



**DO SPORTS, TAKE PHOTO AND SHARE:  
PHUBBING, SOCIAL MEDIA ADDICTION AND  
NARCISISM OF BODY BUILDERS<sup>i</sup>**

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**Abstract:**

Although mobile phone addiction is rapidly spreading, there are few studies available in the literature on social and cultural impacts of this addiction. The concept of Phubbing is defined as individuals escaping interpersonal communication by dealing their mobile phones. In line with this information, the aim of the research is to determine the relationships between phubbing, social media addiction and narcissism structures of individuals who are interested in various levels of bodybuilding. Convenience sampling method were used to reach 319 individuals who are interested in various levels of bodybuilding. The data obtained in accordance with the objectives of the research were analyzed with two-step approach in the light of the basic principles of structural equation modeling. In this respect, confirmatory factor analysis and various validity reliability analyzes proposed by the literature were applied to the research data via AMOS22 package program. Following the validation of the research model, the structural model was tested in order to explore the relationships between the structures. As a result of the analyzes performed within the scope of the measurement model, the model was found to be valid and reliable. As a result of the analyzes performed within the scope of the measurement model, the model was found to be valid and reliable. By testing the structural model researchers found positive relationships between bodybuilding athletes' phubbing, social media loyalty and narcissism levels. The findings obtained from the research have made important contributions to the developing phubbing literature. It can be stated that bodybuilding

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is affected by tendencies towards social media platforms. This study sheds light on the discussions about future research.

**Keywords:** bodybuilding, narcissism, phubbing

## 1. Introduction

In recent years there has been an explosion of communication technology, and devices and systems that support interpersonal human interactions were created (Gummesson, 2004). The hunger for the use of more technology, extreme technology use (Davis, 2001), high level of participation in technology (Charlton and Danforth, 2007) and, finally, technology addiction (Turel, Serenko and Giles, 2011) has led to such results. Technology addiction is defined as a psychological problem related to overuse of technology in DSM-IV dependency criteria. This dependency mostly depends on the factors that go into human life with computers, but smartphones equipped with computer features have a significant impact on these factors as an addiction object (Karadağ et al., 2015). The fact that to be able to access the internet via mobile phones shifted technology addiction to mobile phones. Nowadays, many people have mobile phones and use them every period of their daily life (Salehan and Negahban, 2013). The unconscious use of smartphones, whose prevalence increases day by day, brings along social interaction disorder. In the behavior of Phubbing, individuals communicate via message instead of face-to-face communication. Chotpitayasunondh and Douglas (2016) stated that phubbing behavior has become an acceptable normative feature of modern communication. It has become possible to come across a phubbing case in almost any environment. The term's popularity in the world-wide media has become popular with the stopphubbing campaign. In a research, it was revealed that an average of 36 phubbing cases per day during lunch in a restaurant, and 97% of the victims of phubbing do not like the taste of food. In the same research, it was revealed that 87% of adolescents prefer to communicate by phone instead of face to face communication (<http://stopphubbing.com>). This situation led to the shift in interest in phubbing phenomenon in academic literature.

These developments have brought about a new concept in the famous "Macquarie Dictionary": Phubbing. In general, it is defined the escape of the individuals from communicating with others in the social life and dealing with mobile phones. The concept of "phubbing" is created by combining phone and snubbing words and is considered to be one of the most important discomforts of our time. Karadağ et al., (2015) stated that the Phubbing concept is a single structure that contains many addictions such as mobile phone loyalty, internet loyalty, social media loyalty and game commitment. Accordingly, the researchers stated that the concept of Phubbing is more common and the possible effects can be more destructive.

The concept of phubbing has become an important academic interest from education to psychology in recent years. However, the studies on the subject of sports science literature deficiency has been evolved. In this context, the aim of this research is to test the hypotheses between the context of phubbing, social media loyalty and narcissism in bodybuilders. For this purpose, the research will present a broad literature review and then test the research hypotheses supported by the literature and the results will be discussed in the context of previous research.

## 2. Literature Review

The use of social media is also considered to be one of the most popular leisure activities for a long time (Kuss and Griffiths, 2011). Individuals primarily use social media for various purposes, such as sharing photos, playing games, socializing and communicating (Allen et al., 2014). Although this situation has become a modern phenomenon (Boyd and Ellison, 2007) of social media today, it is considered as one of the important dependencies of our age in many researches (e.g., Andreassen vd., 2017; Griffiths, Kuss, and Demetrovics, 2014). Ryan, Chester, Reece and Xenos, (2014) defined social media addiction as the inability of one to control social media use and use social media in such a way as to affect other tasks that exist in social life. Such extreme and obsessive use is explained by general dependence theories by Griffiths, (2005). Social media addiction, which was previously considered a structure of internet addiction (Andreassen, Pallesen and Griffiths, 2017), is nowadays defined as a single addiction type (Karaïskos, Tzavellas, Balta and Paparrigopoulos, 2010; Turel and Serenko, 2012). While social media access from the computer restricts social media usage, individuals can easily use social media in almost everywhere. This is considered to be one of the important reasons for the increase in the use of smart phones compared to other phones (Falaki et al., 2010). Kwon et al., (2013) explained that the most important reason of mobile phone loyalty is social media addiction. However, Karadağ, et al. (2015) stated that although social media addiction is a very important dimension in mobile phone addiction, it is not sufficient to explain this phenomenon alone.

Particularly through the use of mobile phones, accessibility to social networks has become much easier and this made social media a part of life. Individuals are forced to be active in social media from their real lives and this leads to a decrease in their real-life activities. In fact, this situation clearly reveals the relationship between social media and social media (Karadağ et al., 2015). In sum, individuals are now communicating their real world through social media and the situation has become a routine of real-life. In parallel with this information, the first hypothesis of this research was formed as follows:

**H<sub>01</sub>:** There is a positive relationship between body builders' phubbing levels and social media addiction.

Vaknin (2001) defined the narcissism as behavioral patterns that are self-obsessed, egoistic, ambitious and constantly seeking satisfaction. A variety of personality disorders (jealousy, personal attention, lack of empathy, feeling unique, etc.) is accepted as a combination of narcissistic personality disorder for American Psychiatric Association (2000). However, the more moderate and non-clinical levels of narcissistic features have sometimes been found to be safe in terms of self-confidence and self-reliance (Campbell, Reeder, Sedikides, and Elliot, 2000; Muller, 2014).

Several studies (eg. Andreassen et al., 2017; Griffiths et al., 2014) have shown that women use social media in terms of addiction, compared to men. In the literature, this situation can be explained by the fact that women tend to develop addictive behaviors towards activities involving social interaction (Kuss, Griffiths, Karila, and Billieux, 2014; Van Deursen, Bolle, Hegner, and Kommers, 2015). However, Andreassen et al. (2015) found that social media dependency is more common among young people. This can be explained by the fact that young people are accustomed to the online world and are more adaptable to new technologies. The fact that social media offers young people a platform to build their own identities freely without parental pressure can be seen as another reason (Mazzoni & Iannone, 2014). Kuss et al. (2014) found that the use of dependent social media is more common among individuals who have a personal relationship. This can be explained by the fact that social media platforms offer important opportunities for individuals to develop new relationships and connections (Ryan et al., 2014).

In sports science literature, the concept of narcissism has been the subject of many different studies. When the studies are examined (Roberts et al., 2013; Spano 2001; Wallace and Baumeister 2002; Elman and McKelvie, 2003), they showed that athletes' narcissistic levels significantly affect their psychological performance positively. In addition, Davis (1992) stated that narcissistic individuals are addicted to excessive exercise because of increasing their self-confidence. Brown and Graham (2008) has shown that narcissism has an impact on body satisfaction of active bodybuilders. Recent literature (e.g. Andreassen et al., 2017; Hong, Huang, Lin, and Chiu, 2014; Wilson, Fornasier and White, 2010) show that personality is important in social media addiction. In their study, Wilson, Fornasier and White (2010) have identified that extroversion and social media dependence are related. Extroverted individuals use social media intensively to develop social connections (Kuss and Griffiths, 2011). Accordingly, introverted individuals use less social media can be explained by their unwillingness to develop social relations (Blackwell et al., 2017). In some studies searching individual differences in terms of narcissism, it was revealed that narcissism was positively associated with different online social networking activities (Barbera, Paglia, and Valsavoia, 2009; Malik and Khan, 2015; Ryan and Xenos, 2011; Wang, Jackson, Zhang, and Su, 2012). This seems quite meaningful because social media allows individuals to express themselves, share their achievements with other individuals and receive appreciation from other individuals (Andreassen et al., 2017). Twenge and Campbell (2010) have shown that the most basic characteristics of

narcissistic individuals are exaggerated positively about their personalities. Social media platforms allow narcissistic individuals to present their personalities in the way they want. This situation allows narcissistic individuals to create shallow relationships in terms of emotionally and superficially (Ekşi, 2012), and provides important clues about social media addiction with narcissism. According to this information, the second hypothesis of this research is as follow.

**H<sub>02</sub>** There is a positive relationship between social media addiction and narcissism levels of body builders.

### **3. Material and Methods**

#### **3.1 Sampling**

Convenience sampling method were used to reach 319 individuals who are interested in various levels of bodybuilding. The data were collected by researchers in 10 different sport facilities in Eskisehir, Turkey. Each survey took about 12 minutes to complete. The questionnaires were not distributed to individuals who did not want to participate in the study and who stated that they were doing body building less than 2 years. The participation in the research was voluntary. In scope of the study, a total of 380 questionnaires were distributed and 61 of them were not included in the study due to incomplete and incorrect coding. The sample of the study 319 body builders, of whom 67,4 % were male and 32,6 % were female and 74.9 % were between the ages 18 to 25. Also, 67.4% of the participants have an average of 4 to 7 trainings per week. Previous studies with athletes of body building in the literature (e.g. Emini, and Bond, 2014; Smith and Hale, 2004) it is possible to see that the participants were similarly distributed. According to this information, it can be stated that the research sample can be similarly represent the research universe.

#### **3.2 Instruments**

A questionnaire form consisting of two parts was developed in the scope of the study. In the first part, there are items aimed to determine social media addiction and phubbing levels of participants. They indicated their response on a five-point Likert-type scale with anchors (1) strongly disagree to (5) strongly agree. The second part of the questionnaire included nine questions to determine the demographic characteristics of the bodybuilders. In order to reveal the levels of phubbing and social media addiction of participants, the scale developed by Karadağ et al. (2015) was used. In addition, to determine the levels of narcissism of the participants the scale developed by Ames, Rose, and Anderson, (2006) was used. The translation back translation method was used to provide the measurement equivalence of the items included in the study. Hambleton and Kanjee (1993) stated that this method is mandatory for measurement equivalence. All statements included in the study were first translated into English by two academicians working in the field of sports science and then translated into Turkish and the possible language problems were prevented. In this respect, it is accepted that

all items included in the study represent the original ones. To ensure the control of the questionnaire form in terms of clarity, the suggested method by Babbie (1998) were applied. So, a pilot study was conducted with 30 bodybuilders within the universe of the study. Some arrangements were done from the feedback received from the athletes and final version of the questionnaire was prepared.

## 4. Results

Hair et al., (2006) defined structural equation modeling (SEM) as a research procedure that demonstrates multiple relationships between different structures. The research procedure is tested in the literature with a two-stage approach, measurement and structural. Within the scope of the measurement model, first, the relationship between the variables and the structures is verified, while the causal relationships are tested in the context of the structural model. In the study, which aims to explore the causal relationships between different structures it is appropriate to use the SEM procedure. In accordance with this information, the research model was tested by Amos 20 program with a two-stage approach consisting of measurement and structural model within the scope of SEM application.

### 4.1 Measurement model

Phubbing scale dimensions, communication disorder (4 items), phone obsession (5 items), control of social media addiction dimensions (5 items), sharing (5 items) and narcissism scale (16 items) were tested within confirmatory factor analysis.

It was revealed that the goodness of fit obtained within the scope of the analysis is above the values suggested in the literature. ( $X^2= 1033,88$   $p=0,000$ ,  $X^2/SD =1,89$ ,  $GFI=0,843$ ,  $CFI = 0,916$ ,  $TLI = 0,908$ ,  $IFI =0,917$ ,  $RMSEA =0,053$ ).

### 4.2 Findings about the validity and reliability of the scale

In order to reveal the validity and reliability levels of the structures included in the study, various validity and reliability analyzes proposed in the literature were used. For this purpose, AVE (average variance extracted) values of all structures were calculated in order to determine the suitability of the measurement model (discriminant validity). Fornell and Larcker (1981) stated that all values should be 0.5 or higher. As a result of the analyzes, all values were over 0.5. Stimson, Carmines and Zeller (1978) stated that all of the expressions included in the study were 0.6 and above, and thus they would verify the relationship between the expressions and the related structures. Also, it was determined that the factor loadings of all statements within the research were over 0.6. In order to reveal the external validity of the measurement model, the relations of all structures with each other were examined and it was determined that all structures had significant relations with each other but no relationship was over 0.85. Malhotra and Peterson (2006) stated that the Cronbach's alpha coefficients should be 0.6 and above to ensure the reliability of the structures. So, as a result of the analyzes, Cronbach's alpha

reliability coefficients of all structures were found to be over 0.6. It can be stated that the research model is valid and reliable, in this sense, structural model can be created.

**Table 1:** Result of the measurement model

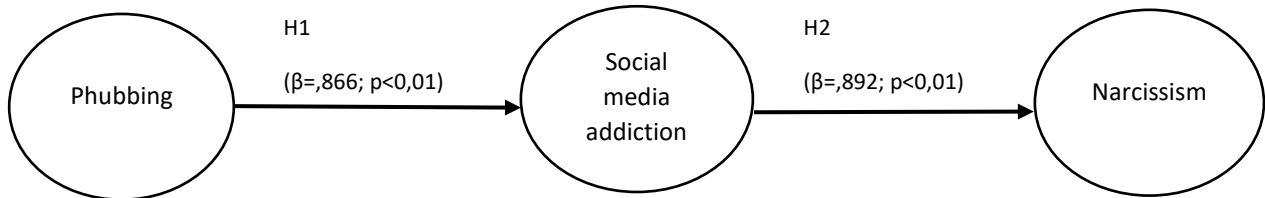
Constructs	Factor Loadings
<b>Social media addiction (Controlling)</b> (AVE: ,507), (Cronbach's alpha: ,879), (CR: ,837)	
I check over my social media [e.g. Twitter, Facebook] accounts even if I have something else to do.	,858
I check over my social media accounts whenever possible.	,911
I check over the accounts of the people I know in social media.	,567
I check over the accounts of the people I don't know in social media.	,558
I prefer to use social media rather than watch television.	,579
<b>Social media addiction (Sharing)</b> (AVE: ,506), (Cronbach's alpha: ,678), (CR: ,835)	
I share what I did, what is going on with life and momentary events in social media.	,815
I follow activities, momentary events, popular videos and trend topics in social media.	,734
I wonder whether my friends read my posts or not.	,698
I communicate with my friends through social media rather than talk to them face to face.	,711
I follow the daily events and current affairs using social networks.	,579
<b>Phubbing (Communication disturbance)</b> (AVE: ,537), (Cronbach's alpha: ,864), (CR: ,852)	
My eyes start wandering on my phone when I'm together with others.	,747
I am always busy with my mobile phone when I'm with my friends.	,815
People complain about me dealing with my mobile phone.	,749
I'm busy with my mobile phone when I'm with friends.	,635
The time allocated to social, activities decreases because of my mobile phone.	,705
<b>Phubbing (Phone obsession)</b> (AVE: ,552), (Cronbach's alpha: ,895), (CR: ,830)	
My phone is always within my reach.	,618
When I wake up in the morning, I first check the messages on my phone.	,738
I feel incomplete without my mobile phone.	,805
My mobile phone use increases day by day.	,795
<b>Narcissism</b> (AVE: ,508), (Cronbach's alpha: ,700), (CR: ,912)	
I know that I am good because everybody keeps telling me so	,659
I like to be the center of attention	,720
I think I am a special person	,748
I like having authority over people	,686
I find it easy to manipulate people	,700
I insist upon getting the respect that is due me	,698
I am apt to show off if I get the chance	,693
I always know what I am doing	,625
Everybody likes to hear my stories	,722
I expect a great deal from other people	,594
I really like to be the center of attention	,738

People always seem to recognize my authority	,759
I am going to be a great person	,768
I can make anybody believe anything I want them to	,732
I am more capable than other people	,616
I am an extraordinary person	,693
<b>Fit Indices:</b> (X <sup>2</sup> = 1033,88 p=0,000, X <sup>2</sup> /SD =1,89, GFI=0,843, CFI = 0,916, TLI = 0,908, IFI =0,917, RMSEA =0,053)	

### 4.3. Structural Model

After testing and validating the measurement model, a research model was created (Figure 1). The results show that the goodness of fit results is above the values suggested in the literature.

In line with this information, research hypotheses were tested within the model framework. (X<sup>2</sup>= 1022,173 p=0,000, X<sup>2</sup>/SD =1,865, GFI=0,845, CFI = 0,918, TLI = 0,911, IFI =0,919, RMSEA =0,052).



**Figure 1:** Structural model

### 4.3. Hypothesis testing

As a result of the hypothesis tests, two hypotheses in the scope of the research were accepted (p<,001). In this context, it was revealed that there is a high and positive correlation between phubbing levels of bodybuilders and their social media addiction levels. Also, it is found that there is a high and positive relationship between social media addiction and the narcissism levels of athletes (Table-2).

**Table 2:** Result of the research model

Analysis	Coefficient	T-value	Result
H <sup>1</sup> Social media addiction <--- Phubbing	,866	6,21	Accepted**
H <sup>2</sup> Narcissism <--- Social media addiction	,892	4,30	Accepted**

## 5. Discussion

This research is designed to explore the relationships between the levels of phubbing, social media addiction and narcissism levels of bodybuilding athletes. In this context, two research hypotheses were accepted as a result of the analyzes within the scope of the research. The social media phenomenon that has created such a deep dependency on the computer environment has gained a new form through smartphones that are always on the side of the individuals. Wilson et al., (2010) stated that the overuse of the use of social media today is a kind of addiction. In parallel with the subject, and in the recent literature, there are studies revealing that the social media is a new and rapidly



developing area of addiction (Karaiskos et al., 2010; Turel and Serenko, 2012). However, these applications provide the opportunity to see the effects of an individual's views, ideas and desires on a wider environment than the real environment without being familiar with acquaintances. Kwon et al. (2013) stated that this situation creates social media addiction in individuals. In their study, Salehan and Negahban (2013) found that social media loyalty is one of the leading structures associated with cell phone loyalty. In the light of this information, it has been suggested that there is a relationship between social media addiction and phubbing behavior in the study. As a result of the analyzes, it is revealed that there is a high and positive relationship between these two structures in bodybuilders.

In parallel, Karadağ et al. (2015) found that social media addiction triggered phubbing behavior among university students. The results obtained in the study support this relationship in the literature in different sample groups. As today, beautiful and attractive physical appearance is emphasized in the past societies. Thus, individuals make intensive efforts to have aesthetic physics. This situation has transformed the body appearance into a very important condition for the developing new age and the body is considered not only biologically, but also as a social and psychological product (Raghibi and Minakhany, 2012). In various researches conducted in previous periods about smartphones (Arkin, 1981; Leary 1992; Hart, Leary, and Rejeski, 1989), it was revealed that one of the most important motivations of individuals to exercise is self-presentation in social environments. Social media sites such as Facebook, Twitter, and Instagram, which allow sharing of photos, videos, sounds, texts and images, offer great opportunities to get the appreciate, approval and opinions of third parties (Malita, 2011). In addition, Crawford and Eklund (1994) stated that the theoretical background of self-presentation is important in understanding the exercise behaviors of individuals. In various studies (eg, Seidman, 2012; Zhao, Grasmuck, and Martin, 2008), it has been revealed that one of the most important motivations of social media usage is self-presentation. In parallel with our research, for body builders; their most important product is their body and the motivation to present their bodies in social media can be shown one of the most important reason. However, in the light of research in the literature, if the subject is examined in another dimension, Forest and Wood (2012) found that individuals to express themselves who are lack of self-confidence think that social media is a safer place than individuals with high self-confidence. In parallel with this research, there are various studies in the literature that reveal negative correlations between high self-esteem and social media usage (eg, Hong et al., 2014; Wang et al., 2012; Wilson et al., 2010). These results reveal the necessity to examine the subject by different studies.

McCabe and Ricciardelli (2004) stated that the importance of appearance of individuals includes not only what a person looks like, but also a number of indicators related to health status, fitness and general well-being. Sport is one of the most important ways to improve physical appearance. For a long time, bodybuilding has started to gain popularity in this sense. The desire of the individual to draw attention in

to the public and to be appreciated by others are some of the most important motivations of bodybuilding (Leary, 1992). In his study, Yavari (2014) showed that the narcissistic levels of individuals who are interested in bodybuilding are higher than others. In this context, it can be stated that bodybuilding causes individuals to exhibit narcissistic behaviors. In fact, this situation often brings along a variety of behavior disorders such as eating, anabolic steroid usage among individuals who are engaged in this sport (Martin and Leary, 2001). This result may cause behavioral disorders that may adversely affect many habitats such as social, family and workplace relationships. Findings from this research can be examples of phubbing depending on social media addiction. This information supports the second hypothesis of the study, the relationship between phubbing and narcissism. Bianchi and Philips (2005) underlined that individuals tend to use their mobile phones in both suitable and inappropriate environments. When people realize the frequent phubbing behavior around them, they can conclude that this behavior is socially acceptable (Ross, 1977). In their study, Chotpitayasunondh and Douglas (2016), revealed that exposure to phubbing behavior is an indication of how much phubbing behavior the individual will exhibit in the future. Phubbing is a disgruntled action for those exposed to this behavior (<http://stopphubbing.com>). In response to discontented actions, individuals tend to retaliate (Falk and Fischbacher, 2006; Keysar et al., 2008). This situation can be expressed among the reasons of the spread of phubbing behavior among bodybuilders.

## 6. Limitations and future research

As with all research this research contains various limitations, and in line with these limitations, some suggestions for similar studies can be put forward. Within the research, convenience sampling method was used and this reduces the generalizability of the research. More generalizable results can be obtained from new research structured using probabilistic sampling methods. In addition, only bodybuilders were included in this study. Different results can be obtained from new researches that will be formed with athletes from different sports branches.

Our research has been carried out with Turkish athletes, similar interactions with athletes from different cultures can be observed in the intercultural exchange of phubbing. Similar models to be created by adding different structures, different variables affecting research structures can be revealed.

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