



# Examination of the Relationship between Phubbing and Continuous Anger and Anger Expression Styles in Adults

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## ABSTRACT

This research examines the relationship between phubbing (sociotetism) and continuous anger and anger expression styles. In addition, it aims to search whether there is a significant difference between phubbing and continuous anger and anger expression styles according to some demographic information of the sample. This research is a quantitative study and a relational survey model was used. This study was conducted on an online platform on 303 people, 188 female and 115 male men, between the ages of 18-64 living in Turkey. Demographic information form, phubbing scale, continuous anger and anger expression scales were used in this study. In the data analysis, Pearson correlation coefficient, independent groups t-test, Anova and post-hoc test were used. According to the findings, it is seen that there is a significant correlation between phubbing and continuous anger and anger expression styles. At the same time, analyzes were made with the demographic information obtained from the sample and some findings were found. As a result of the literature review, not many studies were found about these two variables in Turkey. No research has been studied these variables together; from this aspect, the research is important for the literature. This study was expected to be a guiding study for the future researches. However, it is thought that the results of this research will provide perspective when working in mental health, especially in the field of smartphone and anger in clinical applications.

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Keywords:

Phubbing, sociotetism, continuous anger, anger expression styles, young adults

## 1. Introduction

Human life is changing and developing day by day with the effect of technology. Technology raises the standard of living and at the same time simplify lives. When it is looked at today's world, almost no person does not use technology in at least one part of her/his life. With the inclusion of smartphones worldwide, it is an inevitable fact that people do most of their work through them. Smartphones have affected everybody's life both positively and negatively. Many studies have found that people also use technology when socializing with others. This harms the social relations (Parmaksız, 2020; Chotpitayasunondh and Douglas, 2018; Karaköse, 2019). This situation has led to the emergence of the concept which calls "phubbing". Phubbing is described as dealing with the phone in the presence of others. It is seen as social rudeness. Although it can be seen at any age, it has become more common among young people. Rather than being an interpersonal problem, it has now turned into a global problem. It causes a decrease in communication. Many psychological problems can occur pathologically with people who have reduced social communication and interaction because human race is social being who needs to have communication with others. Problems like depression, anger and anxiety, can be seen at the people who have decreased communication with others. Increasing the

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amount of time, especially young people spend on their smartphone causes researchers to focus on this matter and think about the situations in which phubbing occurs and what causes phubbing. Therefore, the subject of this study has recently become one of the curial research topics in the world and Turkey.

### **1.1. Phubbing**

Technology, which is one of the benefits of the developing and changing world, appears in many areas of life. It is an undeniable fact that people live together with technology and do most of their work through it. The increasing use of the telephone has attracted attention in recent years. According to a study conducted in 2019, the number of smartphone users in Turkey is approximately 47 million. It corresponds to more than half of the population and is expected to increase (Parmaksız, 2019). According to another study conducted in 2018, it was found that smartphone users in Turkey look at their phones for control purposes seventy-eight times a day. The finding shows that smartphone users check their phones every 13 minutes. In the same study, %66 of these users are also aware that they use their phones more than necessary (Yıldırım & Ünal, 2020). Excessive phone use poses a risk in some issues, the most important is social communication. When people show interest in their phones, they cannot focus on the people in their physical environment; this disrupts the quality of social life and creates problems in communication between people interacting with the person (Parmaksız, 2020). Smartphones, which have the power to shake social relationships deeply, entered all people lives quickly and made their effects felt on relationships in a short time. One of the most important concepts in this regard is phubbing. Since it is a new concept in the literature, phubbing has not been sufficiently researched. In 2012, the concept of phubbing was created by a team of experts in the field, combining the words phone and snubbing, to produce a new word to explain the event of deliberately ignoring someone while using a mobile phone. Phubbing is a behavior in which people ignore the person next to them by engaging with their phone instead of interacting with the people there. In other words, instead of communicating with the people around them, they make phone calls, thus avoiding their perception of interpersonal relationships. With its entry into the world literature, it has also attracted the attention of researchers and some researches have been conducted on this topic (Parmaksız, 2019). Smartphone use decreases the quality of social interaction between individuals. According to a study, a lower empathy level was found in conversations with a smartphone at the table than in conversations without a smartphone (Chotpitayasunondh & Douglas, 2018). Little is known about what causes or causes phubbing. Existing findings are used to understand the factors predicting phubbing behavior. In a study by Koca (2019), it was stated that one of the factors that trigger phubbing is phone addiction.

A study on smartphone, social media and game addiction of university students was conducted by Karadağ et al. (2016), and it was determined that the most important determinants of phubbing were smartphones, text messages, social media and internet addiction (Yıldırım & Ünal, 2020, p. 8). Socializing only by phone while in a social environment harms interpersonal relations, and as a result, it causes some problems in individuals. Karaköse (2019) discussed these in a study. In this study conducted on students, a significant relationship was found between smartphone addiction and life satisfaction and depression. As phone addiction increases, life satisfaction decreases. In the same study, it was found that as phone addiction increased, depression increased. In the studies of Chotpitayasunondh and Douglas, it was found that there is a correlation between smartphone abuse, internet abuse and fear of missing out. Still, although there is a link between these behaviors, it does not mean that they cover all the features of these behaviors. A phubbing person may not be addicted to a smartphone or the internet. Therefore, phubbing should be separated from these concepts at some point (Göksün, 2019). At the same time, how much time a person spends on the phone is an important variable. A study applied by Ergün et al. (2019) resulted a strong correlation between the duration of phone use and phubbing.

### **1.2. Continuous anger and anger expression styles**

It is natural to experience many good and pleasant emotions, it is also natural to experience unpleasant emotions. One of them is the emotion of anger. Whatever form it takes, anger is understood, accepted, and controlled. When used properly, anger is a useful emotion (Bal et al., 2019), can be learned to express and control. If this control is achieved successfully, anger can help increase understanding in problem-solving, attitude development, and interpersonal relationships. When it cannot be controlled, it causes interpersonal conflict, verbal and nonverbal attack, and aggression. In Bal et al. (2019) study, continuous anger refers to how

the person generally feels and the degree of anger. On the other hand, Anger expression styles refers to how often the person acts and the way he or she reacts to anger. Anger can manifest itself internally and externally. Inner anger is the tendency of anger to be suppressed and the amount of retention. On the other hand, external anger is the amount of expression, verbal or physical expression.

The emotion we call anger is a part of life and is necessary, but its effective and appropriate use can make a good difference in one's life. When the people evaluate the concept of anger in terms of men and women, it is inevitable that there will be certain differences due to evolutionary aspect. According to the findings of the study applied by Bal et al. (2019), it was found that anger management differed according to gender, employment status, and education. It was also concluded that men's average was higher in anger expression. Another finding of the same study was that the average score of the individuals who worked was higher than those who did not work in anger control. Based on the results of this study, it is obvious that gender, education level and work activity have a significant effect on anger expression and control. Although it is observed that gender makes a certain difference, personality traits can also reinforce this difference. The environment in which a person grew up and evolved has affected the expression of anger. The environment shapes the individuals attachment styles they grew up in. A study was applied with university students. As a result of this research, it was concluded that university students with secure attachment had low levels of continuous anger and anger-out and high levels of control (Ayyıldız & Elkin, 2016).

Anger can be a cause or a result of conflicts. In a study conducted on adolescents living in orphanages, the impact of interpersonal problem-solving skills training on structural problem-solving ability, and the amount of continuous anger was examined. Research findings showed that problem solving ability training provided a decrease in continuous anger level. The same research has shown a linear relationship between problem solving ability and anger control, and it seemed that as this ability increases, anger control skill also increases (Bedel & Arı, 2015, p.8). At the same time, in another study on depression by Köksal and Gençdoğan (2007), it was discovered that there is a correlation between depression and continuous anger, both anger in and anger out, guilt and shame. It was determined that women had more guilt and shame, while men had more anger and anger control. It was concluded that people who suffer from depression have higher continuous anger, anger in than those who do not.

What will be the source of anger has been one of the research topics. Many studies have been done in this direction. For example; Guo et al. (2014) conducted a study on mice. This study aims to find out which genes are impressed when anger is in and out. Initial analogy at the molecular level showed that genetic mechanisms can induce feelings of anger both internally and externally. Jingqianshu and Jingqianping (2015) showed the main specific purpose genes and signals include in the regulating path of granules during response to both anger-in and anger-out emotions. It is argued that this research may also be valid for humans and may work in anger-oriented treatments.

### **1.3. Phubbing and continuous anger and Anger expression styles**

There is no study in the literature related to these two variables. As explained, phubbing is the situation of isolating oneself from the environment and dealing with the phone. This can be perceived as rude by the environment. When this situation gains continuity, it is inevitable to end the people's communication after a while. This can trigger the behaviors, such as; game play dependency, internet dependency, social media dependency, smartphone dependency. While phubbing is related to these, it does not or cannot be fully covered. This study aimed to find out what kind of relationship there is between phubbing and continuous anger and anger expression styles. The main curiosity of the research is that the individual who becomes lonely will change her/his continuous anger and anger expression styles and how she/he will express it. The research aims to find out which of the anger-in, anger-out or anger control parts of an individual who exhibits phubbing will use frequently and to determine the level of continuous anger and anger expression styles. Although a limited amount of information was obtained on both issues due to national and international resource reviews, it was believed that this issue should be investigated. It is expected that phubbing will isolate the person and it is a matter of curiosity how the individual will react after this isolation. This research aims to satisfy this curiosity. Therefore, The main purpose of this research is to examine phubbing in terms of continuous anger and anger expression styles. Consistent with this primary purpose, we will first examine the correlation between shame and persistent anger and the styles of expression of anger, and then determine

whether there is a significant difference by age, gender, education level and marital status, employment status, financial income, presence of a child or children, and duration of smartphone use.

## 2. Methodology

### 2.1. Research Model

Descriptive and correlational research designs were used in this study. Data were collected using an online survey platform.. In accordance with the established model, the hypotheses of the study are as follows;

H<sub>1</sub> There is a significant correlation between phubbing and continuous anger and anger expression styles .

H<sub>2</sub> Phubbing, continuous anger and anger expression styles differ significantly by age, gender, marital status, employment status, having children or not, educational status, financial income, duration of phone use.

### 2.2. Research Sample

The research population included individuals between the ages of 18-64 living in Turkey. The study sample comprised of 303 participants who willingly participated in the research. It comprised of 188 females and 115 males. The average age of sample participated in the study was 29.86 years. The distribution of the socio-demographic information data of the sample is shown in Table 1.

**Table 1.** Socio-Demographic Information of the Sample

	Groups	N	%
Gender	Woman	188	62.0
	Man	115	38.0
	Total	303	100.0
Age	18-24 (youths)	99	32.7
	25-44 (young adults)	175	57.8
	45-64 (adults)	29	9.6
	Total	303	100.0
Education status	Primary school	4	1.3
	Secondary School	6	2.0
	High school	29	9.6
	University	196	64.7
	Master	68	22.4
	Total	303	100.0
Marital status	Single	213	70.3
	Married	89	29.4
	Total	303	100.0
Employment status	Working	159	52.5
	Not Working	144	47.5
	Total	303	100.0
Financial Income	Low	56	18.5
	Middle	216	71.3
	High	31	10.2
	Total	303	100.0
Having a Child or Children	Yes	70	23.1
	No	233	76.9
	Total	303	100.0
Duration of Phone Use	less than an hour	6	2.0
	One to three hours	97	32.0
	three to five hours	113	37.3
	Five hours and above	87	28.7
	Total	303	100.0

As shown in Table 1, of 303 participants, 188 were women (62%) and 115 (38%) were men (N= 303) and %37.7 of participants were between 18-24 years old, %57.8 were between 25-44 years old, and %9.6 were between 45-64 years old. %1.3 of the participants attended elementary school (n=4), %2 attended secondary school (n=6), %9.6 attended high school (n=29), %64.7 attended university (n=196), %22.4 had a master's degree (n=68) and above. %70.3 of them were single (n=213), %29.7 (n=89) were married, while %23.1 have children, %76.9 have no children. 18.5% of the participants have low income, %71.3 have middle income and %10.2 have high income level. %2.3 of participants are retired, %45.2 are not working, and %52.5 are working. %2 of

participants are interested in their phone for less than an hour, %32 for 1-3 hours, %37.3 for 3-5 hours, %28.7 for more than 5 hours. The average age of those participating in the study is 29.86 years ( $Ss=9.59$ ).

### 2.3. Data Collection Tools and Procedure

The questionnaire data collection method was used in this research. Demographic information form, phubbing scale, continuous anger and anger expression styles scale were included. The data was collected in November 2019. The collected data were evaluated by quantitative analysis methods using SPSS 25.0.

*Demographic Information Form:* This form consists of 8 inquiry prepared by the researchers. Demographic Information Form, which included questions about age, gender, marital status, educational status, employment status, financial income, whether they have children and the duration of mobile phone use, was given to the participants.

*Phubbing Scale:* The original version was divulged by Chotpitayasonondh and Douglas (2018). The Turkish adaptation was done by Ergün et al. (2020). The scale includes of 15 items. It is a Likert scale which has 7-point (1: Never, 7: Always). Internal validity is between .85 and .92. The scale includes of four sub-scales: Interpersonal Conflict, Nomophobia, Problem Recognition and Self-Isolation. Some of these questions were "I get worried when my phone is not near me", "People say I spend too much time on my phone", "I am happy when I pay attention to my phone instead of others."

*Continuous Anger and Anger Expression Styles Scale:* The original version belongs to Spielberger et al. (1988). It consists of 34 items. It was tailored into Turkish by Özer (1994). Items measure the presence of anger. It is a 4 Likert type measurement. "Almost Never" (1); "Sometimes" (2); "Often" (3) and "Almost Always" (4). The items measuring the level of continuous anger are items from 1 to 10, and items 13, 15, 16, 20, 23, 26, 27 and 31 measuring the amount of anger suppression. The items that measure the extent of anger are items 12, 17, 19, 22, 24, 29, 32, and 33, and the items that measure the extent of anger control are items 11, 14, 18, 21, 25, 28, 30, and 34. Some questions about the continuous anger are as follows: "I get angry when others' mistakes slow down my work." "It bothers me not to be appreciated after a good job." Some questions about anger in are as follows; "I let my anger in.", "I pout." Some questions related to anger out are "I show my anger", "I say sarcastic words to others." Finally, some of the items related to anger control are "I control my behavior," "I can stop myself before my anger gets out of control." The total score in the continuous anger and anger expression styles scale is obtained by summing the scores obtained from each item. Alpha values were observed to be between .67 and .92. It varies between .82 and .90 in its original form (Spielberger et al., 1983). Individuals can get a score between 10 and 40 from the Continuous Anger Sub-scale. Participants can get 8 to 32 points from the sum of each dimension in the Anger Expression Styles Sub-scale (Özer, 1994).

### 2.4. Data Analysis

In the study, the demographic characteristics of individuals aged 18-64 were measured with the demographic information form. The amount of phubbing was measured with the general phubbing scale. Their anger levels and expression styles were measured using the anger expression and continuous anger scale. The data obtained from the applied forms were analyzed with the SPSS 25.0 program. Accordingly, the relationship between phubbing and general anger levels, how much they suppressed their anger, how much they were able to express it and how they could control it, was analyzed with the Pearson Correlation Test. T-test was used as independent sample test to examine the variables of gender, marital status, and having children. ANOVA was used when examining variables such as age, financial situation, educational status, and duration of using the phone.

### 2.5. Ethical

In this study, all rules stated to be followed within the scope of "Higher Education Institutions Scientific Research and Publication Ethics Directive" were followed. Ethical Review Board Name: Beykent University Ethics Committee. Date of Ethics Evaluation Decision: 28.03.2022

## 3. Findings

A total of 303 people participated in this study, which was carried out to examine the relationship between phubbing and the continuous anger and anger expression styles in individuals aged 18 to 64 years. The

descriptive results related to phubbing and continuous anger and anger expression styles obtained from the analysis of the responses to the scales are demonstrated in Table 2.

**Table 2.** *The Descriptive Statistics of the Scales*

	N	Min.	Max.	$\bar{X}$	Sd	Skewness	Kurtosis	$\alpha$		
Continuous anger total	303	11.00	37.00	23.4801	5.87618	.200	.140	-.579	.280	.829
Anger in total	303	9.00	31.00	18.2409	5.12409	.018	.140	-.536	.279	.804
Anger out total	303	9.00	30.00	18.4851	4.55419	.115	.140	-.585	.279	.816
Anger control total	303	8.00	31.00	23.7888	4.36591	-.975	.140	1.570	.279	.832
CAAES Total	303	38	121	84.00	10.728	-.155	.140	1.565	.280	.782
Phubbing Total	303	15	93	43.65	18.400	.780	.140	-.096	.279	.928

In Table 2, the continuous anger subscale mean was 23.49, standard deviation was 5.88, skewness values were .200/.140, kurtosis values were -.579/.280, cronbach alpha value was .829, Anger in subscale mean 18.24, standard deviation 5.12, skewness values .018/.140, kurtosis values -.536/.279, cronbach alpha value .804. Anger out subscale mean was 18.48, standard deviation was 4.55, skewness values were .115/.140, kurtosis values were -.585/.279, cronbach alpha value was .816. Anger control subscale mean was 23.78, the standard deviation was 4.36, skewness values were -.975/.140, kurtosis values were 1.570/.279, cronbach alpha value was .832. The mean caas was 84, the standard deviation was 10.73, the skewness values were -.155/.140, the kurtosis values were 1.565/.280, the cronbach alpha value was .782. The phubbing scale mean was 43.65, standard deviation was 18.4, skewness values were .780/.140, kurtosis values were -.096/.279, cronbach alpha values were .928.

The relationship between phubbing and anger expression styles total and subscales and continuous anger were analyzed by Pearson Correlation. Analysis results are given in Table 3.

**Table 3.** *The Correlation Table of Phubbing and Continuous Anger, Anger In, Anger Out and Anger Control Sub-Scales*

		Phubbing Total	Continuous Total	Anger In Total	Anger Out Total	Anger Control Total
Phubbing Total	r	1	.453**	.106	.120*	-.123*
	p		.000	.067	.037	.032
	N	303	303	303	303	303

\*\* $p < 0.01$ ; \* $p < 0.05$

Table 3 indicated a significant positive relationship ( $r(302) = 0.45, p < .01$ ) between phubbing and continuous anger total scores. A significant positive relationship was found ( $r(303) = 0.12, p < .05$ ) between phubbing and anger out total. It means that when phubbing increases, anger out increases too and when phubbing decreases, anger out decreases too. But a significant negative relationship was found ( $r(303) = -0.12, p < .05$ ) between phubbing and anger control total. It means that when phubbing increases, anger control decreases. There is no significant relationship was found ( $r(303) = 0.11, p < .05, p < .01$ ) between phubbing and anger in total.

The t-test performed to understand whether there is a significant difference between these two variables according to gender. Analysis results were demonstrated in Table 4.

**Table 4.** *The Comparison of Phubbing And continuous Anger and Anger Expression Styles According to Gender*

Gender		N	$\bar{X}$	Sd	t	Sd.	p
CAAES Total	Woman	188	83.47	10.530	-1.114	300	.266
	Man	115	84.89	11.037			
Continuous anger total	Woman	188	23.3670	5.94794	-.429	300	.668
	Man	115	23.6667	5.77708			
Anger in total	Woman	188	17.9521	5.26545	-1.256	301	.210
	Man	115	18.7130	4.86982			
Anger out total	Woman	188	18.2553	4.49584	-1.124	301	.262
	Man	115	18.8609	4.64321			
Anger control total	Woman	188	23.8936	4.20585	.534	301	.594
	Man	115	23.6174	4.62939			
Phubbing Total	Woman	188	43.88	18.850	.275	301	.784
	Man	115	43.28	17.715			

The t-test was conducted to determine whether the participants differed significantly according to their gender in the continuous anger and anger expression styles scale ( $t(300)=1.114, p>.05$ ). The difference between the averages was not found significant. The subscales were evaluated separately, continuous anger ( $t(300)=.429, p>.05$ ), anger in ( $t(301)=1.256, p>.05$ ), anger out ( $t(301)=1.124, p>.05$ ), anger control ( $t(301)=.534, p>.05$ ). The results of the analysis show that there is no significant difference in the subscales. T-test was performed to determine whether the participants differed according to gender in the phubbing scale ( $t(301)=.275, p>.05$ ), there is no significant difference was found.

The t-test was performed to understand whether there is a significant difference between these two variables according to marital status. Analysis results were given in Table 5.

**Table 5.** *The Comparison Between Phubbing and Continuous Anger and Anger Expression Styles According to Marital Status*

	Marital Status	N	$\bar{X}$	Sd	t	Sd.	p
CAAES Total	Single	213	84.57	10.961	1.433	299	.153
	Married	88	82.63	10.134			
Continuous anger total	Single	213	23.8404	5.88994	1.696	299	.091
	Married	88	22.5795	5.80670			
Anger in total	Single	213	18.3333	5.20039	.514	300	.608
	Married	89	18.0000	4.98407			
Anger out total	Single	213	18.5352	4.51046	.266	300	.791
	Married	89	18.3820	4.70374			
Anger control total	Single	213	23.8638	4.15561	.404	300	.686
	Married	89	23.6404	4.86697			
Phubbing Total	Single	213	44.83	18.717	1.770	300	.078
	Married	89	40.73	17.467			

Table 5 indicated the results of the comparison between phubbing and continuous anger and anger expression styles according to marital status. As it is seen in the table, according to marital status  $t(300) = 1.770, p>.05$ . No significant difference was found between phubbing and continuous anger and anger expression scale  $t(299)=1.433, p>.05$ . No significant difference was found between the means.

The t-test performed to understand if there is a significant difference between these variables according to whether the sample has a child or not. The analysis findings were demonstrated in Table 6.

**Table 6.** *The Comparison Between Phubbing and Continuous Anger and Anger Expression Styles According to Having Children*

	Children	N	$\bar{X}$	Sd	t	Sd.	p
CAAES Total	Yes	70	83.06	10.258	-.833	300	.406
	No	233	84.28	10.869			
Continuous Total	Yes	69	22.8696	6.24008	-.983	300	.327
	No	233	23.6609	5.76561			
Anger In Total	Yes	70	17.7857	5.17489	-.847	301	.398
	No	233	18.3777	5.11201			
Anger Out Total	Yes	70	18.1571	4.79624	-.687	301	.493
	No	233	18.5837	4.48495			
Anger Control Total	Yes	70	24.2143	4.65908	.930	301	.353
	No	233	23.6609	4.27614			
Phubbing Total	Yes	70	41.94	17.403	-.885	301	.377
	No	233	44.16	18.695			

Table 6 indicated the results of the comparison between phubbing and continuous anger and anger expression styles according to whether the sample has a child or not; no any significant difference was found in the anger expression styles and continuous anger scale  $t(300)=.833, p>.05$ . No any significant difference was found in the phubbing scale,  $t(301)=.885, p>.05$ .

Data analysis was made according to the working status (working, not working). The t-test analysis was performed to understand if there is a significant difference in working status. Analysis results were given in Table 7.

**Table 7.** The Comparison Between Phubbing and Continuous Anger and Anger Expression Styles According to the Working Status

Employment status		N	$\bar{X}$	Sd	t	Sd.	p
Continuous	Working	158	22.9937	5.87611	1.510	300	.132
	Total	144	24.0139	5.85009			
Anger In	Working	159	18.7673	4.83159	1.887	301	.060
	Total	144	17.6597	5.38603			
Anger Out	Working	159	19.0692	4.49207	2.363	301	.019
	Total	144	17.8403	4.55067			
Anger Con.	Working	159	23.4717	4.23190	1.330	301	.184
	Total	144	24.1389	4.49804			
CAAES	Working	158	84.32	10.946	.541	300	.589
	Total	144	83.65	10.511			
Phubbing	Working	159	41.92	17.573	1.721	301	.086
	Total	144	45.56	19.153			

Table 7 indicated the results of the comparison between phubbing and continuous anger and anger expression styles according to the working status. Although no any significant difference was found between the anger expression styles and the continuous anger scores;  $t(300) = .541, p > .05$ ,  $t(301)$  but in the anger out sub-scale,  $t = 2.363, p < .05$  a significant difference was found. In other words, the working group scored higher in anger out scoring than the non-working group. In the phubbing scale,  $t(301) = 1.721, p > .05$  could not find a significant result.

The Anova analysis was performed to understand whether there is a significant difference according to educational status or not. Analysis results are given in Table 8.

**Table 8.** The Comparison Between Phubbing and Continuous Anger and Anger Expression Styles According to Educational Status

ANOVA		Sum of Squares	df.	Mean Square	F	p	Difference
Continuous	Bet. Groups	182.956	2	91.478	2.679	.070	-
	Total	10210.425	299	34.149			
Anger In	Bet. Groups	49.892	2	24.946	.950	.388	-
	Total	7879.521	300	26.265			
Anger Out	Bet. Groups	29.149	2	14.575	.701	.497	-
	Total	6234.534	300	20.782			
Anger Control	Bet. Groups	2.660	2	1.330	.069	.933	-
	Total	5753.822	300	19.179			
CAAES	Bet. Groups	446.152	2	223.076	1.950	.144	-
	Total	34196.844	299	114.371			
Phubbing	Bet. Groups	1892.634	2	946.317	2.829	.061	-
	Total	100352.284	300	334.508			

While analyzing the educational status, since there were very few primary and secondary school graduates, they were combined with senior high school and the category of senior high school and above was created. The Anova analysis was performed to understand whether there is a significant difference in educational status. No any significant difference was found according to the continuous anger and anger expression styles scale;  $F(2,299) = 1.950, p > .05$ . No any significant difference was also found due to continuous anger, and also anger in, anger out and anger control sub-scales. In the phubbing scale,  $F(2,300) = 2.829, p > .05$  could not found a significant result.

The Anova analysis was performed to understand whether or not there was a significant difference in financial income. The results of the analysis are given in Table 9.



**Table 9.** *The Comparison Between Phubbing and Continuous Anger and Anger Expression Styles According to the Financial Income*

ANOVA		Sum of Squares	df	Mean Square	F	p	Difference
Continuous	Bet. Groups	5.250	2	2.625	.076	.927	-
	Within Groups	10388.131	299	34.743			
Anger In	Bet. Groups	130.615	2	65.307	2.512	.083	-
	Within Groups	7798.798	300	25.996			
Anger Out	Bet. Groups	22.668	2	11.334	.545	.581	-
	Within Groups	6241.015	300	20.803			
Anger Control	Bet. Groups	4.984	2	2.492	.130	.878	-
	Within Groups	5751.498	300	19.172			
CAAES Total	Bet. Groups	186.335	2	93.168	.808	.447	-
	Within Groups	34456.661	299	115.240			
Phubbing	Bet. Groups	58.321	2	29.161	.086	.918	-
	Within Groups	102186.596	300	340.622			

Table 9 indicated the comparison between phubbing and continuous anger and anger expression styles according to the financial income. No any significant difference was found according to the continuous anger and anger expression styles scale;  $F(2,299) = .808, p > .05$ . No any significant result was found in the phubbing scores either.  $F(2,300) = .086, p > .05$ .

The Anova analysis was performed to understand whether there is a significant difference according to the duration of phone use. The analysis results were shown in Table 10.

**Table 10.** *The Comparison Between Phubbing and Continuous Anger and Anger Expression Styles According to the Duration of Phone Use*

ANOVA		Sum of Squares	df	Mean Square	F	p	Diff.
Continuous	Between Groups	97.125	2	48.562	1.410	.246	-
	Within Groups	10296.256	299	34.436			
Anger In	Between Groups	3.882	2	1.941	.073	.929	-
	Within Groups	7925.530	300	26.418			
Anger Out	Between Groups	15.110	2	7.555	.363	.696	-
	Within Groups	6248.573	300	20.829			
Anger Control	Between Groups	11.764	2	5.882	.307	.736	-
	Within Groups	5744.717	300	19.149			
CAAES	Between Groups	57.938	2	28.969	.250	.779	-
	Within Groups	34585.059	299	115.669			
Phubbing Total	Between Groups	10681.563	2	5340.781	17.499	.000	2>3,4
	Within Groups	91563.355	300	305.211			

Due to the small number of participants using less than one hour in the variable of telephone usage duration, the participants who used less than one hour and between 1-3 hours were combined and the 0-3 hour category was created. The Anova analysis was performed to understand whether there is a significant difference according to the duration of phone use. No any significant difference was found with respect to the continuous anger and anger expression styles scale;  $F(2,299) = .250, p > .05$ . No any significant difference was found according to the continuous anger, and also anger in, anger out and anger control sub-scales. A significant difference was found due to the phubbing scores,  $F(2,300) = 17.5, p < .05$ . Post-hoc analysis revealed where the significant difference was. While there is a significant difference between 0-3 hours and 3-5 hours, there is also a significant difference between 0-3 hours and 5+ hours.

The Anova analysis was performed to understand whether there is a significant difference according to age categories. The analysis findings are given in Table 11.

**Table 11.** The Comparison Between Phubbing and Continuous Anger and Anger Expression Styles According to the Age

ANOVA		Sum of Squares	df	Mean Square	F	Sig.	Fark
Continuous Total	Between Groups	209.908	2	104.954	3.082	.047	-
	Within Groups	10183.473	299	34.058			
Anger In Total	Between Groups	135.549	2	67.774	2.609	.075	-
	Within Groups	7793.864	300	25.980			
Anger Out Total	Between Groups	71.788	2	35.894	1.739	.177	-
	Within Groups	6191.895	300	20.640			
Anger Control Total	Between Groups	30.086	2	15.043	.788	.456	-
	Within Groups	5726.395	300	19.088			
CAAES Total	Between Groups	1219.024	2	609.512	5.452	.005	18-24>25-44
	Within Groups	33423.972	299	111.786			
Phubbing Total	Between Groups	4211.567	2	2105.784	6.444	.002	18-24>25-4,45-64
	Within Groups	98033.350	300	326.778			

Table 11 indicated the comparison between phubbing and continuous anger and anger expression styles according to the age. A significant difference was calculated in the anger expression styles and continuous anger scores;  $F(2,299)=5.45$ ,  $p<.05$ . The post hoc analysis determined that the difference was between the ages of 18-24 and 25-44. At the same time, a significant difference was compute in the phubbing scores,  $F(2,300)=6.44$ ,  $p<.05$ . In the post hoc analysis, while the difference was found between the ages of 18-24 and 25-44, there was also a difference between 18-24 and 45-64. A significant difference was found in the continuous anger sub-scale,  $F(2,299)=3.08$ ,  $p<.05$ . However, there was no any difference between groups in post hoc analysis.

#### 4. The Conclusion and Discussion

This research intends to find the correlation between phubbing and continuous anger and anger expression styles. For this purpose, demographic information form, phubbing scale, and the anger expression styles and continuous anger scale were given to the participants and they were expected to answer sincerely. As a result of the analysis, it was detected that there was a significant correlation between phubbing and continuous anger and anger expression styles. At the same time, analyzes were made for two scales with the demographic information given by the participants and some findings were found. No any significant difference was found due to gender, having children, employment status, educational status and financial income. When the duration of phone use was considered, the sample showed a heap of use for three to five hours. According to the "Digital 2019 in Turkey" research conducted by a research company in Turkey in 2019, it has been revealed that individuals using social media in Turkey spend an average of 2 hours and 46 minutes per day on their social media accounts (Yıldırım and Ünal, 2020). This is a finding that matches our study. A significant difference was found between the duration of phone use and the continuous anger subscale. Participants who used less than one hour scored lower on the continuous anger scale than participants who used it for more than five hours. The amount of continuous anger was higher in participants who used the phone for more than five hours. A significant difference was found between the phone usage duration variable and the phubbing scale. The individuals who use less than an hour differ significantly with those who use more than five hours. At the same time, other information obtained as a result of post-hoc analyzes is that there is a significant difference between 0-3 hours of use and 3-5 hours and 5+ hours of use. At the same time, there is a significant difference between three-five hours and five or more hours uses. While there was a significant difference between the age variable and the continuous anger and anger expression styles scale, there was also a significant difference with the the continuous anger sub-scale. This difference is between 18-24 and 25-44. The age variable also reflected a significant difference with the phubbing scale. The 18-24 age range differs between 25-44 and 45-64 age ranges. Although a significant result was obtained in the continuous anger subscale, which groups differed in the post hoc analysis was not found.

The research was conducted with 303 individuals between 18-64. According to the participants' answers, the lowest score obtained from the continuous anger and anger expression styles scale was 38, while the highest score was 121. While the lowest score on the phubbing scale was 15, the highest score was 93. Considering the average of men and women, the scores of men from continuous anger and anger styles scale are higher than

women's. This may be because men are more comfortable in experiencing and expressing anger. Women cannot show anger directly due to internal and social barriers and the fact that they are not socially welcomed (Bal; Gül & Tumorbağa, 2019). On the phubbing scale, the women's average score is higher than the average score of the men. This may be because they use the smartphone to communicate with their partner. Within the traditional understanding, it is assumed that smartphone use has increased due to women's concerns about keeping their friends informed about what they are doing, where they are, and who they are with. This may lead people to phubbing (Karadağ et al., 2016).

A significant correlation was calculated between phubbing, continuous anger and anger expression styles. The small amount of correlation is due to the small sample size. In a study conducted with a larger sample, the relationship is predicted to be high. Since there is no study about these two variables after the literature review, it is expected to lead to further research. Smartphone users willingly or unwillingly ignore the people around them in their social environment while dealing with their phones. The quality of communication with their social environment decreases, creating problems in communication in social life (Parmaksız, 2019). Depression is an expected mental health problem because phubbing isolates people. Studies have shown that phubbing harms interpersonal relationships, decreases relationship satisfaction and causes depression (Koca, 2019). As mentioned in a study by Köksal and Gençdoğan (2007), it was observed that there is a correlation between depression and the continuous anger, anger in and anger out. Depression may play an interpose role in the correlation between phubbing, continuous anger and anger expression styles. In a study by Mert and Özdemir (2018), it was found that loneliness affects smartphone addiction. In a study conducted by Błachnio and Przepiorkan (2019), it was revealed that loneliness triggers phubbing. The feeling of loneliness is one of the variables that can lead to depression.

In this study, it was expected that there would be a significant difference according to gender, but it was not found. It is expected that men tend to experience anger externally, while women tend to experience it internally. Although Gül et al. (2019) found that continuous anger and anger expression styles vary according to gender, employment status, and education level, no difference was found in this study's variables. This may be due to the similarities among participants because the study was conducted online because of the pandemic. Also, the insufficient number of our sample may affect such a result. The reason why no significant differences were found as a result of the analyzes made with the sub-dimensions of the anger expression scale and the continuous anger may also be due to the same reasons. In the study conducted by Gül et al. (2019) on continuous anger and anger expression styles, it was resulted that there was no any significant difference between continuous anger and anger control sub-scales in the analyzes made according to the gender variable of the participants. According to their research, gender; it is a factor that affects the expression of continuous anger, but it is not a factor that affects the internally living of anger and the control of anger. The reasons why women cannot express their anger directly can be both internal and social obstacles. The main reason why women cannot express their anger is that the society does not welcome them. The need for social approval may lead to suppression of anger (Gül, 2019). At the same time, since the research is conducted on an online platform, it is also among the reasons people do not reply carefully due to the length of the scales while answering the questions. There were some significant differences between the groups according to age. The significant differences were between the ages of 18-24 and 25-44 within the scope of continuous anger and anger expression scale may indicate that although 18-24 year-olds have more anger than 25-44 year-olds, they also have more control. At the same time, there was a significant difference between the groups in the continuous anger subscale, but in the post hoc analysis, it was not determined which groups they were. A significant difference was found according to the age analysis performed in the phubbing scale. Ages 18-24 differ significantly between 25-44 and 45-64 age groups. This may be because the younger generation spends more time on the phone. Although there was no relationship between the phone's duration and the continuous anger and anger expression styles, a significant relationship was found with the phubbing scale. This finding is expected. The people who use smartphone 0-3 hours differ significantly with those who use 5+ hours. Using the phone for more than five hours indicates phone addiction, and continued use in social environments indicates phubbing. This result supports this research. A significant difference was found between 0-3 hours and 3-5 hours. It has been proven that there is a significant difference in the phubbing scale that they continue to use the phone in social environments other than its purpose. It is inevitable for an individual who spends five hours or more per a day on the phone to experience phubbing. In the study of T'ng et al. (2018), internet addiction was the biggest determinant of phubbing behavior. Considering that, the internet and mobile

phones are integrated into a single device; it increases the duration of phubbing behavior. Karadağ et al. (2015) found that internet addiction positively affects phubbing behavior. As a consequence of the study conducted by Ergün et al. (2019) showed that the duration of phone use was significantly and positively related to phubbing. Based on these findings, it can be said that the probability of phubbing increases as the duration of phone use rises. Thus, when an individual deals with a high degree of smart phone use, the likelihood of developing cell phone addiction and engaging in phubbing-related behaviors goes up too. No significant difference was found between the phubbing and the anger expression styles and the continuous anger according to the education variable. It was assumed that the phubbing rate of the sample whose educational level was senior high school and below would be higher, because it was predicted that they would spend more time on the phone depending on their working status. Likewise, it was predicted that expressing anger would change with respect to the educational status, and even if there was no any significant result in this study, another study reached a relevant meaningful result. In the study conducted by Gül et al. (2019) on continuous anger and anger expression styles, educational status; It has been revealed that it is a factor affecting anger in, controlling anger and continuous anger. However, it was revealed that educational status was not a factor affecting the expression of anger. The reason for this was attributed to the fact that their low status affects their way of expressing anger. It has been estimated that people will be more likely to experience anger as suppressed internally because they prefer to be ineffective even though they get angry when faced with bad situations.

According to the marital status variable, no any significant difference was obtained between the phubbing, the anger expression styles and the continuous anger. The expected result in this variable is that single individuals score higher on the phubbing scale than married individuals. This is because married individuals cannot find much time to deal with the phone as they will be more busy with housework, bilateral relations, and children. It was predicted that married individuals would get higher scores in the continuous anger and anger expression styles scale. The reason for this is marital problems, housework, children etc. It was thought that the styles of expressing anger would differ, as there may be disagreements on these issues. However, no significant result could be reached. In the study conducted by Gül et al. (2019) on continuous anger and anger expression styles, it was resulted that there was no any significant difference between participants' anger-out, anger-in, and anger-control sub-scales in respect to marital status. According to the research, it was revealed that marital status is not a factor affecting continuous anger, anger expression, anger suppression and anger control. In a research applied by Roberts and David (2016) on romantic partners, phubbing was found as a factor that increases cell phone-related disagreements and decreases relationship satisfaction. This research obtained a different result from this research; it found phubbing to be higher in married people. According to the financial income variable, no any significant difference was figured out between phubbing and the continuous anger and anger expression styles. What is expected here is that participants with low financial income score high on the the continuous anger and anger expression styles but low on phubbing. The reason for the difference in the phubbing scale of the participants with low financial income is due to the struggle for life. Differentiation was also expected in the the continuous anger and anger expression scale. In this struggle for life, it was predicted that there would be a difference in the anger total of the participants with low financial income, but it was not found.

Analysis was also made according to the variable of having children or not. What is expected here is that phubbing is lower for people with children than for those who do not. Because people with children will spend most of their time taking care of their children, it was thought that they would not be able to deal with the phone. However, no significant difference was found. Analysis was also performed by work status. As expected, the level of phubbing is higher among those who do not work than among those who do. This is because employees use their time to truly socialize. Since those who do not work have more time, it was predicted that the time spent on the phone would be more, but no significant difference was found. At the same time, another expected employee was more successful in anger management than non-workers. As mentioned in Fitness (2002)'s study on anger, it was expected to support the finding that working people refrain from expressing their anger at work to avoid the negative consequences of anger, but no significant difference was observed. In the study conducted by Gül et al. (2019) on continuous anger and anger expression styles, it was figured out that there was no any significant difference between the anger control, anger in and anger out sub-scales of the participants according to the working status variable. According to the research, it has been determined that working conditions are a factor affecting the control of anger. But the working status;

It has been found that there is no factor affecting the continuous anger, experiencing anger internally and anger outwardly. There is a possibility that the individuals cannot experience anger because of the fear of being excluded from the environment, losing their jobs, and not finding new jobs. The low status of employees affects the way they reflect anger. It has been stated that people who work in lower status suppress their anger more and thus condemn themselves to a state of continuous anger (Fitness, 2019).

## 5. Recommendations

The fact that our sample consisted of 303 people caused our results to be weak, although some of them were significant. Research on a larger sample may increase the correlation strength. Another limitation is that the research was conducted online. It was thought that if this was a face-to-face study, the results would be more meaningful. It is recommended to pay attention to this for future researches. Since our research is conducted on the online platform, certain provinces are redundant. It is recommended for future researches to conduct a study in which participants from all over Turkey participate. In an important variable such as educational status, the primary and secondary school participants are very few. Since the research was conducted on an online platform, the participants gathered above a certain educational level (such as undergraduate, graduate). Therefore, it is recommended that further research can be carried out face-to-face and with people from all educational statuses.

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