Investigation Psychological Factors Effecting the Phubbing Behavior of Young Adults with Different Structural Equation Models

Faruk Caner YAM[1] & Hatice KUMCAĞIZ[2]

Abstract

The aim of this study is to examine the serial mediating roles of shyness, interaction anxiety, interaction anxiety, and true self-perception on the internet in the relationship between self-esteem and phubbing. A total of 646 people, including 391 women (60.5%) and 255 men (39.5%), participated in the study. The ages of the study participants ranged from 18 to 45 (mean= 28.11, SD= 8.25) data from the research were collected with the Self-Esteem Scale, Interaction Anxiety Scale, General Phubbing Scale, Revised Buss and Check Shyness Scale, UCLA Loneliness Scale-Short Form, and True Me on the Net Scale. The descriptive statistics of the data collected in the study were calculated and correlation analysis was performed to determine the relationships between the variables. Mediation analyses in the research were made by using Hayes process macro-Model 6. As a result of serial mediation analysis, it is seen that the total effect of self-esteem on phubbing is significant. In addition, it was found that shyness, loneliness, interaction anxiety, and true self-perception on the internet had a significant direct effect on phubbing. Finally, shyness, interaction anxiety, loneliness, and true self-perception on the internet were found to have significant multiple serial mediating roles in the relationship between self-esteem and phubbing.

Key Words: Phubbing, Self-Esteem, True Self on The Internet, Shyness, Interaction Anxiety, Loneliness

Genç Yetişkinlerin Phubbing Davranışları Üzerinde Etkili Olan Psikolojik Faktörlerin Farklı Yapısal Eşitlik Modelleriyle İncelenmesi

Öz

Bu çalışma, benlik saygısı ve phubbing arasındaki ilişkide utangaçlık, etkileşim kaygısı, etkileşim kaygısı ve internette gerçek benlik algısının seri aracı rollerini incelemeyi amaçlamıştır. Çalışmaya 391 kadın (%60.5) ve 255 erkek (%39.5) olmak üzere toplam 646 kişi katılmıştır. Çalışmaya katılanların yaşları 18 ile 45 arasında değişmektedir (ortalama= 28.11, SD= 8.25). Araştırmanın verileri Benlik Saygısı Ölçeği, Etkileşim Kaygısı Ölçeği, Genel Phubbing Ölçeği, Revize Edilmiş Buss ve Çek Çekingenlik Ölçeği, UCLA Yalnızlık Ölçeği- Kısa Formu ve İnternette Gerçek Ben Ölçeği ile toplanmıştır. Araştırmada toplanan verilerin betimsel istatistikleri hesaplanmış ve değişkenler arasındaki ilişkileri belirlemek için korelasyon analizi yapılmıştır. Araştırmada aracılık analizleri süreç Hayes makro-Model 6 kullanılarak yapılmıştır. Seri aracılık analizi sonucunda benlik saygısının phubbing üzerindeki toplam etkisinin anlamlı olduğu görülmüştür. Ayrıca utangaçlık, yalnızlık, etkileşim kaygısı ve internette gerçek benlik algısının phubbing üzerinde anlamlı bir doğrudan etkiye sahip olduğu bulunmuştur. Son olarak, utangaçlık, etkileşim kaygısı, yalnızlık ve internette gerçek benlik algısının benlik saygısı ve phubbing arasındaki ilişkide anlamlı çoklu seri aracılık rollerine sahip olduğu bulunmuştur.

Anahtar Kelimeler: Phubbing, Benlik Saygısı, İnternette Gerçek Ben, Utangaçlık, Etkileşim Kaygısı, Yalnızlık

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Introduction

Technological opportunities have facilitated people's daily lives, but have led to the emergence of technology addictions, which is one of the biggest problem areas of our age (Chayko, 2008p. 102; Pugh, 2017). Problems arising due to technological developments first emerged in the field of computer and internet addiction (Young, 2004, p. 410), and then new problem areas called game addiction and social media addiction were added (Malita, 2011, p. 750; Meral, 2018, p.23). With smartphones emerging as a result of rapid developments in information and communication technology, the addiction problem caused by technology has gained a new dimension (De Pasquale et al., 2015, p. 4; Geser, 2006, p. 11). The fact that smartphones have come to a position that provides multitasking (such as playing games, accessing the internet, and accessing social media) alone has started to cause individuals to use them more intensely (King et al., 2013, p. 142; Yılmaz et al., 2015, p. 29). In support of the above explanations, the research report We Are Social published in 2020a, it is set out that the level of internet access of individuals on smartphones has doubled in the last five years. The fact that individuals are very interested in their smartphones while communicating face-to-face has led to the emergence of the concept of phubbing.

Phubbing is a combination of the English words phone and snubbing (ignoring) is expressed as a situation in which the individual pays attention to the smartphone instead of focusing on the person in front of him while communicating face to face in social environments and does not communicate with his environment (Barrios-Borjas et al., 2017, p. 205; Karadağ et al., 2015, p. 69; Nazir and Pişkin, 2016, p. 43). It is stated in some studies that phubbing does not only harm the individuals exhibiting these behaviors, but also harms the individuals around them, and therefore it may harm the social relations of individuals in the long term (Davey et al., 2018, p. 35; Roberts and David, 2016, p. 137). Studies indicate that technology addictions (for example, smartphones, social media, internet, FOMO, etc.) are effective in phubbing (Al-Sggaf and MacCulloch, 2018, p.6; Franchina et al., 2018, p. 2319. ; Author(a), 2020). In addition, we have revealed that individuals who exhibit phubbing behavior have high levels of depression (González-Rivera et al.,2018, p.84; Wang et al., 2017, p. 714), and their life satisfaction and well-being levels (Garrido and Delgado, 2017, p. 177) decrease. In addition to these, studies are reporting that phubbing behaviors reduce individuals' relationship satisfaction (Aagaard, 2019, p. 4; Çizmeci, 2017, p. 369; Yam, 2021, p.2083; Yam, 2023, p. 325) and cause communication problems between parents and children (Pancani et al., 2020), and cause conflicts among employees at work (Roberts, and David, 2020, p. 109702). The explanations above indicate that phubbing has a more complex and holistic structure than other technological addictions.

Self-Esteem and Phubbing

Self-esteem is a concept that expresses the individual's level of self-worth and satisfaction with his/her characteristics (Rogers, 1961, p.34). Self-esteem is a factor that affects individuals' planning, displaying their behavior, and being successful in this regard (Saygılı et al., 2015, p. 213). When we examined the literature limited number of studies examine the relationship between self-esteem and phubbing. However, many research results reveal a negative relationship between the number of self and technology addictions. For example, individuals with low self-esteem were found to have high smartphone addiction (Choi & Yoo, p. 79, 2015; Park & Choi, 2017, p. 284), social media addiction (Balcı et al., 2020, p. 311; Hawi & Samaha, 2017, p. 580), and internet addiction (Stieger & Burger, 2010, p. 684). Similarly, in the literature, it is stated that social media addiction (Al-Sggaf & MacCulloch, 2018, p. 5; Hanika, 2015, p. 46), internet addiction (Karadağ et al., 2016, p. 241; Yan & Wan, 2017, p. 7), smartphone addiction (Davey et al., 2018, p. 35; Munatirah & Anisah, 2018, p. 9; Yam & İlhan, 2020, p. 54), game addiction (Karadağ et al., 2016, p. 245) and fear of missing out (Franchina et al., 2018, p. 2319; Yin et al., 2019, p. 3881; Author(a), 2020) are effective on phubbing behaviors. When the above research findings are evaluated together, it is seen that individuals with low self-esteem are more likely to use their smartphones and related technological elements in society. Therefore they are more likely to exhibit phubbing behavior. For this reason, it is noteworthy that it is an important research topic to examine whether self-esteem has direct or indirect effect on individuals' phubbing behaviors.

Shyness as a Mediator

Shyness is an essential factor that hurts individuals' ability to initiate and maintain interpersonal relationships. Shyness is moving away from social environments due to the anxiety and fears individuals feel when they cannot behave appropriately in social environments (Zimbardo, 1977, p. 38). In another definition, shyness is defined as an interpersonal problem caused by low self-esteem, shyness, and fear of rejection in interpersonal relationships (Carducci, 2000, p. 43). Buhrmester et al. (1988, p. 999) explained

shyness based on social skills and explained it as a state of distrust in individuals' interpersonal communication skills and refraining from initiating social relations. It is a fact that shy individuals are very anxious in social situations and are reluctant to talk to other people (Cheek & Buss, 1981; Stevens, 1997, p. 335). In addition, shy individuals are less confident in their abilities, often experience feelings of inadequacy, and have low self-esteem (Huan, et al., 2014, p. 544). In support of this explanation, many studies in the literature have found that individuals with low self-esteem have high levels of shyness (Iranmanesh et al., 2019, p. 5362; Zhao et al., 2012, p. 673). These results indicate that individuals with low self-esteem make negative references to their ability to engage in social relationships and, accordingly, their shyness levels increase. With the developments in today's communication technologies, it is stated that shy individuals use online communication tools more frequently due to the anxiety they feel about communicating face-to-face (Aktaş & Yılmaz, 2016, p. 91; Wei & Lo, 2006, p. 64). In many studies, it has been concluded that individuals with high shyness have high rates of smartphone (Bian & Leung, 2014, p. 164; Han et al., 2017, p. 367), social media (Orr et al., 2009, p. 338) and internet usage (Chak & Leung, 2004; Tang & Gao, 2016). Phubbing is also explained as individuals focusing on their smartphones instead of communicating face-to-face in social environments. Considering all these explanations above, it indicates that shyness may have both a direct effect on phubbing and a mediating role in the relationship between self-esteem and phubbing.

Interaction Anxiety as a Mediator

Interaction anxiety is defined as the emotion individuals feel due to the need to establish relationships that arise unexpectedly in social environments (Leary & Kowalski, 1995, p. 139, Liebowitz, 1987, p. 151). According to another definition, interaction anxiety is expressed as the emotion individuals feel in situations where direct social relations need to be established, such as meeting new people in social environments or expressing their thoughts (Kimbrel et al., 2010, p. 374). In brief interaction anxiety is a state of stress in which the individual lives for face-to-face communication. As the relationship between self-esteem and interaction anxiety is examined, there is a negative relationship between these two concepts. In many studies in the literature, it has been reported that individuals with low self-esteem feel more interaction anxiety (Iancu et al., 2015, p. 164; Kurtyılmaz et al., 2017, p. 49; Tan et al., 2016, p. 1299). As individuals with low self-esteem have dysfunctional thoughts about their communication skills and have a high level of interaction anxiety because they believe that they will always make mistakes in society and that other people will evaluate them negatively (Kashdan & McKnight, 2010, p. 48; Schlenker & Leary, 1982, p. 641). It can be understood from the explanations above, individuals with high interaction anxiety have difficulty communicating face-to-face for this reason, it is a well-known fact that individuals with high interaction anxiety and who do not meet the need for face-to-face communication tend to use online communication tools more. In support of this explanation, in some studies in the literature, it has been reported that individuals with high interaction anxiety spend a lot of time on the Internet (Lee & Stapinski, 2012, p. 200; Weinstein et al., 2015, p. 6), social media (Dobrean & Păsărelu, 2016, p. 134) and smartphones (Elhai et al., 2018, p. 321). When all these explanations are evaluated together, it brings to mind that individuals with high interaction anxiety will be more likely to exhibit phubbing behavior by focusing on their smartphones in such environments, since they will experience hesitancy in communicating with others in social environments. This result indicates that interaction anxiety may directly affect phubbing and has a mediating role in the relationship between self-esteem and phubbing.

Loneliness as a Mediator

Loneliness is expressed as an unpleasant psychological state that individuals feel as a result of the conflict between the social relationships they want to be in and the social relationships they have experienced (Perlman & Peplau, 1982, p.128). On the other hand it is stated that loneliness is a reaction against individuals being deprived of the social relations they need and the sense of intimacy that cannot be obtained (Weiss, 1973, p. 27). One of the essential factors affecting the loneliness of individuals is self-esteem. As individuals with low self-esteem do not trust their social skills and therefore feel lonely by avoiding relationships with other individuals. In addition, the individual with low self-esteem and, accordingly, has more negative experiences in social interaction begin to feel increasingly lonely (De Jong Gierveld, 1998, p. 14). Many studies in the literature supporting the above explanations, reveal that there is a negative relationship between self-esteem and loneliness (Avan & Çakmak, 2020, p. 22; Ishaq et al., 2017, p. 24; Uba et al., 2020, p. 183; Zhao et al., 2013, p. 578). However, it is stated in the literature that individuals with high levels of loneliness have higher technology use rates than other individuals. For example, in some studies, it has been concluded that there is a positive relationship between social media

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(Błachnio & Przepiorka, 2019, p. 275; Youssef et al., 2020, p. 5), smartphones (Aktürk et al., 2018, p. 566; Bian & Leung, 2014, p. 164; Gezgin et al., 2020, p. 325; Jiang et al., 2019, p. 713; Mert & Özdemir, 2018, p. 100) and internet (Demir & Kutlu, 2016, p. 203; Erol & Çırak, 2019, p. 161; Moretta & Buodo, 2020, p. 132) usage rates of individuals with high loneliness. In addition, a very limited study found a positive relationship between phubbing and loneliness (Al-Saggaf & O'Donnell, 2019, p. 135; Błachnio & Przepiorka, 2019, p. 276). When the above explanations and research results are evaluated together, it is considered that individuals with high loneliness levels may be more likely to exhibit phubbing behaviors by focusing on their smartphones because they cannot achieve the social relations they desire in social environments. For this reason, it indicates that loneliness may have a direct effect on phubbing and a mediating role in the relationship between self-esteem and phubbing.

True Self-Perception on the Internet as a Mediator

The concept of the true self was first introduced by Rogers (1951, p. 41). The true self represents the self-formed by the characteristics of the individuals that are inherent in them (Rogers, 1961, p. 34). Individuals often cannot fully express their true selves in their daily lives. As it is stated that individuals suppress their true selves due to social and cultural expectations, and they continue their lives by developing a false self to the expectations of society (Rogers, 1961, p. 35). Individuals who cannot achieve a life suitable for their true selves, on the other hand, either develop an addiction to the society they live in and distance themselves from their selves or begin to seek new environments that can reveal their true selves (Rogers, 1961, p. 35). Recently, individuals who have faced the fear and threat of rejection by society in their face-to-face communication and daily life have started to use internet-based technologies to reflect their true selves (Bargh, et al., 2002, p. 35). Individuals begin to reflect on their true selves, which they could not reflect on in their daily lives, in online communication environments, and this situation was named "true self on the internet" (McKenna et al., 2002, p. 18). Individuals who live a life contrary to their true selves due to the influence of social norms in daily life and as a result become psychologically conflicted try to resolve their spiritual tensions by revealing their true selves through online communication tools (Hu, et al., 2017, p. e0175623; Wang et al., 2018, p. 134). In addition, some individuals direct them to use online communication tools because they have a negative belief that they cannot express themselves in face-to-face communication environments (Scott, 2004, p. 135). Because the internet environment contains less threatening elements in terms of social norms, individuals can reflect their true selves more easily in these environments (Scott, 2004, p. 133; Tosun & Lajunen, 2010, p. 164). On one hand, due to the asynchrony feature provided by the internet, individuals experience less evaluation anxiety as they do not have to respond instantly to a message as in face-to-face communication and therefore they are more courageous in revealing their true selves (Suler, 2004, p. 324). For these reasons, individuals are more motivated to communicate in online environments, as they can express their true selves more easily and are more likely to have their true selves confirmed by others (Wang et al., 2018, p. 134). From this point of view, individuals with low self-esteem, shyness, interaction anxiety, and high levels of loneliness in social environments may have higher true self-perceptions on the internet and accordingly, they are more likely to exhibit phubbing. These results indicate that true self-perception on the internet may directly affect phubbing and a mediating role in the relationship between self-esteem and phubbing.

The Current Study

In the report, the world's digital scorecard, published in 2021 by the organization We Are Social, it was announced that approximately 66.6% of the world's population owns a smartphone. Again in the same report, it was stated that 55.7% of the total internet activity in the world and 88.4% of the social media activities were carried out via smartphones. This increasing intensity of smartphone use has gradually reached a level that threatens individuals (Bragazzi & Puente, 2014, p. 158). Even today, people communicate little even when they come together and spend more time with their smartphones even when they are in social environments (Şahan & Eraslan Çapan, 2017, p. 893; Franchina et al., 2018, p. 2319). Phubbing is defined as individuals focusing on their smartphones and not communicating when they are in social environments or together with others (Çizmeci, 2017, p. 370; Karadağ et al., 2015, p. 66). As it can be understood from the definitions above, phubbing behaviors appear as a situation that disrupts and disrupts the social relations of individuals and causes individuals to withdraw socially. When research on phubbing, which is a new research area, is examined, it is seen that its relations with technological factors such as smartphone addiction, social media addiction, internet addiction, game addiction, and fear of missing out are mostly investigated (Davey et al., 2018, p. 35; Munatirah & Anisah, 2018, p. 13; Yam & İlhan, 2020, p. 54; Yam ve Kumcağız, 2020, p.). However, in this study, unlike the studies on phubbing so far, it was

assumed that some psychological factors may be effective alone or together on phubbing behaviors. In some studies, it has been concluded that people with low self-esteem (Hawi & Samaha, 2017) have high interaction anxiety (Elhai et al., 2018, p. 321; Lee & Stapinski, 2012, p. 199; Şahan & Eraslan Çapan, 2017, p. 893; Weinstein et al., 2015, p. 5), shy (Bian & Leung, 2014, p. 164; Orr et al., 2009, p. 338; Tang & Gao, 2016, p. 72) and high levels of loneliness (Gezgin et al., 2020, p.325; Jiang et al., 2019, p. 715) use smartphones, internet, and social media more. Considering the relationships between phubbing and technological elements, it brings to mind that psychological factors that are effective on technology addictions may also affect phubbing. The theoretical framework of the research is seen in Figure-1.
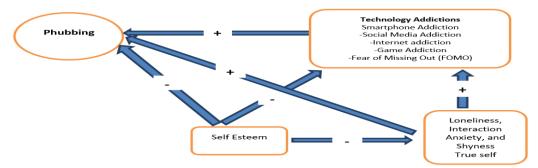

Figure 1. *The theoretical framework of the research*

For all these reasons, this study aimed to examine the serial mediator roles of shyness, interaction anxiety, interaction anxiety, and true self-perception on the internet in the relationship between self-esteem and phubbing. For this purpose, four different serial mediation models were analyzed and the following hypotheses were tested:

H_1: There will be a negative relationship between self-esteem and phubbing.

H_2: There will be a positive relationship between the variables of interaction anxiety, loneliness, shyness, and true self-perception on the internet.

H_3: There will be a positive relationship between phubbing and true self-perception on the internet (H_{3a}), interaction anxiety (H_{3b}), shyness (H_{3c}), and loneliness (H_{3d}).

H_4: There will be a negative relationship between self-esteem and loneliness (H_{4a}), interaction anxiety (H_{4b}), shyness (H_{4c}), and true self-perception on the internet (H_{4d}).

H_5: True self-perception on the internet (H_{5a}), interaction anxiety (H_{5b}), and shyness (H_{5c}) loneliness (H_{5d}) will have mediator roles in the relationship between self-esteem and phubbing.

H_6: In the relationship between self-esteem and phubbing, true self-perception on the internet and interaction anxiety (H_{6a}), true self-perception on the internet and loneliness (H_{6b}), and true self-perception on the internet and shyness (H_{6c}) will have serial mediating roles.

H_7: In the relationship between self-esteem and phubbing, shyness, interaction anxiety, loneliness, and true self-perception on the internet will have multiple serial mediating roles.

Method

A total of 646 people, including 391 women (60.5%) and 255 men (39.5%), participated in the study. The ages of the study participants ranged from 18 to 45 (mean= 28.11, SD= 8.25). When the daily smartphone usage times of the participants are examined, it is seen that 5.1% of them are 0-1 hours, 23.2% are 2-3 hours, 23.5% are 3-4 hours, 20% are 4-5 hours, 27.4% are more than 5 hours (mean= 3.42, Sd= 1.25). In addition, when the daily social media usage times of the participants are examined, it is seen that 26.6% of them are 0-1 hours, 39.2% are 2-3 hours, 15.5% are 3-4 hours, 9.4% are 4-5 hours, 9.3% are more than 5 hours (mean= 2.36, Sd= 1.22).

Measurements

Rosenberg Self-Esteem Scale (RSS): The RSS was developed by Rosenberg (1985) and adapted into Turkish by Çuhadaroğlu (1986). An RSS consisting of ten items and one dimension is answered in a four-point Likert type (4-Very true, 1-Very false). It indicates that individuals have low self-esteem got between 10-20 points, a medium between 20-30, and high self-esteem between 30-40 points. An internal consistency coefficient of the ULS-8 in this study was found to be sufficient (Cronbach Alpha= .89).

General Phubbing Scale (GPS): The GPS was developed by Chotpitayasunondh and Douglas (2018) and adapted into Turkish by Yam & Kumcağız (2020). The GPS assesses the situation when people focus on

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their smartphones during social communication and ignore their neighbors. The measurement tool consists of 15 items and four sub-dimensions (nomophobia, conflict, isolation, and problem acceptance). The GPS was prepared in a seven-point Likert type (1-never, 7-Always). The Cronbach Alpha internal consistency coefficients calculated on the data collected in this study were .91 for the whole scale, .86 for the nomophobia sub-dimension, .84 for the interpersonal conflict sub-dimension, .90 for personal isolation, and .74 for the problem acceptance sub-dimension.

Interaction Anxiety Scale (IAS): The IAS was developed by Leary and Kowalski (1993) and adapted into Turkish by Coşkun (2009). The measurement tool consists of 15 items and one dimension. The IAS was developed to determine the interaction anxiety levels of individuals in social environments that cause anxiety such as parties, communicating with the opposite sex, random encounters, and talking to strangers. Five-point Likert (1-totally not agree, 5-totally agree) is used while answering the measurement tool. The internal consistency coefficient of the ULS-8 in this study was found to be sufficient (Cronbach Alpha= .89).

True Me on the Net Scale (TMNS): The TMNS was developed by Amichai-Hamburger, Wainapel, and Fox (2002) and adapted into Turkish by Tosun and Lajunen (2010). The scale was developed to evaluate how individuals reflect their true selves in their communication on the Internet compared to their face-to-face communication. Five-point Likert type is used in the TMNS (1-totally not agree, 5-totally agree). The measurement tool consists of four items in total. High scores indicate that individuals reflect their true selves more in their online communications than in face-to-face communications. The internal consistency coefficient of the ULS-8 in this study was found to be sufficient (Cronbach Alpha= .79).

Revised Buss and Check Shyness Scale (RBCSS): The RBCSS was developed by Cheek and Buss (1983) and adapted into Turkish by Koydemir (2006). The measurement tool consists of 13 items and one dimension. The RBCSS is prepared in a five-point Likert type (1-Not suitable at all, 4- totally suitable), and the scores that can be obtained from the scale vary between 13 and 65. Participants who score high on the scale are considered to have a high level of shyness. The internal consistency coefficient of the ULS-8 in this study was found to be sufficient (Cronbach Alpha= .94).

UCLA Loneliness Scale-Short Form (ULS-8): The ULS-8 was developed by Hays and DiMatteo (1987) and adapted into Turkish by Doğan, Çötak, and Tekin (2011). The measurement tool consists of eight items in total, and the participants answer the measurement tool by using a four-point Likert type (1-Not suitable at all, 4- totally suitable). The scores that can be obtained from the scale range from 8 to 32. High scores indicate that individuals have high levels of loneliness. The internal consistency coefficient of the ULS-8 in this study was found to be sufficient (Cronbach Alpha= .86).

Data Analysis

Descriptive statistics of the data collected in the study were calculated and correlation analysis was performed to determine the relationships between the variables. In addition, the internal consistency coefficients (Cronbach Alpha) of the measurement tools were calculated. Mediation analyses in the research were made using process macro-Model 6 (Hayes, 2018, p. 45). On the other hand, it is recommended to use the bootstrapping method to decide whether the mediating effects are significant in the literature (Preachers & Hayes, 2008, p. 20). In this study, 5000 bootstraps resample were performed to determine whether the mediation effects were significant, and it was checked whether the 95% confidence intervals included zero. If the 95% confidence intervals obtained do not cover zero, it is accepted that the mediation effect is significant (Hayes, 2013, p. 49).

Result

Descriptive Statistic

Descriptive statistics and correlation analysis results of the variables in the study are given in Table 1.

Table 1. *Descriptive statistics and correlation analysis results*

Variables	1.	2.	3.	4.	5.	6.	Mean	SD	Skewness	Kurtosis
1. Phubbing	1						43.60	16.53	.87	1.06
2. True Self on the Internet	.51**	1					7.32	3.51	1.16	.79
3. Self-Esteem	-.24**	-.33**	1				32.19	6.23	-.86	.47
4. Loneliness	.28**	.32**	-.55**	1			13.67	5.17	.95	.31
5. Interaction Anxiety	.36**	.37**	-.56**	.58**	1		41.11	11.43	.12	.-42
6. Shyness	.27**	.27**	-.39**	.45**	.60**	1	31.90	12.62	.48	-.33

**p< .01. (N= 647).

It is seen that the kurtosis and skewness coefficients of the variables in Table 1 are between the recommended limits of +1.5 and -1.5 (Tabachnick & Fidell, 2013, p. 80). These results indicate that the data in the study have a normal distribution. Looking at Table 2, it is seen that there is a negative relationship between phubbing and self-esteem ($r = -.24$; p < .01). Similarly, there is a negative relationship between self-esteem and other variables (see Table 1). On the other hand, there is a positive relationship between phubbing and true self on the internet ($r = .51$; p < .01), loneliness ($r = .28$; p < .01), interaction anxiety ($r = .51$; p < .01) and shyness ($r = .51$; p < .01). Similarly, there is a positive relationship between true self on the internet and loneliness ($r = .32$; p < .01), interaction anxiety ($r = .36$; p < .01) and shyness ($r = .27$; p < .01).

The serial mediating role of interaction anxiety, shyness, loneliness, and true self-perception on the internet in the relationship between self-esteem and phubbing

In the study, four different serial mediation models were tested to examine the serial mediation roles of interaction anxiety, shyness, loneliness, and true self-perception on the internet in the relationship between self-esteem and phubbing. First, the serial mediation role of interaction anxiety and true self-perception on the internet in the relationship between self-esteem and phubbing was tested (Model 1). The path diagram of Model 1 is shown in Figure 2, and the results regarding the direct and indirect effects of the analysis are shown in Table 2.
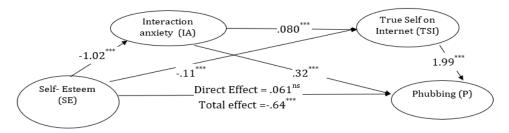

Figure 2. *Serial Meditation Path Diagram of Model 1*

When Table 2 is examined, we found that self-esteem has a negative predictive role on phubbing (total effect; $\beta = -64$; %95 CI = [-.843, -.446]). This result confirmed the H1 hypothesis. However, as a result of serial mediation analysis, it was seen that the direct effect of self-esteem on phubbing was not significant ($\beta = .061$; 95% CI = [-.150, .271], p>.05). In addition, self-esteem predicted negatively interaction anxiety ($\beta = -1.02$; 95% CI = [-1.23, -.904]) and true self-perception on the internet ($\beta = -11$; 95% CI = [-.159, -.060]). With these results, the H4b and H4d hypotheses of the research were confirmed. True self-perception on the internet ($\beta = 1.99$; 95% CI = [1.67, 2.31]) and interaction anxiety ($\beta = 32$; 95% CI = [.200, .432]) positively predicted phubbing. These results show that the H3a and H3b hypotheses are supported. In the serial mediation analysis performed, all indirect effects were found to be significant since the lower and upper limits in the 95% confidence interval did not include zero. In the relationship between self-esteem and phubbing, both interaction anxiety ($\beta = -.27$; 95% CI = [-.171, -.072]) and true self-perception on the internet ($\beta = -.083$; 95% CI = [-. 126, -.042]) has a significant mediator role. These results show that the H5a and H5b hypotheses of the study were confirmed. Finally, interaction anxiety and true self-perception

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on the Internet was found to be serially mediated in the relationship between self-esteem and phubbing (β = -.061; 95% CI = [-.087, -.038]). With this result, the H6a hypothesis was confirmed.

Table 2. *Direct and indirect effects in Model 1*

Pathway	Coefficient	Lower Limit (LL)	Upper-Limit (UL)	Hypotheses Status
		CI (Bias%95)		
Total effect				
SE→ P	-.64***	-.843	-.446	H1 confirmed
Direct effect				
SE → IA	-1.02***	-1.13	-.904	H4b confirmed
SE → TSI	-.11***	-.159	-.060	H4d confirmed
SE→ P	.061ns	-.150	.271	
IA→ TSI	080***	.052	.107	H2 confirmed
IA→ P	.32***	.200	.432	H3b confirmed
TSI→ P	1.99***	1.67	2.31	H3a confirmed
Indirect effect				
SE → IA → P	-.27	-.171	-.072	H5b confirmed
SE → TSI → P	-.083	-.126	-.042	H5a confirmed
SE → IA → TSI → P	-.061	-.087	-.038	H6a confirmed

***p<.001. Not: SE= Self esteem, P= Phubbing, IA= Interaction anxiety, TSI=True Self on Internet, CI= (Bias%95): Confidence Interval

After analyzing Model 1, Model 2, which examines the serial mediating role of shyness and true self-perception on the internet in the relationship between self-esteem and phubbing was analyzed. The path diagram of Model 2 is shown in Figure 3, and the results regarding the direct and indirect effects of the analysis are shown in Table 3.
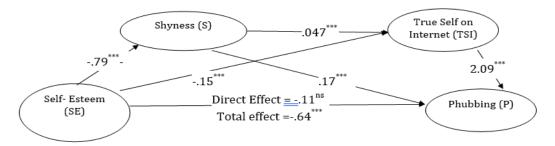

Figure 3. *Serial Meditation Path Diagram of Model 2*

As seen in Table 3, the direct effect of self-esteem on phubbing is not significant (β = -.11; 95% CI = [-.304, .087], p >.05). In addition, self-esteem predicted negatively shyness (β = -.79; %95 CI = [-.936, -.647]) and true self-perception on the internet (β = -15; %95 CI = [-.159, -.060]). With these results, the H4c and H4d hypotheses of the research were confirmed. True self-perception on the internet (β = 2.09; %95 CI = [1.77, 2.42]) and shyness (β = 17; %95 CI = [.075, .265]) positively predicted phubbing. These results show that the H3a and H3c hypotheses are supported. In the serial mediation analysis performed, all indirect effects were found to be significant since the lower and upper limits in the 95% confidence interval did not include zero. In the relationship between self-esteem and phubbing, both shyness (β = -.051; %95 CI = [-.255, -.152]) and true self-perception on the (β = -.12; %95 CI = [-.166, -.079]) has a significant mediating role. These results show that the H5a and H5c hypotheses of the study were confirmed. Finally, shyness and true self-perception on the internet were found to be serially mediated in the relationship between self-esteem and phubbing (β = -.030; %95 CI = [-.049, -.012]). With this result, the H6c hypothesis was confirmed.

Table 3. *Direct and indirect effects in Model 2*

Pathway	Coefficient	Lower Limit (LL)	Upper-Limit (UL)	Hypotheses Status
		CI (Bias%95)		
Direct effect				
SE → S	-.79***	-.936	-.647	H₄c confirmed
SE → TSI	-.15***	-.199	-.108	H₄d confirmed
SE→ P	-.11ns	-.304	.087	
S→ TSI	.047***	.025	.070	H₂ confirmed
S→ P	.17***	.075	.265	H₃c confirmed
TSI→ P	2.09***	1.77	2.42	H₃a confirmed
Indirect effect				
SE →S → P	-.051	-.255	-.152	H₅c confirmed
SE → TSI → P	-.12	-.166	-.079	H₅a confirmed
SE → S → TSI → P	-.030	-.049	-.012	H₆c confirmed

***p<.001. Not: SE= Self esteem, P= Phubbing, S= Shyness, TSI=True Self on Internet, CI= Confidence Interval (Bias%95)

After analyzing Model 2, Model 3 which examines the serial mediating role of loneliness and true self-perception on the internet in the relationship between self-esteem and phubbing was analyzed. The path diagram of Model 3 is shown in Figure 4, and the results regarding the direct and indirect effects of the analysis are shown in Table 4.
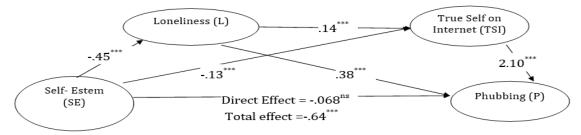

Figure 2. *Serial Meditation Path Diagram of Model 3*

As seen in Table 4, the direct effect of self-esteem on phubbing is not significant (β = -.068; %95 CI = [-.283, .145], p >.05). In addition, self-esteem predicted negatively loneliness (β = -.46; %95 CI = [-.513, -.405]) and true self-perception on the internet (β = -13; %95 CI = [-.177, -.077]). With these results, the H4a and H4d hypotheses of the research were confirmed. True self-perception on the internet (β = 2.10; %95 CI = [1.77, 2.42]) and loneliness (β = 38; %95 CI = [.119, .633]) positively predicted phubbing. These results show that the H3a and H3d hypotheses are supported. In the serial mediation analysis performed, all indirect effects were found to be significant since the lower and upper limits in the 95% confidence interval did not include zero. In the relationship between self-esteem and phubbing, both loneliness (β = -.065; %95 CI = [-.281, -.154]) and true self-perception on the (β = -.10; %95 CI = [-.147, -.057]) has a significant mediating role. These results show that the H5a and H5d hypotheses of the study were confirmed. Finally, loneliness and true self-perception on the internet were found to be serial mediated in the relationship between self-esteem and phubbing (β = -.051; %95 CI = [-.080, -.024])With this result the H6c hypothesis was confirmed.

Table 4. *Direct and indirect effects in Model 3*

Pathway	Coefficient	Lower Limit (LL)	Upper-Limit (UL)	Hypotheses Status
		CI (Bias%95)		
Direct effect				
SE → L	-.45***	-.513	-.405	H₄a confirmed
SE → TSI	-.13***	-.177	-.077	H₄d confirmed
SE→ P	-.068ns	-.283	.145	
L→ TSI	.14***	.078	.199	H₂ confirmed
L→ P	.38***	.119	633	H₃d confirmed
TSI→ P	2.10***	1.77	2.42	H₃a confirmed
Indirect effect				
SE →L → P	-.065	-.281	-.154	H₅d confirmed
SE → TSI → P	-.10	-.147	-.057	H₅a confirmed
SE → L → TSI → P	-.051	-.080	-.024	H₆b confirmed

***p<.001. Not: SE= Self esteem, P= Phubbing, L= Loneliness, TSI=True Self on Internet, CI= Confidence Interval (Bias%95).

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Finally, Model 4, which examines the multiple serial mediating roles of shyness, interaction anxiety, loneliness, and true self-perception on the Internet, in the relationship between self-esteem and phubbing was analyzed. The path diagram of the multiple series mediation analysis is presented in Figure 5 and the results are presented in Table 5.
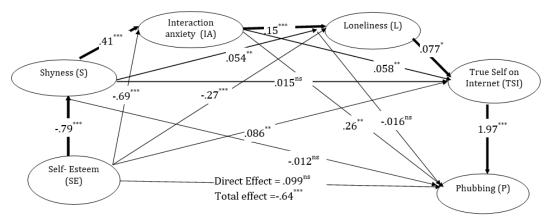

Figure 5. *Multiple Serial Meditation Anaysis Path Diagram of Model 4*

***p<.001; **p<.01; *p<.05. Note 1: ns = non-significant, Note 2: The multiple serial meditation is indicated in dark black line

Looking at Table 5, people can notice that some of the direct effects that were significant in Model 1, Model 2, and Model 3 were insignificant in the multiple-series mediation analysis. For example, while the direct effect of shyness on self-perception on the Internet was significant in Model 2 (β = .047, p< .001; %95 CI = [.025, .070]), it was found to be insignificant in multiple serial mediation analysis (see Table 5). Similarly, while the direct effect of shyness on phubbing was significant in Model 2 (β = .17, p< .001; 95% CI = [.075, .265]), it was found to be insignificant in multiple series mediation analysis (see Table 5). Again, while the direct effect of loneliness on phubbing was significant in Model 3 (β = .38, p< .001; 95% CI = [.119, .633]), it was found to be insignificant in multiple serial mediation analysis (See Table 5).

When we examined Table 5, we noticed that some of the indirect effects that were significant in Model 1, Model 2, and Model 3 were not significant in the multiple serial mediation analysis. For example, while shyness has a significant mediating role in the relationship between self-esteem and phubbing in Model 2 (β = -.051; 95% CI = [-.255, -.152]), it is not significant in multiple serial mediation analysis (See Table 5). while shyness has a significant mediating role in the relationship between self-esteem and phubbing in Model 2 (β = -.051; 95% CI = [-.255, -.152]), it is not significant in multiple serial mediation analysis (See Table 5). Similarly, while loneliness has a significant mediating role in the relationship between self-esteem and phubbing in Model 2 (β = -.051; 95% CI = [-.255, -.152]), it is not significant in multiple serial mediation analysis (see Table 5). In addition, while the serial mediation role of shyness and true self-perception on the internet was significant in the relationship between self-esteem and phubbing (β = -.030; 95% CI = [-.049, -.012]), it was found to be insignificant in the multiple serial mediation analysis (see Table 5). However, other research hypotheses appear to be confirmed in the multiple-series mediation analysis. Finally, the overall mediation effect was found to be significant in the multiple series mediation analysis (β = -.015; 95% CI = [-.032, -.003]). This result showed that the H7 hypothesis was confirmed.

Table 5. *Direct and indirect effects in Model 4*

Pathway	Coefficient	Lower Limit (LL)	Upper-Limit (UL)	Hypotheses Status
		CI (Bias%95)		
Direct effect				
SE → S	-.79***	-.936	-.647	H₄c confirmed
SE → IA	-.69***	-.808	-.586	H₄b confirmed
SE→ L	-.27***	-.324	-.206	H₄a confirmed
SE→ TSI	086**	-.139	-.033	H₄d confirmed
S→IA	.41***	.355	.464	H₂ confirmed
S→L	.054**	.023	.084	H₂ confirmed
S→ TSI	.015ns	-.012	.041	H₂ not confirm
S→P	-.012ns	-.053	.163	H₃c not confirm
IA→L	.15***	.111	.185	H₂ confirmed
IA→ TSI	.058**	.023	.088	H₂ confirmed
IA→P	.26**	.124	.401	H₃b confirmed
L→TSI	.077*	.011	.142	H₂ confirmed
L→P	-.016ns	-.157	.394	H₃d not confirm
TSI→P	1.97***	1.65	2.29	H₃a confirmed
Indirect effect				
1.SE → S → P	-.016	-.055	.019	H₅c not confirm
2.SE → IA→ P	-.069	-.108	-.029	H₅b confirmed
3.SE → L → P	-.012	-.044	.021	H₅d not confirm
4.SE → TSI → P	-.061	-.106	-.021	H₅a confirmed
5.SE → S→IA → P	-.032	-.054	-.013	confirmed#
6.SE → S→L → P	-.002	-.008	.004	not confirm#
7.SE → S→'TSI → P	-.009	-.026	.007	H₆c not confirm
8.SE → IA→L→ P	-.005	-.018	.008	not confirm#
9.SE → IA→TSI → P	-.028	-.048	-.011	H₆a confirmed
10.SE → L→TSI → P	-.015	-.032	-.008	H₆b confirmed
11.SE → S → IA →L→P	-.022	-.009	.004	not confirm#
12.SE → S → IA →TSI→P	-.014	-.025	-.007	confirmed#
13.SE →S → L →TSI→P	-.005	-.006	-.002	confirmed#
14. SE →IA→ L →TSI→P	-.006	-.012	-.006	confirmed#
15. SE →S →IA→L→TSI→P	-.007	-.007	-.003	H₇ confirmed
Total Effect	-.64	-.843	-.446	
Total Indirect Effect	-.28	-.346	-.209	

***p< .001; **p< .01; *p< .05. Note1: ns= non-significant, Not 2: SE= Self esteem, P= Phubbing, S= Shyness, IA= Interaction anxiety L= Loneliness, TSI = True self on the internet, CI= Confidence interval (Bias%95), # = Mediation effects that were not hypothesized in the study.

Discussion

The aim of the study is to examine the serial mediator roles of being shy, interaction anxiety, interaction anxiety, and true self-perception on the internet in the relationship between self-esteem and phubbing. For this purpose, we analyzed four different serial mediation models and obtained important findings. According to a finding of the study, self-esteem negatively predicted true self-perception on the internet and phubbing. According to another finding in the study, it was seen that true self-perception on the internet had a mediating role in the relationship between self-esteem and phubbing (Model 1, Model 2, and Model 3). These results indicate that low self-esteem is associated with high levels of true self-perception on the internet and phubbing. In other words, it can be thought that individuals with low self-esteem have problems expressing themselves in society, and accordingly, they tend to show their true selves through online communication tools. In support of these explanations, in some studies conducted in the literature, it has been concluded that individuals with low self-esteem use online communication tools more and express their true selves more easily in this environment (Choi & Yoo, 2015, p. 82; Grieve et al., 2020, p. 148; Michikyan et al., 2014, p. 62; Stieger & Burger, 2010, p. 685). These results reveal that self-esteem and true self-perception on the internet are important predictive variables for phubbing.

As a result of the analysis, it was seen that interaction anxiety (Model 1), shyness (Model 2), and loneliness (Model 3) had mediating roles in the relationship between self-esteem and phubbing. According to this result, it can be said that low self-esteem is associated with increased levels of interaction anxiety, shyness, and loneliness, and this situation is associated with increases in individuals' phubbing behaviors. The current research finding is also supported by the literature. Because in some studies conducted in the literature, it has been reported that there is a negative relationship between self-esteem and shyness (Tackett et al., 2013, p. 38), interaction anxiety (Iancu et al., 2015, p. 168; Apaolaza et al., 2019, p. 393; Seema &

Kumar, 2017, p. 251) and loneliness (Avan & Çakmak, 2020, p. 31; Bozorgpour & Salimi, 2012, p. 2005; Zhao et al., 2013, p. 579). Similarly, in the studies conducted in the literature, it has been concluded that individuals with high loneliness (Aktürk et al., 2018, p. 566; Jiang et al., 2019, p. 715), shyness (Bian & Leung, 2014, p. 275; Huan et al., 2014, p. e0175623; Orr et al., 2009, p. 338) and interaction anxiety (Lee & Stapinski, 2012, p. 203) use online communication tools (e.g. Facebook, Instagram) and technological elements (e.g. smartphone, internet) more intensively.

We obtained four important conclusions in the results of the serial mediation analysis carried out in the research. Firstly, interaction anxiety and true self-perception on the Internet have a serial mediating role in the relationship between self-esteem and phubbing (Model 1). Secondly, it was concluded that shyness and true self-perception on the Internet have a serial mediating role in the relationship between self-esteem and phubbing (Model 2). Third, loneliness and true self-perception on the Internet have a serial mediating role in the relationship between self-esteem and phubbing (Model 3). According to these results, it can be thought that low self-esteem is associated with increased levels of interaction anxiety, shyness, and loneliness, and individuals with higher levels of interaction anxiety, shyness, and loneliness have an increased true self-perception on the internet. And depending on these relationships, it can be said that phubbing behaviors occur in individuals. Finally, shyness, interaction anxiety, loneliness, and true self-perception on the internet were found to have significant multiple serial mediating roles in the relationship between self-esteem and phubbing (Model 4). According to this result, it can be said that individuals with low self-esteem feel a higher level of shyness and that the increased level of shyness is related to individuals' higher level of feel interaction anxiety. Similarly, it can be thought that high interaction anxiety causes individuals to stay away from social environments and this situation is related to the increase in loneliness levels. It can be stated that individuals with increased levels of loneliness begin to express themselves in online environments, and accordingly, their true self-perceptions increase on the Internet, and this is related to the high level of phubbing behaviors observed in individuals. It is seen that many studies in the literature report results that support the relationships obtained as a result of the current research. For example, studies are showing that low self-esteem is associated with high shyness (Tackett et al., 2013, p. 38; Ran et al., 2018, p. 570), and high shyness is associated with high interaction anxiety (Chavira et al., 2002, p. 592; Huan et al., 2014, p. 548; Leary & Kowalski, 2013, p. 141). Again, studies have revealed that there is a positive relationship between interaction anxiety and loneliness (Caplan, 2006, p. 238; Lim et al., 2016, p. 620; O'Day et al., 2019, p. 567) and loneliness and the intensity of the use of online communication tools (Elhai et al., 2018, p. 327; Lee ve Stapinski, 2012, p. 201; Weinstein vd., 2015, p. 5). In short, these results show that many variables may be effective in the relationship between self-esteem and phubbing and that complex and interrelated factors may be effective in the emergence of phubbing behaviors in individuals.

Limitations and Future Research

Although we obtained very important results about phubbing in this study, there are some limitations. Firstly, care should be taken when generalizing the results of the study to individuals from other cultures, as the sample group of the study consists only of individuals in Turkey. For this reason, it should not be forgotten that the relationships between the variables in the research need to be verified on individuals from other cultures as well. More generalizable results can be achieved by repeating this study with a sample group consisting of different cultures in future studies or by conducting a meta-analysis study in which similar research results in different cultures are evaluated. Secondly, this research was designed in a cross-sectional research design. For this reason, there is no definite causal link between the variables in the research. The results should be evaluated with this limitation in mind. For this reason, the relationships between the variables examined in the research can be better examined by using different research methods in future studies. Thirdly, since the data of this study was collected by the self-report method, it is subject to all limitations of this data collection method. This limitation can be overcome by conducting a future study using different data collection methods. Finally, this study, it was examined the serial mediating role of shyness, loneliness, interaction anxiety, and true self-perception on the Internet in the relationship between self-esteem and phubbing. In future research, the variables that are likely to be related to the phubbing behaviors of individuals can be examined by constructing different structural equation models.

Conclusion

This study makes essential contributions to the literature to understand the factors associated with phubbing, which has been the subject of recent research and has significant damage to individuals' social relationships. In this study, we revealed that individuals with low self-esteem exhibit more phubbing

behaviors. Similarly, individuals with low self-esteem have higher true self-perceptions on the internet. Both results indicate that individuals with low self-esteem tend to use online communication tools and technological elements because they have difficulty communicating face-to-face. As a result of the analysis, it was seen that interaction anxiety, shyness, and loneliness had mediating roles in the relationship between self-esteem and phubbing. At the same time, it was revealed that there is a negative relationship between self-esteem and shyness, loneliness, interaction anxiety, and true self on the internet. When these results were evaluated, it was concluded that low self-esteem increased individuals' shyness, loneliness, interaction anxiety, and true self-perceptions on the internet, and accordingly, individuals exhibited phubbing behaviors. This research has shown that the phenomenon of phubbing has a complex structure, that it is insufficient to explain only based on smartphone addiction, and that many psychological factors may be effective on it.

In this study, it was obvious that individuals with low self-esteem have high levels of loneliness, shyness, interaction anxiety, and phubbing. Individuals can be supported to develop positive self-esteem by organizing preventive and supportive activities such as psychoeducational programs related to self-esteem or self-help activities. In this way, it can be supported to reduce the frequency of individuals exhibiting phubbing behaviors. In addition, it can prevent problems such as shyness, loneliness, and interaction anxiety by organizing training that will support individuals' life skills. In this way, it can be contributed to the reduction of phubbing behaviors by reducing the frequency of individuals who successfully communicate with others in the community, turning to their smartphones. In addition, it is seen that phubbing is a risk factor in the social development areas of individuals. For this reason, policymakers can produce studies that will increase the awareness of individuals about the possible harms of phubbing on mental health, and they can draw attention to the risks of phubbing with public service ads.

Ethical Declaration

In the writing process of the study titled "*Investigation Psychological Factors Effecting the Phubbing Behavior of Young Adults with Different Structural Equation Models*", there were followed the scientific, ethical, and citation rules; were not made any falsification on the collected data and this study was not sent to any other academic media for evaluation. In addition, permission was obtained from the Ondokuz Mayıs University Social and Humanities Sciences Ethics Committee (Date: 26/08/2020 and Decision no: 2020/537) to conduct the research

Statement of Contribution Rate of Researchers

The contribution rates of the authors in the study are equal.

Declaration of Conflict

There is no potential conflict of interest in the study.

Note

This study was produced from the first author's doctoral thesis titled Investigation Psychological Factors Effecting the Phubbing Behavior of Young Adults with Different Structural Equation Models.

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TÜRKÇE GENİŞ ÖZET

Günümüzde bireyler teknolojinin sağlamış olduğu imkânları hayatlarının her alanlarında kullanır hale gelmişledir. Diğer bir ifadeyle teknolojik yenilikler, sağlamış oldukları kolaylıklardan dolayı bireylerin hayatlarında giderek daha yoğun bir kullanım alanına ulaşmıştır. Teknolojik imkânlar insanların günlük yaşamlarını kolaylaştırmasını yanı sıra çağımızın en büyük problem alanlarından birisi olan teknoloji bağımlılığının ortaya çıkmasına neden olmuştur (Chayko, 2008; Pugh, 2017). Teknolojik gelişmelere bağlı olarak ortaya çıkan sorunlar ilk olarak bilgisayar ve internet bağımlılığı alanında kendisini göstermiş, ardından bunlara oyun bağımlılığı ve sosyal medya bağımlılığı olarak isimlendirilen yeni sorun alanları eklenmiştir (Young vd., 1999; Malita, 2011; Meral, 2018).

Bireylerin sosyal ortamlarda akıllı telefonlarını yoğun bir şekilde kullanmaları, çevrimiçi iletişimleri teknolojilerini yüz yüze iletişime tercih etmeleri başlamaları bu durumun akıllı telefon bağımlılığı kavramıyla açıklanmasının yetersiz olduğu kanısını ortaya çıkarmıştır (Krasnova vd., 2016; Nazir ve Pişkin, 2016). Araştırmacılar bu durumu phubbing olarak isimlendirmişlerdir. Phubbing, İngilizce phone (telefon) ve snubbing (yok sayma, kötüye kullanma) kelimelerinin bir araya gelmesinden oluşturulan ve bireyin sosyal ortamlarda yüz yüze iletişim kurarken dikkatini karşısındaki bireye vermek yerine akıllı telefona vermesi ve çevresiyle iletişim kurmaması durumu olarak ifade edilmektedir (Barrios-Borjas vd., 2017; Karadağ vd., 2015; Nazir ve Pişkin, 2016). Diğer bir ifade ile phubbing, bireylerin sosyal ortamlarda çevresindeki bireylerle iletişim kurmak yerine akıllı telefonlarıyla sanal dünyada vakit geçirmeyi tercih etmesidir. Tanımlardan da anlaşılacağı üzere phubbing, bireylerin en çok sosyal gelişim alanları üzerinde olumsuz etkisi bulunan bir durum olarak karşımıza çıkmaktadır (Krasonova vd., 2016). Bunun yanı sıra yapılan bazı araştırmalarda phubbingin sadece bu davranışları sergileyen bireylere zarar vermediği, aynı zamanda çevresindeki bireylere de zarar verdiği ve bu nedenle bireylerin sosyal ilişkileri üzerinde uzun vadede olumsuz bir etki bırakabileceği ifade edilmektedir (Davey vd., 2018; Roberts ve David, 2016).

Alanyazında phubbing davranışlarıyla ile ilgili yapılan araştırmalara bakıldığı zaman, bu davranışların ortaya çıkması üzerinde akıllı telefon bağımlılığı (Davey vd., 2018; Munatirah ve Anisah, 2018; Yam ve Kumcağız, 2020), internet bağımlılığı (Yan ve Wan, 2017), oyun bağımlılığı (Karadağ vd., 2016), sosyal medya bağımlılığı (Al-Sggaf ve MacCulloch, 2018; Hanika 2015; Karadağ vd. 2016), sosyal gelişmeleri kaçırma korkusu (Franchina vd., 2018; Yin vd., 2019; Yam ve Kumcağız, 2020) gibi faktörlerin etkili olduğu görülmektedir. Yukarıdaki araştırma sonuçlarına bakıldığı zaman phubbing olgusunun akıllı telefon bağımlılığı, sosyal medya bağımlılığı, internet bağımlılığı ve oyun bağımlılığı gibi teknolojik bağımlılıkların bir arada yer aldığı bir konsept olduğu dikkati çekmektedir. Bu konuda yapılan bir araştırmada phubbing kavramı bütünsel teknolojik bağımlılığı olarak nitelenmiş ve içerisinde birçok bağımlılığı barındırdığı ifade edilmiştir (Yam ve İlhan, 2020). Sonuç olarak phubbing akıllı telefon bağımlılığının ötesinde bireyin sosyal yaşamı üzerinde daha tehlikeli sonuçlar doğurması muhtemel bir sorun alanı olduğu dikkati çekmektedir.

Yukarıdaki tanımlardan da anlaşılacağı üzere phubbing davranışları bireylerin sosyal ilişkilerinin bozan, sekteye uğratan ve bireylerin sosyal içe çekilmesine neden olan bir durum olarak karşımıza çıkmaktadır. Diğer yandan phubbing ile ilgili yapılan araştırmalar incelediğinde çoğunlukla akıllı telefon bağımlılığı, sosyal medya bağımlılığı, internet bağımlılığı, oyun bağımlılığı ve gelişmeleri kaçırma korkusu gibi teknolojik faktörlerle olan ilişkilerinin araştırıldığı görülmektedir (Davey ve vd., 2018; Munatirah ve Anisah, 2018; Yam ve Kumcağız, 2020; Yam ve İlhan, 2020). Ancak bireylerin phubbing davranışları sergilemelerinin üzerinde bazı psikolojik faktörlerin de etkili olabileceği düşünülmektedir. Çünkü yapılan bazı araştırmalarda benlik saygısı düşük (Hawi ve Samaha, 2017; Romero-Rodríguez vd., 2020; Tohumcu, Karslı, Bahadır ve Kalender, 2019), etkileşim kaygısı yüksek (Elhai vd., 2018; Lee ve Stapinski, 2012; Şahan ve Eraslan Çapan, 2017; Turgeman vd., 2020 Weinstein vd., 2015), utangaç (Bian ve Leung, 2014; Orr vd., 2009; Satıcı, 2019; Tang ve Gao, 2016) ve yalnızlık düzeyleri yüksek (Bian ve Leung, 2014; Gezgin, Ümmet ve Hamutoğlu, 2020) olan kişilerin akıllı telefon, internet ve sosyal medyayı daha fazla kullandıkları sonuçlarına ulaşılmıştır. Yukarıdaki araştırma bulguları çeşitli psikolojik faktörler ile teknoloji bağımlılıkları arasında önemli ilişkilerin olduğunu ortaya koymaktadır. Phubbing ile teknolojik unsurlar arasındaki ilişkiler göz önüne alındığında, teknoloji bağımlılıkları üzerinde etkili olan psikolojik faktörlerin phubbing davranışları üzerinde de etkisinin olabileceğine işaret etmektedir. Tüm bu nedenlerden dolayı bu araştırmada benlik saygısı ile phubbing arasındaki ilişkide yalnızlık, utangaçlık, internette gerçek benlik algısı ve etkileşim kaygısı değişkenlerinin paralel ve seri aracı rollerinin incelenmesi amaçlanmıştır.

Çalışmaya 391 kadın (%60.5) ve 255 erkek (%39.5) olmak üzere toplam 646 kişi katılmıştır. Çalışmaya katılanların yaşları 18 ile 45 arasında değişmektedir (ortalama= 28.11, Ss= 8.25). Araştırmanın verileri Benlik

Saygısı Ölçeği, Etkileşim Kaygısı Ölçeği, Genel Phubbing Ölçeği, Revize Edilmiş Buss ve Çek Çekingenlik Ölçeği, UCLA Yalnızlık Ölçeği- Kısa Formu ve İnternette Gerçek Ben Ölçeği ile toplanmıştır. Araştırmada toplanan verilerin betimsel istatistikleri hesaplanmış ve değişkenler arasındaki ilişkileri belirlemek için korelasyon analizi yapılmıştır. Araştırmada aracılık analizleri süreç makro-Model 6 kullanılarak yapılmıştır.

Bu çalışma son yıllarda araştırmalara konu olan ve bireylerin sosyal ilişkilerine önemli zararlar veren phubbing ile ilişkili faktörlerin anlaşılması konusunda literatüre önemli katkılar sağlamaktadır. Bu çalışmada benlik saygısı düşük olan bireylerin daha fazla phubbing davranışı sergiledikleri ortaya çıkmıştır. Benzer şekilde, benlik saygısı düşük olan bireylerin internette daha yüksek gerçek benlik algıları vardır. Her iki sonuç da düşük benlik saygısına sahip bireylerin yüz yüze iletişim kurmakta zorlandıkları için çevrimiçi iletişim araçlarını ve teknolojik unsurları kullanma eğiliminde olduklarını göstermektedir. Analiz sonucunda etkileşim kaygısı, utangaçlık ve yalnızlığın benlik saygısı ile phubbing arasındaki ilişkide aracı rollere sahip olduğu görülmüştür. Aynı zamanda benlik saygısı ile utangaçlık, yalnızlık, etkileşim kaygısı ve internette gerçek benlik arasında negatif bir ilişki olduğu ortaya çıkmıştır. Bu sonuçlar değerlendirildiğinde düşük benlik saygısının bireylerin utangaçlıklarını, yalnızlıklarını, etkileşim kaygılarını ve internetteki gerçek benlik algılarını arttırdığı ve buna bağlı olarak bireylerin phubbing davranışları sergiledikleri sonucuna ulaşılmıştır. Bu araştırma, phubbing olgusunun karmaşık bir yapıya sahip olduğunu, sadece akıllı telefon bağımlılığı üzerinden açıklamakta yetersiz kaldığını ve bunun üzerinde pek çok psikolojik faktörün etkili olabileceğini göstermiştir.

Bu çalışmada benlik saygısı düşük olan bireylerin yalnızlık, utangaçlık, etkileşim kaygısı ve phubbing düzeylerinin yüksek olduğu görülmüştür. Benlik saygısı ile ilgili psikoeğitim programları veya kendi kendine yardım etkinlikleri gibi önleyici ve destekleyici etkinlikler düzenlenerek bireylerin olumlu benlik saygısı geliştirmeleri desteklenebilir. Bu sayede phubbing davranışı sergileyen bireylerin sıklığının azaltılması desteklenebilir. Ayrıca bireylerin yaşam becerilerini destekleyecek eğitimler düzenleyerek utangaçlık, yalnızlık, etkileşim kaygısı gibi sorunların önüne geçebilir. Bu sayede toplumdaki diğer kişilerle başarılı bir şekilde iletişim kuran bireylerin akıllı telefonlarına yönelme sıklığı azaltılarak phubbing davranışlarının azaltılmasına katkı sağlanabilir. Ayrıca phubbing'in bireylerin sosyal gelişim alanlarında da bir risk faktörü olduğu görülmektedir. Bu nedenle politika yapıcılar, phubbing'in ruh sağlığı üzerindeki olası zararları konusunda bireylerin farkındalığını artıracak çalışmalar üretebilir ve kamu spotları ile phubbing'in risklerine dikkat çekebilirler.