

## Evaluation of university students in terms of psychological health brought about by technology

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### Suggested Citation:

Bakhtyalievna, I. G., Rizabekovna, Y. A., Kabidollaevna, B. B., Tokanovna, Z. N., & Abulkhakovna, B. G. (2018). Evaluation of university students in terms of psychological health brought about by technology. *Cypriot Journal of Educational Science*. 17(5), 1852-1859 <https://doi.org/10.18844/cjes.v17i5.7453>

Received from January 15, 2022; revised from April 19, 2022; accepted from May 26, 2022.

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### Abstract

Throughout history, society and technology have always interacted with each other. It has emerged as a result of development in information and communication technologies (ICT), which is called the Information Revolution in the world. The modern society has been replaced by the information society. The use of the Internet, which has become one of the indispensable habits of our age, thanks to the developing technologies in the information society, facilitates our lives in many areas, such as our daily life, business and education life. In addition to many advantages, such as saving time by providing fast communication, reaching sufficient and satisfying information and shortening distances, this technological phenomenon, which brings with it many sociological and psychological negativities when not used consciously, has become more controversial in recent years. In this research, it is aimed to determine the opinions of university students in terms of psychological health, one of the disadvantages brought by technology. As a result of the findings obtained from this study, which was conducted with 82 students in the 2021–2022 fall semester, it was concluded that the students are dependent on the use of technological equipment; the duration of use is quite high; and they will not quit even if they know that they will become psychologically ill.

Keywords: Psychology, technology, university student, adult, technological tool, health;

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## 1. Introduction

Today, smart Internet devices, which have developed in the process of changing technology, have caused a global transformation in society. With the introduction of smart devices into our lives, many applications that could be made using different devices were brought together in a single device (Yıldırım & Kışoğlu, 2018). Although the telephone technology, which started with the invention of the telephone by Graham Bell in 1876, developed, it remained tied to a place due to its cable. With the concept of mobility, new generation wireless communication tools have developed over time and mobile phones have become one of the fastest growing sectors in the world with the number of users increasing day by day (Kalba, 2008; Minaz & Bozkurt, 2017; Öncel & Tekin, 2016).

The most basic feature of the 21st century, which is called the information age, is the rapid digitalization process that continues with the social media revolution and mobile revolution with the emergence of the Internet age. In this process, which entered a new era in which smartphones have become an integral part of daily life, consumer behaviour has also changed rapidly. Technology, which covers all areas of our lives, has also changed the way we communicate. Most interpersonal communication today is carried out through technology, but computer technology (e.g., SMS, chat rooms, MSN, e-mail, virtual groups, blogs, mobile social programmes) sometimes facilitates communication and sometimes hinders it, because interpersonal communication changes as a result (Konijn, Utz, Tanis, & Barnes, 2008). Web platforms where users create their own profile pages and publish their own content on these pages are called 'social media platforms' (Ofcom, 2008). Social networks, in general, are defined as the set of tools and platforms that people use to share their thoughts, experiences, comprehension skills, perceptions, media (such as music), video and photography with each other (Lai & Turban, 2008).

Consumers examine their mobile phones before they even go to the market and then make a purchase plan. Consumer comments made in the online environment affect consumers' attitudes towards products or services and increase their confidence, thus the resulting attitude is also effective in their future purchasing decisions (Gürce, 2017; Sigerson, Li, Cheung, & Cheng, 2017). In other words, in today's world, transactions are carried out over the mobile phone at every stage of the purchasing behaviour of a modern consumer. The comments made before, during and after the purchase of a product or service on social media are included in many marketing activities, such as their use.

Computer communication has a wide application area in relationship management (Walther, 2006). Studies on this subject (Polkosky, 2008, p. 37) show that there are many different relationships facilitated by computers [e.g., teacher–student (McComb, 1994), student–student (Lipponen, Rahikainen, Lallimo, & Hakkarainen, 2003; Smith, 2003), counselling therapist (Peterson & Beck, 2003), peer relationships (Covert & Thompson, 2001; Van den Berg, Thompson, O Bremski-Brandon, & Covert, 2002) and romantic partners (Harris, Visconti, Sengupta, & Hinton, 2018; Nice & Katzev, 1998)].

With the rapid development of technology in recent years, technological applications for psychotherapy have also emerged. Applications of such technology are diverse and include website-assisted rehabilitation, computer-assisted therapy, laptop-assisted complementary therapy, virtual reality therapy, voicemail conditioning and ambulatory physiological monitoring. As we present in this topic, this technology provides many benefits to the practitioner. For example, it can be used to give clients objective feedback on what is contributing to their problems and how they are responding to therapy. Some methods have been used to treat problems that are particularly difficult to treat or where qualified therapists are difficult to find. In addition, technology applications can motivate clients to be ready for therapy or to complete tasks (Chen & Karahanna, 2018).

Many psychotherapists initially dislike the idea of using technology. Discomfort may arise from fear that technology may interfere with the development of a therapeutic relationship or increase the likelihood of clients leaving prematurely because the alliance between client and therapist constantly predicts therapeutic benefit (Newman, 2004). It is understandable that psychotherapists are reluctant

to bring anything that might hinder the development of a good union. However, contrary to many fears, technology may be preferable in some cases, even for studies that have shown a therapeutic link to date, without compromise and technological intervention. For example, Ghosh, Marks, and Carr (1988) found that more people than a computer-guided therapist refuse to participate in therapist-led treatment for panic disorder. Additionally, studies have found no difference in permanent smoking cessation rates between computer-assisted and conventional treatments (Moshe et al., 2020; Rabasco et al., 2022;). At the end of treatment, studies show similar levels of satisfaction with traditional and technological approaches (Becker & Andersson, 2020; Moshe et al., 2020; Sangiorgio, 2021).

The concept of technological addiction includes many aspects. Among these areas, Internet addiction, social media addiction (Leung & Lee, 2012), game addiction (Leung, 2004) and mobile phone addiction (Bianchi & Phillips, 2005) stand out. The problem of Internet addiction first came to the fore in Young's (2010) study. Internet addiction can be defined as a person's loss of control over the use of the Internet and using the Internet frequently enough to cause problematic consequences in life (Ertemel, & Pektaş, 2018; Young & Abreu, 2011).

Smartphone addiction in the literature is also known as usage of one's smartphone while constantly connected to social platforms and the Internet. It appears to reduce loneliness anxiety in humans as it provides the opportunity to stay (Townsend, 2000). People feel emptiness when their smartphones are not with them. They feel that it has become an integral part of their lives. Being able to easily access various features anytime and anywhere has become a trap for some users. Cell phones with the problematic behaviour of checking phones for no reason open its doors for use (Park, 2005).

### *1.1. Purpose of the research*

Intensive use of technology brings along serious problems such as not being able to socialize with friends, depression and insomnia in young people (Twenge, 2017). In this study, answers to the following questions were sought in order to determine the psychological views of university students about technological tools.

1. Which of the technological tools do you use the most?
2. How often do you use the technological tool on a daily basis?
3. How would you feel if you did not have technological tools for 1 day?
4. What kind of an attitude change would you have if you knew that there would be negative psychological effects after a while due to mobile Internet use?

## **2. Method**

The qualitative research method was used in this study. Ensuring that the qualitative research method is sensitive to the daily life environment, to have a participant role in the research and to reveal their perceptions clearly takes place. In this study, focus group interview was chosen as one of the qualitative research methods. With the focus group interview technique, individuals can freely express their thoughts. It can be defined as a carefully planned discussion in an environment (Çokluk, Yılmaz, & Oğuz, 2011). According to Plummer-D'Amato (2008), focus group interviews are based on open-ended questions and individual interviews based on the objective. In focus group interviews, people who do not know each other express their feelings and thoughts easily in a chat atmosphere of a group (Şahsuvaroğlu & Halil, 2008).

### *2.1. Working group*

In order to determine the qualitative views of university students in terms of psychological health brought by technology, 82 students studying in the 2021–2022 academic fall semester were included. Selections were made from the senior students on the basis of volunteerism.

## 2.2. Data collection

In this study, semi-structured interview questions were prepared as a data collection tool in order to achieve the purpose of the research. The questions developed by the researcher were submitted to evaluation by five experts, each of whom is an expert in their field, and their final form was given with the changes. The answers obtained from the research were confirmed by the students included in the research. The accuracy of the data obtained in this way has been determined.

## 2.3. Analysis of the data

Content analysis method was used in the analysis of the results obtained from the students studying at the university. In content analysis, data are collected around similar concepts and topics. It is interpreted in a way that the reader can understand (Creswell, 2014). In this study, the process of coding the raw data obtained from the interviews and then collecting and interpreting the coded data according to the subjects was followed by content analysis.

## 3. Findings

### 3.1. Which of the technological tools do you use the most?

**Table 1. Frequently used technological tools**

Theme	<i>f</i>
Mobile phone	74
Computer	8

First of all, university students were asked which of the technological tools they used frequently. 72 students answered their mobile phones and 8 students stated that they use the computer because they do not have smart mobile phones.

The opinions of some of the university students are as follows:

‘I use a smartphone. It is the most frequently used technological tool. He does my every duty’.

‘My phone is an old phone, I don't have access to anything. For this reason, I access the Internet, which is a technology, using my computer’.

### 3.2. Frequency of daily use of technological tools

**Table 2. Frequency of daily use of technological tools**

Theme	<i>f</i>
Less than 1 hour	2
1–3 hours	10
3–5 hours	30
5–8 hours	38
More	2

From the answers given by the university students to the first finding, it was found that they use computers and smartphones. A question was also asked about how often they use these technological tools. Two of the students gave the answer less than 2 hours. The people who gave this answer are the people who gave the computer response to the first finding. There are 10 students who say they use it for 1–3 hours, 30 students who say they use it for 3–5 hours, 38 students who say they use it for 5–8 hours and 2 students who say they use it more than 8 hours.

The opinions of some of the university students are as follows:

‘The phone is at hand, I use it for more than 5 hours both for following social media and for communication’.

‘The majority of today is spent on social platforms such as Instagram and TikTok. I have a lot of followers on my TikTok account, so I have to follow. I spend more than 8 hours’.

### 3.3. How would you feel if you did not have technological tools for 1 day?

**Table 3.** Emotions felt when you are away from technology

Theme	f
Unhappy	35
Annoyed	18
Not knowing what to do	17
Pessimistic	12

University students were asked about their feelings when they thought of a day when they would be away from technology. The majority of students stated that they would be unhappy. There are 18 students who stated that they would be nervous, 17 students who would have the feeling of not knowing what to do and 12 students were pessimistic.

The opinions of some of the university students are as follows:

'A day away from technology? I don't even want to think about it. It's like a part of me. Like I need it. I can access everything thanks to these tools. I would be extremely unhappy'.

'Even when my phone runs out of battery, I'm still looking for a charger. I would be extremely angry all day long'.

### 3.4. Knowing that there will be negative psychological effects due to mobile Internet use after a while, what kind of attitude change would it cause in you?

**Table 4.** Attitude towards the negative psychological effects of mobile Internet use

Theme	f
Set a limit	51
Use little	22
Refuse to use	6
Totally quit for health	3

The students were asked the question of what they would do if they knew that there would be many permanent problems in terms of using technology for mobile Internet. 51 of the students stated that they would set a limitation. There are 22 students who stated that they would continue using it, even if it was a little, and there were 6 students who said that they would never give up using it. 3 students gave the answer that they would quit completely.

The opinions of some of the university students are as follows:

'Knowing that a health problem will occur does not prevent me from quitting completely. We know the harm of smoking, but we do not quit. I would still use it, but I would set limits'.

'I would definitely reduce my frequency of use. This could be a solution. It may not realize the disease that may occur'.

'I don't use it very often anyway. I would have quit completely when my mental health was in danger'.

## 4. Conclusion, discussion and suggestions

Although the use of technological equipment is beneficial, it also has harms in terms of health, especially the psychological damage would increase day by day. The results obtained in this study, in which university students were asked to determine their views on the psychological effects of technology, are quite thought-provoking. Teachers can prepare seminars, posters, videos or presentations that can be used in the classroom to raise students' awareness about risky behaviours that should not

be performed in virtual environments, the harms of using time and the negative effects of psychological effects (Tanrikulu, 2012). Ekşi and Ümmet (2013) talked about the harms of technology use by students in their study. Findings from these studies are similar to this study.

University students were asked which of the technological tools they frequently use. 72 students answered their mobile phones and 8 students stated that they use the computer because they do not have smart mobile phones. Budak's study (2012) concluded that especially mobile phones offer communication and sharing opportunities to their users even when they are on the move, with very different technological opportunities, and because young people use their socialization processes without being tied to the place they are in, they frequently use their mobile phones.

It has been determined that university students use computers and smartphones from their answers to the first finding. Opinions were asked about how often they use these technological tools. Two of the students answered in less than 2 hours. Those who gave this answer are those who gave the computer answer to the first finding. There are 10 students who say they use it for 1–3 hours, 30 students who say they use it for 3–5 hours, 38 students who say they use it for 5–8 hours and 2 students who say they use it more than 8 hours. It is observed that young people continue their socialization and communication processes with the opportunities provided by technology, and it is noteworthy that they carry facilities such as mobile phones and Internet to every aspect of their living spaces. Budak's study (2012) concluded that university students can continue to use technology for 24 hours. With the opportunities provided by the technological developments, the new generation mobile phones offer all the opportunities provided by the computer and internet technology, these devices are followed with interest by the young people; in short, the youth are the main generation in the spread of technology. In a study conducted by Gross, Juvonen, and Gable (2002), the daily Internet usage time and the individuals' well-being found that there was no significant relationship between the results of this research, which is not consistent with this study.

University students were asked how they felt when they thought of a day away from technology. Most of the students stated that they would be unhappy. There are 18 students who stated that they would be nervous, 17 students who felt that they did not know what to do and 12 students were pessimistic. Budak's study (2012) stated that most of the university students believe that mobile phones affect their daily life positively and they use them constantly because they offer fast and easy communication (Budak, 2012). Ertemel and Pektaş (2018), in their study, found that university students carry out social activities on the mobile Internet, playing computer games rather than sporting activities, chatting, following social media, listening to music, and unconsciously browsing the Internet to spend their spare time on the go, which can be concluded that it was associated with such actions.

Students were asked what they would do if they knew that there would be many persistent problems in using technology for mobile Internet. 51 of the students stated that they would impose a limitation. There were 22 students who stated that they would continue to use it, albeit a little, and 6 students said that they would never stop using it. 3 students answered that they would quit completely. When we look at the studies (Caplan, 2003; Whang, Lee, & Chang, 2003) examining the relationship between the concepts of psychological well-being and problematic Internet use in the literature review, it is seen that there is a negative relationship between psychological well-being and problematic Internet use.

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