

## Perspectives of Generation 2000 and Their Parents on E-Communication Addiction in Turkey

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**BACKGROUND AND AIMS:** Turkey held a leading position in the use of e-social networks in 2014; thus, it is worthwhile to research e-communication addiction in this country. Aim: To answer the question as to whether Generation 2000 in Turkey is addicted to e-communication, we researched the topic from two perspectives. Method: For the first perspective, a sample was chosen from among university students from Generation 2000 (N=1784). For the second perspective, a sample was chosen from among parents in the previous generation (N=2240). Result and Conclusion: According to the findings of the research, the views of Generation 2000 and their parents differ with regard to whether Generation 2000 is addicted to e-communication. Generation 2000 believes that they have a low level (Total  $X_{average}=2.50$ ) of e-communication addiction. In contrast, their parents feel that Generation 2000 has a high level (Total  $X_{average}=3.41$ ) of e-communication addiction. Discussion: The general results of the research do not permit us to conclusively state that Generation 2000 in Turkey is addicted to e-communication. However, can we conclude that Generation 2000 in Turkey is not addicted to e-communication? We can only state that this is the case for now. Our findings reveal significant differences with respect to age and frequency of internet use in the perspectives of members of Generation 2000 on whether their generation is addicted to e-communication. In their parents' generation, perspectives on this issue differ significantly by gender and age.

**Keywords:** e-communication addiction, addictive behavior, Generation 2000, parents, e-communication in Turkey

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### I. INTRODUCTION

The internet revolution has created Generation 2000 (millennials). Today, e-communication is used primarily by Generation 2000. Naturally, this generation is subject to the psychosocial impact of e-communication, and the negative effects of opportunities provided by e-communication technologies are discussed more often than their benefits (Walther, Van Der Heide, Ramirez, Burgoon & Peña, 2015, p. 5; De Leo & Wulfert, 2013; Brunelle et al., 2012; Thatcher, 2012, p. 103; O'Brien, 2012; Andreassen, Torsheim, Brunborg & Pallesen, 2012; Gee & Hayes, 2011; Hantula, Kock, D'Arcy & DeRosa, 2011, p. 343; Tao et al., 2010; Dijk, 2007, p.54; Ko et al., 2005; Griffiths, 2005; Bargh & McKenna, 2004; Shapira et al., 2003; Nie & Hillygus, 2002; Nie, 2001; Davis, 2001; Beard & Wolf, 2001; Dietz-Uhler & Bishop-Clark, 2001; Pratarelli, Browne & Johnson, 1999; Greenfield 1999a, 1999b; Young, 1996; Walther, 1992).

With regard to the negative psychosocial effects of e-communication, a primary concern is unhealthy or excessive use of e-social networks by Generation 2000. Although the direct target of this concern is Generation 2000, the parents of Generation 2000 are the indirect target of the problem. Parents are an important consideration when addressing this problem. The importance of parents' perspectives is increasingly clear, and their ideas are more important than ever. Parents observe Generation 2000 very closely. Because parents from the previous generation lived in the pre-internet and e-social network period, they can identify behaviors associated with e-communication use. Conflicts arise between older-generation parents and Generation 2000 with regard to excess or unhealthy use of e-communication. Hence, the subject of e-communication addiction among Generation 2000 in Turkey will be researched by comparing the views of Generation 2000 with those of their parents' generation.

### II. LITERATURE REVIEW

Technological developments have radically changed communication media over the past 25 years. The internet revolution was an important milestone of this period. The internet did not develop suddenly; rather, it arose from previous conditions (Internet History 1962, n.d.; Leiner et al., n.d; Husson, 2012; Chrisafis, 2012). The year 1990 can be considered the beginning. Over time, the internet and other e-communication technologies (e-social networks, smartphones, etc.) were more widely adopted (Steele & Carter, 2002) and entered every area of life.

The use of the internet and e-social network increases every day throughout the world. The International Telegraph Union (ITU) predicted that internet users in the world would reach 3 billion people by the end of 2014 (ITU, 2014), but this number was passed, with an actual total of 3,037,608,300 (Internet live Stats, n.d.a.). This total corresponds to 40% of the world's population. In 2014, 1.79 billion people in the world used e-social networks. It was predicted that this number would reach 1.96 billion by the end of 2015 and 2.44 billion people by the end of 2018 (Statista, 2015a). Today, the huge research and development budgets for network technologies (Digital Agenda For Europe, 2015; NITRD, 2015) suggest that these technologies will become more diversified, developed, and popular.

Social structures have always been affected by technology (Fisher, 1992, p. 7). Changes in social interaction as a result of the internet continue (Kraut et al., 1998). According to Castells (2000), a new society has emerged from this period: the network society. E-communication technologies have reduced the importance of time and place (Rosnay, 2000; Kolko, 2000). Following one-to-one communication, a communication model from one point to multiple points has emerged. The internet has provided masses-to-masses and masses-to-person communication (Morris & Ogan, 2006).

In particular, with the help of smart phones, the internet has become mobile, enabling continuous communication. In 2014, the number of smartphone users in the world was estimated as 1.44 billion. It is assumed that this number will increase steadily in the coming years, reaching 2.56 billion people by 2018 (Statista, 2015b). The number of mobile telephone subscribers in Turkey was 71,908,742 as of the end of September of 2014 (TÜİK, n.d.a). As of the end of 2014, the number of internet subscribers using mobile telephones was over 31 million people ("Cep kullanıcısı sayısı", 2015). Smart phones are used mostly for connecting to e-social networks in Turkey (Statista, 2015c). E-communication mobility has spread and increased the use of electronic social networks. In Turkey, 92% of internet users use e-social networks. In 2014, Turkey became a world leader in the use of e-social networks (Consumer Barometer with Google, n.d.). As of 1 July 2014, 46.62% of Turkey's population are internet users. Turkey ranks 17<sup>th</sup> in the world in terms of the number of internet users (Internet Live Stats, n.d.b.).

In Turkey, computer use starts at 8 years old on average and internet use starts at 9 years old on average (TÜİK, 2013a). According to April 2015 data from the Turkish Statistical Institute (TÜİK), computer use among the 16-74 age group was 54.8%. Internet use was 55.9% (TÜİK, 2015a). Computer use is 64% among men and 45.6% among women. Internet use is 65.8% among men and 46.1% among women. One point draws attention here: even though the number of women and men looks equal among Turkey's population (TÜİK, 2015b), it seems that the percentages of computer and internet use are not equal by gender. The TÜİK 2015 data (ICT usage survey in households and individuals, 2014-2015) reveal another interesting finding: the high percentage of people who do not use computers and the internet. In Turkey, the percentage of people who do not use a computer is 45.2% and the percentage of people who do not use the internet is 44.1%. The percentage of men who do not use the computer is 36%, and the percentage of women is 54.4%. The percentage of men who do not use the internet is 34.2%, and the percentage of women is 53.9% (TÜİK, n.d.b). It seems that the use of e-communication technologies reveals a different dimension of male-female inequality.

The developments provided by e-communication technologies carried socialization efforts from social networks to e-social networks (Zhao, 2006; Jennings & Wartella, 2004, p. 605). E-social networks are first among the reasons for internet use in Turkey. In the first quarter of 2015, 80.9% of internet users logged onto e-social networks (TÜİK, 2015a). As of the fourth quarter of 2014, Facebook (26%) was first among e-social networks, followed by WhatsApp (23%), Facebook Messenger (21%), Twitter (17%), and Google+ (Statista, 2015d). Turkey is in eleventh place in terms of time spent by internet users on e-social networks (2.9 hours daily) (Statista, 2015e). The 16-24 age group uses computers and the internet most often in Turkey (TÜİK, 2014). The 25-34 age group is second in computer and internet use. Computer and internet use is higher in men in all age groups. Generation 2000 uses the internet and e-social networks more than any other age group in Turkey (Latif, Uçkun & Demir, 2015). Generation 2000 refers to people born between 1982 and 2002 (Howe & Strauss, 2009, p. 41). Generation 2000 is of the same age as e-communication and is closely associated with e-communication. As of 31 December 2014, the population of Generation 2000 was 31,824,146 of a total population of 77,695,904 people in Turkey (TÜİK, 2015b). The populations of older generations are as follows: the 1980 generation (Generation X, born 1961-81), with 20,541,357 people, and the 1968 generation (baby boomers, born 1943-60), with 9,521,600 people. Generation 2000 grew up with the computer. People in this generation buy and use e-communication technologies the most. Social and economic mobility depend on them. Generation 2000 seeks socialization in e-social networks (Zhao, 2006; Jennings & Wartella, 2004, p. 605). It is inevitable that every new generation will be criticized by previous generations. In this case, due to the excessive and aimless use of e-communication technologies by Generation 2000, they will face criticism from previous generations. The most common thoughts about Generation 2000 come from popular ideas that are not based on research and not academic ("Et si la génération", 2011; Pralong, n.d.).

Addiction is a primary, chronic, neurobiological disease with genetic, psychosocial, and environmental factors influencing its development and manifestations (American Society of Addiction Medicine, n.d). Stress and loneliness are factors that increase fragility through addiction (Peele & Brodsky, 1975, p.284). With the spread of e-communication technologies, a new type of addiction has been discussed related to the use of the internet and e-social networks. Internet addiction means the internet has priority before family, friends and work (Young, n.d). E-communication addiction can be described as the use of the internet, e-social networks and smartphones at a level that threatens a healthy life. "Internet addiction" or "cyber addiction" was first discussed by Goldberg in 1995. Young (1996), Greenfield (1999a, 1999b), Pratarelli et al. (1999), Davis (2001), Beard and Wolf (2001), Shapira et al. (2003), Griffiths (2000, 2005), Ko et al. (2005), and Tao et al. (2010) determined criteria for internet addiction. Morahan-Martin (2005) questioned the appropriateness of applying the addiction paradigm to internet use.

With the help of the internet, media have gone online. Adding this dimension to the use of e-social networks, a new communication model has occurred. The existence of electronic social networks is quite new. Since the launch of Facebook by Mark Zuckerberg in 2004, the network has spread. As of March 2015, Facebook is the most used e-social network site in the world (Statista, 2015f). Whereas up to 2006, the social effects of internet were discussed, today, the internet effect has been replaced by the Facebook effect. The Facebook effect is so strong that Facebook addiction, even more than internet addiction (Andreassen et al., 2012), has come to the fore; e-social networks, with their e-social networking use, addiction and similar issues, have become the focus of more and more attention as a source of information and research area for social scientists (Ackland, 2009).

In time, every new development in e-communication technologies has been accompanied by a new type of addiction. With the internet as the underlying mechanism, researchers have discussed internet addiction (Young, 2015, p. 8, Tone, Zhao & Yan, 2014; Greenfield, 2011), online gaming addiction (Young, 2009; Kuss, Griffiths, 2012; Griffiths, 2014), cybersex addiction (Laier, Pawlikowski, Pekal, Schulte & Brand, 2013; Delmonico & Carnes, 1999), e-social network addiction (Go-Globe, 2014; Andreassen & Pallesen, 2014), mobile telephone addiction (Griffiths, 2013, Bian & Leung, 2015), and gambling addiction on the internet (Griffiths, 2011, Griffiths & Parke, 2002). Due to the complex nature of internet addiction (Hahn & Kim, 2014), we can evaluate each of these aspects separately and accept the necessity of criteria for each area. We also know that those using the internet generally use e-social networks as well as e-communication.

There are different denotations associated with e-communication: information and communication (ICT), internet-based communication (IBC), and computer-mediated communication (CMC). Although the internet is directed toward building communication and information exchange, communication-aimed use is primary. For this reason, we do not prefer the expression "internet addiction" but, rather, "e-communication addiction." E-communication addiction depends primarily on the use of e-social networks. E-social networks should be considered separately from social networks. Social networks have existed throughout human evolution (Deschenaux & Laflamme, n.d.). The internet has existed since 1991, and e-social networks have existed since 2004. E-communication and electronic social networks are very new. For the concepts, the definitions should be appropriate. Friedman (2011) separated natural life and online life. Barnes and Pressey (2014) described virtual life as a second life apart from real life. Lethiais and Roudaut (2010) separated friendships in real life from virtual friendships. We separate e-communication from communication and e-social networks from social networks.

### **III. METHOD**

#### **The Subject and Aim of the Research**

The subject of this research is the perspectives of Generation 2000 and their parents on e-communication addiction in Generation 2000 in Turkey.

The basic aim of the research is to find the answer of the question "Is Generation 2000 in Turkey addicted to e-communication?" To this end, the opinions of Generation 2000 and their parents were investigated. The views of Generation 2000 and their parents were examined by comparison. The specific research questions were as follows:

RQ1: Is Generation 2000 addicted to e-communication in Turkey? (Generation 2000 perspective)

RQ2: According to parents, is Generation 2000 in Turkey addicted to e-communication? (Parent perspective)

RQ3: Related with the question as to whether Generation 2000 is addicted to e-communication, is there any difference between the views of Generation 2000 and their parents?

RQ4: Is there any meaningful difference between the views of generation 2000 and their parents with respect to variables such as age, gender, and others related with the e-communication addiction of Generation 2000?

### **Main audience and sample**

The main audience of this research consists of the Generation 2000 (population 31,824,146) and the previous generations (Generation X and the baby boom generation; population 30,062,957), including parents reached from the detailed results of a population census as of the end of 2014 (TÜİK, 2015b).

The data used for the research were obtained via communication with personal contacts of the authors from different generations in Turkey and questionnaires answered by university students of Generation 2000 (N=1784) and parents from the previous generation (N=2240).

From the Generation 2000 sample, (N=1784), 54.1% (966 people) were men and 45.9% (818 people) were women. In total, 38.9% of the participants (694 people) were in the 18-20 age group, 49% (874 people) were in the 21-25 age group, and 12.1% (216 people) were in the 26-33 age group. A total of 60.4% (1078 people) of the participants connected to the internet continuously, 29.8% (532 people) connected 2-3 hours daily, and 9.2% (164 people) connected 1 hour daily. The percentage of people who did not connect to the internet was 0.6% (10 people). A total of 1524 participants reported that they use smart phones. The most used social network was Facebook (1578 people); second was WhatsApp (1510 people); third was YouTube (1356 people); fourth was Instagram (1032 people); fifth was Twitter.

From the parent sample (N=2240), 48.6% (1088 people) of the participants were men and 51.4% (1152 people) were women. A total of 40% (896 people) of the participants were in the 35-41 age group, 37.4% (838 people) participants were in the 42-48 age group, 16.1% (360 people) were in the 49-53 age group, and 6.5% (146 people) participants were in the 53+ age group. A total of 36% (806 people) of the participants had a lycee diploma, 25.4% (568 people) had less than a lycee diploma, 18.9% (424 people) had a bachelor's degree, 15.3% (343 people) had an associate degree, and 4.5% (98 people) had a graduate diploma. A total of 38.7% (866 people) of the participants connected to the internet 2-3 hours daily, 22.9% (514 people) connected to the internet continuously, and 20.5% (460 people) connected to the internet 1 hour daily. The percentage of people who did not connect to internet is 17.9% (400 people). A total of 1152 participants stated that they use smart phones. The most used e-social network was Facebook (1266 people); second was YouTube (898 people); third was Twitter (746 people); fourth was WhatsApp (745 people); fifth was Instagram (470 people).

### **Means and methods of collecting data used in the research**

In this research, after scanning the literature inside and outside of Turkey to obtain detailed perspectives of Generation 2000 and their parents regarding the e-communication addiction of Generation 2000, a survey form was prepared. Consulting the views of experts, first, a survey consisting of 25 questions was transformed into 5 subscales with the help of factor analysis. As a result of an evaluation made afterward, the survey was transformed into 22 questions and 4 subscales. Confirmatory factor analysis was carried out. The difference between the views was tested by an independent-sample t-test. The reliability coefficient (Cronbach's  $\alpha$ ) of the survey for Generation 2000 through the 22 articles was 0.916; for parents through the 22 articles, it was 0.939. These values indicate the excellent reliability (Özdamar, 1997, p. 500). With respect to with the e-communication addiction of Generation 2000, to test the difference in the views of Generation 2000 and parents from the previous generation in terms of variables such as age, gender, and others, analysis of variance (Anova) was used; to determine where this difference comes from, a Tukey test was performed.

### **Analysis and findings of the research**

With respect to the variance ratios of each factor, for the first factor, "lack of self-control," it was determined to be 16.935%. For the second factor, "e-communication use in extraordinary places," it was determined to be 15.567%. For the third factor, "worries," it was determined to be 14.652%. For the fourth factor, "control difficulty," it was determined to be 12.248%. In total, the variant ratio was 59.402%.

In the research, fitting a five-point Likert scale, all data regarding the e-communication addiction of Generation 2000 were interpreted according to certain score ranges: 4.20-5.00: very high; 3.40-4.19: high; 2.60-3.39: medium; 1.80-2.59: low; and 1.00-1.79: very low.

The first sub-problem of this research is to address the question of whether Generation 2000 in Turkey is addicted to e-communication from the perspective of Generation 2000. In the survey in which the views of Generation 2000 were solicited, the most common expression was "I am afraid to lose my cell phone" ( $X_{\text{average}}=3.56$ ) and the least accepted expression was "Due to long time I spend on e-social networks, I have lost important relationships in real life" ( $X_{\text{average}}=1.98$ ) (Table 1).

**Table 1.** Comparison of the views of parents and Generation 2000 as related to the e-communication addiction of Generation 2000

| Factors   | Generation 2000 |      | Parents   |      | Result |
|---|-----------------|------|-----------|------|--------|
|   | $\bar{X}$       | SD   | $\bar{X}$ | SD   |        |
| <b>Lack of self-control (cognitive)</b>   |                 |      |           |      |        |
| When I feel lonely, I leave real life and take refuge in e-social networks                                    | 2.79            | 1.12 | -         | -    | *0.000 |
| When he/she feels lonely, he leaves real life and takes refuge in e-social networks                           | -               | -    | 3.52      | 1.30 |        |
| E-social networks are an important part of my life  | 2.59            | 1.04 | -         | -    | *0.000 |
| E-social networks are an important part of his/her life   | -               | -    | 3.59      | 1.19 |        |
| When I leave e-social networks, I feel a strong desire to go back in a short period of time                   | 2.37            | 0.99 | -         | -    | *0.000 |
| When he/she leaves e-social networks, he/she feels a strong desire to go back in a short period of time       | -               | -    | 3.42      | 1.21 |        |
| I recover from the boredom of daily life in e-social networks   | 2.87            | 1.05 | -         | -    | *0.000 |
| He/she recovers from the boredom of daily life in e-social networks   | -               | -    | 3.67      | 1.14 |        |
| The time I spend on e-social networks makes me very excited   | 2.31            | 0.97 | -         | -    | *0.000 |
| The time he/she spends on e-social networks makes him/her very excited  | -               | -    | 3.54      | 1.12 |        |
| When I do not use e-social networks, I am nervous   | 2.08            | 0.89 | -         | -    | *0.000 |
| When he/she does not use e-social networks, he/she is nervous   | -               | -    | 3.20      | 1.19 |        |
| I use e-social networks to escape from problems   | 2.38            | 1.00 | -         | -    | *0.000 |
| He/she uses e-social networks to escape from problems   | -               | -    | 3.63      | 1.12 |        |
| <b>E-communication use in extraordinary places</b>  |                 |      |           |      |        |
| When I eat a meal, I am interested in my cell phone or play with it   | 2.68            | 1.06 | -         | -    | *0.000 |
| When he/she eats a meal, he/she is interested in his/her cell phone or plays with it                          | -               | -    | 3.25      | 1.16 |        |
| While standing on buses, I talk with my phone in one hand and/or text message                                 | 2.76            | 1.13 | -         | -    | *0.000 |
| While standing on buses, he/she talks with his/her cell phone and/or text messages                            | -               | -    | 3.43      | 1.22 |        |
| When I watch a film at the cinema, I glance at my cell phone  | 2.21            | 1.01 | -         | -    | *0.000 |
| When he/she watches a film at the cinema, he/she glances at his/her cell phone                                | -               | -    | 3.11      | 1.18 |        |
| I use my cell phone in the bathroom   | 2.23            | 1.15 | -         | -    | *0.000 |
| He/she takes his/her cell phone when going to the bathroom  | -               | -    | 2.97      | 1.22 |        |
| When I walk on a crowded road, I text with my cell phone  | 2.71            | 1.06 | -         | -    | *0.000 |
| When he/she walks on a crowded road, he/she texts with his/her cell phone                                     | -               | -    | 3.48      | 1.18 |        |
| <b>Worries</b>  |                 |      |           |      |        |
| I am very afraid to lose my cell phone  | 3.56            | 1.17 | -         | -    | *0.000 |
| He/she is very afraid of losing his/her cell phone  | -               | -    | 3.33      | 0.95 |        |
| When the internet connection is lost, I am worried  | 2.82            | 1.16 | -         | -    | *0.000 |
| When the internet connection is lost, he/she is worried   | -               | -    | 3.32      | 0.92 |        |
| Due to the long time I spend on e-social networks, I have lost important relationships in real life           | 1.98            | 1.00 | -         | -    | *0.000 |
| Due to the long time he/she spends on e-social networks, he/she has lost important relationships in real life | -               | -    | 3.32      | 1.22 |        |
| Due to the long time I spend on e-social networks, I have missed educational and career opportunities         | 2.04            | 1.08 | -         | -    | *0.000 |
| Due to the long time he/she spends on e-social networks, he has missed educational and career opportunities   | -               | -    | 3.31      | 1.21 |        |
| When e-social networks entered my life, I met with people less often  | 2.16            | 1.06 | -         | -    | *0.000 |
| When e-social networks entered his/her life, he/she met with people less often                                | -               | -    | 3.39      | 1.22 |        |
| <b>Control difficulty (behavioral)</b>  |                 |      |           |      |        |
| I spend hours nonstop on e-social networks  | 2.80            | 1.10 | -         | -    | *0.000 |
| He/she spends hours nonstop on e-social networks  | -               | -    | 3.38      | 1.23 |        |
| Even though I am warned to stop, I continue to stay on e-social networks                                      | 2.41            | 1.05 | -         | -    | *0.000 |
| Even though I warn him/her to stop, he/she continues to stay on e-social networks                             | -               | -    | 3.24      | 1.22 |        |
| I stay longer on e-social networks than I planned to with my parents  | 2.62            | 1.05 | -         | -    | *0.000 |
| He/she stays longer on e-social networks than we planned together   | -               | -    | 3.43      | 1.14 |        |
| I stay longer on e-social networks than I planned without being aware   | 2.91            | 1.06 | -         | -    | *0.000 |
| He/she stays longer on e-social networks than he/she planned without being aware                              | -               | -    | 3.46      | 1.19 |        |
| I spend such a long time on e-social networks that I forget to eat, even though I am warned                   | 2.00            | 0.99 | -         | -    | *0.000 |
| He/she spends such a long time on e-social networks that he/she forgets to eat, even though he/she is warned  | -               | -    | 3.16      | 1.23 |        |

\*p<0.005

The statistics related to the average and standard deviations of the four factors for Generation 2000 are shown in Table 2. The average factors are as follows: “lack of self-control” ( $X_{\text{average}}=2.48$ ), “e-communication use in extraordinary places” ( $X_{\text{average}}=2.51$ ), “worries” ( $X_{\text{average}}=2.50$ ) and “control difficulty” ( $X_{\text{average}}=2.54$ ). When these averages are examined, Generation 2000 appears to have a low level of ( $X_{\text{average}}=2.50$ ) e-communication addiction.

**Table 2.** Descriptive statistics of factors reflecting the views of Generation 2000 on e-communication addiction

| Factor                                      | $\bar{X}$ | SD    |
|---|-----------|-------|
| Lack of self-control (cognitive)            | 2.48      | 0.743 |
| E-communication use in extraordinary places | 2.51      | 0.806 |
| Worries                                     | 2.50      | 0.683 |
| Control difficulty (behavioral)             | 2.54      | 0.799 |
| Total                                       | 2.50      | 0.683 |

The second sub-problem of the research was to address the question of whether Generation 2000 in Turkey is addicted to e-communication according to their parents. In the survey in which the views of the parents were solicited, the most accepted expression overall was “He/she recovers from the boredom of daily life in e-social networks” ( $X_{\text{average}}=3.67$ ); the least accepted expression was “He/she takes his/her cell phone when going to the bathroom” ( $X_{\text{average}}=2.97$ ) (Table 1).

The statistics related to the average and standard deviations of the four factors for parents from the previous generation are shown in Table 3. The average factors are as follows: “lack of self-control” ( $X_{\text{average}}=3.51$ ), “e-communication use in extraordinary places” ( $X_{\text{average}}=3.24$ ), “worries” ( $X_{\text{average}}=3.49$ ), and “control difficulty” ( $X_{\text{average}}=3.42$ ). When these averages are examined, Generation 2000 appears to have a high level ( $X_{\text{average}}=3.41$ ) of e-communication addiction from the perspective of parents.

**Table 3.** Descriptive statistics of factors reflecting the views of parents on e-communication addiction of Generation 2000

| Factor                                      | $\bar{X}$ | SD    |
|---|-----------|-------|
| Lack of self-control                        | 3.51      | 0.856 |
| E-communication use in extraordinary places | 3.24      | 0.876 |
| Worries                                     | 3.49      | 0.840 |
| Control difficulty                          | 3.42      | 0.799 |
| Total                                       | 3.41      | 0.783 |

The third sub-problem of the research is to address differences between the views of parents and Generation 2000 regarding the question of whether Generation 2000 is addicted to e-communication. The fourth sub-problem of the research is to address whether there is a meaningful difference between the views of Generation 2000 and parents of the previous generation depending on the variables age, gender, and others regarding the e-communication addiction of Generation 2000.

A significant difference was detected in all answers given to 22 questions forming the survey (Table 1). Additionally, whether the views of parents and the views of Generation 2000 exhibited differences was analyzed according to certain variables regarding whether Generation 2000 is addicted to e-communication. According to the findings, depending on the age and frequency of internet use, the views of Generation 2000 differ significantly. As a result of the Tukey test, for the age variable, this difference was found in the 21-25 age group. In the frequency of internet use variable, the difference came from users who use the internet continuously. The difference in parents’ views was found in the gender and age variables. In the gender variable, this difference was in favor of women. In the age variable, the difference was found to come from the 53+ age group (Table 4).

**Table 4.** The relationship between the views of Generation 2000 and the views of parents and variables associated with e-communication addiction among Generation 2000

| Demographic specification (Generation 2000) | P (F-value)   | ANOVA    |
|---|---------------|----------|
| Age   | 0.007 (4.948) | **       |
| Gender                                      | 0.931 (0.007) | Non-sig. |
| Frequency of internet use                   | 0.000 (7.442) | **       |
| Demographic specification (parent)          | P (F-value)   | ANOVA    |
| Age   | 0.002 (5.243) | **       |
| Gender                                      | 0.027 (3.642) | **       |
| Frequency of using internet                 | 0.632 (0.328) | Non-sig. |

Note: \*\*  $p \leq 0.05$

According to the results, the views of Generation 2000 and the variables age and frequency of internet use exhibited significant differences. The Tukey test revealed that the difference in age came from the 21-25 age group ( $x=2.56$ ). In the frequency of internet use variable, this difference came from users using the internet continuously ( $x=2.77$ ). With regard to the views of parents, the difference was found in the gender and age

variables. In the gender variable, this difference was in favor of men ( $x=3.12$ ). In the age variable, this difference came from the 53+ age group ( $x=3.29$ ).

**Ethics:** The study procedures were carried out in accordance with the Declaration of Helsinki. All subjects were informed about the study and all provided informed consent.

#### IV. DISCUSSION AND CONCLUSION

In this study, the subject of e-communication addiction among Generation 2000 in Turkey was examined comparatively from the perspectives of Generation 2000 and parents from the previous generation.

According to the perspective of Generation 2000, they have a low level of ( $X_{\text{average}}=2.50$ ) e-communication addiction. The views of parents regarding whether generation 2000 is addicted to e-communication are different from the views of Generation 2000. According to the parents, Generation 2000 has a high level of ( $X_{\text{average}}=3.51$ ) e-communication addiction. When we examine descriptive statistics related to the factors that we called lack of self-control, e-communication use in extraordinary places, worries and control difficulty, we see that Generation 2000 and parents have different views. When using e-social networks, Generation 2000 states that they lose their self-control at a low level ( $X_{\text{average}}=2.48$ ). In contrast, parents state that Generation 2000 loses self-control at a high level ( $X_{\text{average}}=3.51$ ) when using e-social networks. Generation 2000 reported that they continue their e-communication in extraordinary places at a low level ( $X_{\text{average}}=2.51$ ), whereas parents said that Generation 2000 uses e-communication in extraordinary places at a medium level ( $X_{\text{average}}=3.24$ ). Members of Generation 2000 are very interested in their cell phones and text while walking in crowds, standing on buses, and eating. Although Generation 2000 stated that if they lacked a cell phone, internet and e-social networks, they would feel a low level ( $X_{\text{average}}=2.50$ ) of worry, parents determined that with such deprivation, Generation 2000 would have a high level of worry ( $X_{\text{average}}=3.49$ ). Generation 2000 argued that when they use e-social networks, a low level ( $X_{\text{average}}=2.54$ ) of control difficulty occurs, whereas parents stated that a high level ( $X_{\text{average}}=3.42$ ) of self-control difficulty occurs when Generation 2000 uses e-social networks.

According to the analytical results related to demographic variables, there is a difference in the 21-25 age group in the views of Generation 2000. Addiction is higher among the 21-25 age group than the other age groups ( $X_{\text{average}}=2.56$ ). The next highest level is in the 18-20 age group ( $X_{\text{average}}=2.49$ ). Addiction is at its lowest level among the 26-33 age group ( $X_{\text{average}}=2.33$ ). The low level of e-communication addiction in the 26-33 age group can be associated with the assumptions that they are more mature and conscious about e-communication and its negative effects.

According to the analytical results of demographic information, there is a difference in the views of Generation 2000 with regard to the frequency of internet use. The difference in opinion between those who are online/connect to internet continuously ( $X_{\text{average}}=2.64$ ) and those who connect for 1 hour ( $X_{\text{average}}=1.99$ ) or do not connect at all seemed reasonable. The continuously online group engages in non-stop communication, and naturally, e-communication addiction behavior can be observed frequently in this group.

According to the analytical results related to demographic variables, there is difference in the views of parents based on gender. According to female parents, Generation 2000 has a high level of ( $X_{\text{average}}=3.40$ ) e-communication addiction. According to male parents, Generation 2000 has a medium level of ( $X_{\text{average}}=3.22$ ) e-communication addiction. This difference can be related to the fact that mothers have a closer observation distance and relationship toward Generation 2000 than do fathers.

According to the parents in the 53+ age group, Generation 2000 has a high level of e-communication addiction. This age group (baby boomers) lived in the period before the internet for a longer time than other age groups and they know the difference between that period and this period. For this reason, these parents can identify the behavior of Generation 2000 that arises from e-communication use.

The findings show that the two generations have different views regarding the e-communication addiction of Generation 2000. The diversity of views regarding the use of technology (e-communication technologies) reflects a conflict between the new generation (Generation 2000) and the older generation (parents) as well as a new dimension of conflicts of generations. Mesh (2003, 2006a, 2006b, 2009), Subrahmanyam and Smahel (2010, p. 100), and Bruess (2014, pp. 750-754) showed that there is a conflict within the family regarding the e-communication use of Generation 2000. Generation 2000 wants to use e-communication without their parents supervision or limitations. Parents complain that Generation 2000 uses internet unnecessarily or excessively and thus is subject to negative psychosocial effects. The existing generational conflict arising from the use of e-communication is the common view of these researchers. Although revealing a generational conflict was not among our aims, the results showed a new dimension of the conflict between generations and support the views of the researchers noted above.

The demographic variables include the frequency of internet use scores, which hints at the source of conflicts from using e-communication. Parents have fallen behind Generation 2000 in the frequency of internet

usage. Whereas only 0.6% of Generation 2000 does not use the internet, 17.9% of their parents do not use the internet.

The subject and results of this research enrich the literature. The extant addiction research did not test such a wide sample. It is also important that the present research presents Turkey as a sample. Turkey has become a world leader in the use of e-social networks as of 2014. Thus, research in Turkey regarding this subject is very meaningful. The most important aspect of the present research that distinguishes it from previous studies is the dual perspective approach toward addiction. By examining the views of parents, we obtained additional objective information. The comparative analysis results reveal a conflict of perspectives. We think of this as a conflict of generations, and this point is an important contribution to the literature regarding the use of e-communication by Generation 2000. Our study focused on a scale enabling us to find the answer to a basic research question. In particular, the factor of using e-communication in extraordinary places is a unique aspect of the present research. With the help of mobile smart phones, the aspect of the place of e-communication has changed, and e-communication has become available everywhere and uninterrupted. Now, we see people engaging in e-communication while standing on buses, watching movies at the cinema, watching a play at the theater, walking in a crowded street, and in other places. We considered these new tendencies when preparing the survey used in this research.

E-communication technologies have developed quickly, and these technologies have become popular. Undoubtedly, the socio-physiological effects of these developments have been present for only a short period of time. At this point, "time" is an important constraint, and in writing this section, we hesitate to even include this new situation as significant in this research. The importance of the duration of these effects should be the subject of future studies.

The general results of the research do not permit us to state conclusively that Generation 2000 in Turkey is addicted to e-communication. Can we say that Generation 2000 in Turkey is not addicted to e-communication? For the time being, the answer appears to be "yes." However, the demographic information clearly reveals that Generation 2000 in Turkey uses e-communication widely (60.4% are online continuously). Based on our observations, we can discuss unhealthy, excessive, and unnecessary use, but addiction is beyond such attributes, and it is not easy to say that such a condition exists. Additionally, we must consider that face-to-face communication has a special place in Turkey, and remains an important aspect of daily life.

If Generation 2000 is the agent of the subject, that subject gains an interdisciplinary quality. This research is interdisciplinary in nature and can be a guide for future studies. This work has a quality that can attract the attention of scientists from different disciplines and convey new ideas. Our results might be of interest to entrepreneurs and managers from the business world. Generation 2000 includes students, workers, and, recently, a few managers, but above all else, they are the target audience of businesses given their role as customers or potential customers.

We argue that there is no addiction but there is a tendency toward it. The responsibility of overcoming this tendency and creating a healthy generation stands with the older generations. E-communication technologies present an artificial environment to everyone, especially Generation 2000. It is impossible to deny this environment; the important response is to realize the negative effects caused by this environment. To prevent the negative effects occurring on a mass level in the future, parents and scientists have much work to do. The government should have a role. However, although there is no scientific proof of internet addiction, an internet addiction polyclinic (BRSHH, n.d.) was established in Turkey after a legislative proposal was presented to the Turkish Grand National Assembly. It was also requested to open internet hospitals that are connected to the Health Ministry for the first time in Turkey. ("İnternet hastaneleri kurulacak!", 2013).

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