

ÇÖZÜM ODAKLI KISA SÜRELİ GRUPLA PSİKOLOJİK DANIŞMANIN ÜNİVERSİTE ÖĞRENCİLERİNİN TEKNOLOJİ BAĞIMLILIKLARI ÜZERİNE ETKİSİ

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ÖZET

Bu araştırmanın amacı çözüm odaklı grupla psikolojik danışmanın üniversite öğrencilerinin teknoloji bağımlılık düzeyleri üzerine etkisini incelemektir. Deneysel bir araştırma olarak tasarlanan bu çalışmanın bağımlı değişkeni; katılımcı lisans öğrencilerinin “Teknoloji Bağımlılık Düzeyleri”, bağımsız değişkeni ise “Çözüm Odaklı Kısa Süreli Grupla Psikolojik Danışma” olmaktadır. Araştırma yöntemini; “Solomon 4 Gruplu Deneysel Modeli” temelinde 2 kontrol ve 2 deney grubu oluşturuyor. Örneklem; 2023-2024 eğitim ve öğretim yılı Rehberlik ve Psikolojik Danışmanlık ve Okulöncesi ABD 32 lisans öğrencisinden oluşuyor. Çalışmada elde edilen nicel verilerin analizinde 9 farklı istatistiksel analiz kullanılmış ve analizler bilgisayarda SOPSS27.00 paket programı ile yapılmıştır. Nicel veri analizinde birinci gruptaki Deney-1 (ön testli) ve Kontrol-1 (ön testli) deki öğrenciler arasında “Sosyal Ağ Kullanma” ve “Anlık Mesajlaşma” boyutları açısından anlamlı bir farklılık olmadığı, Deney-1 (ön testli) öğrencilerin “Çevrim İçi Oyun Oynama” boyutu aritmetik ortalamasının Kontrol-1 (ön testli) de kilerden yüksek olduğu anlaşılmıştır. Dolayısıyla deney grubundaki öğrencilerin daha fazla çevrim içi oyun oynadıkları söylenebilir çünkü farklılık deney grubu lehinedir. Nicel bulgular, ÇOKSGPD’ nin teknoloji bağımlılıklarının azalmasında etkili olduğunu gösteriyor. Deney Grubu-1’in ön-test ve son-test verilerine bakıldığında, bağımlılık düzeyi açısından bir düşüş gözlenmiştir. Kontrol-1 grubuna uygulanan ön-test ve son-test verileri de son-test lehine bir düşüş göstermiştir. Sonuç olarak ÇOKSGPD’ nin teknoloji bağımlılığını düşürdüğü söylenebilir.

Anahtar Kelimeler: teknoloji bağımlılığı, psikolojik danışma, çözüm odaklı kısa süreli grupla psikolojik danışma.

THE EFFECT OF SOLUTION-FOCUSED SHORT-TERM GROUP PSYCHOLOGICAL COUNSELING ON UNIVERSITY STUDENTS’ TECHNOLOGY ADDICTION

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ABSTRACT

The purpose of this study is to examine the effects of solution-focused group counseling on the technology addiction levels of university students. Designed as an experimental study, the dependent variable of this study is the participating undergraduate students' "Technology Addiction Levels," and the independent variable is "Solution-Focused Short-Term Group Counseling." The research method is based on the "Solomon 4-Group Experimental Model," consisting of two control and two experimental groups. The sample consisted of 32 undergraduate students in the Department of Guidance, Psychological Counseling, and Preschool Education during the 2023-2024 academic year. Nine different statistical analyses were used to analyze the quantitative data obtained in the study, and the analyses were conducted on the computer using the SPSS27.00 package program. Quantitative

data analysis revealed that there was no significant difference between the students in the first group, Experiment-1 (pretested) and Control-1 (pretested), in terms of the "Social Network Usage" and "Instant Messaging" dimensions. The arithmetic mean for the "Online Gaming" dimension of Experiment-1 (pretested) students was higher than that of Control-1 (pretested). Therefore, it can be said that the students in the experimental group played more online games, as the difference was in favor of the experimental group. Quantitative findings indicate that the SFSTGC was effective in reducing technology addiction. When the pretest and posttest data of Experimental Group-1 were examined, a decrease in addiction levels was observed. The pretest and posttest data applied to the Control-1 group also showed a decrease in favor of the posttest. Consequently, it can be said that the SFSTGC reduced technology addiction.

Key words: technology addiction, psychological counseling, solution-focused short-term group counseling.

INTRODUCTION

In today's world, where education, training, and information technologies are rapidly evolving, it's clear that living unaware of and disconnected from these technologies is impossible. In this context, technological products that evolve and evolve, moving ever closer to absolute and immutable truth, are directly and indirectly changing human life. It's important to remember that improper use of information technologies, which simplify human life and save time, can lead to very significant problems. Chief among these problems is "technology addiction." This addiction negatively impacts success in socialization and environmental adaptation, while also fundamentally predisposing human nature to visual and auditory interactions, contrary to its very nature. Such a structure leads to the internalization of addiction through increased visual and auditory perception. However, it's clear that the most significant value of the so-called information age is knowledge, based on information technologies. Even so, "technology addiction" negatively impacts all of life, particularly due to low levels of "technology literacy." Technology addiction negatively affects an individual's psychological experiences and emotional state, affecting their communication skills (Beard, 2005, as cited in Ertemel & Pektaş, 2018). Research on this issue, which has recently emerged as a significant mental health problem, has become prominent (Griffiths, 2000, Young, 2010, as cited in Ertemel & Pektaş, 2018). The intensive use of technological devices, which have become an indispensable part of human life, not only increases addiction to these devices but also reveals the inability to act independently of these devices even when and where we spend time together (Al-Saggaf et al., 2029, as cited in Çaka, 2021). According to a study conducted by Rene and Zickuhr (2015), 90% of the participants stated that they use smartphones and similar devices in their communication and interactions. This situation, defined as phubbing, is associated with the use of smartphones in communication processes with others. Those who are called socioteller, during their social interactions, focus their attention on the smart devices they use instead of the environment and the other person (Chotpitayasunondh & Douglas, 2016, Cited in, Çaka, 2021). Not knowing and lack of information create an inferiority complex in the individual. The only way to get rid of this complex is the consciousness of knowledge. The age we live in is described as the age of communication and information. Because with almost perfect communication technologies, far away can become close and near behind far away. When we approach humans holistically, when the balance between the dimensions that make up them cannot be maintained and their development as a whole is not ensured, the balance between the dimensions is disrupted and far away may become close and near distant. Technology addiction emerges as an important concept exactly at this point. The situations and environments that develop in today's age of innovation show that technological environments have become more important. Especially while smartphones have become indispensable in our lives (Jones, 2014, Cited in, Çaka, 2021); People prioritize smartphone use over computers (Ofcom, 2015, cited in Çaka, 2021).

It's clear that technology use is more beneficial when it's developed in a positive and healthy way. To keep up with the times we live in, understanding scientific developments and their role in human life, both technologically and in terms of processes, and keeping up with them is a crucial necessity. In fact, technology is sometimes like a sword that cuts both ways. When used well, its benefits are numerous and significant. However, when used poorly, its harms are equally significant. When technological tools are not used correctly, they disrupt the balance between the fundamental dimensions of human beings and weaken their communication skills. Consequently, people begin to live as virtual

figures in an artificial environment, devoid of true social interaction. Technology addiction directly impacts not only individual relationships but also family relationships. The reasons for this addiction are diverse. It can be assumed that individuals vary in their self-control and capacities within the context of individual differences. Technology addiction is a behavioral disorder not linked to any chemical stimulant. In addition to Young's 1998 studies on this topic, the American Psychiatric Association's "Diagnostic Manual of Mental Disorders" also included this topic under the title "Internet Gaming Disorders." Nine symptoms that can lead to technological addiction have been mentioned (American Psychiatric Association, 2013). In 2018, the World Health Organization (WHO) compiled an international classification of diseases and defined "Game Addiction" as a mental health problem.

The "Comparison of Game Addiction Symptoms," presented by the American Psychiatric Association (DSM-5) regarding internet addiction and recognized for the first time by the WHO, will help better understand the situation (Table 1):

Table 1. Comparison of Internet and Gaming Addiction Symptoms

DSM-5 Internet Addiction Symptoms	WHO, Game Addiction Symptoms
Mental Preoccupation	Gaming Frequency
Withdrawal Symptoms	Gaming Intensity
Increasing Time	Gaming Duration
Loss of Control and Failed Attempts	Prioritization of Activities
Continuing Despite Negative Situations	Continuing Despite Negative Situations
Abandonment of Activities	
Avoidance States	
Alert States	
Disregard of Important Processes	

Table 2. Harms of Technology Addiction (Table-2): Emotional and Physical Harms of Technology Addiction

Emotional Harms of Technology Addiction	Physical Harms of Technology Addiction
Feelings of Guilt	Back pain
Anxiety	Carpal tunnel syndrome
Feelings of Euphoria when using technology/the Internet	Headaches
Inability to prioritize or constantly postponing plans	Insomnia
Isolation from the outside world and social environment	Unhealthy diet
Losing the concept of time	Neglecting personal care and hygiene
Excessive defensiveness	Neck pain
Avoiding work; not fulfilling work or school duties	Dry eyes and other vision problems
Constantly postponing and neglecting responsibilities	Excessive weight loss or obesity
Sudden mood swings	
Fear	
Feelings of loneliness	
Bored while performing routine tasks	

Basic Definitions Related to the Research

Solution-Focused Short-Term Group Counseling (SFSTGC) This approach aims to focus on solutions by considering group dynamics rather than simply eliminating the problem. SFSTGC focuses on the client's "strengths, abilities, and solutions" rather than their "weaknesses, inadequacies, and problems," and utilizes the effects of positive psychology in sessions (Ümme, 2024).

Technology Addiction: This refers to the excessive and misuse of technological devices such as phones, tablets, and computers, leading to functional impairments in personal, social, and professional settings. Think of something you regularly enjoy and find difficult to quit. In such a situation, addiction may be imminent. For example, if drinking tea or coffee, watching TV, playing digital games, or using the internet or technology is stopped for a while, it can cause various emotional problems, even if the consequences are relatively mild (Özkan et al., 2020). Characteristics of Addiction

One of the most prominent social and individual problems of the 21st century is substance addiction, any situation or substance that leads to an inability to make sound decisions within the context of personal will. Whatever the addictive substance or situation, it puts the organism under the thrall of sanctions and activates short-term pleasure mechanisms that make it dependent on it. The short-term pleasure and physical satisfaction that emerge in this situation creates a state of exhaustion that disables sound decision-making mechanisms. The inability to translate the affective values that form the key systems of our attitudes and behaviors into attitudes and behaviors constitutes the source of all these undesirable situations.

Intensive use of technology causes individuals to experience problems such as antisocial behavior, depression, and fatigue. A study conducted in the United States (Twenge, 2017, cited in Ertemel & Pektaş) found a 40% decrease in daily contact with friends between 2000 and 2015. Individuals who excessively use social media platforms experience a 27% increase in their tendency to exhibit depressive symptoms. This research further revealed that intense technology use has increased by 57%, falling short of the minimum 7 hours of sleep required for a quality life. A 2016 study in the US showed that 29% of consumers and 39% of millennials spend more time with their phones, which are technological devices, than with other people (Bank of America, 2016, as cited in Ertemel & Pektaş). Addiction, which affects all areas of social life, can have a decisive impact and directing power on individual/personal will, and is therefore considered a disease that takes control of the mind and will. Within the framework of a holistic approach to education, addiction stems from an individual's inability to meet their demands and expectations by maintaining the balance between the dimensions that constitute them. Because the individual cannot meet these needs themselves, they now seek a solution, even if it is virtual, through this and similar addictions. Addiction is the result of a person losing their sense of self-efficacy and losing faith in themselves. Dependency is not a status role associated with any particular social class, such as the positive attachment children have to their parents. Rather, it is the internal and external reflection of an inner decay.

It is not easy for people to break free from the addiction that has them under control, but it is possible with appropriate scientific and therapy-based methods and techniques. Treatment services also mainly focus on how to manage addictions. According to the results of the research conducted by the PEW research center in the USA, it has been revealed that more than 87% of citizens living in the United States are internet users, 90% of whom own a mobile phone and 58% of whom own a smartphone (PEW, 2014). On the other hand, based on data published by the UK Office for National Statistics (ONS) in 2016, 99.2% of adults between the ages of 16-24 are active internet users. On the other hand, 82% of these adults also have daily internet access and 70% of those who have this access own a mobile phone or smartphone (ONS, 2016). However, substance addiction and technology addiction are different. The point where the data obtained from studies on substance addiction are generally united is that; Addiction, in a sense, is a manifestation of individuals who cannot be true to themselves, who cannot accept themselves as they are, and therefore cannot express themselves as themselves, to some extent, avoid being seen as they are. They cling to the behaviors of another personality, even temporarily, in their quest to say what they cannot say, to appear to be able to do what they cannot.

As attempted to be explained, it is the inability to suppress the urge to use technology uncontrollably and intensely, consciously or unconsciously. It is a prevailing perception that life has little meaning without technology. In this situation, when a person distances themselves from technology, they experience a fear of losing their purpose in existence. It is a type of behavioral and actional addiction that sabotages and disrupts family and social life. A person addicted to technology often perceives that this is the only way they can truly be recognized and recognized.

Social relationships are also regulated accordingly. Now, at the center of future plans and designs is the desire to access and satisfy substances and technological products that create addiction and provide physical and emotional pleasure. Those addicted lack the self-confidence, willpower, and logic—the science of reason—that will enable them to overcome this condition, and therefore, it is

essential to seek external, professional support. Mismanagement or inability to manage technology use can lead to dangerous behaviors that lead to addiction, particularly among younger individuals, leading to increased anxiety and negative consequences. Therefore, it is crucial to keep up with the advancements in technology and pay special attention to the younger generations of our time (Heirene, 2022; Mathes et al., 2018, cited in Akay et al., 2023).

One of the fundamental factors contributing to technology addiction is the disruption of normal family relationships and the resulting socialization problems resulting from the resulting introversion. When this condition becomes chronic, every addictive device becomes a tool, and to some extent, the individual identifies with it and attempts to adapt to the environment. Gradually, this very tool, which has become a part of their personality, transforms itself into a much more effective and influential one. As is known, while the term addiction mostly refers to the use of chemical substances such as alcohol, cigarettes and marijuana, it has begun to be questioned whether some of the problems that arise as science and technology develop at a dizzying pace have become more prevalent in human life are psychiatric and psychological problems.

It is crucial to experience some problems during technology use and to identify these problems. Griffiths (1995) has also attempted to present this situation in detail. This study demonstrates that the attitudes and behaviors considered technology addiction have a stimulating or reinforcing nature that can support the promotion of addictive motivations. For example, it is assertively stated that they can be passive, such as watching television, or active, such as playing games. Griffiths (1999) emphasized that technology addiction is a social tool addiction, unlike other types of chemical addiction. Furthermore, the view that it should be examined in terms of behavioral addictions has also been highlighted. In a 1995 study conducted by Griffiths and Brown, technology addiction was explained with six addiction criteria. These criteria are: "Salience, Withdrawal, Conflict, Relapse, Tolerance, and Mood Modification." In open groups, the voluntary addition of new members to replace members who have left for their own reasons can be necessary and beneficial for credibility and trust. Otherwise, constantly seeing members leave the group can put pressure on some anxious members, accelerating the group, or it can provide a sense of motivation and prevent the group from reaching a dead end (Yalom, 2003). In this case, the new members' lack of knowledge of what was shared in previous sessions can undermine the process of awareness and disrupt cohesion. Another drawback of group members' changing and diversifying through departures and additions is that, as has been pointed out, these changes negatively impact group unity (Corey, 2012). Furthermore, one of the challenging processes open groups experience in these and similar situations can be described as the need for new members to be constantly introduced to the group, to adapt to the environment, and to receive support (Yalom, 1993).

In general, in solution-focused group counseling, the focus is on the solution itself rather than the solution itself (Corey, 2008; McDonald, 2007). Therefore, this structure can be considered a problem-solving effort. In this case, the primary goal of the counselor is to reframe the client's behavior and frame of reference for events, leading to more beneficial outcomes. With this approach, analyzing the source of the problem and attempting to resolve it, rather than conducting analyses based on the results, would be more effective (Cepukiene & Pakrošnis, 2011). In his study (2005), Banks summarized the SFSTGC process as consisting of six steps: "1. Introduction: The main lines of the problem are determined. 2. Clarification: Participants are given enlightening information about the problem. 3. Confirmation: Acceptance of the problem by the stakeholders and positive feedback. 4. Miracle scenario: Creating a positive vision for the future. 5. Ensuring progress in the process and appreciation of the participating members. 6. Closing: Moving on to the next steps.

Quick (2008) structured the group model based on SFSTGC by focusing on three basic ideas: visualizing and designing a future without problems, essentially demonstrating problem-solving behaviors, and then doing what works, and replacing what doesn't work with something different and more meaningful. The content of a standard session suggested by Quick (2008) within this framework is briefly as follows: "a. Self-assessment before the session begins using the existing rating scale: Progress involving solutions related to the presented problem and awareness of things that have improved and made a difference since the last session (or since enrolling in the group). The first session should express the part of the life of the participant (client) that he/she wants to change. b. Participants getting to know each other and explaining the principles to be followed by the group that is asked to "Do What Works." c. Warm-up exercises and familiarization of the participants with the process: At the beginning, the clients are paired up and introduce themselves briefly to each other to satisfy their curiosity. They also share with each other what has changed and in what circumstances during the process. Then, each member introduces their partner to the group. d. Concrete visualization experience (about five minutes) for a better understanding of the solution within the process: Asking the predetermined miracle question. Five sessions are held, one for each week as a timeframe within the process. It is implemented in different structures. Participating members are asked to imagine a future time when the problem they are experiencing is not occurring, even though all the conditions and obstacles present at that moment are the same. e. Sharing within structured groups (more time is allocated, i.e., the longest time is allocated): What was experienced during the practice of asking the miracle question and receiving the answer is discussed within the group. f. Participant self-assessment using a rating scale called the post-session form within the ongoing counseling process: Identifying the progress made toward resolving the problem and revealing what the client participant wants to remember during the sessions. g. Each participant shares briefly what they want to remember about the session. The miracle and exceptional questions used in this process are important and effective.

The miracle question is a standard component of the counseling process. The crucial point here is the client's needs or expectations expressed after the miracle question is posed to the addressee. The session will be shaped by the client's response to the miracle question. Throughout the counseling process, the miracle question is further elaborated. It is believed that there are times when clients do not recognize the problems they face in their social lives as problems and instead define them as such. This process of not defining them is considered an exception, and this may, in fact, be the source of the distress and differences that arise. Professionals who conduct CPAS ask exceptional and in-depth questions to direct their clients to moments in their lives when they have not confronted the problem in question. Exceptions are past experiences in the client's life where the problem was inevitable, but somehow was not experienced. For example, there is a time and situation when a child who constantly fights or lies is honest and cooperative (De Jong & Miller, 1995; McDonald, 2007). Therefore, during the counseling process, the following questions may be offered to the client: The answers obtained by asking questions like, "Can you think of a time when you didn't have a problem?" and "What were you doing then?" are signs and determinants of these exceptional situations. Expert counselors who provide solution-focused psychological counseling generally ask rating questions to identify changes in experiences, such as emotions, mood, or communication, that are not easy to observe.

Questions in this context help clients pay closer attention to the steps they need to take and the actions they need to take if they are to achieve the changes they expect and demand. These questions are structured on a 0-10 score scale. Considering the problem being experienced, in a 0-10 score range, 0 represents the initial state. The time period when a miracle occurs and the problem is resolved, as expected, corresponds to a 10-point value. After the client assigns a score between 0 and 10 during the problem-solving process, the counselor asks questions about how that point was reached and what further actions could be taken to increase the score. These questions are rating questions. For example, the client might be asked: You give yourself a "5" on this scale. What brought you to this point? Let's say you went up one point. What changes do you think could happen then?

The miracle question can be expanded and deepened further as part of the ongoing counseling process. For example, as the scoring progresses from "6" to "7," other group members will say you're doing better and demonstrating the right behaviors for improvement. What situation do they notice about you now? Questions like these will be explored. The purpose of questions using a rating scale is to focus on the client's solution-focused potential and the small changes that have occurred. This will encourage the client. Questions like "What positive developments do you notice when you compare your current situation to what you described as your worst before?", "How do you think you did this?", "What helped you achieve these goals?", "From a personal perspective, who do you think helped?", "What do you think you did to ensure and sustain this improvement?" Questions like these can be asked. Furthermore, other group members are motivated to share their experiences similar to the progress the client has made and brought to their attention by the group members. Furthermore, at this stage, which is considered positive, it is also quite meaningful and valuable to appreciate the client's overall performance throughout the process in a holistic and cyclical manner (Banks, 2005). Questions based on rating scales are not numerical. In fact, exercises using different metaphors (such as a staircase, a slope, or the "Representing Group Information on a Line" exercise developed by Voltan-Acar (2004) can be designed and implemented for this purpose.

Short-Term Psychological Counseling

The approaches and theories of STPC have a long history. Approaches called brief therapies were introduced by Ferenczi. Substantial studies on this topic were also conducted in subsequent years (Sifenos, 2010). Due to the lengthy process of diagnosing patients with psychotic diagnoses, researchers in this field focused directly on the problem being experienced rather than listening to the client's full story, and this has resulted in highly effective results (Akin & Sarıçam, 2014). The number of sessions to be conducted here ranges from 1 to 25 and is actively targeted. For the therapy process to achieve its goal, it is essential to change the clients' problematic emotions, thoughts, and behaviors. Effective time management is also required to achieve this. Generally, the goal is to help clients gain vitality, self-efficacy, and self-confidence (Fisch, 1994). There are numerous brief counseling approaches in the literature. In this regard, "Solution-Focused Brief Therapy," "Brief Dynamic Therapy," "Brief Cognitive Behavioral Psychological Counseling," "Brief Adlerian Therapy," "Brief Family Therapy," and "Brief Emergency Psychotherapy" are examples. Instead of listening to the patient's entire history, the focus is on the problematic situation (Dryden & Feltham, 1992; Feltham, 1997). Psychotherapies in general are based on "Psychoanalytic Theory" (Doğan, 2010).

Solution-Focused Short-Term Psychological Counseling

This model is based on "Strategic Counseling" and the "Spiritual Research Institute Model," as well as the ideas and perspectives of Milton H. Erickson and Gregory Bateson (De Shazer, 1985; Nichols & Schwartz, 1988; cited in Doğan, 1999). Erickson, a key figure in this counseling process, uses observation, He used suggestion, hypnosis, stories, and anecdotes (Erickson, 2000).

Solution-Focused Brief Counseling is "still based on existing solution methods. Studies are currently being conducted on this approach, and attempts are being made to restructure it with some modifications (Miller et al., 2001).

The basic principles on this subject can be summarized as follows:

* The psychological counselor must be adapted to the client. Individual differences are understood to be a crucial detail here. In other words, the process must be adapted to the client, not the client to the process (Doğan, 1999). This process, in a way, mirrors "consultation" work. The goal is for the client to identify their own solution options and find solutions by applying them. The client is expected to find their own and different solutions to the problem, particularly using their creative thinking skills and their own talents and competencies.

* The most dangerous aspect is having only one view on any given situation or issue. This leads to the idea that every problem has a solution. Because existence and non-existence are fundamental factors that complement each other. This is also called divergent thinking. Solution-Focused Brief Counseling will not only focus on the situations that make up the immediate environment, but will also enable the client to arrive at different and alternative solutions based on these.

* The problem and its solution do not have to be identical. They can even appear completely unrelated (Miller et al., 2001; Sklare, 1997). Here, the client is given the opportunity to ignite the fuse of change (Quick, 2008).

* Change is inevitable and constant. This does not mean that a problem is like this today but will not change tomorrow. Everything can change at any moment. In this case, there is a situation focused on solving the problem (Geil, 1998).

* Small changes can lead to larger changes. This is described as the "snowball effect" (Dölek & Kurter, 2005; O' Holon & Weiner, 1989). A positive change in one area of life can also impact other areas (Beyebach, 2009).

* It's important to focus on strengths rather than shortcomings and limitations.

* There are periods in life when not every problem in a person's life is felt. This can also be described as rewinding.

* Focusing on the future rather than the past is crucial. This is where dreams come into play. Dreams are the blueprint for the future. The client's goal should be consistently expressed with positive statements. Extensive knowledge is not necessary to solve a problem.

Solomon's Four-Group Model

"The Solomon four-group model offers the expected advantages of a pretest-posttest control group design, while also offering the advantages of a posttest-only control group design" (Braver & Braver, 1988; Solomon, 1949).

The primary advantages of using the Solomon four-group counseling model in the traditional two-group pretest-posttest design are the reduction of the influence of variables/factors considered to be confounders and the ability to satisfactorily determine whether differences in dependent variables are due to interactions between the pretest and intervention. Furthermore, as has been suggested, the use of the Solomon four-group model in research allows for the context in which control and experimental groups differ, as well as the investigation and evaluation of pretest sensitivity and differences between pretests and posttests (Gall et al., 2003).

However, as with other designs, it should be assumed that it also has some limitations and disadvantages. The complexity and complexity of the statistical analysis performed as a result of using this design can also be considered a significant disadvantage (APA, 2023).

As it is well known, because this model requires two control groups, it may be more difficult to determine whether differences in scores between the experimental and control groups after the test are due to the intervention or the effects of the test. The Solomon four-group consultation design, due to the greater number of comparisons, may be more prone to Type I errors (false positives) (Cook & Campbell, 1979). In other words, the possibility of making multiple comparisons between measurements can create a complex and perhaps problematic situation in terms of statistical analyses related to the situation to be performed. Unfortunately, there is no specific analysis accepted for the model (Braver & Braver, 1988).

Another disadvantage of the Solomon four-group model is that it requires more participants than other similar experimental designs, such as pretest and posttest control group designs. This situation and framework can make the study more costly and challenging to endure and pose the risk of participant dropout (Fraenkel et al., 2012).

Given these characteristics and differences, the Solomon four-group model may not be suitable for all types of research. It is primarily suitable for experimental studies that include pretest and posttest measures, but it should be noted that it may not be suitable for other types of research, such as observation-based studies (Campbell & Stanley, 1963). The Solomon four-group model is particularly relevant for evaluating interventions in educational research, which has a wide range of applications.

Purpose of the Study

The purpose of this study is to examine the impact of the SFSTGC on technology addiction among undergraduate university students.

To this end, the following questions were answered:

Research Problem(s)

- What is the impact of the SFSTGC on technology addiction among university students?
- Is there a significant difference between the technology addiction levels of undergraduate university students before and after the SFSTGC?
- What are the opinions of undergraduate university students regarding their technology addiction levels before, during, and after the SFSTGC?
- What effect does the pretest administered within the scope of the study have on technology addiction levels?
- Is there a significant difference in the levels of technology addiction between the experimental and control groups in solution-focused brief group counseling?

Research Limitations and Assumptions

This study is limited to the participating students and the researchers. It was assumed that the participants responded to the scale items presented to the study/sample group members of the study of their own free will and from an objective perspective.

It was assumed that the participating students responded objectively to the technology addiction scale items of their own free will. This research is also limited to the experimental and control groups consisting of students from Atatürk University's Kazım Karabekir Faculty of Education.

Research Method

This thesis was designed as an experimental study. The dependent variable was the participating undergraduate students' "Technology Addiction Levels," and the independent variable was the Purpose of the Study

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- Is there a significant difference in the levels of technology addiction between the experimental and control groups in solution-focused brief group counseling?

Research Limitations and Assumptions

This study is limited to the participating students and the researchers. It was assumed that the participants responded to the scale items presented to the study/sample group members of the study of their own free will and from an objective perspective.

It was assumed that the participating students responded objectively to the technology addiction scale items of their own free will. This research is also limited to the experimental and control groups consisting of students from Atatürk University's Kazım Karabekir Faculty of Education.

Research Method

This thesis was designed as an experimental study. The dependent variable was the participating undergraduate students' "Technology Addiction Levels," and the independent variable was the SFSTGC (Students' Choice) ... Following this voluntary agreement, 32 students were randomly assigned to form experimental and control groups according to the Solomon Four-Group Experimental Model. Two experimental and two control groups were created, each consisting of eight people. Each group was formed using a completely voluntary random assignment method, consisting of eight people. The four groups were then randomly assigned within themselves: Experiment 1, Experiment 2, Control 1, and Control 2. This determination was made by drawing lots. One week before the group counseling process began, the "Technology Addiction Scale" was administered as a pre-test to one control and one experimental group. Subsequently, the 6-week SFSTGC (Currently a 6-week SFSTGC) was administered to the experimental groups to examine its effects on technology addiction. Thus, the effect of the SFSTGC application on the technology addiction of the participating students was tested. The processes were concluded by announcing to the experimental and control groups that the SFSTGC could be conducted with them at the end of the study if desired. (Students' Choice) ... Following this voluntary agreement, 32 students were randomly assigned to form experimental and control groups according to the Solomon Four-Group Experimental Model. Two experimental and two control groups were created, each consisting of eight people. Each group was formed using a completely voluntary random assignment method, consisting of eight people. The four groups were then randomly assigned within themselves: Experiment 1, Experiment 2, Control 1, and Control 2. This determination was made by drawing lots. One week before the group counseling process began, the "Technology Addiction Scale" was administered as a pre-test to one control and one experimental group. Subsequently, the 6-week SFSTGC (Currently a 6-week SFSTGC) was administered to the experimental groups to examine its effects on technology addiction. Thus, the effect of the SFSTGC application on the technology addiction of the participating students was tested. The processes were concluded by announcing to the experimental and control groups that the SFSTGC could be conducted with them at the end of the study if desired. Veri Toplama Aracı

In this study, the "Personal Information Form" which includes the demographic characteristics of the participants was used as the data collection tool, and in the second part, the "Technology Addiction Scale" (TAS) which includes items and questions about the participants' technology use preferences was used to measure their technology addiction levels. The prepared demographic characteristics form; 1- Participants' department of study, 2- grade level, 3- gender, 4- age, 5- whether they own a smartphone, desktop computer, or laptop, 6- socio-economic level of the family, 7- where they connect to the internet, 8- device used to connect to the internet, 9- social networking sites used, 10- average time spent on social networking sites, 11- instant messaging systems used, 12- average time spent daily on instant messaging programs, 13- types of online games played, 14- time spent on online games, 15- websites used, 16- time spent on websites browsed, 17- average time spent daily on social networking sites, instant messaging programs, online games, and all other internet networks, as well as users' habits and frequency of using technological environments were determined. The "Technology Addiction Scale" and "Personal Information Form" to be used in this study were developed by Şimşek and Aydın (2017). The "Technology Addiction Scale," which will be used to determine students' technology addiction levels, consists of 32 items covering four subscales. These are: social network addiction, instant messaging addiction, online game addiction, and website addiction. When developing this scale, the literature was first reviewed, a conceptual review was conducted for each subscale, and an item pool was prepared. During this process, similar measurement tools used in other studies were utilized, and items expressing addiction criteria were added to the item pool, taking into account the theoretical framework. A holistic approach was chosen for the items determined by considering and evaluating the

addiction-related criteria found in Yong's (1996) "Internet Addiction Test" and Griffiths's (2005) six-criteria study. The scale, prepared in a five-point multiple-choice Likert format, was presented using a form prepared by experts with expertise in addiction and technology addiction. It was evaluated by three professors and one associate professor specializing in instructional technologies, one measurement and evaluation specialist, and one linguist. In line with suggestions from field experts, some changes were made to the item wording and related items. After these revisions were made based on expert opinions, the draft form was prepared for preliminary application with 32 items for validity, reliability, and factor analysis and was administered to 200 undergraduate students at Ankara University. Principal component analysis revealed that the scale items clustered under factors that were conceptually quite different from the assumed dimensions. From a conceptual perspective, the fact that the item descriptions for the sub-dimensions in the envisioned model were prepared according to the addiction criteria of Young (1996) and Griffiths (2005) caused similar expressions to be clustered under the same factors, and therefore, the content, scope, and factorial validity analyses of each subscale were conducted separately. The "Technology Addiction Scale" was used after approval was obtained. The scale, prepared as a five-point Likert-type scale, was made available at the end of the necessary stages, and validity and reliability studies were conducted as stated. However, the reliability of the "Technology Addiction Scale," used as the data collection tool in this study, will be assessed. Factor analysis (EFA) was conducted on the obtained data. As seen in Table 8, in the results obtained from EFA, the "Kaiser Meyer Olkin (KMO)" value of 0.827 was accepted as the basis, and the sample capacity was assumed to be applicable for principal components analysis. The rating and multiple-choice scale (Technology Addiction Scale) and the developed information form mentioned above were used (Aydın & Şimşek, 2017).

Experimental designs, based on scientific research methods and techniques, are considered the gold standard because they allow scientists to establish a connection between the independent variable and the dependent variable (Karasar, 2022). Within this framework, experimental methods and techniques (designs) allow researchers to control other variables by controlling the causes identified as the independent variable in studies and assigning participants to different groups without bias, thus establishing a understandable cause-and-effect relationship (Canbell & Stanley, 1963). As is well known, one of the most important advantages of experimental designs is the ability to establish objectivity regarding the process and the data obtained. When researchers can control an independent variable and concretely observe its effect on the dependent variable, they can be aware that the independent variable is the source of the change in the dependent variable (Cook & Campbell, 1979). This can be said to be the primary variables affecting the outcome. This interaction is important for revealing more meaningful results because it allows researchers to make more concrete, observable, and measurable causal inferences regarding the interaction and relationship between variables. Additionally, experimental design processes allow researchers to control for more diverse and potentially impacting variables.

Study Group

The study participants consisted of 150 second-, third-, and fourth-year undergraduate students in the Guidance and Counseling Education Departments and Preschool Education Departments at Atatürk University, Erzurum. These students were divided into two experimental and two control groups, each consisting of eight students. Demographic information for the participants consisted of 22 variables, including parental attitudes, academic achievement, income level, grade, and gender.

Implementation and Evaluation

This study included a total of 150 second-, third-, and fourth-year undergraduate students in the Guidance and Counseling Education Departments and Preschool Education Departments at Atatürk University, Erzurum, during the second semester of the 2023-2024 academic year. The "Technology Addiction Scale," used as a data collection tool and pretest and posttest, and the included "Personal Information Form" were administered to students in the relevant departments constituting the study group. The aim was to obtain information on the participants' socioeconomic levels, technology used and time spent on social media, and the status and patterns of technology use within the scope of demographic characteristics. Statistical calculations for these variables are detailed in the findings.

The demographic variables and the "Technology Addiction Scale" identified here were developed by field experts. Approval was obtained for the entire scale, and the study team deemed these variables appropriate for the thesis project proposal. The "Technology Addiction Scale" and "Demographic Information" to be used in this context were developed by Prof. Dr. Nurettin Şimşek, a faculty member in the Educational Technology Program of the Department of Computer and Instructional Technology Education at the Institute of Educational Sciences at Ankara University, and Fatih Aydın, a doctoral student, and submitted to expert review. This form is also included in the appendix of the thesis.

The "Technology Addiction Scale" was administered as a pretest to one experimental and one control group, using the Solomon four-group model. Subsequently, after a 6-week COSSGPD application was administered to the experimental groups, the "Technology Addiction Scale" was administered to all groups as a posttest. To address the research questions, the researcher defined a 6-week "Solution-Focused Short-Term Group Counseling" process, and all sessions were conducted thoroughly within the prepared plan.

The 6-week SFSTGC Process

The outlined process for the SFSTGC implementation was as follows:

Session 1

* The group leader, the consultant, introduced himself to the group. * The group members were informed about the SFSTGC process. * The group's purpose was explained to the group, encompassing each member. * Time was given for group members to get to know each other. * The group's working principles and participation agreement were approved. * Participants were provided with informative information about SFSTGC, explaining which steps would be taken, why, and how. * "Technology Addiction," which constituted the core of the research problem, was emphasized, and participants' opinions on this topic were shared. * More positive, desired, and expected goals and objectives were determined. * The expected change was highlighted, and evaluations were made. * Goals were determined by the clients. * The Miracle Question technique was applied. * Homework assignments for the next session were completed, and the session concluded.

Duration: 60-90 minutes.

Tools and equipment used: Participation agreement, paper, pencil, blackboard, and marker.

Session 2

* The purpose of the study was clarified. * Participants' awareness was raised to overcome the changing and problematic situation. * Participants were asked whether any changes had occurred since the first session. * The positive change expectation adopted by the participants was restructured. * The problem was resolved and the solution was reached. * Evaluations were made regarding the solution. * A rating question was asked, using the miracle question technique from the first session, and guidance was provided based on this question. * Cheerleader effects were used.

Duration: 90 minutes

Tools Used: Blackboard, blackboard, paper, and marker.

Session 3 (Recognizing Exceptions)

* Exceptional/Rare situations were recognized. * Motivation was enhanced to recognize strengths, skills, and resources for the expected change. * Homework assignments were discussed. * Evaluations were conducted. * Clients' positive use of technology since the day they began therapy was highlighted. * Homework assignments, such as making observations about rare/exceptional situations and taking initiatives to increase exceptional situations, were conducted. * The session concluded.

Duration: 90 minutes

Tools Used: Blackboard, marker, paper, and pencil.

Session 4 (Coping Skills)

* The previous session was summarized. * The homework assigned in the previous session was discussed. * Coping skills were discussed. * Guidance was given to increase awareness of situations and things that could be helpful. * Solutions thought to be beneficial to the situation were emphasized. * These solutions were discussed and tried. * Evaluations were conducted. * Assignments such as observing and trying solutions found to be useful so far were completed, and the session concluded.

Duration: 90 minutes

Tools Used: Blackboard, marker, paper, and pencil.

Session 5 (Positive Design of the Future)

*What was discussed in the previous session was reiterated. * The process focused on positively designing the future, which is the expectation for the process. * How to achieve that positive future was discussed. * Evaluations were made regarding the entire process. * Assignments such as observing the changes and achievements achieved so far were completed. * The session concluded.

Duration: 90 minutes

Tools Used: Blackboard, marker, paper, and pencil.

Session 6 (Conclusion)

The gains, benefits, and positive changes achieved during the group counseling process were evaluated. * Feelings and thoughts about the counseling process were shared. * A general evaluation of the group counseling process was made. * Session evaluation was made. *Positive changes between the first day and today were highlighted. *The SFSTGC process has been concluded.

Duration: 90 minutes

Tools Used: Blackboard, marker, paper, and pencil.

Process/Application

The Technology Addiction Scale was printed and administered to undergraduate students.

Data Analysis

At the end of the data collection process, appropriate statistical tests will be used to determine whether the data exhibits a normal distribution, using either parametric or nonparametric tests. Four different statistical analyses will be used in the data analysis process, and these analyses will be conducted in a computer environment using the SPSS 22.00 statistical package. The analyses to be conducted are as follows:

1. Frequency
2. Percentage
3. Kruskal Wallis H test
4. Mann Whitney U test

Validity and Reliability

A certain level of validity and reliability is required in academic studies. To increase the internal validity of the study, data diversification was conducted using different data sources used in quantitative methods. Rich descriptions were used to ensure the external validity of the study. The findings obtained in the study were interpreted and supported by theoretical studies. Generalizations were made after supporting them with relevant studies in the field. To ensure consistency in the study, each client in the groups was treated equally. The scale used as the data collection tool in this study was developed by Aydın and Şimşek (2017) and was validated and reliable before being used in similar studies. Previous reliability and validity results are provided under the heading "Data Collection Tools."

Participants in all groups (two experimental and two control groups) were randomly assigned. After the groups were determined, the group to be included in each group was also randomly assigned. The unbiased assignment of individuals in the control and experimental groups to each group prevented any threat to internal validity. In this study, conducted over a specific timeframe, the unbiased assignment of group members aimed to eliminate the threat that might arise despite the maturity of the data collection process. The fact that the data collection instrument was administered and collected by the same person, the consultant, ensured consistency, thus eliminating the threat to internal validity. The absence of any adverse effects or client loss in the experimental and control groups during the 6-week period protects the reliability and internal validity of the study. Care was taken to avoid positive responses to the expectations of clients in the experimental groups as a precaution against the threat to internal validity. In the experimental practice, care was taken to ensure that clients were not unaware of the findings before each session, eliminating the threat to external validity. Ensuring the validity and reliability of the data collection instrument used prior to the study also positively impacts the reliability of the study. Because the study included control groups, the impact of the experimental process was compared. Due to the presence of control groups, there is no vulnerability to external validity threats.

Findings

Demographic Characteristics of the Students Participating in the Study

The demographic characteristics of the students participating in the study are presented in Table 4.

Table 4. Demographic Characteristics of the Students Participating in the Study

		GROUP						
		Experiment_1		Control_1		Experiment_2		Control_2
Department	Psychological Counseling and Guidance	n	4	4	4	4	4	4
		%	50.0	50.0	50.0	50.0	50.0	50.0
	Preschool	n	4	4	4	4	4	4
		%	50.0	50.0	50.0	50.0	50.0	50.0
Class	2nd Class	n	3	3	1	0		
		%	37.5	37.5	12.5	0.0		
	3rd Class	n	5	4	5	7		
		%	62.5	50.0	62.5	87.5		
	4th Class	n	0	1	2	1		
		%						

		%	0.0	12.5	25.0	12.5
Gender	Male	n	4	4	4	4
		%	50.0	50.0	50.0	50.0
	Female	n	4	4	4	4
		%	50.0	50.0	50.0	50.0
Phone Tablet Computer	Yes	n	8	8	8	8
		%	100.0	100.0	100.0	100.0
Family Economic Status	Medium	n	8	8	8	8
		%	100.0	100.0	100.0	100.0
Environment where you connect to the internet	Home or dormitory/Faculty/Mobile	n	8	8	8	8
		%	100.0	100.0	100.0	100.0
Internet-Connected Device	Smartphone/PC	n	5	6	5	8
		%	62.5	75.0	62.5	100.0
	Smartphone Tablet/PC	n	3	2	3	0
		%	37.5	25.0	37.5	0.0
Social Networks Used	Twitter/ Instagram/ Youtube	n	2	8	4	8
		%	25.0	100.0	50.0	100.0
	Facebook/ Twitter/ Instagram/ Youtube	n	6	0	4	0
		%	75.0	0.0	50.0	0.0
Time Spent on Social Networks	Less than 1 hour	n	0	0	3	0
		%	0.0	0.0	37.5	0.0
	1-2 hours	n	0	0	5	0
		%	0.0	0.0	62.5	0.0
	5-6 hours	n	3	4	0	8
		%	37.5	50.0	0.0	100.0
	More than 7 hours	n	5	4	0	0
		%	62.5	50.0	0.0	.,0
Messaging Programs Used	Whatsapp	n	0	8	0	8
		%	0.0	100.0	0.0	100.0
	Whatsapp ve Messenger	n	8	0	5	0
		%	100.0	0.0	62.5	0.0
	Whatsapp Snapchat Messenger	n	0	0	3	0
		%	0.0	0.0	37.5	0.0
Daily Usage of Messaging Programs	3-4 hours	n	0	0	8	0
		%	0.0	0.0	100.0	0.0
	5-6 hours	n	3	7	0	6
		%	37.5	87.5	0.0	75.0
	More than 7 hours	n	5	1	0	2
		%				

		%	62.5	12.5	0.0	25.0
Type of Games Played	Action	n	3	0	2	0
		%	42.9	0.0	25.0	0.0
	Puzzle	n	0	0	3	0
		%	0.0	0.0	37.5	0.0
	War	n	0	0	2	1
		%	0.0	0.0	25.0	12.5
	Strategy	n	1	0	0	0
		%	14.3	0.0	0.0	0.0
	Virtual life	n	2	0	1	0
		%	28.6	0.0	12.5	0.0
	Puzzles and Virtual Life	n	1	4	0	4
		%	14.3	50.0	0.0	50.0
	War and Strategy	n	0	4	0	3
		%	0.0	50.0	0.0	37.5
Daily Time Spent on Games	1-2 hours	n	0	0	8	0
		%	0.0	0.0	100.0	0.0
	3-4 hours	n	7	4	0	3
		%	100.0	50.0	0.0	37.5
	5-6 hours	n	0	4	0	5
		%	0.0	50.0	0.0	62.5
Type of Websites Used	Shopping Travel Technology	n	0	0	0	1
		%	0.0	0.0	0.0	12.5
	Travel - Online Movies/Series - Search Engines - Online Music/Video	n	0	0	2	0
		%	0.0	0.0	25.0	0.0
	Shopping Travel Online Movies/TV Series Beauty	n	0	0	0	2
		%	0.0	0.0	0.0	25.0
	Shopping Travel Online Movies/TV Series Technology	n	0	4	0	4
		%	0.0	50.0	0.0	50.0
	Shopping Search Engines Online Music/Video Fashion	n	0	0	1	0
		%	0.0	0.0	12.5	0.0
	Shopping Travel Online Movies/TV Series Technology Beauty	n	0	4	0	1
		%	0.0	50.0	0.0	12.5
	Shopping Travel Online Movie/Series Search Engines Online Music/Video Fashion	n	0	0	1	0
		%	0.0	0.0	12.5	0.0

Shopping Travel Online	n	0	0	1	0
Movie/Series Search	%	0.0	0.0	12.5	0.0
Engines Online					
Music/Video Beauty					
Shopping Travel Online	n	3	0	1	0
Movie/Series Search	%	37.5	0.0	12.5	0.0
Engines Online					
Music/Video Technology					
Shopping Travel Online	n	1	0	0	0
Music/Video Fashion	%	12.5	0.0	0.0	0.0
Beauty					
Shopping Travel Online	n	3	0	2	0
Movie/Series Search	%	37.5	0.0	25.0	0.0
Engines Online					
Music/Video Fashion					
Beauty					
Shopping, Travel, Online	n	1	0	0	0
Movies/TV Series, Search	%	12.5	0.0	0.0	0.0
Engines, Online					
Music/Video, Fashion					
Beauty, Technology					
Daily Time Spent on 1-2 hours	n	0	0	3	0
Websites	%	0.0	0.0	37.5	0.0
3-4 hours	n	0	2	5	0
	%	0.0	25.0	62.5	0.0
5-6 hours	n	3	5	0	8
	%	37.5	62.5	0.0	100.0
More than 7 hours	n	5	1	0	0
	%	62.5	12.5	0.0	0.0
Daily Time Spent on 1-2 hours	n	0	0	3	0
All Internet	%	0.0	0.0	37.5	0.0
Environments					
3-4 hours	n	0	0	5	0
	%	0.0	0.0	62.5	0.0
5-6 hours	n	3	0	0	0
	%	37.5	0.0	0.0	0.0
More than 7 hours	n	5	8	0	8
	%	62.5	100.0	0.0	100.0

Differences Between Technology Addiction Scale Pretest Scores of Students in Experiment-1 and Control-1 in the First Group (Pretest Group)

The differences between Technology Addiction Scale pretest scores of students in Experiment-1 and Control-1 in the first group were analyzed using the Mann-Whitney U test (Table 5).

Table 5. Differences Between Technology Addiction Scale Pretest Scores of Students in Experiment-1 and Control-1 in the First Group

	GROUP	N	X	S.s.	Rank average	Rank sum	U	p	Cohen'D
Social Network Use	Experiment_1	8	23.75	1.17	10.50	84.00	16.000	.070	-
	Control_1	8	23.00	.00	6.50	52.00			
Instant Messaging	Experiment_1	8	24.25	1.04	10.63	85.00	15.000	.057	-
	Control_1	8	23.25	.71	6.38	51.00			
Playing Online Games	Experiment_1	8	25.00	1.07	12.50	100.00	.000	.001	5.21
	Control_1	8	18.25	1.49	4.50	36.00			
Using Websites	Experiment_1	8	26.75	.46	12.50	100.00	.000	.000	8.64
	Control_1	8	22.75	.46	4.50	36.00			
Technology Addiction Scale Total	Experiment_1	8	99.75	2.12	12.50	100.00	.000	.001	6.42
	Control_1	8	87.25	1.75	4.50	36.00			

The differences in the Social Network Usage dimension were found to be insignificant at a significance level of $p > 0.05$ ($U = 16.000$, $p = 0.070$). This finding indicates that the students in the first group, Experiment 1 and Control 1, were similar in terms of the Social Network Usage dimension.

The difference in the Instant Messaging dimension was found to be insignificant at a significance level of $p > 0.05$ ($U = 15.000$, $p = 0.057$). This result indicates that there is no significant difference between the students in Experiment 1 and Control 1 in the first group in terms of the Instant Messaging dimension.

The difference in the Online Gaming dimension was found to be significant at a significance level of $p < 0.05$ ($U = 0.000$, $p = 0.001$). The table shows that the arithmetic mean scores of the students in Experiment 1 on the Online Gaming dimension were higher than the arithmetic mean scores of the students in Control Group 1. In other words, it can be said that the students in the Experiment 1 group played more online games. This finding indicates that there is a difference between the students in Experimental Group 1 and Control Group 1 in terms of the Online Game Playing dimension, in favor of the control group.

The difference in terms of the Website Usage dimension was found to be significant at the $p < 0.05$ level ($U = 0.000$, $p = 0.000$). The table here shows that the arithmetic mean scores of the students in Experimental Group 1 on the Website Usage dimension were higher than those of the students in Control Group 1. In other words, it can be argued that the students in the experimental group used websites more. This finding indicates that there is a difference between the students in Experimental Group 1 and Control Group 1 in terms of the Website Usage dimension, in favor of the control group.

The differences in terms of the total Technology Addiction Scale scores were found to be significant at the $p < 0.05$ level ($U = 0.000$, $p = .001$). When these table values are examined, it is seen that the arithmetic mean scores of the students in Experimental Group 1 on the Technology Addiction Scale were slightly higher than those of the students in Control Group 1. In other words, it can be said that the students in the experimental group were more addicted to technology. This finding indicates that there was a difference in technology addiction between the students in Experiment-1 and Control-1 in the first group, in favor of the control group.

Differences Between the Technology Addiction Statuses of the Students in Experiment-1 and Control-1 in the First Group (Pre-Test Group)

The differences between the technology addiction statuses of the students in Experiment-1 and Control-1 in the first group were examined using chi-square analysis (Table 6).

Table 6. Differences Between the Technology Addiction Statuses of the Students in Experiment-1 and Control-1 in the First Group

		STATUS		χ^2	p
		Highly Dependent	Fully Dependent		
Experiment-1	n	1	7	12.444	.000
	%	12.5	87.5		
Control-1	n	8	0		
	%	100.0	0.0		

The difference between the students in Experiment-1 and Control-1 in the first group in terms of technology addiction was considered significant at the $p < 0.05$ level ($\chi^2 = 12.444$ $p = .000$). When the table values here are examined, it is observed that 88% of the participating students in Experimental Group-1 were fully dependent in terms of "Technology Addiction," while there were no fully dependent students in Control Group-1. In other words, it can be said that the students in the experimental group were more technology addicted. This finding shows that there was a difference between the students in Experiment-1 and Control-1 in the first group in terms of technology addiction, to the detriment of the experimental group. Differences Between the Technology Addiction Posttest Scores of Students in the First (Pretest Group) and Second Groups in Experiment-1, Control-1, Experiment-2, and Control-2

The differences between the technology addiction posttest scores of students in the first and second groups in Experiment-1, Control-1, Experiment-2, and Control-2 were analyzed using the Krusal Wallis H test (Table 7).

Table 7. Differences Between the Technology Addiction Posttest Scores of Students in the First and Second Groups in Experiment-1, Control-1, Experiment-2, and Control-2

		N	X	S.s.	Rank average	Ki-square	p	Difference	η^2
Social Network Use	Experiment-1	8	12.50	.926	4.50	28.962	.000	2-4>1 4>3	0.96
	Control-1	8	20.63	1.061	21.25				
	Experimen-2	8	17.75	.463	12.50				
	Control-2	8	22.25	.463	27.75				
Istant Messaging	Experiment-1	8	11.63	.518	4.50	25.192	.000	2-4>1	0.91
	Control-1	8	19.63	1.847	23.63				
	Experimen-2	8	17.00	.000	13.50				
	Control-2	8	19.75	1.035	24.38				
Playing Online Games	Experiment-1	8	7.50	.535	4.50	22.608	.000	2-4>1	0.92
	Control-1	8	14.63	1.506	21.69				
	Experimen-2	8	13.50	.535	15.00				
	Control-2	8	15.13	.991	24.81				
Using Websites	Experiment-1	8	8.50	.535	4.50	29.101	.000	2-4>1 4>3	0.98
	Control-1	8	18.38	1.061	20.75				
	Experimen-2	8	14.50	.535	12.50				
	Control-2	8	20.75	.886	28.25				
Technology Addiction Scale Total	Experiment-1	8	40.13	1.126	4.50	28.070	.000	2-4>1 4>3	0.98
	Control-1	8	73.25	3.919	21.56				

Experimen-2	8	62.75	.886	12.50
Control-2	8	77.88	1.959	27.44

It can be said that the difference between the students in Experiment-1, Control-1, Experiment-2, and Control-2 in the first and second groups in terms of the Social Network Usage dimension is significant at the $p < 0.05$ level (KW=28.962 $p = .000$). This finding shows that there is a difference between the students in Experiment-1, Control-1, Experiment-2, and Control-2 in terms of the Social Network Usage dimension in the first and second groups. DBPHT was applied to understand the source of the difference.

The test result showed that the difference between the Social Network Usage scores of the students in the Control-1 and Control-2 groups and those in Experiment-1 was significant at the $p < 0.05$ level in favor of the students in Experiment-1. The difference between the Social Network Usage scores of the students in Control-2 and Experiment-2 was significant at the $p < 0.05$ level in favor of the students in Experiment-2. The Eta-squared value for the effect size of this difference was also found to be quite significant ($\eta^2 = 0.96$).

The differences between the students in the first and second groups, Experiment 1, Control 1, Experiment 2, and Control 2, in terms of the Instant Messaging dimension were found to be significant at the $p < 0.05$ level (KW=25.192 $p = .000$). This finding indicates that there is a difference between the students in the first and second groups, Experiment-1, Control-1, Experiment-2, and Control-2, in terms of the Instant Messaging dimension. DBPHT was applied to understand the source of the difference. The test result showed that the difference between the Instant Messaging dimension scores of the students in the Control-1 and Control-2 groups and those in Experiment-1 was found to be highly significant at the $p < 0.05$ level of significance and in favor of the students in Experiment-1. The Eta-squared value for the effect size of this difference was also found to be very significant ($\eta^2 = 0.91$). It was found that the difference between the students in Experiment-1, Control-1, Experiment-2, and Control-2 in the first and second groups in terms of the "Online Gaming" dimension was significant at the $p < 0.05$ level (KW=22.608 $p = .000$).

The finding here shows that there is a difference between the students in Experiment-1, Control-1, Experiment-2, and Control-2 in the first and second groups in terms of the Online Gaming dimension. DBPHT was applied to understand the source of the difference. The test result indicated that the difference between the Online Gaming dimension scores of the students in Control-1 and Control-2 groups and those in Experiment-1 was significant at the $p < 0.05$ level, in favor of the students in Experiment-1. The Eta-squared value for the effect size of this difference was also found to be very significant ($\eta^2 = 0.92$). The difference between the students in Experiment-1, Control-1, Experiment-2 and Control-2 groups, which consist of the participants in the first and second groups, in terms of the dimension of Using Websites was evaluated as significant at the $p < 0.05$ level (KW=29.101 $p = .000$). In this case, the findings show that there is a difference between the students in Experiment-1, Control-1, Experiment-2 and Control-2 groups, which are in the first and second groups, in terms of the dimension of Using Websites. DBPHT was applied in order to determine the source of the difference that emerged here. The result of the applied test showed that the differences in the scores of the students in the Control-1 group and the students in Experiment-1 in terms of the dimension of Using Websites were found to be significant at the $p < 0.05$ level in favor of the students in Experiment-1, and the differences in the scores of the students in Control-2 and the students in Experiment-2 in terms of the dimension of Using Websites were found to be significant at the $p < 0.05$ level in favor of the students in Experiment-2. The Eta-squared value for the effect size of this difference was also found to be highly significant ($\eta^2 = 0.98$).

The differences between the students in Experiment-1, Control-1, Experiment-2 and Control-2 in the first and second groups in terms of Technology Addiction Scale Total scores were found to be significant at the $p < 0.05$ level (KW=28.070 $p = .000$). The finding here showed that there was a significant difference between the total Technology Addiction Scale scores of the participating students in Experiment-1, Control-1, Experiment-2 and Control-2 in the first and second groups. DBPHT was applied in order to understand the source of the difference. The test result showed that the differences between the total Technology Addiction Scale scores of the students in Control-1 and Control-2 groups and the students in Experiment-1 were found to be significant at the $p < 0.05$ level in favor of the students in Experiment-1; the difference between the total Technology Addiction Scale scores of the students in

Control-2 and Experiment-2 was found to be significant at the $p < 0.05$ level in favor of the students in Experiment-2. The Eta-squared value for the effect size of this difference was also found to be highly significant ($\eta^2 = 0.98$).

Differences in Technology Addiction Scale Pretest and Posttest Scores of Students in Experiment-1 in the First Group (Pretest Group)

The differences in Technology Addiction Scale pretest and posttest scores of students in Experiment-1 in the first group were examined using the Wilcoxon test (Table 8).

Table 8. Differences in Technology Addiction Scale Pretest and Posttest Scores of Students in Experiment-1 in the First Group

Experimental Group		N	X	S.s.	Rank average	Rank sum	z	p
Social Network Use	Pre-test	8	23.75	1.165	4.50	36.00	2.640	.008
	Post-test	8	12.50	.926	.00	.00		
Instant Messaging	Pre-test	8	24.25	1.035	4.50	36.00	2.598	.009
	Post-test	8	11.63	.52	.00	.00		
Playing Online Games	Pre-test	8	25.00	1.069	4.50	36.00	2.640	.008
	Post-test	8	7.50	.54	.00	.00		
Using Websites	Pre-test	8	26.75	.463	4.50	36.00	2.640	.008
	Post-test	8	8.50	.54	.00	.00		
Technology Addiction Scale	Pre-test	8	99.75	2.121	4.50	36.00	2.530	.011
	Post-test	8	40.13	1.123	.00	.00		

Differences in the Social Network Usage dimension were found to be significant at the $p < 0.05$ level ($z = 2.640$, $p = .008$). This finding indicates that there was a difference in favor of the posttest between the pretest and posttest scores of the students in Experiment 1 in the first group on the Social Network Usage dimension. The Social Network Usage scores of the students in Experiment 1 decreased in the posttest.

Differences in the Instant Messaging dimension were found to be significant at the $p < 0.05$ level ($z = 2.598$, $p = .009$). This finding indicates that there was a difference in favor of the posttest between the pretest and posttest scores of the students in Experiment 1 in the first group on the Instant Messaging dimension. The Instant Messaging scores of the students in Experiment 1 decreased in the posttest.

Differences in the Online Gaming dimension were found to be significant at the $p < 0.05$ level ($z = 2.640$, $p = .008$). The table shows that the arithmetic mean of the posttest scores of the students in Experimental Group 1 on the Online Game Playing dimension was lower than the arithmetic mean of their pretest scores. This finding indicates that there was a difference in favor of the posttest between the pretest and posttest scores of the students in Experimental Group 1 on the Online Game Playing dimension in the first group. There was a decrease in the Online Game Playing scores of the students in Experimental Group 1 on the posttest.

The differences in the Website Usage dimension were found to be significant at the $p < 0.05$ level ($z = 2.640$, $p = .008$). The table shows that the arithmetic mean of the posttest scores of the students in Experimental Group 1 on the Website Usage dimension was lower than the arithmetic mean of their pretest scores. This finding shows that there was a difference in favor of the posttest between the pretest and posttest scores of the students in Experimental Group 1 on the Website Usage dimension in the first group. There was a decrease in the Website Usage scores of the students in Experimental Group 1 on the posttest. The differences in terms of the total Technology Addiction Scale were found to be significant at the $p < 0.05$ level ($z = 2.530$, $p = .011$). The table shows that the arithmetic mean of the Technology Addiction Scale post-test scores of the students in Experimental Group 1 was lower than the arithmetic mean of their pre-test scores. This finding indicates that there was a difference between

the total Technology Addiction Scale pre-test and post-test scores of the students in Experimental Group 1 in favor of the post-test. It also indicates that there was a difference in the total Technology Addiction Scale scores of the students in Experimental Group 1 in favor of the post-test.

Differences in Technology Addiction Scale Pre-Test and Post-Test Scores of the Students in the First Group (Pre-Tested Group) and the Control Group

The differences in the Technology Addiction Scale pre-test and post-test scores of the students in Control Group 1 in the first group were analyzed using the Wilcoxon test (Table 9). Table 9.

Differences in Technology Addiction Scale Pre-Test and Post-Test Scores of Students in the First Group, Control-1

Control group		N	X	S.s.	Rang average	Rank sum	z	p
Social Network Use	Pre-test	8	23.00	.000	4.50	36.0	2.539	.011
	Post-test	8	20.63	1.61	.00	.00		
Instant Messaging	Pre-test	8	23.25	.707	4.50	36.0	2.539	.011
	Post-test	8	19.63	1.847	.00	.00		
Playing Online Games	Pre-test	8	18.25	1.488	4.50	36.0	2.539	.011
	Post-test	8	14.63	1.506	.00	.00		
Using Websites	Pre-test	8	22.75	.463	4.50	36.0	2.539	.011
	Post-test	8	18.38	1.061	.00	.00		
Technology Addiction Scale	Pre-test	8	87.25	1.753	4.50	36.0	2.539	.011
	Post-test	8	73.25	3.919	.00	.00		

Differences in the Social Network Usage dimension were found to be significant at the $p < 0.05$ level ($z = 2.640$, $p = .008$). This finding indicates that there was a difference in favor of the posttest between the pretest and posttest scores of the students in Experiment 1 in the first group on the Social Network Usage dimension. The Social Network Usage scores of the students in Experiment 1 decreased in the posttest.

Differences in the Instant Messaging dimension were found to be significant at the $p < 0.05$ level ($z = 2.598$, $p = .009$). This finding indicates that there was a difference in favor of the posttest between the pretest and posttest scores of the students in Experiment 1 in the first group on the Instant Messaging dimension. The Instant Messaging scores of the students in Experiment 1 decreased in the posttest.

Differences in the Online Gaming dimension were found to be significant at the $p < 0.05$ level ($z = 2.640$, $p = .008$). The table shows that the arithmetic mean of the posttest scores of the students in Experimental Group 1 on the Online Game Playing dimension was lower than the arithmetic mean of their pretest scores. This finding indicates that there was a difference in favor of the posttest between the pretest and posttest scores of the students in Experimental Group 1 on the Online Game Playing dimension in the first group. There was a decrease in the Online Game Playing scores of the students in Experimental Group 1 on the posttest.

The differences in the Website Usage dimension were found to be significant at the $p < 0.05$ level ($z = 2.640$, $p = .008$). The table shows that the arithmetic mean of the posttest scores of the students in Experimental Group 1 on the Website Usage dimension was lower than the arithmetic mean of their pretest scores. This finding shows that there was a difference in favor of the posttest between the pretest and posttest scores of the students in Experimental Group 1 on the Website Usage dimension in the first group. There was a decrease in the Website Usage scores of the students in Experimental Group 1 on the posttest. The differences in terms of the total Technology Addiction Scale were found to be significant at the $p < 0.05$ level ($z = 2.530$, $p = .011$). The table shows that the arithmetic mean of the Technology Addiction Scale post-test scores of the students in Experimental Group 1 was lower than the arithmetic mean of their pre-test scores. This finding indicates that there was a difference between

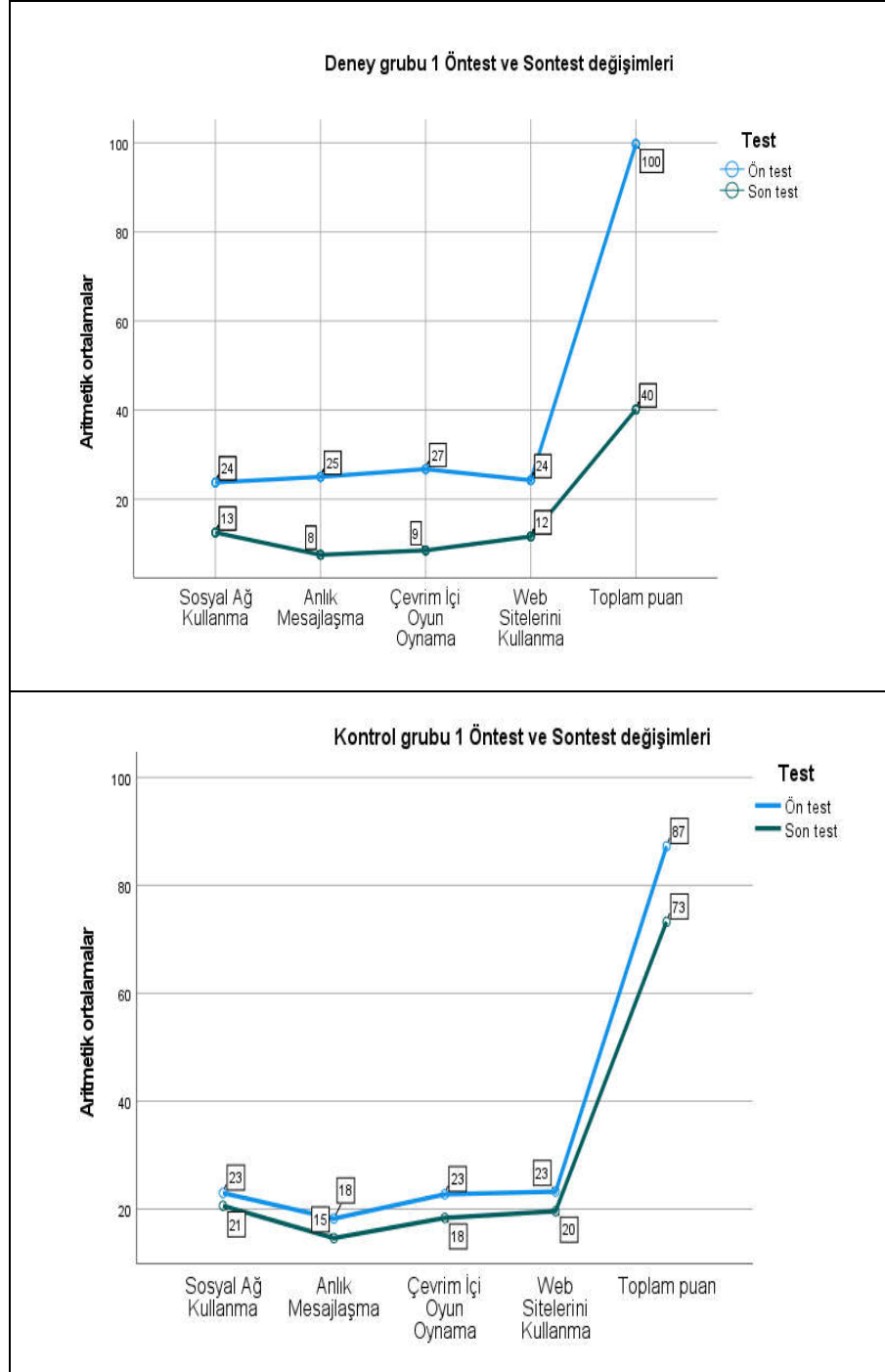
the total Technology Addiction Scale pre-test and post-test scores of the students in Experimental Group 1 in favor of the post-test. It also indicates that there was a difference in the total Technology Addiction Scale scores of the students in Experimental Group 1 in favor of the post-test.

Differences in Technology Addiction Scale Pre-Test and Post-Test Scores of the Students in the First Group (Pre-Tested Group) and the Control Group.

The differences in the Technology Addiction Scale pre-test and post-test scores of the students in Control Group 1 in the first group were analyzed using the Wilcoxon test (Table 9).

Table 9. Differences in Technology Addiction Scale Pre-Test and Post-Test Scores of Students in the First Group, Control-1

Şekil 1. Deney-1 ve Kontrol 1 Grubundaki Öğrencilerin Teknoloji Bağımlılığı Ölçeği Ön Test ve Son Test Puanları Değişimi



Discussion, Conclusion, and Recommendations

Research findings reveal that solution-focused, short-term group counseling has a positive impact on reducing undergraduate students' technology addiction levels. Pretest and posttest analyses conducted on the experimental and control groups indicate that the therapeutic process significantly reduces university students' technology addiction. For example, as indicated in the findings, the results of the ÇOKSGPD program, conducted with undergraduate students who volunteered to participate, particularly those experiencing significant levels of technology addiction, revealed significant decreases in addiction levels. In the solution-focused therapy method, focusing on the strengths of participating clients, which are effective in solving the problem, can be said to be effective in achieving positive findings and outcomes. Instead of focusing on clients' weaknesses and weaknesses, utilizing their strengths and focusing on developing these strengths also increases expected effectiveness.

In light of the studies conducted in this context, a positive change in any area of life will undoubtedly have positive repercussions in other areas of life, which are cyclical processes (Beyebach, 2009). Change is inevitable and constant, regardless of the area of life. It should not be forgotten that a problem experienced today may only change tomorrow. Therefore, a method that is ineffective in solving the problem today may be effective tomorrow. At this point, quantum reality should not be forgotten. Because the variables that affect the outcome can differ at any moment and change the outcome. The outcome is the result of the causes, that is, the independent variables, dependent on them. If those independent variables can be intervened within the changing situation and timeframe, they will ultimately change as the dependent variable. Therefore, the focus should be on solving the problem within the framework of dynamic and continuous changes that will occur in every situation (Geil, 1998). Based on the fact that the only unchanging reality is change itself, when struggling with addictions, one must believe that one will definitely find a way and overcome them. As is always stated, changes and states of well-being achieved in small steps can open doors to larger and more holistic solutions. This situation is also considered the snowball effect (Dölek & Kurter, 2005; O' Holon & Weiner, 1989). The findings of the study reveal that psychological counseling through a solution-focused group plays an effective role in reducing university students' technology addiction levels. Students themselves have expressed positive improvements in their social, emotional, academic, and career skills as a result of the solution-focused group counseling. As is well known, technology addiction is one of the fundamental problems of our time. In fact, before this problem becomes even more chronic, it would be meaningful to create environments where psychological counseling services can be provided at the school level, even for short periods on a voluntary basis. Raising students' and young people's awareness through therapeutic approaches will enable them to utilize technological opportunities and opportunities in a way that prevents addiction.

Before the experimental intervention, students expressed that they were not aware of the amount of time they spent on technology, but their awareness increased with the therapeutic process. With this increased awareness, they stated that they were able to control the time they used technology and that this control made them feel happier. Following the experimental intervention, students' feedback indicated that their ability to control their use of technological tools had improved. Students expressed greater happiness as they realized their skills were improving and felt the benefits of this awareness. When individuals gain self-control, they experience greater happiness through the sense of pleasure they experience. Many students expressed a sense of self-appreciation stemming from this happiness. This is consistent with a sense of accomplishment. Considering that every individual needs the motivation to be appreciated, the therapeutic process behind this appreciation, along with the findings, clearly demonstrates its benefits.

The significant difference between the findings obtained before and after the experimental application demonstrates the impact of the study. Considering that each person is unique, it should be remembered that the solution to each individual's problem lies within them to some extent, and that activating their inherent potential will be crucial steps toward a solution. Individuals can realize their unique potential and talents through small, immediate interventions.

When experiencing a psychological disorder at any stage of our lives, experimental applications are crucial in alleviating this disorder. Given the research topic, the scarcity of these applications is striking. It is recommended that group counseling applications be designed to be beneficial in addressing these types of addictions. These experimental studies should be piloted in schools or universities, and if

deemed necessary, group counseling courses for different age groups should be added to the National Education curriculum to encourage children to use technology appropriately from an early age. Group counseling applications can be designed to encourage not only children but also adults to use technology appropriately. Necessary plans can be made within the Ministry of Family and Social Policies to raise awareness in every family. For example, group psychological counseling sessions in Family Medicine may be considered to help manage technology addiction.

REFERENCES

- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental Disorders (dsm-5)*. Apa Publishing.
- Anderson, K. J. (2001). Internet use among college students: An exploratory study. *Journal of American College Health*, 50(1), 21-26. <https://doi.org/10.1080/07448480109595707>
- Aydın, F. (2017). *Teknoloji bağımlılığının sınıf ortamında yarattığı sorunlara İlişkin öğrenci görüşleri* (Tez No: 494180) [Yüksek Lisans Tezi, Ankara Üniversitesi-Ankara]. Yüksek Öğretim Kurulu Ulusal Tez Merkezi.
- APA. (2023). *Solomon four group design*. American Psychological Association. APA Dictionary of Psychology. <https://dictionary.apa.org/solomon-four-group-design>
- Banks, R. (2005). Solution-focused group therapy. *Journal of Family Psychotherapy*, 16(1/2), https://doi.org/10.1300/J085v16n01_05
- Beck, A. (2008). *Bilişsel terapi ve duygusal bozukluklar* (2. baskı) (A. Türkcan ve V. Öztürk, Çev.). Litera Yayınları. (Çalışmanın orijinali 1976'da yayımlanmıştır).
- Block, J. J. (2008). Issues for DSM-V: Internet addiction. *The American Journal of Psychiatry*, 165(3), 306-307. <https://doi.org/10.1176/appi.ajp.2007.07101556>
- Braver, S. L., & Braver, M. C. (1988). Statistical treatment of the Solomon four-group design: A meta-analytic approach. *Psychological Bulletin*, 104(1), 150-154. <https://doi.org/10.1037/0033-2909.104.1.150>
- Campbell, D. T., & Stanley, J. C. (1963). *Experimental and quasi-experimental designs for research*. Rand McNally & Company.
- Cepukiene, V., & Pakrosnis, R. (2011). The outcome of solution-focused brief therapy among foster care adolescents: The changes of behavior and perceived somatic and cognitive difficulties. *Children and Youth Services Review*, 33, 791-797. <https://doi.org/10.1016/j.childyouth.2010.11.027>
- Cook, T. D., & Campbell, D. T. (1979). *Quasi-experimentation: Design and analysis issues for field settings*. Houghton Mifflin.
- Corey, G. (2008). *Psikolojik danışma, psikoterapi kuram ve uygulamaları* (7. baskı) (T. Ergene, Çev.). Mentis Yayıncılık.
- Corey, G. (2009). *Psikolojik danışma, psikoterapi kuram ve uygulamaları*. (T, Ergene, Çev.). Mentis Yayıncılık. (Eserin orijinali 2005'te yayımlanmıştır).
- Corey, G. (2012). *Theory & practice of group counseling* (8th ed.). Brooks&Cole.
- Çakır, Ö., & Horzum, M. B. (2008). İnternet bağımlılığı testi. *Eğitim Bilimleri ve Uygulama Dergisi*, 7, 87-102. https://www.researchgate.net/publication/272357837_INTERNET_BAGIMLILIGI_TESTI
- Davis, R. A., Flett, G. L., & Besser, A. (2004). Validation of a new scale for measuring problematic Internet use: Implications for pre-employment screening. *Cyberpsychology & Behavior*, 5(4), 331-345. <https://doi.org/10.1089/109493102760275581>

- De Jong, P., & Kim Berg, I. (2001). *Interviewing for solutions* (2nd ed.). Thomson Brooks&Cole.
- De Jong, P., & Miller, S.D. (1995). How to interview for client strenghts. *Social Work*, 40(6), 729-736.
- De Shazer, S., Dolan, Y., Korman, H , Trepper, T. S., McCollom, E. & Berg, I. K. (2007). *More than miracles: The state of the art of solution-focused brief therapy* (1st ed.). Haworth Press.
- De Shazer, S. (1985). *Keys to solution in brief therapy* (1st ed.). Norton.
- Doğan, S. (1999). Çözüm-Odaklı Kısa Süreli Terapi: Kuramsal Bir İnceleme. *Türk Psikolojik Danışma ve Rehberlik Dergisi*, 2(12), 23-38.
- Doğan, S. (2000). Okul psikolojik danışmanları için yeni ve pratik bir yaklaşım: çözüm-odaklı kısa süreli psikolojik danışma. *Eğitim ve Bilim Dergisi*, 25(116), 59-66. [https://doi:10.15390/ES.2000.422](https://doi.org/10.15390/ES.2000.422)
- Doğan, Y. B. (2010). *Kısa acil psikoterapi (bep)* (2. baskı). Dama yayınları.
- Dölek, N. ve Kurter, F. (2005). *Çözüm odaklı kısa danışmanlık yaklaşımı*. Seminer Notları, Bahçeşehir Üniversitesi Kariyer Merkezi. İstanbul.
- Dryden, W. ve Feltham, C. (1992). *Brief counselling: a practical guide for beginning practitioners*. Open University Press.
- Ektiricioğlu, C., Arslantaş, H., & Yüksel., R. (2020). Ergenlerde çağın hastalığı: teknoloji bağımlılığı. *Arşiv Kaynak Tarama Dergisi*, 29(1), 51-64. <https://doi.org/10.17827/aktd.498947>
- Erickson, M. (2000). *The Letters of Milton Erickson* (J. K. Zeig, B. B. Geary, Ed.). Zeig Tucker&Theisen Publishers.
- Eyal, N., Hoover, R., (2022). *Kancaya takılınca alışkanlık yaratan ürünler nasıl geliştirilir?* (B, Akat, Çev.). Nova Kitap.
- Fisch, R. (1994). Basic Elements in the Brief Therapies. In M. F. Hoyt (Ed.), *Constructive Therapies*. The Guilford Press.
- Ferenczi, S. (1994/1999F). XV. Technical Difficulties in the Analusis of Case of Hysterical (Including Observations on Larval Forms of Onanism and 'Onanistic Equivalents'). *Further contribution to the theory and technique of psychoanalysis* (Translated by J. Isabel). Routledge.
- Fleming, J. S. & Rickord, B. (1997). Solution-Focused Brief Therapy: One Answer to Managed Mental Health Care. *Family Journal*, 5(4), 286-294. <https://doi.org/10.1177/1066480797054002>
- Fraenkel, J. R., Wallen, N. E., & Hyun, H. H. (2012). *How to design and evaluate research in education* (8th ed.). McGraw-Hill.
- Franklin, C., Corcoran, J., Nowicki, J., & Streeter, C. (2012). Using Client SelfAnchored Scales to Measure Outcomes in Solution-Focused Therapy. *Journal of Systematic Therapies*, 16(3), 246-265. <https://doi.org/10.1521/jsyt.1997.16.3.246>
- Franklin, C., Streeter, C., Kim, J., & Tripodi, S. (2007). The Effectiveness of a Solution-Focused, Public Alternative School for Dropout Prevention and Retrieval. *Children and Schools*, 29(3), 133-144. <https://doi.org/10.1093/cs/29.3.133>
- Gall, M. D., Gall, J. P., & Borg, W. R. (2003). *Educational research: An introduction* (7th ed.). Allyn-Bacon.

- Geil, M. (1998). *Solution-focused consultation: an alternative consultation model to manage Student behavior and improve classroom environment*. [Unpublished doctoral dissertation]. University of Northern Colorado.
- Glass, C. (2007). The Power of One. In M. McKergow ve J. Clarke (Eds.), *Solutions Focus Working* (pp. 13-31). Solutions Books.
- Goldberg, L. R. (1999). A broad-bandwidth, public domain, personality inventory measuring the lower-level facets of several five-factor models. *Personality Psychology in Europe*, 7(1), 7-28.
- Griffiths, M. (1995). Technological addictions. *Clinical Psychology Forum* 76(76), 14- 19. <https://doi.org/10.53841/bpscpf.1995.1.76.14>
- Griffiths, M. (1999). Internet addiction: fact or fiction. *The Psychologist*, 12(5), 246-250.
- Griffiths, M. D. (2000). Internet addiction – time to be taken seriously? *Addiction Research*, 8, 413–418. <https://doi.org/10.3109/16066350009005587>
- Griffiths, M. (2005). A ‘components’ model of addiction within a biopsychosocial framework. *Journal of Substance Use*, 10(4), 191-197. <https://doi.org/10.1080/14659890500114359>
- Huck, S., & Sandler, H. M. (1973). A note on the solomon 4-group design: Appropriate statistical analyses. *Journal of Experimental Education*, 42(2), 54-55. <https://doi.org/10.1080/00220973.1973.11011460>
- Işıklı, Ş., & Küçükvardar, M. (2016). *Bilişim devrimi: teknolojinin felsefi ve sosyolojik analizi* (1. Baskı). Birleşik Yayınevi.
- Karasar, N. (2022). *Bilimsel araştırma yöntemi: kavramlar ilkeler teknikler* (37. Baskı). Nobel.
- King, A., Valenca, A., & Silva, A. (2013). Nomophobia: dependency on virtual environments Or social phobia? *Computers in Human Behavior*, 29(1), 140-144. <https://doi.org/10.1016/j.chb.2012.07.025>
- Macdonald, A.J. (2007). *Solution-focused therapy: Theory, research & practice*. SAGE Publications Ltd.
- Martin, C. V., Guterman, J. T., & Shatz, K. (2012). Solution-focused counseling for eating disorders. *American Counseling Association (ACA)*, (88), 1-11.
- McKergow, M. (2007). Listing and letting go: transforming a training department. In M. McKergow ve J. Clarke (Eds.), *Solutions Focus Working*. (pp. 147-157). Solutions Books
- Metcalf, L. (1998) *Solution focused group therapy: ideas for groups in private practice, schools, agencies, and treatment programs*. Free Press.
- Metcalf, L. (2006). *The miracle question: Answer it and change your life*. Crown House Publishing.
- Miller, S., Hubble, M., & Duncan, B. (Eds) (1996). *Handbook of Solution-Focused Brief Therapy*. San Francisco, CA: Jossey-Bass.
- Miller, S., Hubble, M., & Duncan, B. (2001). *Handbook of solution-focused therapy* (2nd edition). Jossey-Bass Publishers.
- Miller, G., & de Shazer, S. (2000). Emotions in solution-focused therapy: a reexamination. *Family Process*, 39(1), 5-23. <https://doi.org/10.1111/j.1545-5300.2000.39103.x>
- Morahan-Martin, J., & Schumacher, P. (2000). Incidence and correlates of pathological Internet use among college students. *Computers in Human Behavior*, 16(1), 13-29. [https://doi.org/10.1016/S0747-5632\(99\)00049-7](https://doi.org/10.1016/S0747-5632(99)00049-7)

- Nalwa, K., & Anand, A. P. (2003). Internet addiction in students: A cause of concern. *CyberPsychology & Behavior*, 6(6), 653-656. <https://doi.org/10.1089/109493103322725441>
- O'Connell, B. (2005). *Solution-focused therapy* (2nd edition). Sage.
- O'Hanlon, B., & Weiner-Davis, M. (1989). *In search of solutions: A new direction in psychotherapy*. Norton and Company.
- Peele, S., Brodsky, A., & Arnold, M. (1992). *Truth about addiction and recovery*. Touchstone.
- Ratner, H., George, E., & Iveson, C (2003). *Solution Focused Brief Therapy*. Routledge,
- Quick, E.K. (2008). *Doing What Works in Brief Therapy: A Strategic Solution Focused Approach* (2nd. Ed.). CA: Academic Pres. Quick, E.K., & Gizzo, D.P. (2007). The "doing what works" group: A quantitative and qualitative analysis of solution-focused group therapy. *Journal of Family Psychotherapy*, 18(3), 65-85. https://doi.org/10.1300/J085v18n03_05
- Ray, W. J. (2009). *Methods toward a science of behavior and experience* (9th Ed.). Wadsworth Cengage Learning.
- Roberts, J., Petnji, L., & Manolis, C. (2014). The Invisible Addiction: Cell-phone Activities And Addiction Among Male And Female College Students. *Journal Of Behavioral Addictions*, 3(4), 254-265. <https://doi.org/10.1556/jba.3.2014.015>
- Sarıçam, H., (2014). *Çözüm odaklı kısa süreli yaklaşıma dayalı bir müdahale programının Ruminasyon üzerine etkisi* (Tez No: 358196) [Doktora Tezi, Ankara Üniversitesi-Ankara]. Yükseköğretim Kurulu Ulusal Tez Merkezi.
- Seligman, L. ve Reichenberg, L. W. (2013). *Theories of counseling and psychotherapy: Systems, strategies, and skills* (4th edition). Pearson.
- Sharry, J., Madden, B. ve Darmody, M. (2003). *Becoming a solution detective, identifying your clients' strengths in practical brief therapy*. The Haworth Clinical Practice Press.
- Sifneos, P. E. (2010). Kısa süreli dinamik psikoterapi. F. Masterson (Ed.), *Psikanalitik psikoterapilerin karşılaştırılması*. Litera Yayıncılık.
- Song, I., Larose, R., Eastin, M., & Lin, C. (2004). Internet gratifications and internet addiction: On the uses and abuses of new media. *CyberPsychology & Behavior*, (7), 384-394. <https://doi.org/10.1089/cpb.2004.7.384>
- Szabó, P. ve Meier, D. (2009). *Coaching plain and simple: solution-focused brief coaching Essentials*. Norton.
- Tarı Cömert, I. (2010). Diğer bağımlılıklar: bilgisayar ve internet bağımlılığı K. Ögel(Ed.), *Sigara, Alkol ve Madde Kullanım Bozuklukları: Tanı, Tedavi ve Önleme*. YenidenYayımları. https://www.ogelk.net/Dosyadepo/diger_bagimliliklar.pdf
- Voltan-Acar, N. (1988). Sosyal "mikrokozmos" ile "ilişkinin şimdi ve buradalığı"nın bağlantısı. *Hacettepe Üniversitesi Eğitim Fakültesi Dergisi*, (3), 47-49.
- Voltan-Acar, N. (2004). *Grupla psikolojik danışma: Alıştırmalar deneyler* (2. Baskı). Nobel Yayın Dağıtım.
- Voltan-Acar, N. (2008). *Yeniden terapötik iletişim: Kişiler arası ilişkiler* (5. Baskı). Nobel Yayın Dağıtım.
- Voltan-Acar, N. (2012). *Grupla psikolojik danışma ilke ve teknikleri* (7. Baskı). Nobel Yayın Dağıtım.
- Yalom, I.D. (1992). *Grup psikoterapisinin teori ve pratiği*. Nobel Tıp Kitapevi.

- Yalom, I.D. (2003). *Kısa süreli grup terapileri*. Kabalıcı Yayınevi.
- Yıldırım, S.C., Kaplan, B., (2019). Mobil uygulama kullanımının benimsenmesi: teknoloji kabul modeliyle bir çalışma. *Kafkas Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi*, 10(19), <https://doi.org/10.9775/kauibfd.2019.002>
- Yılmaz, O., Voltan Acar, N. (2017). Grupla psikolojik danışma-çözüm odaklı kısa süreli psikolojik danışma: sinerjik bir etki. *Ufuk Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, 6(11), 17-34.
- Young, K. S. (1998b). Internet addiction: The emergence of a new clinical disorder. *Cyberpsychology & Behavior*, 1(3), 237-244. <https://doi.org/10.1089/cpb.1998.1.237>
- Zeig, J. K. (2008). *Ericksoncu psikoterapi* (H. S. Kelpetin, Çev.). Litera yayıncılık. (Çalışmanın orijinali 1985'te yayımlanmıştır).
- Zorlu, F., & Zorlu, Y. (2019). Eğitim alanında solomon deneysel deseni ile gerçekleştirilen çalışmaların incelenmesi: Bir tematik analiz çalışması. *Kastamonu Eğitim Dergisi*, 27(4), 1623-1636. <https://doi.org/10.24106/kefdergi.3188>