The Digital Burnout Scale Development Study

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Abstract

Digital burnout occurs as a result of spending excessive amounts of time on digital devices. It causes stress, fatigue, desensitization toward the environment, loss of interest, and physical and mental problems. This study developed a scale to determine digital burnout levels. Digital natives and digital immigrants were selected as the study group. Exploratory and confirmatory factor analysis was done to determine the scale’s structure validity. Cronbach’s alpha reliability coefficient was used to determine the reliability. These procedures generated a scale with 24 items in three sub-factors: digital aging, digital deprivation and emotional exhaustion. The scale has a valid item content and structural validity. Its Cronbach’s alpha coefficient was 0.946. It is thought that the digital burnout scale will contribute to the field. This study can be a reference for detecting digital burnout levels. By detecting digital burnout levels, people may notice their situation and seek solutions.

Keywords: Digital burnout, scale development, digital aging, digital deprivation, emotional exhaustion.

Suggested Citation

Dijital Tükenmişlik Ölçeği Geliştirme Çalışması

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Öz


Anahtar Kelimeler: Dijital tükenmişlik, ölçek geliştirme, dijital yıpranma, dijital yoksunluk, duygusal tükenme.

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Önerilen Atıf

The word, burnout means “the status of having became exhausted on strength, not endeavor” (Turkish Language Institution-Türk Dil Kurumu [TDK], 2017). Freudenberger (1974) defines it as running out of internal resources as a result of failure, exhaustion, reduced energy and strength or wishes that cannot be satisfied. According to Maslach and Jackson (1981), burnout is a syndrome of emotional exhaustion and cynicism (depersonalization) that often occurs due to working with people. Emotional exhaustion has dimensions of desensitization and personal success. Burnout syndrome occurs as a result of running out of emotional resources, is followed by emotional exhaustion, isolation and desensitization, and culminates in reduced personal success with feelings of inadequacy (Maslach & Jackson, 1981; Maslach, Jackson, & Leiter, 1996; Maslach, 1998).

The types of occupation-related burnout that are experienced in work environments are the most common subjects of research. The burnout, that manifests itself in many different symptomatic ways which vary in symptom from person to person, has both physical effects (fatigue, feeling of tiredness, cold blood, headache, gastrointestinal discomfort, sleep deprivation, dyspnea) and behavioral effects (short temper, becoming abruptly provoked, disappointment, not being able to control one's emotions, paranoia) (Freudenberger, 1974). These symptoms alter people's lives who suffer from burnout and reduces their quality of life and make them unhappy (Ardic & Polatci, 2008). When people's emotional, physical and cognitive energy resources are wasted and depleted, they experience reduced self-efficacy and self-respect, changes in relations with families and social environment, deteriorating health, stress, desperation and despair (Hobfoll & Shirom, 1993; Shirom, 2003). These negative affective responses proceed continuously (Demir, 2010).

Since burnout is both physical and psychological, people can go through different types of burnout in their lives (Bakoğlu Deliorman, Boz, Yiğit, & Yıldız, 2009). One type is digital burnout, which is one of the diseases of our age. With the 24/7 use of digital devices making it possible to do business outside traditional work hours, workers find themselves in a digital burnout that they do not know when to stop. Irresistible information flow and constant accessibility are harmful to people’s health. The purpose of digital connection disappears, and stress increases. Digital burnout emerges in work environments as sleep deprivation, problematic relations at home and reduced organizational effectiveness in workplaces (Detecon, 2013; Quill, 2017).

The rapid development and expansion of technology have swept people into a digital lifestyle in which technologies affect their professional competencies and psychosocial development. Technology has substantial positive and negative effects on social relations, cognitive structure, behavior, emotions and psychological health. Since digital communication, technology and the internet have positive effects, they also have negative effects: envy, loneliness, depression, low self-esteem, addictive behaviors and impotency in relationships (Greenberg, 2016). Digital burnout’s symptoms include low productivity, being unable to cope with routines, constant fatigue and inability to control emotions (Accountancy SA, 2015; Spalding, 2015).

According to Dion Chang (2016), one of the founding consultants of Flux Trends, digital burnout is a recent phenomenon that has yet to be understood. Its destructive outcomes are caused by people’s virtual existence, while stress and tension caused by long work hours are the causes of traditional burnout. It is a digital age disorder that threatens individuals and also causes physical and mental disorders. Digital detox or midyear recesses are required to cope with digital burnout. According to Chang (2016), there is a friction between our online and offline worlds that has been growing for many years. It has become a significant source of conflict in families. People live in two parallel universes, the diminishing physical environment and a virtual world, where they spend most of their time. People have ways of using digital devices that leads them to spend more time on internet than sleeping and then try to discover the cyber world in their free time. Not being able to focus on work for more than a few minutes is a sign of digital burnout.

People’s brains readjust themselves to be in permanent multitasking mode when they are always using and dependent on digital devices, leading to digital burnout (Chang, 2016). Constant availability causes an increase in mental disorders. They spend most of their time with digital devices. Average telephone users use their phones 150 times in a day and starts 10 apps, but addicts check their phones 900 times a day and starts 60 apps. As our addiction to digital devices becomes normal and accepted, realizing the need for digital recovery takes quite some time. Multitasking and information overload (also known as infoxication) tend to cause depression in women and cardiovascular diseases in men. People do not entirely disconnect their bodies and especially their brains from digital devices after spending time with them and turning them
off just before sleep. This stimulates their brain to be preoccupied and generates mental fatigue, physical fatigue and burnout (Grant-Marshall, 2014).

Technology is like any other tool that can be used in both favorable and unfavorable ways. The use of technology is alluring to people because of its quality and velocity. Yet, current technology should be assimilated in a reasonable way. The question of how we should interact with technology needs to be discussed and resolved.

The technological preferences and usage of different generations vary. Positive experiences with technology cause generations with positive perception, while negative experiences or lack of experience cause generations with negative perceptions (Gunuc & Kuzu, 2014). Digital burnout occurs as a result of spending excessive amounts of time on digital devices. Over time, stress, fatigue, desensitization toward the environment, loss of interest, and physical and mental problems will occur.

Studies on burnout have been carried out in many areas (Ardıç & Polatç, 2008; Yildiz-Durak & Saritepeci, 2019; Yildiz-Durak & Seferoğlu, 2017; Freudenberger, 1975; Güven, 2013; Maslach & Jakson, 1985; Mandaviya, 2019). Most of these studies are related to burnout experienced by people working in various occupations. Therefore, scales for measuring such burnouts have been developed (Kristensen, Borritz, Villadsen, & Christensen, 2005; Maslach & Jackson, 1981; Seidman & Zager, 1986-1987). However, individuals who lead a digital life due to the rapid spread and use of technology experience physical, psychological and social problems. There is no tool in the literature to demonstrate this situation. It is important to identify these situations. In addition, it is thought that the development of this tool will make it easier for both individuals and experts to apply the necessary measures.

Evaluation can be done by using a measure to evaluate and pass judgments based on results about individuals, incidents, situations or objects (Ercan & Kan, 2004). It is thought that the digital burnout scale will contribute to the field.

Aim of the research
The purpose of this study is to develop a scale to identify digital burnout levels, and its validity and reliability studies of this Likert type scale were carried out.

METHOD
The Population and Sample of the Study
The population of the study consists of digital natives and digital immigrants (Prensky, 2001) who are digitally literate and can use and adopt digital technologies (Kazu & Erten, 2013). Purposeful convenience sampling (Erkuş, 2017; Sönmez & Alacapinar, 2016) was chosen in order to find individuals who were qualified enough to represent the features of the population of the study (Erkuş, 2014). The study was carried out in two implementations. Exploratory factor analysis was used on the data from the first implementation, and confirmatory factor analysis was used on the data that was obtained from the second implementation. The validity and reliability studies were carried out on all the total data from both implementations. Various types of analysis should be used in order to test the psychometric properties of items in a way that suits the variable that is to be assessed (Azaltun, 2008). The sample of the study consisted of 376 (286 high school, 138 university) students between the ages of 14 and 37 for the first implementation, and 283 (150 university students and 133 graduates) individuals between the ages of 18-48 for the second implementation. The population and sample of the study were chosen with the purpose of collecting generalizable data (Kuş, 2009). Administering the scale to different groups was intended to strengthen the validity and reliability of the study. Individuals’ heterogeneity regarding the related property is desirable in scale development studies (Erkuş, 2017). The scale was administered to 437 individuals in the first implementation and 461 individuals in the second implementation. Since there were 376 usable data from the first implementation and 283 usable data from the second, statistical analysis was carried out using these data. Data from participants were collected by way of internet. In scale development studies, there need to be more participants than the variables subjected to factor analysis. The reliability of factors depends on the size of the study sample (Bryman & Cramer, 2005). There should be at least five participants per item and no less than 100 participants per analysis (Gorsuch, 1983). The size of the pretest sample to evaluate the psychometric properties of items should be between 100-200, and then confirmatory sample size should be at least 300 (Tay & Jebb, 2017). In the implementation of the structural equation model, sample size is 100 participants for low level and 200
participants for acceptable level (Gürbüz & Şahin, 2014). Sufficient sample size for factor analysis was achieved.

Scale Development Process

First, an item pool was formed after a review of the relevant literature (Büyüköztürk, 2005, p. 136). Burnout (Çapri, 2006; Freudenberg, 1974; Kristensen, Borritz, Villadsen, & Christensen, 2005; Maslach & Jackson, 1981; Maslach, Jackson, & Leiter, 1996; Shirom, 2003; Shirom, Melamed, Toker, Berliner, & Shapira, 2005), digital burnout (Accountancy SA, 2015; Detecoon, 2013; Grant-Marshall, 2014; Quill, 2017; Spalding, 2015), digital fatigue (Tohlang, 2016), digital stress (Reinecke et al., 2016), digital health (Loos, 2017) and scale development (Çokluk et al., 2012; Hooper, Coughlan & Mullen, 2008; İlhan & Çetin, 2014; Korkmaz, Çakir, & Özden, 2017; Otrar & Argın, 2015; Şahin, 2016; Ugur & Turan, 2016; Yavuz Konokman & Yanpar Yelken, 2015; Yeşil & Aslanderen, 2017) studies were also examined. An item pool consisting of 68 items about the opinions of not only high school and university students, but also graduates, was formed. For the content validity of this scale (Erkuş, 2014, p. 8), which indirectly evaluates the responses of individuals to various stimulants, a computer teacher, a faculty member in the field of computer and instructional technology and an associate professor of educational sciences were consulted. The scale was finalized by determining whether its items were sufficient or suitable in terms of assessing the content and quality of the behavior to be assessed (Büyüköztürk, 2013, p. 179-180). A Likert-type scale with 40 items in total, was formed (Tavşancıl, 2010, p. 139). The response options were: entirely agree (5), agree (4), do not entirely agree (3), disagree (2), strongly disagree (1). Reverse coding was done for negative items. The data obtained from the participants were entered in computer software for validity and reliability analysis.

Data Analysis

Exploratory and confirmatory factor analysis techniques were used in order to determine the structural validity (Balcı, 2009, p. 113) that indicates the accuracy of the scale (Çokluk, Şekerçioğlu, & Büyüköztürk, 2012, p. 177). Factor analysis provides a way of thinking about these relations by positing the existence of underlying factors or factor structures of face value statements in a correlation matrix (Comfrey & Lee, 1992, p. 6). Exploratory factor analysis is used to choose between principal components analysis, which may include purposes of the study, define latent structure or can be based on data reduction and mutual factor analysis. Confirmatory factor analysis, which uses a structural equation model, is used for validating the dimensional structure of the scale (Floyd & Widaman, 1995, p. 286).

The adequacy of the data obtained from a sample is determined with the Kaiser-Meyer-Olkin (KMO) test. It is evaluated as perfect as it closes to 1, and as unacceptable when it is below 0.50. Bartlett’s test was performed because population distribution should be normal for factor analysis. The higher the results of Bartlett’s test are, the greater the significance (Sönmez & Alacapınar, 2016; Tavşancıl, 2010). Internal consistency coefficients were calculated to determine the reliability of the scale. Cronbach’s alpha reliability coefficient was used to determine the internal consistency levels of the scale items (Büyüköztürk, 2013, p. 181). The threshold for statistical significance level was <0.05.

In exploratory factor analysis, confirmatory factor analysis should be performed on the new sample, and it should be evaluated with the fit index number of the model after the occurrence of the theory-based dimensionality (Tay & Jebb, 2017). In scale development studies, validation of the present model with confirmatory factor analysis is expected after exploratory factor analysis (Erkorkmaz, Etikan, Demir, Özdamar & Sansoqlu, 2013). Confirmatory factor analysis evaluates the consistency between the original structure and the pre-determined factor model (Çokluk et al., 2012; Doğan, 2015; Erkorkmaz et al., 2013; Sayın & Gelbal, 2016; Seçer, 2015). AMOS software (Çokluk et al., 2012) was used to test the model's hypothesis. General consistency and the consistency of the model and data are determined as statistical values by calculating model parameters (Çokluk et al., 2012; Erkorkmaz et al., 2013). This shows the general quality of factors and the tested model (Sümü, 2000). Several fit indices are used for the validity of the model, depending on the statistical software. Min 4, max 8 of fit indexes are used for model explanation because fit indices show how well a previously defined model explains the data (Ayyıldız & Cengiz, 2006). CMIN/DF (chi-square/degree of freedom), CFI, NFI, GFI and RMSEA values were used in this study. These values should be: lower than 3 for CMIN/DF correlation as perfect fit, higher than 0.90 for CFI value as good fit, lower than 0.08 for RMSEA value as good fit, closer to 1 for NFI, fluctuating between 0 and 1 for GFI values as perfect fit and closer to 0 for inconsistency (Çokluk et al., 2012; Hooper, Coughlan & Mullen, 2008; Ilihan & Çetin, 2014; Seçer, 2015; Sümü, 2000; Yilmaz, 2004). Models have good fit not when goodness-of-fit tests are high, but when the correlations between variables are low. It is normal for the model fit indices of newly developed fields to be under the critical limit values (Ayyıldız & Cengiz, 2006).
Cronbach’s alpha reliability coefficient was used to determine the reliability of the scale. A Cronbach’s alpha value (Büyüköztürk, Kılıç Çakmak, Akgün, Karadeniz, & Demirel, 2016; Kline, 2016), which indicates the consistency of measuring test items completely, of 0.70 or higher is enough for reliability (Cronbach, 1951; Pallant, 2007; Nunnally, 1975).

**FINDINGS AND INTERPRETATION**

The Kaiser-Meyer-Olkin (KMO) coefficient and Bartlett’s test of sphericity, which are used to determine the adequacy of data for factor analysis, were 0.916 and 6624.227 (p=0.000), respectively. KMO values should be 0.60 or higher, and values of 0.90 or higher to indicate excellent sample size (Kaiser & Rice, 1974; Pallant, 2005; Tabachnick & Fidell, 2007; Tavşancıl, 2010; Çokluk et al., 2012; Büyüköztürk, 2013). Bartlett’s test P values lower than 0.05 are significant for factor analysis (Can, 2016; Pallant, 2007). These results indicate that data were adequate for factor analysis.

Whether the scale is unidimensional or not was determined using principal components analysis. In principal components analysis, the first principal component is added to total variance at the highest level, and other components are added to total variance at lower levels (Uğur & Turan, 2016). Of the scale items, 40 were found to have nine components with an eigenvalue of higher than 1 and a contribution to total variance at the rate of 60.831%. The effects of these nine components on total variance were: 29.224%, 7.375%, 4.820%, 4.154%, 3.756%, 3.386%, 2.958%, 2.656% and 2.502%. In exploratory factor analysis, the number of factors is defined by eigenvalues higher than 1 and their effects on mutual variance and scree plots (Figure 1) (Can, 2016; Erkuş, 2014; Pallant, 2007; Reise, Waller, & Comrey, 2000; Sönmez & Alacapınar, 2016). Thus, the scale had a three-factor structure, and analysis was redone for these three factors. Varimax vertical rotation method was used as for principal components. This made it possible to determine the groups accumulating the items and increased the factor variances that were suitable for strong interpretation (Çokluk et al., 2012).

![Scree Plot](image)

Figure 1. Scree Plot

In factor analysis, a factor loading value of 0.45 was chosen to exclude items that did not evaluate same structure. Thus, the items that best evaluated the structure of the scale were included (Büyüköztürk, 2013; Can, 2016). Some studies use factor loading values as low as 0.30 (Pallant, 2007) or 0.32 (Tabachnick & Fidell,
2007). The scale was finalized after the exclusion of items with factor loading values lower than 0.45 (Table 1).

Table 1

*The Results of the Exploratory Factor Analysis of the Digital Burnout Scale*

<table>
<thead>
<tr>
<th>Items</th>
<th>Mutual Factor Variance</th>
<th>Factor Loading</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First Factor: Digital Aging</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>28. I have attention deficit.</td>
<td>0.446</td>
<td>0.560</td>
</tr>
<tr>
<td>29. I do nothing in the name of productivity.</td>
<td>0.336</td>
<td>0.501</td>
</tr>
<tr>
<td>32. I always feel tired.</td>
<td>0.426</td>
<td>0.569</td>
</tr>
<tr>
<td>34. I think that I will lose my mind one day.</td>
<td>0.519</td>
<td>0.685</td>
</tr>
<tr>
<td>35. I sometimes feel like my mind gets blurred.</td>
<td>0.487</td>
<td>0.669</td>
</tr>
<tr>
<td>36. I feel stressful.</td>
<td>0.535</td>
<td>0.692</td>
</tr>
<tr>
<td>37. My mind is always occupied with digital devices that I use.</td>
<td>0.526</td>
<td>0.681</td>
</tr>
<tr>
<td>38. Either my hand or my body aches as a result of constantly writing and checking messages.</td>
<td>0.455</td>
<td>0.528</td>
</tr>
<tr>
<td>39. I started to think that I have symptoms of depression.</td>
<td>0.522</td>
<td>0.651</td>
</tr>
<tr>
<td>40. A feeling of loneliness dominates me.</td>
<td>0.360</td>
<td>0.541</td>
</tr>
<tr>
<td>42. I am confused about my statue.</td>
<td>0.418</td>
<td>0.599</td>
</tr>
<tr>
<td>45. I feel restricted.</td>
<td>0.398</td>
<td>0.601</td>
</tr>
<tr>
<td>57. I cannot establish balance between the real world and the virtual world.</td>
<td>0.446</td>
<td>0.512</td>
</tr>
<tr>
<td>59. I spend long periods of time in the virtual world with digital devices.</td>
<td>0.494</td>
<td>0.538</td>
</tr>
<tr>
<td>67. I speak and look around less.</td>
<td>0.286</td>
<td>0.467</td>
</tr>
<tr>
<td><strong>Second Factor: Digital Deprivation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. I feel uneasy when I do not have internet connection or I am offline.</td>
<td>0.494</td>
<td>0.626</td>
</tr>
<tr>
<td>13. I always think about which message I just received and what is happening.</td>
<td>0.505</td>
<td>0.634</td>
</tr>
<tr>
<td>15. I feel naked when I do not have my digital devices (phone, tablet, computer etc...) with me.</td>
<td>0.584</td>
<td>0.718</td>
</tr>
<tr>
<td>16. I check my tweets, facebook account, e-mails, messages all the time. If I don’t, I feel weird or anxious.</td>
<td>0.627</td>
<td>0.753</td>
</tr>
<tr>
<td>17. I feel powerless when I do not have an internet connection or I am offline.</td>
<td>0.531</td>
<td>0.648</td>
</tr>
<tr>
<td>61. I fell most afraid of losing or forgetting my phone. This thought disturbs me.</td>
<td>0.482</td>
<td>0.588</td>
</tr>
</tbody>
</table>
Third Factor: Emotional Exhaustion

<table>
<thead>
<tr>
<th>Item</th>
<th>Factor Loading</th>
<th>Contribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. I feel uneasy when I use digital devices excessively.</td>
<td>0.356</td>
<td>0.464</td>
</tr>
<tr>
<td>3. I feel worthless when I use digital devices excessively.</td>
<td>0.441</td>
<td>0.542</td>
</tr>
<tr>
<td>6. I feel exhausted due to virtual and digital worlds.</td>
<td>0.397</td>
<td>0.567</td>
</tr>
<tr>
<td>8. I almost feel nothing about events and situations around me.</td>
<td>0.448</td>
<td>0.620</td>
</tr>
<tr>
<td>9. I have become intolerant of and desensitized to the people around me.</td>
<td>0.585</td>
<td>0.701</td>
</tr>
<tr>
<td>10. I have become impatient.</td>
<td>0.591</td>
<td>0.683</td>
</tr>
<tr>
<td>11. I have become quick-tempered.</td>
<td>0.509</td>
<td>0.631</td>
</tr>
<tr>
<td>21. I think that my relationships and communications with people have been weakened.</td>
<td>0.478</td>
<td>0.589</td>
</tr>
<tr>
<td>23. I think that my face-to-face relationships have weakened.</td>
<td>0.351</td>
<td>0.534</td>
</tr>
</tbody>
</table>

**Explained Total Variance: 41.419%**

There were 30 items left after the analysis. Since factor loading values fluctuate between 0.464-0.753 for all of the scale, their contribution to total variance was 41.419%. Explained variances between 40%-60% is sufficient for multi-factor scales (Çokluk et al., 2012). Factor loading values fluctuated between 0.467-0.692 for the first factor, 0.588-0.753 for the second factor and 0.464-0.701 for the third factor. The explained variances of the factors were 17.241%, 12.828%, and 11.350%, respectively. Mutual factor variances, which are formed by factors on every variable as a result of factor analysis, are required to be calculated for multi-factor structures. When this mutual factor variance, which has a value between 0 and 1, closes to 1, it means that its contribution to variance is high, and when it closes to 0, it means that its contribution is low (Çokluk et al., 2012). The scale was defined as valid according to item content and structural validity. After these procedures, the factors were named. During this process, the literature and the views of field experts were consulted. Since the variable with the highest factor loading value is taken as the basis (Karagöz, 2016), the first factor was digital aging, the second was digital deprivation, and the third was emotional exhaustion.

Confirmatory factor analysis was performed to validate the factor structures of the scale, which has three factors. A new sample of 283 people was selected for confirmatory factor analysis. This sample size is suitable for confirmatory factor analysis (Kline, 2016). The results of confirmatory factor analysis were sufficient: CMIN/DF=2.614 (Kline, 2005; Sümer, 2000), CFI=0.909 (Ayyıldız & Cengiz, 2006; Çokluk et al., 2012; Sümer, 2000), GFI=0.838 (Günüç, 2009; Yılmaz, 2004), NFI=0.861 (Yılmaz, 2004) and RMSEA=0.076 (Çokluk et al., 2012; Dursun & Kocagöz, 2010; Hu & Bentler, 1999; Kline, 2016; Yılmaz, 2004). Based on these results, it can be concluded that the model confirms the factors. The diagram of factor-item relationships is shown below (Figure 2).
The scale was finalized according to the exploratory and confirmatory factor analysis (Table 2), and a scale with 24 items in 3 factors was obtained.

Table 2
The Final Version of The Digital Burnout Scale

<table>
<thead>
<tr>
<th>Factor</th>
<th>Item No</th>
<th>Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Digital Aging</td>
<td>28</td>
<td>I have attention deficit.</td>
</tr>
<tr>
<td></td>
<td>34</td>
<td>I think that I will lose my mind one day.</td>
</tr>
<tr>
<td></td>
<td>35</td>
<td>I sometimes feel like my mind gets blurred.</td>
</tr>
<tr>
<td></td>
<td>36</td>
<td>I feel stressful.</td>
</tr>
</tbody>
</table>

Figure 2. The Confirmatory Factor Analysis Diagram of The Scale (One: Digital Aging, Two: Digital Deprivation, Three: Emotional Exhaustion, Outcome: Digital Burnout)
Factor | Item No | Items
---|---|---
Either my hand or my body aches as a result of constantly writing and checking messages.
I started to think that I have symptoms of depression.
A feeling of loneliness dominates me.
I am confused about my statue.
I feel restricted.
I cannot establish balance between the real world and the virtual world.
I spend long periods of time in the virtual world with digital devices.
I speak and look around less.
I feel uneasy when I do not have internet connection or I am offline.
I always think about which message I just received and what is happening.
I feel naked when I do not have my digital devices (phone, tablet, computer etc…) with me.
I check my tweets, facebook account, e-mails, messages all the time. If I don’t, I feel weird or anxious.
I feel powerless when I do not have an internet connection or I am offline.
I fell most afraid of losing or forgetting my phone. This thought disturbs me.
I feel exhausted due to virtual and digital worlds.
I almost feel nothing about events and situations around me.
I have become intolerant of and desensitized to the people around me.
I have become impatient.
I have become quick-tempered.
I think that my relationships and communications with people have been weakened.

The Cronbach’s alpha coefficient, which is the reliability level internal consistency method, was calculated as 0.946. It meets the suggested criteria of being 0.90 or higher (Tay & Jebb, 2017). The Cronbach’s alpha coefficient was 0.919 for the first factor, consisting of 12 items, 0.885 for the second factor, consisting of 6 items, and 0.865 for the third factor, consisting of 6 items. Accurate predictions for the general population of the study were able to be made as the reliability of the scale improved (Ercan & Kan, 2004). Thus, the entire scale and its sub-factors are reliable.

CONCLUSION AND RECOMMENDATIONS

The digital burnout scale was developed to detect burnout due to the use of digital technologies in daily life. First, a literature review was carried out, and items were written for a Likert-type scale. Individual and situational characteristics that indicate digital burnout were taken into consideration. A draft of 68 items was sent to experts for content validity. The scale was renewed according to the items that should be regulated or removed. The resulting 40-item scale was administered to the sample, and the results were subjected to exploratory factor analysis. The scale was determined to have 30 items in three factors. The factor loading values met the criteria for structure validity in terms of explained variance values and eigenvalues. Confirmatory factor analysis was performed after exploratory factor analysis. Its results confirmed the
validation of the model by the data. The relevant literature was reviewed in order to determine the validity of the scale; however, similar scales’ validity could not be calculated because no scales with the same content and purpose were found. The Cronbach’s alpha value of the 24-item scale in three factors was found to be sufficient. The digital burnout scale was confirmed to be reliable and valid by reliability, exploratory and confirmatory factor analyses. Scales that are tested for reliability and validity and found sufficient enable practitioners to obtain valid data (Erçan & Kan, 2004). Therefore, studies that will contribute to the literature can be carried out with this scale. This study can be a reference for detecting digital burnout levels. By detecting digital burnout levels, people may notice their situation and seek solutions. This study contributes to taking measures for a healthier and higher quality of life.

The digital burnout scale has been developed to appeal to a wide segment. In future studies, it is thought that applying to individuals in different professions or students at different levels will contribute to the validity and reliability of the scale. Its inclusion in future research studies will enable us to achieve a better understanding of the personal, social and institutional variables that either encourage or reduce the emergence of digital burnout. In addition, it is thought to be useful to identify the variables predicting digital burnout. It is thought that by determining the levels of digital burnout of individuals, field experts will refer to the necessary measures.

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