ORIGINAL ARTICLE

Turkish Validity and Reliability of the Smartphone Overuse Screening Questionnaire

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Main Points

- The Turkish version of Smartphone Overuse Screening Questionnaire (SOS-Q) has acceptable goodness-of-fit values.
- The total value of Cronbach's alpha was found to be .93.
- The Turkish version of SOS-Q is a valid and a reliable tool with its six-factor structure.
- Increased frequency of checking and time spent on smartphone use are associated with SOS-Q total scores.

Abstract

This study aims to examine Turkish validity and reliability of the Smartphone Overuse Screening Questionnaire. The study group consisted of 400 students enrolled in different departments of a public university. The Smartphone Addiction Scale-Short Version and the Young's Internet Addiction Test-Short Form were used for criterion validity. For the internal consistency of the scale, the Cronbach's alpha was calculated.

Five items were removed from the questionnaire due to high covariance error in the items loaded into different factors. The new 23-item scale consisted of 6 factors with acceptable goodness-of-fit values. (χ^2/df = 2.83, root mean square error of approximation = 0.06, Comparative Fit Index = 0.90, Goodness of Fit Index = 0.87, Incremental Fit Index = 0.90). For the total score of the scale, the Cronbach's alpha was 0.93 and test – retest reliability coefficient was .79. ($p < .001$). The total item correlation was found to be between .386 and .768. The Turkish Smartphone Overuse Screening Questionnaire showed a positive correlation with both the Young's Internet Addiction Test-Short Form and the Smartphone Addiction Scale-Short Version. The results indicate that the Smartphone Overuse Screening Questionnaire can be used as a valid and reliable scale by both researchers and practitioners while examining problematic smartphone use .

Keywords: Addictive behavior, smartphone addiction, validity, reliability, college student

Introduction

Smartphones entered our lives as indispensable instruments in business, education, shopping, game, spare time activities, and collective social communication spaces with their advent in 2007. Worldwide, the number of smartphone users exceeded 3 billion in 2019 (Dea, 2021). According to the data from the Turkish statistical institute, 95.3% of the Turkish population has been using smartphones as of the year 2020. This rate is 97.8% in men and 92.7% in women (TUIK, 2021). Continuation of a behavior that helps to get away from pleasurable and negative emotions despite significant and negative consequences as well as repeated independent attempts to control a behavior is defined as behavioral addiction (Goodman, 1990). In behavioral addiction and problematic smartphone use (PSU), the process of addiction is believed to proceed on reward mechanism like substance-related addictions. Related

studies have shown that behavioral addictions show similarities with substance addiction in terms of parameters such as tolerance, comorbidity, overlapping genetic contribution, neurobiological mechanisms, and response to therapy (Grant et al., 2010). Indeed, similarities have been found between substance use disorders and behavioral addiction in brain screening studies (Noori et al., 2016). As of this moment, neither Diagnostic and Statistical Manual of Mental Disorders (DSM-5) nor International Classification of Disease, Eleventh Revision (ICD-11) has any diagnostic criteria for PSU. Official non-recognition of PSU simply reflects the lack of scientific evidence on diagnostic assessment, clinical course, or treatment (Petry, 2015). However, a growing number of studies show the relationship between decreased academic achievement and depression, anxiety, sleep disorders, substance use disorders, neurotic character, and attention-deficit hyperactivity disorder (Peterka et al., 2019; Yang et al., 2020). Problematic smartphone use is also related to non-psychiatric problems such as eye diseases and joint diseases (Kim & Kim, 2015; Moon et al., 2016). In particular, one problematic use of smartphone among young people is using it while driving, which is a risky behavior (Kita & Luria, 2018).

The increase in the scientific study data regarding PSU is parallel with the increase in the instruments used to describe PSU. The scales regarding problematic use of smartphones, as in the scales developed for Internet addiction, are generally developed by taking the criteria of substance-related disorders as a model. In a recent comprehensive review, the authors classified existing scales associated with PSU into three main groups (Harris et al., 2020). The first and largest group included scales adapted from DSM substance use disorders diagnostic criteria and developed specifically to identify PSU.

Most of these scales have a similar theoretical basis, including concepts related to addiction (e.g., Smartphone Addiction Scale (SAS), Smartphone Addiction Inventory (SPAI), and Problematic Use of Mobile Phones (PUMP) (Kwon et al., 2013; Lin et al., 2014; Merlo et al., 2013)). The second group consisted of scales assessing smartphone usage frequency (e.g., The Media and Technology Usage and Attitudes Scale (MTUAS) (Rosen et al., 2013)). The third group included scales assessing smartphone use motivation and attitudes (e.g., The Mobile Phone Affinity Scale (Bock et al., 2016)).

Turkish validity and reliability studies were carried out using SAS, SPAI, PUMP, and MTUAS scales (Arpaci & Esgi, 2018; Demirci et al., 2014; Koç et al., 2019; Özgür, 2016).

The scales whose Turkish validity and reliability studies are conducted have generally one factor structure or multi-factor corresponding to substance use disorders (Noyan et al.,2015; Şar et al., 2015). Although one factor structure scales are used more frequently due to their ease of use, various sub-factors enable collecting data from different visions regarding the smartphone use. The increase in the instruments that include various dimensions of PSU may contribute to the literature. Smartphone Overuse Screening Questionnaire (SOS-Q) was developed by Lee et al. (2017) with the aim of distinguishing individuals at elevated risk of smartphone overuse from ordinary users. In the study, preliminary items were assessed by 50 addiction experts and 28 questions were selected. Smartphone Overuse Screening Questionnaire

addresses the following areas: occupation, loss of control, craving, insight, overuse, and ignoring other areas. This study aimed to investigate whether the SOS-Q, which has six sub-factors, is a valid and reliable scale for Turkish society.

Methods

Procedures
First of all, approval was obtained from the developers of the original scale.

Study procedures were carried out in accordance with the Helsinki Declaration. The study protocol was approved by the Alanya Alaaddin Keykubat University Clinical Research Ethical Committee (date: November 28, 2019 No:13/6). The scale translation process was carried out according to the World Health Organization Translation Guide. Then, English form of the scale was translated into Turkish by five psychiatrists individually. It was sent to four experts working in the field to identify and resolve inadequate wording/concepts in the translation, as well as any inconsistencies between forward translation and current or comparable previous versions of the questions, if any. The experts were asked to evaluate each item in four items (1-not suitable, 2-the item needs to be adapted, 3-appropriate, but minor changes are required, 4-very appropriate) and to indicate their suggestions. All translated forms were reviewed by the translators and the scale was finalized by consensus. The scale was back-translated into English by two independent translators who were native speakers of English and non-native speakers of Turkish. The resulting text was compared with the original scale and a pilot study was conducted after corrections. Students were asked to point out statements that they had difficulty in understanding or that might be confusing and to make any suggestions. The data collected after the pilot study were analyzed and the scale was finalized.

Data Collection
This study was carried out online using snowball sampling techniques between the dates June 1 and 20, 2020. The online questionnaire was developed using Google Documents and the data were collected from online student communication groups. The participants were asked to fill out a socio-demographic form, the SOS-Q, the SAS-SV, and Young's Internet Addiction Test (YIAT). A total of 411 participants were included in the questionnaire and each participant was allowed to provide a single response. Prior to the study, the participants provided their informed consent and were informed that they could withdraw any time they wish without stating any reason. The forms of 11 participants were not evaluated due to missing answers. For the analysis of test – retest, 56 participants refilled the SOS-Q 3 weeks later.

Instruments
Sociodemographic Form
In addition to their personal information such as age and gender sex, the participants were provided with a sociodemographic form that included questions about duration, lifestyle, and purpose of mobile phone use that might be related to their mobile phone use habits.

Smartphone Overuse Screening Questionnaire
The scale was developed by Lee et al. (2017) and consisted of 28 items and 6 sub-scales. The sub-scales are occupation, loss

of control, craving, insight, overuse, and ignoring other areas. Internal consistency and item-to-total correlations of the scale were found to be at a good level (α = .95, r = .35 – 0.81). However, the test – retest reliability was at a moderate level (r = .70). In consideration of the last month, the four-point Likert type scale items were scored between 0 and 3 (never, sometimes, frequently, and always). In the original scale, there was a high correlation with the smartphone addiction scale (r = .76). In the ROC analysis performed in the original study, the area under the ROC curve (AUC) was .88 and the cut-off point of 49.0 was shown to provide the optimal balance between sensitivity and specificity.

Smartphone Addiction Scale-Short Version

The Smartphone Addiction Scale-Short Version was developed by Kwon et al. (2013). The Cronbach's alpha coefficient of internal consistency and concurrent validity of the original form was .91. It is a 6-point Likert type scale consisting of 10 items and scored between 1 and 6. It has no sub-factors with one factor structure. Its Turkish validity and reliability study was made by Noyan et al. (2015). The Cronbach's alpha was found to be .87. The test – retest reliability coefficient was .93. The scale scores range from 10 to 60. A higher score from the test indicates a higher risk of addiction. The Cronbach's alpha in our study was found to be .91.

Young's Internet Addiction Test-Short Form

The scale was developed by Young et al. (1998), was transformed to short form by Pawlikowski et al. (2013), and its Turkish validity and reliability study was performed by Kutlu et al. (2016). In the original study, the internal consistency reliability coefficient of the scale was calculated as .85. In the study by Kutlu et al. (2016), the Cronbach's alpha coefficient was found to be .91 for university students and .86 for adolescents. Young's Internet Addiction Test-Short Form, being a five-point Likert type scale (1 = never, 5 = very often) , consists of 12 items. Internal consistency reliability coefficient of the scale was calculated as .85 in our study. There is no reverse coded item in this one factor structure scale. Higher scores from the scale show high level of Internet addiction.

Statistical Analysis

The statistical data were evaluated using Statistical Package for the Social Sciences (v22.0, Armonk, NY, USA) and Analysis of Moment Structures (AMOS) v24 software. Descriptive statistics of the data were presented as n (%), and non-normally distributed variables were shown as median (min-max), and normally distributed variables as mean $\pm$ SD. The frequency and percentage values were calculated for categorical variables. Continuous variables were described as mean, standard deviation, and median values. Analysis of Moment Structures v24 was used for confirmatory factor analysis. Normality of distribution of variables was evaluated using skewness and kurtosis measurement. Skewness and kurtosis values at a range of ± 2 were regarded as normally distributed (George & Mallery, 2016). Pearson correlation coefficients were calculated to investigate relationships between SOS-Q, YIAT-SF, and SAS-SV. Spearman's correlation coefficients were calculated to investigate relationships among SOS-Q sub-dimensions. The differences between binary groups were compared using Mann – Whitney U test. In conditions where the normal distribution condition was not met, the Kruskal – Wallis test was used for multiple comparisons. The p < .05 value was deemed statistically significant. A Bonferroni correction was made in the intergroup comparisons among multiple groups. The significance was adjusted to .017 for comparisons of three groups and to .008 for comparisons of four groups.

Results

Validity Analyses of the Smartphone Overuse Screening Questionnaire

Appropriateness of the scale to factor analysis was tested using Kaiser – Meyer – Olkin (KMO) and Bartlett's test of sphericity (BTS). The obtained results showed that the present data are appropriate for factor analysis (KMO = .943, BTS: χ^2 = 5819.207, $p < .001$).

Confirmatory Factor Analysis

To test the construct validity of the SOS-Q whose original version has six factors, AMOS v24 was used and confirmatory factor analysis (CFA) was performed. Since the values obtained from CFA did not meet the fitness criterion, the modification indices were examined, resulting that the model is improvable. Regarding measurement errors, Bartlett underlined that there could be a correlation between the items in the same factor, yet there could not a correlation between the items corresponding to different factors(Bartlett, 1937). In our study, high covariance-related measurement errors were found in the appropriateness indices of 4 – 5, 7 – 8, 19 – 20, 11 – 27, 7 – 9, and 20 – 21 items of the model. Since only the items 4 and 5 among these item pairs were in the same factor, an error correction between them was performed (model 2). The high level of covariance can be explained by the fact that the item 4 and item 5 contain a meaning for the usage areas of the smartphone and take a consecutive place in the scale. Since the other item pairs (7 – 8, 19 – 20, 11 – 27, 7 – 9, and 20 – 21) were loaded on different factors, the error correction could not be performed. These pairs were compared respectively based on their regression loads, and thus the item with lower regression load was removed from the scale. Those removed items were 8, 19, 11, 9, and 20. Then, based on the the CFA results, the final model (model 3), being revised to 23 items and corrected, was found to be better than the previous one (Table 1). The fit indices and value ranges used in CFA are shown in Table 1. Higher Goodness of Fit Index, Comparative Fit Index, Incremental Fit Index, and lower root mean square error of approximation values indicate better goodness of fit. The fit indices found as a result of CFA in the study were found to be compatible with the value ranges given in the literatüre (Schweizer et al., 2003).

The significance of regression coefficients (standardized regression weights) which is an important indicator in confirmatory factor analysis was tested. Since the p value for each correlation between pairs was found to be lower than .05, the items were correctly loaded in the factors (Table 2).

Convergent Validity Analyses

To determine convergent validity of the SOS-Q, the correlation coefficients between YIAT and SAS-SV were examined. Considering the correlation coefficients, the SOS-Q has significant correlations with YIAT-SF (r = .77, $p < .001$) and SAS-SV (r=.78, $p < .001$). (Table 3).

Table 1.
Indexes of Fit Factors Model in the Questionnaire of SOS-Q

	χ^2/df	SRMR	GFI	AGFI	TLI	CFI	IFI	RMSEA	LO90	HI90	p
Model 1 (28 Items)	3.88	0.41	0.78	0.74	0.81	0.83	0.83	0.08	0.79	0.89	<.001
Model 2 (28 Items)	3.84	0.41	0.78	0.74	0.81	0.83	0.83	0.08	0.79	0.88	<.001
Model 3 (23 Items)	2.83	0.34	0.87	0.84	0.89	0.90	0.90	0.06	0.73	0.73	<.001

Note: SRMR, standardized root mean square residual; GFI, Goodness of Fit Index; AGFI, Adjusted Goodness of Fit Index; TLI, Tucker – Lewis Index; CFI, Comparative Fit Index; IFI, Incremental Fit Index; RMSEA, root mean square error of approximation.

Reliability Analyses

Internal Consistency Analysis

As a result of the analysis made to test internal consistency of the Turkish SOS-Q, the Cronbach's alpha coefficients (α) were .85 for the occupation sub-factor consisting of nine items,0.78 for the loss of control sub-factor consisting of five items, .58 for the craving sub-factor consisting of three items, .84 for the insight sub-factor consisting of three items, .77 for the overuse sub-factor consisting of two items, .62 for the ignoring other areas sub-factor consisting of two items, and .93 for the total score. A positive and significant relationship was found between all dimensions of the scale (Table 4).

Total Item Correlations

Total item correlation coefficients were examined to test the reliability of the scale. The total item correlations showed a positive correlation for all items of SOS-Q (Table 5). The following table shows descriptive analysis results of SOS-Q, corrected total item correlations, and the Cronbach's alpha value when item was deleted (Table 5).

Test – Retest Reliability

The test – retest was planned to measure temporal stability of the SOS-Q and was administered to 56 participants two times 3 weeks apart. The findings show that the correlation coefficients are positive and significant between the two applications ($r=.797$, $p<.001$).

Table 2.
Standardized Regression Coefficients and Significance Values of SOS-Q Items

Item	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6
1	.709***					
2	.716***					
3	.604***					
4	.466***					
5	.616***					
6	.610***					
13	.687***					
14	.482***					
15	.698***					
9		.712***				
10		.605***				
16		.631***				
18		.555***				
7			.740***			
8			.636***			
12			.367***			
21				.822***		
22				.687***		
23				.910***		
11					.840***	
19					.775***	
17						.543***
20						.829***

Note: ***p < .001. Factor 1, occupation; Factor 2, loss of control; Factor 3, craving; Factor 4, insight; Factor 5, overuse; Factor 6, ignoring other areas. The scale items were rearranged

Table 3.
Examination of the Relationship Between the Scales

	Mean ± SD (Med)	1	2	3	Skew	Kurt
1. SOS-Q:	43.29 ± 11.84 (42)	-			.83	.62
2. YIAT-SF	26.31 ± 7.43 (26)	.77***			.60	.14
3. SAS-SV	27.71 ± 11.51 (26.5)	.78***	.68***	-	.52	−.43

Note: ***p < .001. SOS-Q, Smartphone Overuse Screening Questionnaire; YIAT-SF, Young's Internet Addiction Test-Short Form; SAS-SV, Smartphone Addiction Scale-Short Version; Pearson correlation coefficients: Skew, Skewness; Kurt, Kurtosis.

Table 4.
Correlation Coefficients Between Sub-factors of SOS-Q

Factors	1	2	3	4	5
1	-				
2	.67**	-			
3	.64**	.55**	-		
4	.64**	.66**	.54**	-	
5	.57**	.60**	.46**	.54**	-
6	.42**	.55**	.41**	.43**	.37**

Note: **Spearman's rho correlation is significant at the .01 level.
Factor 1, occupation; Factor 2, loss of control; Factor 3, craving; Factor 4, insight; Factor 5, overuse; Factor 6, ignoring other areas.

Smartphone Overuse Screening Questionnaire Scores of Participants
A total of 400 participants were included in this study. Of them, 260 (65%) were female.

Mann – Whitney U test indicated that there was no significant difference between females (Mdn = 41.50) and males (Mdn = 42) (U = 17033,000 Z = −1,059 p = .290).

There was no correlation between participants' age and SOS-Q total scores (r = −.09, p = .07). A significant difference in mean ranks was found between the groups when they were asked how they evaluated their phone use behaviors (p < .001).

Kruskal – Wallis test indicated that the mean rank for SOS-Q scores of those calling themselves as addictive smartphone users was significantly higher than all other groups. As their level of feeling dependent decreased, their mean rank (SOS-Q) decreased too.

The group that checked the phone more than 41 times a day obtained higher mean ranks scores from the SOS-Q compared to those checked 21 – 40 times (p = .012) and 0 – 20 times (p < .001).

Table 5.
Relationship of SOS-Q with Personal and Usage Characteristics of the Participants

	(*n* %)	Mean Rank	df	χ²	p	Post hoc[a] (Adj. Sig.)
Daily check number	1. 0 – 20 (123, 30.8%)	144.76				1<2 (<.001)
	2. 21 – 40 (183, 45.8%)	210.97				1<3 (<.001)
	3. 41 and above (94, 23.5%)	253.05	2	49.569	<.001	2<3 (.012)
Daily smartphone use time	1. 0 – 100 (101, 25.3%)	149.94				1<2 (.004)
	2. 101 – 300 (226, 56.5%)	194.49				1<3 (<.001)
	3. 301 and above 73 (18.3%)	289.05	2	62.829	<.001	2<3 (<.001)
Reason for using smartphone	1. For my studies (34, 8.5%)	116.01				1<2 (.006) 1<3 (<.001)
	2. To surf on the Internet (143, 35.8%)	188.24				1<4 (<.001) 2<3 (.52)
	3. To play games (35, 8.8%)	225.54				2<4 (.07) 4<3 (1)
	4. To follow social media (188, 47%)	220.44	3	27.029	<.001	
How do you evaluate your smartphone use?	1. I have no idea (14, 3.5%)	186.93				2<1(.31) 1<3(1)
	2. I am not addicted (129, 32.3%)	123.82				1<4 (.002) 2<3 (<.001)
	3. Somewhat addicted (214, 53.5%)	224.18				2<4 (<.001) 3<4 (<.001)
	4. I am addicted (43, 10.8%)	317.10	3	109.792	<.001	

[a]Based on Dunn's tests with Bonferroni correction, Kruskal – Wallis test.

As the daily phone check number increased, the participants' mean ranks from the SOS-Q increased accordingly ($p < .001$). Similar to the number of the daily check, as the participants' daily smartphone use time increased, their SOS-Q mean rank scores significantly increased. The SOS-Q mean rank scores of those stating they used their smartphone for lessons were significantly lower than those who used it for games ($p < .001$) and social media ($p < .001$), whereas the difference was not significant compared to those who used it for surfing on the Internet ($p = .006$). Those who used their phone to play games had the highest mean rank scores for SOS-Q (225.54). However, the difference was not significant among social media follow up, playing games, and surfing on the Internet (Table 5).

Discussion

This study investigated whether the SOS-Q is an appropriate scale to Turkish community. The analyses made revealed that the Turkish version of the six-factor SOS-Q that had internal consistency and a correlation with other scales is an appropriate evaluation tool to Turkish community. Five items that had close meanings but were in different factors in the original scale were removed from the scale due to high covariance error. Thus, acceptable goodness of fit values was obtained. The six-factor structure in the original scale was preserved in the 23-item Turkish version. Its Turkish version scored .93 for Cronbach's alpha internal consistency, which is a high internal consistency coefficient. This value was .95 in the original scale. To test its temporal consistency, 56 participants refilled out the scale 3 weeks later. The test – retest reliability coefficient was found to be $r = .80$. The total item correlation was found to be between .39 and .77 in our study. These values show that the scale has adequate criteria significantly. The SOS-Q showed a high correlation with both SAS-SV ($r = .78$) and YIAT-SF $r = .77$). Similar to the original study, our study did not find a significant difference between the total SOS-Q results of males and females. ($p = .077$). The related literature seems to have complex results regarding the effect of sex in using smartphone. Similar to our study, some studies have stated that sex does not make a significant difference regarding PSU (Hawi & Samaha, 2016; Lee et al., 2017). On the other hand, a study reported that female sex posed a risk for PSU (Choi et al., 2015). Sixty-five percent of the participants in our study were women and a significant portion of the participants (50.8%) consisted of students studying in nursing and dentistry. The high rate of women in these two departments (66.9% and 76.3%, respectively) resulted in a high rate of female participants. A study has shown that women are more likely than men to report psychiatric symptomatology (Ostrov et al., 1989). This difference in awareness between the sexes may be another reason that women participated in the study at a higher rate.

Excessively time-consuming smartphone use and high daily checking are part of the PSU. Besides, frequent check is more related to PSU compared to excessive time-wasting (Linn et al., 2015). Similarly, both increased checking frequency and increased time spent on smartphone use in our study were related to the SOS-Q scores. There are no criteria on which consensus is built for PSU. This can change with the increased data regarding the PSU . Now, most of the studies conducted on the PSU are made using the developed scales.

When the Turkish validity and reliability studies are examined, it is seen that they include different sub-factors. For example, the Turkish validity study of the SAS scale by Demirci et al. has sub-factors such as disturbing daily life and tolerance, withdrawal symptoms, positive anticipation, cyberspace-oriented relationships, overuse, social network dependence, and physical symptoms (Demirci et al., 2014). Smartphone Addiction Inventory , another scale whose validity and reliability study was conducted in Turkish, has 4 sub-factors: compulsive behavior, functional impairment, withdrawal, and tolerance (Arpaci & Esgi, 2018). The scale developed by Şar et al. includes the following 4 sub-factors: relieving oneself, physical impairment and negligence of daily activities, obstruction face-to-face communication, and unrestrainable use (Şar et al., 2015). One scale does not fully overlap with the other. Although studies on PSU have increased in recent years, the lack of commonly accepted criteria makes it difficult to work in this field. The increasing number of studies and the increase in knowledge from different sub-dimensions will contribute to the formation of an accepted framework for PSU in the future. Smartphone Overuse Screening Questionnaire also has a unique structure with different sub-dimensions from the existing scale: this difference will contribute to the literature in this field by increasing the knowledge coming from different perspectives.

Our study results have shown that the Turkish version of the SOS-Q is appropriate to Turkish community with its internal consistency, test – retest level, and six-factor structure.

Limitations and Directions /Suggestions for Future Research

This study was carried out using snowball sampling. This sampling method can have a potential sampling bias and margin of error. The sample of our study consisted of university students enrolled in only one public university. Generalizability of the results can increase by repetition in different groups. Another limitation of our study is that it was conducted in a non-clinical sample. Information about the phone use habits was obtained by direct questions to the participants. However, these results may not always be reflecting the exact situation as shown in previous studies tested by the use of smartphone applications. In this sense, applications used in smartphones can be used to obtain more objective data. The cut-value was determined in the original scale, yet this was not analyzed in our study. The problematic use is inconsistently described in research studies, terms such as "smartphone addiction," "problematic smartphone use," and "smartphone overuse," being used. In our study, the concept of PSU was preferred to ensure fluency. Further studies with larger participation, including the clinical group, and additional calculations for calculating cut-off values are required.

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EK.1

Akıllı Telefon Aşırı Kullanım Tarama Ölçeği (ATAKTÖ)

Bu anket günlük akıllı telefon kullanımınız hakkında bilgi edinmeyi amaçlamaktadır. Akıllı telefon kullanımı şunları içermektedir: aramalar, mesajlar, sosyal medya servislerinin kullanımı, oyunlar, internet gezinmeleri, video izleme vb. Aşağıdaki maddeleri okuyarak **son bir aylık dönemde** sizin için en uygun seçeneği (Hiçbir zaman, Bazen, Sıklıkla, Her zaman) işaretleyiniz.

	Hiçbir Zaman	Bazen	Sıklıkla	Her Zaman
1. Sık sık akıllı telefonumu düşünürüm.				
2. Her fırsat bulduğumda akıllı telefonumu kullanırım.				
3. Akıllı telefonumu kullanmak için tüm gece uyanık kalırım.				
4. Akıllı telefonumu okulda veya çalışırken kullanırım (iş ve ders ile ilgili kullanımlar hariç).				
5. Akıllı telefonumu e-mail, blog, sosyal medya (facebook, instagram, twitter vb.) ve diğer uygulamaları kontrol etmek için çok fazla kullanırım.				
6. Eskisi kadar keyif almak için akıllı telefonumu daha uzun süre kullanma ihtiyacı duyuyorum.				
7. Akıllı telefonum olmadan huzursuz veya endişeli olurum.				
8. Kötü bir ruh halindeyken (kızgın, gergin, endişeli, suçlu), daha iyi hissetmek için akıllı telefonumu kullanırım.				
9. Akıllı telefonumu planladığımdan daha uzun süre kullanırım.				
10. Akıllı telefonumu kullandığım süreyi gerçekte olandan daha az belirtirim.				
11. Ailem ve/veya yakınlarım akıllı telefonumla çok fazla zaman harcadığımı söylüyorlar.				
12. Başkalarının yardımı olmadan akıllı telefon kullanımımı azaltabileceğimi düşünmüyorum.				
13. Vücudumda ağrılar olsa bile veya rahatsızlık hissediyor olsam da(örneğin uykusuzluk, göz yorgunluğu, bulanık görme, baş ağrısı, el veya sırt ağrısı) akıllı telefonumu kullanmaya devam ediyorum				
14. Akıllı telefon kullanımım için çok para harcarım (internet paketi, uygulama satın alma).				
15. Akıllı telefonumu kullandığım zamanlarda ne kadar zaman geçtiğinin farkına varmam.				
16. Yapmam gerekenler (iş, ev ödevi vb.) yerine akıllı telefon ile zaman geçiririm.				
17. Akıllı telefonumu kullanmayı arkadaşlarımla sosyal etkinliklerde bulunmaktan daha çok seviyorum.				
18. Akıllı telefonumu kullanmayı ailemle zaman geçirmekten daha çok seviyorum.				
19. Aşırı akıllı telefon kullanımım nedeniyle ailemle tartışırız.				
20. Akıllı telefonumdan başka hiçbir şey ilgimi çekmiyor.				
21. Akıllı telefonuma bağımlı olduğumu düşünüyorum.				
22. Mevcut akıllı telefon kullanım alışkanlığımı değiştirmek istiyorum.				
23. Akıllı telefonumu aşırı kullandığımı düşünüyorum.				

Uygulama Yönergesi

Toplam puan tüm maddelerin toplamı ile elde edilir. Faktör puanları faktördeki maddelerin toplamı ile elde edilir. Ters kodlanması gereken madde yoktur.

Alt Faktörler; Faktör 1 (Meşguliyet) = 1,2,3,4,5,6,13,14,15

Faktör 2 (Kontrol Kaybı)=9,10,16,18

Faktör 3 (Aşerme)=7,8,12

Faktör 4 (İçgörü)= 21,22,23

Faktör 5 (Aşırı Kullanım)=11,19

Faktör 6 (Diğer alanların ihmal edilmesi)=17,20