction (Griffiths, 2008). Doing something excessively for a long period of time does not necessarily equate to addictive activity; some activities lead to healthy outcomes and do not cause health problems whereas others can impair the quality of life (Griffiths, 2005). Even though scholars accept that excessive behaviour and addiction are two different things, caution might be necessary when the behaviours are related to video games (Griffiths & Meredith, 2009), internet use (Griffiths, 2018) or mobile phones in general (Chen, 2020; Laurence et al., 2020). There is an ongoing discussion about whether internet addiction in a general sense and mobile phone addiction in particular are really addictions or whether this is simply a misnomer (Csibi et al., 2109; Griffiths, 2019; Panova & Carbonell, 2018). When the Diagnostic and Statistical Manual of Mental Disorders was published in 2013, it was quickly noticed that one of the categories had been renamed 'Substance-Related and Addictive Disorders'. This category included two sub-divisions, one of which was non-substance-related disorders, which is commonly associated with behavioural addiction (Kardefelt-Winther et al., 2017). However, as Potenza (2014) put it, "Debate on how best to define which disorders constitute addictions remains" (p. 2). The previous literature suggests that any new behavioural addiction is expected to compare with substance-related addictions in terms of symptoms. That is, criteria such as psychological distress and a departure from normative behaviour are indicators of a new addiction. Similarly, changes in mood, anxiety and craving might also be expected to be observed when people experience smartphone abstinence (Kardefelt-Winther et al., 2017). If it is the case that smartphone abstinence causes all three of these symptoms, then there might be a need for further discussion about whether to consider it as a separate behavioural addiction (Wilcockson et al., 2019). Marlatt (1987) defined craving as a subjective experience which causes an individual to "anticipate, expect and desire the effects of a given activity that has yet to occur" (p. 43). According to Skinner and Aubin (2010), craving typically prompts a strong motivation in the individual, similar to an obsession, to do what is believed to be necessary to relieve it. The issue of how similar behavioural and substance addictions are will clearly be a matter for debate for a considerable time (Kardefelt-Winther et al., 2017).

Literature Review

Mobile phones have not only dramatically changed the way we interact but also the way we learn and our habits because these devices are not simple telecommunications devices anymore but handheld computers. Users can now access the information which they are looking for anytime and anywhere (Chen, 2020; Seemiller & Stover, 2017). This has led researchers from various fields to look into the effect of mobile phones on improving learners' productivity and learning performance. Foreign-language learning is one of the contexts in which scholars have been seeking evidence that mobile phones in general or specific mobile apps lead to an increase or a decrease in student learning (Chen, 2020; Klimova, 2018; Ozer & Kılıç, 2018; Seemiller & Stover, 2017). Even though, mobile phones can be actively used to support foreign language learning inside and outside the classroom, studies also report problematic use of mobile phones based on adverse consequences experienced by individuals. Problematic mobile phone use is an emerging problem for many users and a new term that is defined as the inability to keep mobile phone use time under control despite negative consequences on the users (Billieux et al., 2015; Cha & Seo, 2018). Even though excessive use of smartphone might be an indicator of problematic mobile phone use, not all excessive mobile phone users are problematic users (Billieux et al., 2015). A considerable number of people use their phones to connect to internet and run apps in order to increase their productivity. Problematic mobile phone use, on the other hand, is associated with a number of serious issues from mental distraction (Divan et al., 2012) to depression (Xie et al., 2019). Studies exploring the prevalence of problematic mobile phone use by user categories are limited (De-Sola et al., 2017a; Nahas et al., 2018; Sohn et al., 2019; Yang et al., 2019), and almost non-existent particularly amongst EFL learners at the tertiary level (Sanal & Ozer, 2017). Despite the many benefits attributed to mobile phones in nearly all aspects of everyday life, concern over the problematic use of these smart devices has grown.

Problematic Mobile Phone Use in Relation to Age and Gender

Before problematic behaviours form into behavioural addictions, they are typically signalled by an urge or craving (Grant et al., 2010). A small but growing body of research is focusing on cravings related to problematic mobile phone use. De-Sola et al. (2017a) found higher levels of craving in participants up to 35 years of age and that the level of craving decreased in individuals after that age. Ozer and Ozer (2018) investigated craving in a sample of 680 people between 18 and 65 years of age and found that the 18-to-25-year-olds were the group with the highest levels of craving. Savci and Griffiths (2019) developed a unidimensional Social Media Craving Scale by sampling 423 university students in Turkey. Wilcockson et al. (2019) found that smartphone abstinence could lead to craving. A vast amount of research across the globe has focused on populations of adolescents and university students and the researchers have consistently found that adolescents, in comparison with adults, are reportedly more vulnerable to problematic mobile phone use (Billieux et al., 2015; De-Sola et al., 2019; Fischer-Grote et al., 2019; Kim et al., 2012; Kuss et al., 2018; Sanal & Ozer, 2017; Savci & Griffiths, 2019; Smetaniuk, 2014). De-Sola et al. (2019) examined

the patterns and differences of mobile phone use based on habitual use, abuse and problematic use in a Spanish population and found that age was a vulnerability factor especially among young people aged between 16 and 25. It has recently been accepted that problematic mobile phone use affects a wider proportion of the adult population than was previously thought (De-Sola et al., 2017a; De-Sola et al., 2017b).

The previous literature has reported that, generally, females tended to report higher scores on the scales of smartphone addiction or problematic mobile phone use (Choi, et al., 2015; Khoury et al., 2019; Nahas et al., 2018; Vally & El Hichami, 2019). Fischer-Grote et al. (2019) carried out an overview of studies focusing on risk factors predicting problematic smartphone use and concluded that female adolescents appeared to be prone to a higher smartphone addiction risk than male adolescents. In another study, Jeong et al. (2019) found that the number of females who were addicted to smartphones was twice that of males in a sample of 768 Korean adolescents.

Problematic Mobile Phone use in Foreign-language Learning Contexts

Despite accumulating evidence that smartphone use could become problematic and could lead to negative consequences among university students and in particular students learning English as a foreign language, its prevalence remains a matter of much debate (Billieux et al., 2015). There is a large body of research addressing the question of how to improve EFL learners' academic performance. In particular, EFL learners' academic performance in preparatory-year English language programmes (PYP) in Turkish universities has been extensively examined (Adıgüzel & Özdoğru, 2017; Cakıcı, 2016; Ozer & Kılıç, 2018) but still remains a subject of study by different variables and in terms of the counterparts' perspectives. A wide variety of learning-related variables such as foreign-language classroom anxiety (Akpur, 2017), self-efficacy (Kesen et al., 2019), cognitive load (Ozer & Kılıç, 2018) and learning strategies (Sahin-Kızıl & Savran, 2016) have been associated with an increase or a decline in the academic performance of PYP students in Turkey. Although a plethora of studies has examined the many effects of these variables on foreign-language learning, there has been a growing body of literature regarding smartphone addiction, problematic mobile phone use and their impact on student learning over the last two decades (Laurence et al., 2020; Vally & El Hichami, 2019; Yang et al., 2019). Even though there are three recent studies investigating smartphone addiction in the Turkish educational contexts, their participants were secondary or high school students (Gezgin et al., 2018; Kara et al., 2019; Yildiz Durak, 2019). It is worth noting that smartphones together with other mobile devices and the use of these devices for school-related purposes have been of vital importance on account of the increased need for distance learning required for the purposes of social isolation during the COVID-19 pandemic (Ng et al., 2020).

Whereas the recent literature indicates both positive and negative effects of smartphones, the present study focuses on problematic mobile phone use in order to be able to determine and interpret smartphone use as a risk factor among a sample of PYP students. Several studies have shown that problematic mobile phone use can lead to addiction and, in some cases, could lead some people to lose their self-direction. Despite accumulating evidence that some behaviours can pose some threats to mobile phone users, there is still a need for research which investigate which behaviours lead to negative consequences (Billieux et al., 2015; De-Sola et al., 2017a; Grant et al., 2010). Interestingly, prevalence studies carried out in the Turkish context are still rare and have produced heterogeneous results of problematic mobile phone use in different age groups (Durak & Seferoğlu, 2018; Gül et al., 2019; Yildirim *et al.*, 2016). This heterogeneity results partly from the employed scales and the lack of a firm theoretical background. As reported in the literature, problematic mobile phone use can lead to some situations in which the individuals engage in some behaviours, such as losing control and an intense desire for mobile phone (De-Sola et al., 2017a; Wilcockson et al., 2019), and this sorts of behaviours can be very similar to those observed in other cases of addiction. The concept of craving has turned out to be crucial as a diagnostic criterion in the explanation of a potential addiction (American Psychiatric Association, 2013; De-Sola et al., 2017a). This is the main reason why the current study was conducted using the Mobile Phone Addiction Craving Scale (MPACS). If the occurrence of problematic mobile phone use is frequent, there might be a negative association between problematic mobile phone use and academic performance. This study was therefore designed to investigate the prevalence of problematic mobile phone use in a sample of Turkish undergraduate EFL learners; specifically, to assess problematic mobile phone addiction among EFL learners in a state university in Turkey. Additionally, it sought to verify whether this assessment was equally applicable to the students in relation to gender and age. Given the conceptual understandings of the role which problematic mobile phone use plays in academic settings as reported in various studies using samples of undergraduate students from various academic majors (Calderwood et al., 2014; Sanal & Ozer, 2017; Vally & El Hichami, 2019; Winskel et al., 2019), this study using a comparative, quantitative research design was guided by the following research questions:

RQ$_1$: Are there significant differences among EFL learners' scores on the Mobile Phone Addiction Craving Scale in relation to gender and age?

RQ$_2$: How are students categorised in relation to the risk of problematic mobile phone use using the cut-off scores?

METHODS

This study was conducted at a medium-size state university in the south of Turkey and employed a quantitative-based cross-sectional design. The data to assess the prevalence and categorisation of mobile phone addiction were collected through self-report.

Participants

Even though previous research shows that younger people are more often associated with excessive mobile phone usage (Lopez-Fernandez *et al.*, 2014; Sohn et al., 2019), the need for investigating further to determine which usage is excessive and which one is problematic has grown in importance. A review of the literature demonstrates that problematic mobile phone use is related with academic performance, but the prevalence of problematic mobile phone use among foreign language learners is still under-researched. Therefore, to investigate this matter further a large number of EFL students were invited to fill out the survey. A total of 270 students responded to the survey. The data belonging to one respondent aged 37 and to two more respondents were excluded due to incomplete information. Therefore, complete data were available for 267 post-secondary students (121 females and 146 males) who were enrolled in PYP classes at a state university in the south of Turkey. The majority of the sample were male (54.7%) with an overall age range between 18 and 35 years. The 18-25-year-olds were 218 respondents (81.6%), whereas there were 49 respondents in the 26-35 age group (18.4%). A non-random method of convenience sampling was used to recruit the participants in an attempt to ensure greater representativeness of the population by reaching a larger sample. The only inclusion criterion for the study was ownership of a smartphone, but students who were younger than 18 years of age were also excluded.

Materials

The survey tool used in this study was the Turkish version of MPACS (hereafter the MPACS-TR) which had been developed to be used to assess problematic mobile phone use by measuring craving (De-Sola et al., 2017a). The MPACS is a unidimensional scale with eight Likert-type items; respondents rate their degree of restlessness on a response range from 1 ('not at all') to 10 ('too much') which they would feel in situations in which their mobile phones were not immediately available. Ozer and Ozer (2018) had previously adapted the MPACS for use with Turkish samples. Internal consistency for the MPACS-TR was high ($\alpha = 0.88$) in the original study. In the present study, internal consistency reliability was assessed and the Cronbach's alpha results indicated good internal consistency (0.869) for the scale (George & Mallery, 2011). The scale used in the current study was chosen because it contributes to the quality of answers as it includes only eight items to assess mobile phone addiction based on craving as a key aspect of potential behavioural addictions.

Data Collection

Participation was voluntary and the study took place at the beginning of the spring term in 2019. The respondents took approximately two minutes to complete the questionnaire. The researcher visited the classrooms to deliver the questionnaires, but since some of the respondents preferred to complete the questionnaire online, they were sent an e-mail including the link to access the survey. The informed consent form was either read by the researcher in each classroom environment for the participating students or was provided online to the students who participated in the study via GoogleDocs. The survey was administered in Turkish. All of the procedures carried out in this study which involved human participants were performed in accordance with the ethical standards of the selected university's Research Ethics Board (Reference number: E.6260).

Statistical Analyses

First, the normality distribution of the MPACS-TR scores was tested using Kolmogorov-Smirnov and analysing skewness and kurtosis. Respondents' characteristics were presented using means and standard deviations, percentages, medians, and minimum and maximum values. Gender comparisons were performed using t-tests. Statistical significance was assumed at $p < 0.05$. The data were then entered into IBM SPSS Statistics 20 and analysed.

FINDINGS

The principal aim of this study was to investigate the prevalence of problematic mobile phone use in a sample of EFL learners in a university setting in Turkey. Descriptive data for the MPACS-TR are presented in Table 1.

Table 1. Mean scores for mobile phone addiction craving (*n* = 267)

Item	*M*	*SD*
1. If I wanted to turn it on right now and could not or would not be allowed to	4.75	2.53
2. If, at this very moment, I found myself out of battery or without coverage	5.49	2.77
3. If, at this very moment, I should be forced to turn it off because I was at the movies or at work	2.90	2.15
4. If, at this very moment, I realized that I left it at home	7.15	2.58
5. If, at this very moment, I could not or if they did not let me reply to a message	4.56	2.64
6. If I was with people at the moment I was using it and it did not work for me	4.88	2.87
7. If I was in a place or a situation in which I always used it and no longer could	5.40	2.58
8. If, at this very moment, I was restless and needed to relax and did not have it available	5.52	2.76

The means of individual items ranged from 2.90 to 7.15, with an overall mean of 5.16 in the study sample. A reliability test of the MPACS yielded a Cronbach's alpha of 0.87. The items presented the respondents with some hypothetical situations in which their mobile phones were not immediately available. Among the items measuring the respondents' degree of restlessness in the given situations, the item with the highest mean score referred to the statement 'If, at this very moment, I realized that I left it at home'.

In an attempt to answer the first research question, the means of students obtained from the MPACS-TR were measured to determine whether there was a difference in their problematic mobile phone use in relation to gender and age.

Table 2. Means, standard deviations and gender/age comparisons (t-tests)

Gender Comparisons					
Female (*n* = 121)		Male (*n* = 146)			
M	*SD*	*M*	*SD*	*T*	*p*
5.29	2.01	5.05	1.82	.989	.279
Age Comparisons					
18-25 years (*n* = 218)		26-35 years (*n* = 49)			
M	*SD*	*M*	*SD*	*T*	*p*
5.26	1.90	4.72	1.87	1.803	.887

An independent samples t-test showed that the MPACS-TR scores were not significantly different with regard to gender; t(265)=.989, *p* = .279). Levene's test showed equal variances (*F* = 1.178, *p* = .279). For the age comparisons, an independent samples t-test showed that the MPACS-TR scores were not significantly different with regard to age group; t(265) = 1.803, *p* = .887). Levene's test showed equal variances (*F* = .020, *p* = .887).

In the original study of De-Sola et al. (2017a), they followed the criteria based on the percentiles which had been developed by Chow et al. (2008) and categorised users under four categories, namely casual, habitual or regular, at-risk and problematic. The MPACS-TR user categories cut-off scores for the Turkish context was calculated by Ozer and Ozer (2018). A total of 21 or a lower score corresponds to the cut-off of casual users; a score from 22 to 54 is the range of regular users; 55-66 corresponds to the cut-off of at-risk users, whereas a score of 67 and above indicates problematic cell phone use and possible addiction.

Table 3. Prevalence by user categories

User categories	N	M	SD	Median	Minimum	Maximum	%
Casual	28	15.86	4.21	16.50	8	21	10.5
Habitual or regular	186	38.25	9.22	39.00	22	54	69.7
At-risk	39	59.64	3.53	59.00	55	66	14.6
Problematic	14	69.64	1.69	69.50	67	72	5.2

Mobile phone users were categorised based on the criteria originally developed by Chow *et al.* (2009) and later adapted by De-Sola *et al.* (2017a) and Ozer and Ozer (2018) and the total of four categories were thus identified. The prevalence of problematic and at-risk mobile phone users made up 19.8% of the study population, of whom 14.6% were at-risk users and 5.2% were problematic users who could be considered as having a mobile phone addiction. The distribution of gender across the user categories showed that 78.6% (*n* = 11) of the users were female as opposed to three males (21.4%) out of fourteen problematic mobile phone users in total.

DISCUSSION

The results of this study add to the existing literature on mobile phone addictions by reporting and discussing the prevalence of at-risk and problematic mobile phone users among post-secondary students in Turkey as well as making gender and age comparisons within the sample. With regard to the examination of the effect of independent variables on the dependent variables, some findings should be noted.

Even though the female respondents scored higher than the males on the means of the MPACS-TR, the difference was not statistically significant. Therefore, the finding on gender does not concur with those of De-Sola *et al.* (2019), Fischer-Grote *et al.* (2019), Khoury *et al.* (2019), Kim *et al.* (2016), Laurence *et al.* (2020) or Oviedo-Trespalacios *et al.* (2019) in all of which female users had significantly higher smartphone addiction scores. In the Turkish context, Ozer (2020) found that a female undergraduate-students group had statistically higher means on the smartphone addiction scale.

The findings did not show any significant differences among the respondents in the 18-25 and 26-35 age groups. Although the youngest age group reported higher levels of problematic mobile phone use, this difference was also not statistically significant, so this finding is incongruent with those of previous studies which reported an increasing trend for problematic mobile phone use as age increases (De-Sola *et al.*, 2019; Oviedo-Trespalacios *et al.*, 2019). Similarly, Khoury *et al.* (2019) found that the 18-25 age group was a predictor of smartphone addiction in a sample of undergraduate students in Brazil. In a study in Spain conducted by

de-Sola *et al.* (2017a), the 16-25 age group was found to have the highest mean scores, followed by the 26-35, 36-45 and 46-55 age groups respectively. That finding indicated a potential vulnerability of those with the highest means to mobile phone addiction.

In addition, the sum of all eight items was used to calculate an MPACS-TR for each participant and thus to determine the user categories as 'casual', 'habitual', 'at-risk' and 'problematic'. In this study, the prevalence of problematic mobile phone use was 5.2 per cent. De Sola et al. (2019) merged at-risk and problematic user categories and call it 'users with difficulties' and in the present study, the prevalence of users with difficulties was 19.8 per cent, which was lower than that reported in the study of De Sola et al. (2018) involving 1126 Spanish respondents. The distribution of gender across the user categories revealed that an overwhelming majority of problematic mobile phone users were females and they can therefore potentially be considered as addicted to their mobile phones. This finding mirrors that of Ozer and Ozer (2018) who found almost the same distribution by user categories in the Turkish context. In the study conducted by de-Sola *et al.* (2017a) in Spain, the prevalence of problematic and at-risk mobile phone users made up 20.5% of the study population, of whom 15.4% were at-risk users and 5.1% were problematic users who could be considered as having a mobile phone addiction. A different study by de-Sola *et al.* (2017b) using a different scale to measure smartphone addiction yielded similar results, that is, at-risk users comprised 15.4% and problematic users made up 5.1% of the respondents. In the meta-analysis study by Sohn *et al.* (2019), they found that one in four young users demonstrated problematic smartphone use.

LIMITATIONS AND FUTURE DIRECTIONS

Two major limitations are present in this study. First, the findings are based on the use of self-reported data. The other limitation is that there was a disproportionate distribution of the participants by age group. In particular, the 26-35-year-old group was under-represented due to the fact that most students at PYPs are about nineteen years old.

Several implications stem from the present work. Language teachers working in PYPs should be aware of the prevalence of mobile phone addiction among EFL learners given emerging evidence on a global scale. Given that many schools worldwide have moved their classes online due to the ongoing pandemic, teachers' guidance and careful observation could be even more important these days in terms of the detrimental effects of problematic mobile phone use on student learning. Given that smartphone addiction has been demonstrated to be associated with academic performance, language teachers should be on the alert for students suffering from problematic mobile phone use. Learning English as a foreign language is a complex interactive process and requires learners' self-direction and autonomy. Therefore, it seems highly likely that at-risk and problematic users in the language classroom will fall behind their peers. In this respect, it is important for teachers to manage the phone use through learner-centred division of labour and some common classroom rules against disruptive use of mobile phones in class.

The MPACS-TR, as a reliable tool for assessing problematic mobile phone use addiction, is believed to be utilised by researchers to complement their studies investigating the academic performance of EFL learners. Future studies should consider investigating whether smartphone addiction is a predictor of academic success and academic self-efficacy in foreign language learning contexts at varying education levels.

Undoubtedly, the functions of a mobile phone to connect and to access information will not slow down its pace. Therefore, there is a need to make better use of this smart technology with the aim of making a strong contribution to student learning. Future studies could explore the factors which facilitate learning based on conditions in which students keep their smartphones on or off. In addition, future studies could also add a question designed to find how much time EFL learners spend on their phones and how much of that time is spent on language learning.

CONCLUSION

Despite the large variety of applications with which smartphone users are provided, some of these applications might reportedly have more negative consequences for students' academic performance. Texting, instant messaging and social media applications are both potentially useful and potentially able to put student learning at risk, and that risk is associated with an all-inclusive term, namely, problematic mobile phone use. This current study has investigated the prevalence of smartphone addiction in a sample of university students.

Overall, this study has produced interesting findings for smartphone addiction and problematic mobile phone use. First, neither gender nor age had a significant effect on the MPACS-TR scores, although the younger age group reported higher levels of problematic mobile phone use. Second, the overall mean was found to be 5.16 in the study sample. Third, the distribution of gender across user categories showed that an overwhelming majority of problematic mobile phone users were female. Finally, the findings of the study show that problematic mobile phone use is more prevalent among females, but even so, the means of female users were not significantly higher than those of male users.

Modern society is in a state of constant change and language learning does likewise. As we become increasingly more reliant on mobile phones, it is a requirement of the digital era to determine the technology-related needs of foreign-language learners, so learners' needs and the concerns of educators in mobile-assisted language learning environments should be addressed in future research. Given that the integration of technology in our everyday life and in educational settings will continue to play an important role, researchers and teachers should devote their efforts to dealing with the concerns about the successful integration of mobile phones and other portable smart devices into language-learning environments.

Declaration of Conflicting Interests

The author declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author received no financial support for the research, authorship, and/or publication of this article.

Statements of publication ethics

I hereby declare that the study does not have unethical issues and that research and publication ethics have been observed carefully.

Researchers' contribution rate

The author confirms sole responsibility for the following: study conception and design, data collection, analysis and interpretation of results, and manuscript preparation.

Ethics Committee Approval Information

Ethical approval was successfully obtained from the Research and Publication Committee on Ethics at Adana Alparslan Türkeş Science and Technology University (Reference number: E.6220; 18/05/2018).

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