



| Araştırma Makalesi / Research Article |

## Relationships Between Phubbing and The Five Factor Personality Traits

### Sosyotelizm ile Beş Faktör Kişilik Özellikleri Arasındaki İlişkiler

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#### Keywords

1. phubbing,
2. extraversion,
3. conscientiousness,
4. agreeableness
5. neuroticism,
6. openness

#### Anahtar Kelimeler

1. sosyotelizm
2. dışa dönüklük
3. yumuşak başlılık
4. sorumluluk
5. nevrotizm
6. deneyime açıklık

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#### Abstract

*Purpose:* Personality traits that distinguish the individual from others can be shown as one of the most important reasons of the individual's behavior. In this study, it was aimed to determine the predictive effect of personality traits on phubbing by considering the relationship between phubbing and personality traits (extraversion, conscientiousness, agreeableness, neuroticism, and openness).

*Design/Methodology/Approach:* The study group of the research consisted of 1186 [Female: 642 (54.1%), Male: 544 (45.9%)] individuals living in different provinces of Turkey. Simple random sampling method was used in the study. The ages of the participants were range from 15-70 (Mean  $\pm$  sd = 31.24  $\pm$  11.38). The research data were collected using Phubbing Scale, Adjective Based Personality Test and Personal Information Form. Descriptive statistics, t-test, One-Way Anova, Pearson correlation, and hierarchical regression were used in the analysis of the research data.

*Findings:* According to the findings obtained from the study, there was no significant relationship between phubbing and extraversion. While there was a significant positive relationship between phubbing with neuroticism and openness. There were negative relationships between phubbing with conscientiousness and agreeableness. According to the preliminary analysis, while gender did not differentiate phubbing scores significantly; marital status, educational level and age significantly differentiated phubbing scores. According to the results of the hierarchical regression analysis, it has been found that conscientiousness, agreeableness, neuroticism, and openness were predictors of phubbing.

*Highlights:* Personality traits are an important factor that needs to be addressed in order to understand phubbing behavior. The research findings were discussed in terms of literature and suggestions are made.

#### Öz

*Çalışmanın amacı:* Bireyi diğerlerinden ayıran kişilik özellikleri bireyin davranışlarının en önemli sebeplerinden biri olarak gösterilebilir. Bu çalışmada sosyotelizm ve kişilik özellikleri (dışa dönüklük, yumuşak başlılık, sorumluluk, nevrotizm ve deneyime açıklık) arasındaki ilişkiye bakılarak kişilik özelliklerinin sosyotelizm üzerindeki yordayıcı etkisini saptamak amaçlanmıştır.

*Materyal ve Yöntem:* Araştırmanın çalışma grubu Türkiye'nin farklı illerinde yaşayan 1186 [ Kadın: 642 (%54.1), Erkek:544 (% 45.9)] katılımcıdan oluşmaktadır. Çalışmada basit tesadüfi örnekleme yöntemi kullanılmıştır. Katılımcıların yaşları 15-70 (Ort  $\pm$  ss = 31.24  $\pm$  11.38) arasında değişmektedir. Araştırmanın verileri Sosyotelizm Ölçeği, Sıfatlara Dayalı Kişilik Testi ve kişisel bilgi formu kullanılarak toplanmıştır. Araştırma verilerinin analizinde betimsel istatistikler, t testi, tek yönlü varyans analizi (Anova), Pearson korelasyonu ve hiyerarşik regresyon kullanılmıştır.

*Bulgular:* Araştırmadan elde edilen bulgulara göre sosyotelizm ile dışadönüklük arasında anlamlı bir ilişkinin olmadığı saptanmıştır. Sosyotelizmle nevrotizm ve deneyime açıklık arasında anlamlı pozitif bir ilişki saptanırken; sosyotelizmle yumuşak başlılık ve sorumluluk arasında anlamlı negatif bir ilişki saptanmıştır. Yapılan ön analize göre cinsiyet sosyotelizm puanlarını anlamlı farklılaştırmazken; medeni durum, eğitim düzeyi ve yaş sosyotelizm puanlarını anlamlı farklılaştırmaktadır. Yapılan hiyerarşik regresyon analizi sonuçlarına göre yumuşak başlılık, sorumluluk, nevrotizm ve deneyime açıklığın sosyotelizmin yordayıcıları olduğu saptanmıştır.

*Önemli Vurgular:* Kişilik özellikleri, phubbing davranışını anlamak için ele alınması gereken önemli bir faktördür. Araştırma bulguları alan yazın açısından tartışılarak önerilerde bulunulmuştur.

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## INTRODUCTION

People now use their smartphones for many purposes besides communicating. They can do their work via the internet by using their phones for many issues such as listening to music, following social media, not missing the news, banking transactions, making reservations, shopping or doing research on a topic they are curious about. In this way, people had the opportunity to do things that they could do in a certain place before, on the move and wherever they want. This has increased the interest in smartphones to a very high level and made us addicted to these devices (Al-Saggaf & MacCulloch, 2018). Smart phones, which facilitate social interaction with people in close proximity or on the other side of the world by allowing people to communicate anywhere and with anyone, can sometimes separate people from one another despite their apparent advantage in bringing people together (Turkle, 2012). Because people continued their activities with their smartphones even while meeting face to face with other individuals, and this situation led to the emergence of a behavior called phubbing, which is defined as being busy with their phones by ignoring others in social environments (Macquarie Dictionary, 2013). Phubbing carries more devastating and hidden dangers than many virtual addictions. Therefore, it is seen that smart phones turn into a problem that arises as a result of the misuse and excessive use of the internet instead of increasing social interactions (Davey et al., 2016). When examined carefully, it is seen that phubbing is a kind of social exclusion behavior (Roberts & David, 2017). Thus, phubbing behavior negatively affects the social development of the individual and prevents the individual's communication and interaction in social environments (Luk et al., 2018). In studies on the effects of phubbing suggests that people perceive their interactions in a lower quality (Ranie & Zickuhr, 2015), are less satisfied with their interactions (Vanden-Abeelee et al., 2016), trust their interaction partner less (Cameron & Webster, 2011), feel less close to their interaction partner when a phone is present (Misra et al., 2014), and have negative emotions (Roberts & David, 2016). Phubbing is generally perceived as disrespectful, rude, and socially inappropriate behavior (Vanden-Abeelee et al., 2016). Studies show that phubbing is associated with lower perceived communication quality (Chotpitayasunondh & Douglas 2018). In addition, research results on phubbing report that this addictive behavior has a negative effect on adolescents, family members, social relationships and couple relationships (Al-Saggaf et al., 2019; Blachnio & Przepiorka, 2019; Barrios-Borjas et al., 2017; Guazzini et al., 2019). Roberts and David (2016) found that phubbing affects a person's well-being and is associated with depressive feelings. It has been determined that phubbers are less satisfied with their lives and feel more lonely than other individuals (Blachnio & Przepiorka, 2019). This increasingly widespread behavioral tendency can lead to problems related to psychopathological and social interaction (Karadağ et al., 2016). Because people focused on the relationships reminded by their phones, not the real social environment (Broadbent, 2016). The physical and psychological consequences of the abuse of phones in this way also manifest themselves as musculoskeletal disorders, pain, disruption in daily routines, sleep disturbances, decreased physical activity, stress, communication problems, deprivation, decreased academic performance, loneliness, changes in relationships (Tangmunkongvorakul et al., 2019). Thus, as a natural consequence of these situations, the use of technology also reduces life satisfaction (McDaniel & Coyne, 2016). As a result, phubbing behavior is a behavior that negatively affects communication, and if we do not realize the seriousness of this problem, it will have a much more negative impact on our relationships and mental health (Gökdağ, 2018). It is known that phubbing negatively affects various relational results such as impression formation and relationship quality in interpersonal relationships (Krasnova et al., 2016; Miller-Ott & Kelly, 2017; Vanden Abeelee et al., 2016). Although the factors that lead to phubbing are listed as mobile phone addiction, internet addiction, social media addiction, mobile game addiction and nomophobia (Afdal et al., 2019), the phubbing tendency is affected by the characteristics of individuals. It is thought that phubbing, a behavior that is increasingly common and that almost all of us are exposed to and that we do to other people from time to time, may be related to personality traits as in other types of addiction. In the literature, personality traits, which are defined as the qualities that distinguish the individual from others, can be shown as one of the most important causes for an individual's behavior (Gustavsson et al., 2003). Because personality traits can affect behavior and can be associated with many aspects of behavior. Because of this effect, personality traits expressed as the big five were taken into account in this study. Personality is the distinctive aspect of the individual that expresses the beliefs, thoughts, behaviors and attitudes of the individual (Richards & Schmidt, 2002). In addition, personality is the combination of innate temperament, and characteristics that emerge in different situations that differentiate the individual from others (İbrahimoğlu et al., 2013). These characteristics, which define different aspects of a person, distinguish a person from others and provide the opportunity to predict the person's future behavior (Bulut & Yılmaz, 2020). Numerous ideas about personality have been put forward and different researchers have reached findings about five dimensions of personality by using different personality data. The Five Factor Personality Model has been determined by comprehensive analyzes of different personality scales and analyzes based on adjective questions, and these five personality traits are widely accepted (Demirci et al., 2007; Lynam & Miller, 2015; Pervin & John, 2013). The five-factor theory of personality seems to combine all these different views under a single heading, and the results of the five-factor model are universal (Bacanlı et al., 2009). These five basic personality traits are; extraversion, conscientiousness, agreeableness, neuroticism, and openness (Goldberg, 1993; Harwood et al., 2015; İbrahimoğlu et al., 2013; Saucier et al., 2005). Being extraversion includes qualities such as being sociable, ambitious, sociable, aggressive and talkative (Barrick & Mount, 1991). It has been determined that those with such personality traits communicate well, enjoy spending time with other people, and attach importance to social life (Merdan, 2013). Introverted individuals, which are the opposite of

extraversion, are shy, passive, lonely, not seeking risk and excitement (Floros & Siomos, 2014), and these individuals generally prefer to spend time alone (Karim et al., 2009). Those with agreeableness can have positive characteristics such as compassion, altruism, emotional support, and on the other hand, they may also have characteristics such as apathy, hostility, selfishness and jealousy (Digman, 1990). But mostly these people have a tendency to be collaborative, flexible, kind, mild-mannered, forgiving, and tolerant (McCrae & John, 1992). Individuals with neuroticism feature behaviors such as being anxious, depressed, angry, embarrassed, emotional, and insecure (Buckley & Doyle, 2017; Erdheim et al., 2006). Openness includes features such as scientific and artistic creativity, original thinking, curious, imagination, intelligence, farsightedness, aesthetic, and artistic sensitivity (Chong et al., 2014; Judge et al., 2002). Among the five factor personality traits, this feature includes the highest cognitive aspect (İbrahimoğlu et al., 2013). Those who are conscientiousness are very good in planning, organizing and running things well. They are disciplined, obedient, organized, and success-oriented individuals (Buckley & Doyle, 2017; McCrae & Costa, 1991). Those who are not conscientiousness behave the opposite of these traits.

Personality traits are the most important factor that enables us to understand how individuals behave with smartphones on the internet. Because it is not possible to define behaviors on the internet without knowing people's personality traits (Amichai-Hamburger & Vinitzky, 2010). In this respect, individual's personality traits can be determinant in their attitudes towards technology use. Erzen et al. (2021) state that neuroticism and being conscientiousness predict phubbing behavior. When the literature is examined, it is seen that there are studies focused on the relationship between the five major personality traits and the internet/smartphone addiction that cause phubbing. (Kayış et al., 2016; Kuss et al., 2013; Servidio, 2014; Zhou et al., 2016). In addition, it is seen that the attitude of using smart phones, which is the main dynamic of phubbing, is related to personality traits (Aktaş & Yılmaz, 2017; Bal & Balcı, 2020; Işık & Kaptangil, 2018; Karaaziz & Keskindağ, 2015; Karahancı, 2018). The emergence of phubbing behavior is directly related to the existence of smartphones and internet applications (T'ng et al., 2018). In addition to these triggering factors, it is assumed that one of the important dynamics affecting phubbing is also personality traits. Considering the literature, the number of studies directly addressing the relationship between phubbing and personality traits is also limited (Çikrikci et al., 2019; Erzen et al., 2021; T'ng et al., 2018). The results of these few studies are not in parallel with each other. For this reason, it is thought that new studies that will provide more data are needed in order to obtain results that we can make comparisons and generalizations. This study will shed light on how personality traits predict this technology-related behavior. The lack of a comprehensive framework defining the relationship between personality traits and phubbing behavior has also been a strong basis for this study to fill a large literature gap. In this study, it was aimed to determine whether personality traits predict phubbing behavior or not. For this purpose, the accuracy of the following hypotheses was tested.

H<sub>1</sub>. Age, sex, marital status and educational level significantly differentiate phubbing scores.

H<sub>2</sub>. There are significant relationships between phubbing and personality traits (extraversion, conscientiousness, agreeableness, neuroticism, openness).

H<sub>3</sub>. Personality traits (extraversion, conscientiousness, agreeableness, neuroticism, openness) significantly predict phubbing behavior.

## METHOD

### Research Model

This research is a correlational survey model to examine the relationships between phubbing and personality traits (extraversion, conscientiousness, agreeableness, neuroticism, openness). Karasar (2008) expresses the correlational survey model as a model that aims to determine whether there is an existing relationship between variables and if there is an existing relationship, the level of change of this relationship together.

### Participants

This study was carried out with the participation of 1186 volunteers living in different provinces of Turkey [Female: 642 (54.1%), Male: 544 (45.9%)]. The ages of the participants ranged from 15-70 (Mean  $\pm$  sd = 31.24  $\pm$  11.38). A wide age range was chosen to make comparisons between the age groups of the participants. 531 (44.8%) of the participants were married, 665 (55.2%) were single. The simple random sampling method was used in the study and the volunteering of the participants was taken as a basis. The sampling method in which each item is taken with the probability of being selected equal to the sampling unit is called simple random sampling. In this sampling type, the probability that all units in the universe will be selected as sampling is equal. Therefore, the selection of a unit selected for the sampling does not affect the selection of other units (Büyükoztürk et al., 2017; Kerlinger & Lee, 1999).

Socio-demographic characteristics of the participants are presented in Table 1.

**Table 1. Socio-demographic characteristics of the participants**

	N	Average of Age	Marital Status		Age Range				Educational Level				
			Married	Single	15-19	20-29	30-39	40 and over	Primary	High school	Associate degree	License	Master
Female (f)	642	30.08	270	372	74	320	98	150	108	171	83	262	18
Male (f)	544	32.61	261	283	34	247	118	145	91	140	86	199	28

## Data Collection Tools

### Personal Information Form

It is a form developed to determine the socio-demographic characteristics of the participants. The personal information form developed by the researcher consists of information such as the age, sex, marital status, and educational level of the participants.

### Phubbing Scale

The Phubbing Scale is a scale developed to measure the phubbing tendency of individuals. The scale is a total of 10 items with two factors. The factors are communication disorder (five items;  $\alpha=.87$ ) and cell phone passion (five items;  $\alpha=.85$ ). The scale is a 5-point Likert type ranging between Never (1) and Always (5). The lowest and highest scores that can be obtained from the scale are between 10 and 50. The score of 40 and above indicates phubbing addiction of individuals (Karadağ, et al., 2015). In this study, the internal consistency coefficient of the scale was calculated using the Cronbach's Alpha method and was found as .83.

### Adjective Based Personality Test

The Adjective Based Personality Test developed by Bacanlı et al. (2009) is a Likert-type scale consisting of 40 adjective pairs that can be graded between 1-7. The scale consists of five sub-dimensions. The sub-dimensions of the scale are extraversion, conscientiousness, agreeableness, neuroticism, openness. These five dimensions explain 52.63% of the scale variance. The factor loads of the five dimensions range between .37 and .79. The test-retest reliability coefficient was found to be .85 for extraversion, .86 for agreeableness, .71 for conscientiousness, .85 for neuroticism, and .68 for openness. The Cronbach Alpha coefficient of the scale was found as .89 for extraversion, .87 for agreeableness, .88 for conscientiousness, .73 for neuroticism, and .80 for openness. In this study, the internal consistency coefficient of the scale was calculated by Cronbach's Alpha method as .81 for extraversion, .75 for agreeableness, .76 for conscientiousness, .62 for neuroticism, and .73 for openness.

### Procedure

Before using the scales, permission was obtained from the researchers who developed the scales. In addition, a certificate of ethical compliance was obtained from the ethics committee of Niğde Ömer Halisdemir University, numbered 11/09 / 2020-40198 and dated 12/09/2020. During the application, after explaining the purpose of the research to the participants, the Phubbing Scale, the Adjective Based Personality Test and a personal information form were applied. It was explained how to fill the scales so that the participants did not answer incorrectly. It was aimed to prevent social acceptance error by expressing to the participants that their responses to the scales would be kept confidential. The application of the scales took approximately 20 minutes.

### Data Analysis

Within the scope of this research, the relationship between variables was examined and, first of all, the homogeneity of the data was tested. The sample had a normal distribution. The skewness values range from -.47 to .26 for all variables; kurtosis values were in the range of -.57 to -.15 for all variables. The skewness and kurtosis coefficients of the scores being close to  $\pm 1$  limits can be interpreted as the scores do not deviate excessively from normal (Büyüköztürk et al., 2010; Huck, 2008). T-test, one-way analysis of variance (ANOVA), Pearson correlation coefficient, hierarchical regression analysis were used in data analysis. Normality and linearity assumptions were found to be at the desired level in the analyzes. In this regard, it was found that there were significant relationships between dependent and independent variables, which are a prerequisite for regression (Table 4). The data set were examined for outliers, and considering the significance level of .001 (Büyüköztürk, 2014), no data with outlier

values were found in the data set according to the Mahalanobis distance value. Tolerance > 0.2 and VIF < 10. These values show that the data set has acceptable values (Green & Salkind, 2010). The Durbin-Watson test, which is used to test autocorrelation, should have a value of 1.5-2.5 (Kalaycı, 2010) in this study is 1.70. The data were analyzed in SPSS 22 program.

## RESULTS

### Preliminary Analysis

**Table 2. Effect of sex and marital status on phubbing**

			$t_{(1182)}$	$p$
<b>Sex</b>	Female (n=642) Mean ± Sd	Male (n=544) Mean ± Sd	-1.87	.06
	27.19 ± 7.68	26.38 ± 7.15		
<b>Marital Status</b>	Married (n=531) Mean ± Sd	Single (n=655) Mean ± Sd	-10.76	.00
	24.35 ± 7.47	28.82 ± 6.81		

T-test was performed to determine whether sex and marital status significantly differentiate phubbing scores. When table 2 is examined, it is observed that the phubbing scores of the participants do not differ significantly according to sex ( $t_{(2-1182)} = -1.87$ ,  $p > .05$ ). On the other hand, it was found that there was a significant difference according to marital status ( $t_{(2-1182)} = -10.76$ ,  $p < .05$ ). Married individuals had lower phubbing scores than single ones.

**Table 3. Effect of educational level and age on phubbing**

		$N$	$\bar{X}$	$Sd$	$F$	$p$
<b>Educational Level</b>	Primary	199	22,68	8,62	22.31	0.00*
	High school	311	26,66	7,51		
	Associate degree	169	28,01	6,21		
	License	461	28,02	6,64		
	Master	46	29,39	7,01		
<b>Age Range</b>	15-19 arası	108	30,75	7,47	55.88	0.00*
	20-29 arası	567	28,37	6,22		
	30-39 arası	216	26,46	7,29		
	40 and over	295	22,66	7,89		

$p < .001$

One-way analysis of variance (Anova) was conducted to determine whether the educational level and age of the participants significantly differentiated their phubbing scores. When table 3 is examined, it is seen that educational level and age significantly differentiate phubbing scores ( $p < .001$ ). In terms of educational level, it is seen that the average phubbing of the primary school graduates is much lower than the other educational levels. Considering at the age groups, it is seen that the frequency of phubbing is less in those who are 40 and over. Considering these findings, it can be said that the frequency of phubbing decreased as the participants did not use their smartphones for purposes other than communication, as the educational level decreased and the age increased. Because phubbing becomes more frequent as you use different alternatives provided by phones.

### Correlations Between Variables

When the correlation analysis results are examined in Table 4, it has been determined that there was no significant relationship between phubbing and extraversion. While a significant positive relationship was found between phubbing, neuroticism and openness; a negative significant relationship was found between phubbing and agreeableness and conscientiousness. Since the

skewness and kurtosis values of all variables are in the range of  $\pm 1$ , it can be stated that the sample has a normal distribution (Tabachnick & Fidell, 2013).

**Table 4. Descriptive statistics and correlations**

Variables	Mean $\pm$ Sd	1	2	3	4	5	6	Skewness	Kurtosis
1. Phubbing	26.82 $\pm$ 7.45	1.00						.13	-.15
2. Extraversion	24.61 $\pm$ 6.91	.01	1.00					.26	-.29
3. Neuroticism	45.11 $\pm$ 8.96	.15*	-.12*	1.00				-.20	-.57
4. Openness	40.07 $\pm$ 7.72	.10*	.55*	-.10*	1.00			-.42	-.18
5. Agreeableness	48.32 $\pm$ 8.20	-.19*	.21*	-.36*	.27*	1.00		-.40	-.21
6. Conscientiousness	37.12 $\pm$ 6.96	-.21*	.46*	-.19*	.34*	.41*	1.00	-.47	-.22

\* $p < .01$

### Regression Analysis Summary

Since the marital status, age and educational level of the participants significantly differentiated the phubbing scores, it was defined as a dummy variable and included in the regression analysis. Extraversion was not included in the regression analysis due to the lack of a significant relationship between extraversion and phubbing. A hierarchical regression analysis was conducted to determine to what extent the participants' personality traits (conscientiousness, agreeableness, neuroticism, openness) predicted phubbing behavior and the results are given in Table 5.

**Table 5. Hierarchical regression analysis summary**

Dependent Variable	Independent Variable	R <sup>2</sup>	F	$\beta$	t
Phubbing	1. Step				
	Age			-.19	-5.35*
	Marital Status	.13	59.25*	-.16	-5.03*
	Educational Level			-.09	-2.63**
	2. Step				
	Age			-.18	-5.22*
	Marital Status	.16	55.88*	-.15	-4.55*
	Educational Level			-.09	-2.79**
	Conscientiousness			-.17	-6.32*
	3. Step				
	Age			-.18	-5.08*
	Marital Status	.17	47.41*	-.15	-4.55*
	Educational Level			-.09	-2.67**
	Conscientiousness			-.13	-4.46*
	Agreeableness			-.10	-3.40**
	4. Step				
Age			-.18	-5.09*	
Marital Status	.17	40.42*	-.15	-4.54*	
Educational Level			-.08	-2.56**	
Conscientiousness			-.13	-4.34*	
Agreeableness			-.08	-2.56**	
Neuroticism			.06	2.17**	

	Age			-.17	-4.92*
	Marital Status			-.13	-3.98*
	Educational Level			-.06	-1.87**
5. Step	Conscientiousness	.18	36.89*	-.16	-5.24*
	Agreeableness			-.10	-3.18**
	Neuroticism			.06	2.23**
	Openness			.10	3.64*

\*p < .001, \*\*p < .01, \*\*\*p < .05

When Table 5 is examined, according to the results of the hierarchical regression analysis, while dummy variables are 13% predictors; in 2th stage, with the inclusion of the conscientiousness sub-dimension, the predictive effect was 16%; in 3th stage, with the inclusion of the sub-dimension of agreeableness, the predictive effect was 17%; in 4th stage, with the inclusion of the neuroticism sub-dimension, the predictive effect was 17%; in 5th stage, it is seen that the total predictive effect increased to 18% with the inclusion of the sub-dimension of openness. According to these results, while conscientiousness and agreeableness predicted phubbing negatively; neuroticism and openness predicted phubbing positively. While being responsible and having mild personality traits have a reducing effect on phubbing; It is seen that neurotic features and openness increase phubbing scores. Since being neurotic is a feature paired with loneliness, it can be said that individuals tend to be phubber to get rid of boredom and loneliness. In individuals who are open to experience, it can be said that curiosity and desire to research increase phone use and phubbing tendency. Educational level, age and marital status continue to have a predictive effect on regression analysis as variables that significantly differentiate phubbing scores. These characteristics of the participants should be taken into account in studies related to phubbing. It can be seen that personality traits, which are defined as personal traits, also affect individuals' attitudes towards technology use.

## DISCUSSION AND CONCLUSION

In this study, it was aimed to determine whether personality traits expressed as extraversion, conscientiousness, agreeableness neuroticism, openness predict phubbing behavior. Considering the findings of the study, it was determined that the extraversion trait was not significantly related to phubbing behavior. Whereas the personality traits of conscientiousness, agreeableness, neuroticism, openness were found to have a significant relationship with phubbing, these personality traits were found to be significant predictors of phubbing.

It was found that the phubbing scores of the participants did not differ significantly according to the sex. Regarding sex, which is one of the variables of this study, Blachnio and Przepiorka (2019) stated that women scored higher than men in phubbing behaviors such as communication disorder and phone obsession. Çizmeci (2017) also found that sex significantly differentiates phubbing scores. On the other hand, in parallel with our research data, Al-Saggaf et al. (2019); Brañas-Garza et al. (2018); Rand et al. (2016) found that sex did not affect the frequency of phubbing. In this study, it was found that phubbing scores differ significantly according to marital status, educational level and age variable. Çizmeci (2017); Benvenuti et al. (2020) found that in parallel with the data of this study, phubbing scores differed significantly according to marital status. Çizmeci (2017) also found that phubbing scores had not differ significantly according to age. In this study, age significantly differentiated phubbing scores. In phubbing studies, the ages of the participants were mentioned, but it was observed that almost all studies did not analyze age variable. Chotpitayasunondh and Douglas (2016) mentioned that age differences could be important and that this issue should be emphasized. In addition, people of all age groups are spending more time with mobile phones at a level that damages interpersonal interaction and and the time spent on phones is increasing day by day (Roberts & Pirog, 2013). This confirms that phubbing is a risk factor for all age groups, even if it is exhibited more frequently in some age groups. Yıldız-Durak (2019) stated in her study that age and educational level are predictors of smartphone addiction, which is the most important dynamic of phubbing. This result also supports our research findings. Çizmeci (2017) found that phubbing behavior significantly differentiated according to educational level. This result is also in line with the findings of this study. On the other hand, Al-Saggaf et al. (2019) stated that the frequency of phubbing did not differ significantly according to the educational level.

When the literature is reviewed, it is seen that there are studies focused on the relationship between personality traits and internet / smartphone addiction that causes phubbing, and these addictive behaviors are related to personality traits (Aktaş ve Yılmaz, 2017; Bal ve Balcı, 2020; Işık ve Kaptangil, 2018; Karaaziz ve Keskindağ, 2015; Karahancı, 2018; Kayış et al., 2016; Kuss et al., 2013; Servidio, 2014; Zhou et al., 2016). Considering the research findings, personality traits have an effect on phubbing tendency. Erzen et al. (2021) found that extraversion, openness, and agreeableness were not associated with phubbing, whereas neuroticism and conscientiousness trait were significant predictors of phubbing. Çikrikci et al. (2019) found that personality traits such as extraversion, agreeableness, conscientiousness, neuroticism, and openness were not related to phubbing. T'ng et al. (2018) found that while neuroticism functioned as a positive predictor of phubbing behavior, openness negatively predicts phubbing behavior. However, extraversion, agreeableness, conscientiousness traits were not found to be significant predictors of phubbing behavior. In the same study, internet addiction, one of the most important triggers of phubbing, was found to be the

biggest predictor of phubbing behavior. Zhou et al. (2016) found that agreeableness and conscientiousness were negatively related to internet addiction. Zamani et al. (2011) reported that agreeableness and openness were not significant predictors of internet addiction, whereas extraversion, neuroticism, and conscientiousness were significant predictors of internet addiction. Since phubbing is a behavior that manifests itself with the internet, the results of these studies are also determinant for the phubbing tendency. In addition, considering that internet and mobile phones are integrated into a single device, it is inevitable that the frequency of phubbing behavior will increase (T'ng et al., 2018). Considering the personality traits in terms of reducing the phubbing tendency, responsible individuals behave responsibly in their bilateral relations and establish a respectful and constructive relationship with the other person (Rose-Krasnor & Denham, 2009). This may be effective in reducing phubbing behavior. According to Lee et al. (2019), the reduction of neuroticism reduces social anxiety and being responsible increases the quality of face-to-face communication. The result of this situation manifests itself as a decrease in the phubbing tendency. Ehrenberg et al. (2008) reported that those with low agreeableness tended to phubbing. T'ng et al. (2018) stated that phubbing behavior will decrease with increased openness. However, few phubbing studies have limited interpretation and comparisons between findings. Therefore, more research is needed to consolidate the findings of the present study. In addition, when the results of the studies are examined, it is seen that the effects of personality traits on phubbing are very different from each other. However, in the studies conducted, it is also stated that technology-related addictions were closely related to the personality traits of individuals (Dalbudak & Evren, 2014; Taş & Ayas, 2015). However, it is thought that there are other factors that affect this behavior besides personality traits. For this reason, it can be said that the emotions that people experience at that moment while performing certain behaviors and, accordingly, the mental structure they are in have an effect on whether or not that behavior will be performed. Because emotions have an effect on behavioral responses (Mayer & Salovey, 1995). Therefore, it can be observed that our emotions, which reveal our mood, are in all the components (e.g. emotions, thoughts, behavior and physiology) of reaction (Koole, 2010). Of course, the lack of sufficient studies on phubbing also limits these comparisons.

There is almost no one who does not use the phone in today's world. With the widespread use of internet technology, the rate of using smart phones has increased significantly. For this reason, the risk of phubbing increases even more. It can be seen that this new problem, which has an impact on social life and communication, is gradually growing. In order to solve this problem, it is necessary to focus on the effect of personality traits that predict the problem. Considering the results of the research, it is seen that personality traits are related with phubbing tendency. Since personality affects many behaviors, emotions and attitudes, it is seen that personality has an effective role on individuals' technology-related habits. It is important because the relationship between phubbing and personality traits will provide clarity of phubbing and contribute to the determination of the content of intervention programs to be developed in the field of psychology. Also phubbing is now a known concept; however, it is a behavioral problem that is not adequately recognized conceptually and awareness is not sufficient. For this reason, it has useful results for the detailed introduction of this behavioral problem both to professionals working in the field and to those who conduct academic studies. This study also has results that will raise awareness to include phubbing in the work programs of institutions that work on technology addiction. It is important to raise awareness on this issue in schools and mental health units. Comparative studies can be conducted by repeating this research with samples with different socio-demographic characteristics. The study has some limitations. In this study, the causal relationship between the variables could not be determined because the data were obtained by survey design. A small number of variables were used. The use of other variables that cause phubbing in research contributes to the understanding of phubbing.

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The author declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article. Because, this study was conducted by a single author.

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#### **Statements of publication ethics**

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

#### **Author contribution statements / Researchers' contribution rate**

There is only one author in this study. All stages of the current study were carried out by the author.

#### **Ethics Committee Approval Information**

A certificate of ethical compliance was obtained from the ethics committee of Niğde Ömer Halisdemir University, numbered 11/09/2020-40198 and dated 12/09/2020.

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