Chapter 10
Investigation of Smartphone Use Addiction in Generation Y

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ABSTRACT
In recent years, rapidly developing of communication technology, increasing of internet and social networking applications usage have led to an increase in the level of smartphones dependence. Transformation of smartphone use from habit to addiction and spread of this addiction especially among young adults emphasize seriousness of the matter. In this context, the main purpose of this research is the investigation of smartphone use and addiction in Generation Y that are a part of the digital world. An online survey was conducted with 887 respondents who own a smartphone from Turkey. Five dimensions of smartphone addiction were extracted from the factor analysis, namely tolerance, accompany/fellowship, withdrawal, social network dependence, and health problems. In order to classify smartphone addiction groups, K-means cluster analysis was used on the extracted factors. Four groups named “nonaddicts,” “heavy addicts,” “realistic addicts,” and “emotional addicts” were determined.

INTRODUCTION
In the digital age, mobile devices have become essential for people around the world and smartphone owners are becoming increasingly reliant on their devices, especially because of such devices’ advanced capabilities. Even though the smartphone revolution is relatively young, every year the smartphone access becomes more penetrating. Smartphones are essential and it accompanies and participates in most people’s daily rituals. In this regard, smartphone penetration continues to increase with each passing day (Ericsson, 2015a; Deloitte, 2015).

Research on mobile phone/smartphone usage reveal this distinct penetration all over the world. Ericsson Mobility Report (2016) stated that the total number of mobile subscriptions at the end of 2015 was...
around 7.3 billion; there was an increase of 68 million subscriptions during fourth quarter of 2015. Global mobile penetration reached 100% in the same period. The number of smartphone users is forecasted to grow from 1.5 billion in 2014 to around 2.5 billion in 2019 and over 36% of the world’s population is projected to use a smartphone by 2018 with an increase from about 10% in 2011 (Statista, 2015a).

A Consumers and Mobile Financial Services Report (2015) focused on consumers’ use of mobile technology to access financial services and make financial decisions; according to the report, 87% of adults in the United States (US) has a mobile phone and 71% of mobile phones are smartphones, a substantial increase of smartphone use over the 61% rate in 2013. In addition, smartphone adoption is higher among 18-29 year olds than 30-44 year olds (Federal Reserve Board, 2015).

According to findings of a Pew Research Center’s (2016) survey, gathered from among 45,435 respondents from 40 nations from March 25, 2015 to May 27, 2015, there was a noticeable rise over the past two years in the percentage of people who own a smartphone in the emerging and developing nations. Smartphone ownership rates have rapidly increased in many countries since 2013 from 21% to 37% in 2015. Additionally, within nearly every country, people who are between the ages of 18-34 are more likely to be internet and smartphone users. South Korea is noticeable country with the highest smartphone ownership rate of 88%. The smartphone ownership rate is 58% in China, 39% in Japan, 72% in the US, 67% in Canada, 68% in the United Kingdom, 60% in Germany, 77% in Australia, and 45% in Russia.

Approximately 29.5% of the global population used smartphones in 2014 and there were 196.6 million smartphone users in Europe, 163.9 million smartphone users in the US, and 944 million smartphone users in China (RapidValue, 2014). TNS/Google’s (2014) Connected Consumer Study report is a global research which contains 57 country and helps to provide a better understanding of media markets and media related infrastructures. Findings from this report revealed that Singapore has a 85% smartphone penetration rate, the U.K. has a rate of 68%, Germany of 50%, and France of 49%.

It is predicted that around 90% of mobile data traffic will be from smartphones by the end of 2021 (Ericsson, 2015b). Furthermore, the Asia Pacific region will have the largest share of total smartphone traffic and smartphone subscriptions in the Middle East and Africa regions will grow more than 200% in 2021. The number of smartphone users in China which is the most populous country in the world is forecasted to grow from around 480 million in 2013 to almost 690 million in 2019 (Statista, 2015a). Around half of the Chinese population is projected to use a smartphone by 2018. Moreover, the number of smartphone users was around 170 million in US in 2014. By 2019, this number is expected to increase to 236 million.

Smartphones have become indispensable to daily life in Turkey too. Between July 2011 and July 2012 Turkey was one of the top ten fastest growing smartphone markets in the world (The Boston Consulting Group, 2013). The Our Mobile Planet Turkey report involved interviewing 1,000 Turkish adults between 18 and 64 years of age (Google Iposos MediaCT, 2013). Smartphone penetration was 14% in the first quarter of 2011, with this rate increasing to 30% in the first quarter of 2013 (Google Iposos MediaCT, 2013) and increasing again to 56% in 2015 (Consumer Barometer Report, 2015). According to TNS/Google’s (2014) Connected Consumer Study report, smartphone penetration in Turkey is 39%.

There have been significant increases in the number of people who have access to the internet in Turkey where 72% of people use the internet at least occasionally or own a smartphone, up from 41% in 2013 (Pew Research Center, 2015). Smartphone usage is higher among younger generations than older with a 93% of Turkish millennials (ages 18-34) owning a smartphone compared with 53% of Turkish people who were 35 or older (Pew Research Center, 2016). In 2016, the number of smartphone users in