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RESEARCH ARTICLE

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Efficacy of Technology Addiction Awareness Training Given to High School Students: Randomized Controlled Experimental Study

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Abstract

It was aimed to evaluate the efficacy of Technology Addiction Awareness Training given to high school students in this study. This study was conducted in two different high schools of National Education Directorate of a province in the Southeastern Region of Turkiye as a randomized controlled experimental study. The research was finalized with 54 students (28 control, 26 Experimental). As data collection tools, Socio-demographic Information Form and Young Internet Addiction Test Short Form were used in the research. The students in the experimental group were given Technology Addiction Awareness Training for 5 weeks, but no intervention was made to the students in control group. The trainings were carried out as group education. Descriptive statistics such as number, percentage, mean, standard deviation were used in the analyses of data, and t test was used in dependent and independent groups After the Technology Addiction Awareness Training of the high school students in the experimental group, it was determined that the Young Internet Addiction Test Short Form post-test score average decreased compared to the pre-test. As a result, it is possible to say that Technology Addiction Awareness Training can be an effective and useable intervention in reducing technology addiction in high school students.

Keywords: *Adolescence, Technology Addiction, Pyscho-education.*

Öz

Bu araştırmada; lise öğrencilerine verilen Teknoloji Bağımlılığı Farkındalık Eğitiminin etkinliğinin değerlendirilmesi amaçlandı. Bu araştırma, randomize kontrollü deneysel bir araştırma olarak Türkiye'nin Güneydoğusunda bulunan bir ilde Milli Eğitim Müdürlüğüne bağlı iki farklı lisede gerçekleştirildi. Araştırma toplam 54 (28 kontrol, 26 deney) öğrenci ile tamamlandı. Araştırmada veri toplama formu olarak; Sosyodemografik Bilgi Formu ve Young İnternet Bağımlılığı Testi Kısa Formu kullanıldı. Deney grubunda bulunan öğrencilere 5 hafta boyunca Teknoloji Bağımlılığı Farkındalık Eğitimi verildi, kontrol grubunda bulunan öğrencilere ise herhangi bir müdahale yapılmadı. Eğitimler grup eğitimi olarak gerçekleştirildi. Araştırma verilerinin analizinde; sayı, yüzde, ortalama, standart sapma gibi tanımlayıcı istatistikler ile bağımlı ve bağımsız gruplarda t testi analizleri kullanıldı. Deney grubunda bulunan lise öğrencilerinin, Teknoloji Bağımlılığı Farkındalık Eğitiminden sonra Young İnternet Bağımlılığı Testi Kısa Formu son test puan ortalamasının ön teste oranla azaldığı belirlendi. Sonuç olarak Teknoloji Bağımlılığı Farkındalık Eğitiminin lise öğrencilerinde teknoloji bağımlılığını azaltmada etkili ve kullanılabilir bir müdahale olduğu söylenebilir.

Anahtar Kelimeler: *Ergenlik, Teknoloji Bağımlılığı, Psikoeğitim.*

Introduction

Adolescence, defined as the transition process from childhood to adulthood, is one of the most important stages of human life, which according to World Health Organization, covers the ages from 10 to 19, and during which fast physical, social and spiritual changes take place and character of the individual is formed. During this stage, together with the use of metacognitive functions, the adolescent starts to question himself, his/her family and environment etc. (Bayhan & Artan, 2005; Bee & Boyd, 2009; Ektiricioğlu et al., 2020). The support taken from friend, father, mother, teacher and close circles is extremely important for adolescents. Otherwise, the adolescent, who feels that he/she is not understood, may be interested in different fields.

What causes an adolescent to spend longer time on television, tablet, computer, telephone, etc. than normal is characteristics of the century, and due to increase in digitalization, development of technology, widespread use of internet and easy-access to the internet. In addition, some reasons such as the adolescent's communication problems with primarily his/her family and peers, the problems experienced in school, emergence of aggressive feelings cause the adolescent to tend to use technological products (Dursun & Eraslan-Çapan, 2018; Ektiricioğlu et al., 2020). As a result, these factors lead to the emergence of technology addiction in adolescents.

The increase in the use of technological products in adolescents has led to both positive and negative results. Among the positive results of the use of technological products, it is possible to mention these results: Faciliating the accessibility of information, providing the opportunity to examine the subjects and events in the course curriculum in three dimensions thanks to digital tools and providing the opportunity to be more understandable, positively affecting academic success, concretizing information by visualizing, faciliating communication and providing fast shopping etc.. (Hamarta et al., 2021). In addition, it is known that digital tools turned out to be effective in an uninterrupted, continuous education during the Covid19 pandemic. and the tools ensured that the education process continues without interruption (Henderson, 2017; Pekşen Akça, 2022; Şenyurt & Şahin, 2022; Uluçay & Kobak, 2020). The negative consequences of overuse of technological products can be counted as introversion, mood swings, tension and anger, conflict, etc.. In addition, a study examined the relationship between the time spent by young people in the digital environment and depression, as a result it is stated that spending more time with online activities such as using chat rooms in digital environments, shopping and playing games is effective in the emergence of depression symptoms (Dilmen-Bayar, 2019; Morgan & Cotten, 2003).

Addiction is a concept used to describe being overly fond of an object or behavior and is generally associated with the use of harmful substances such as cigarettes, alcohol and drugs (Ektiricioğlu et al., 2020). However, with the increase in technological products and digitalization in our age, there is a change in the fields with which this concept is associated. The excessive use of technological products such as tablets, phones, computers, and the internet has created the concept of technology addiction. Technology addiction, which is seen as one of the biggest problems of the age, emerges in basic areas such as internet, social media, digital games and mobile phone addiction (Aygün & Pekşen, 2022; Boyacı, 2019; Ertemel & Eroğlu-Pektaş, 2018; Kalaitzaki & Birtchnell, 2014; Lukavsk´a et al., 2022). In a study conducted on high school adolescents, it was stated that smartphone, internet, digital game and social media have great effects on technology addiction. According to the results of the study, it was concluded that these technological addictions significantly affect social addiction (Savcı & Aysan, 2017).

Technology addiction is an increasing problem in adolescents; and when the relevant literature is examined, it is seen that different therapy methods, especially cognitive behavioral therapies, and psychoeducational programs are used to reduce or prevent technology addiction (Aboujaoude, 2010; Bağatarhan & Siyez, 2017; Dicle, 2018; Karadağ & Noyan, 2023; King et al., 2017). Adolescence, which includes especially high school ages, is a period in which technological

tools are frequently used, and it is a risky stage in terms of the emergence of technology addiction. It is stated that school-based educations to be carried out within the scope of preventive intervention studies on technology addiction in adolescents are important in recognizing risky situations in terms of technology addiction in an earlier period (Yektaş & Yüncü, 2021). In line with this information, in this study, it is aimed to evaluate the effectiveness of the Technology Addiction Awareness Training given to high school students. For these purposes, the study tries to prove the following hypotheses:

Hypotheses:

H0: Technology Addiction Awareness Training is effective on decreasing technology addiction in high school students.

H1: Technology Addiction Awareness Training is not effective on decreasing technology addiction in high school students.

Methodology

Type of Research, Location and Sample Selection

In this study, a pretest posttest randomized controlled experimental research design was used. The research was carried out in two different high schools affiliated to the Directorate of National Education in a province in the southeast of Türkiye. Students in the research group were selected from two different high schools with similar structures (number of students, geographical location, program type, etc.). In order to determine from which high school the students to be selected for the experimental and control groups will be taken, the names of the high schools were written on a piece of paper and lots were drawn. It was decided to include the students of the first high school in the experimental group and the students of the second high school into the control group. In the study, the full randomization method was used to assign high school students to groups. Randomization was carried out in a computer environment.

The population of the research consisted of 419 students enrolled in the 11th grade of these two high schools. In the study, the sample size was determined using the G.Power 3.1.9.2 program. While calculating the sample size, the acceleration rate reported in the study by Erses and Müezzin (2018) was taken as reference. The required sample size was calculated as 40 students, 20 students for each group, with a 95% confidence interval, 0.05% margin of error and 0.8 effect size, according to the power analysis. However, considering the risk of participant loss and the use of parametric tests in the analysis of research data, 60 high school students were included in the study. High school students in the control and experimental groups included in the study were determined using a computer-assisted simple random sampling method. 4 students in the experimental group who did not attend the training program for more than one session and 2 students in the control group who did not fill in the posttest data were excluded from the study. The research was completed with 54 (28 control, 26 experimental) students. The flow chart of the research is given in Figure 1.

Study Inclusion Criteria: To be attending high school, to be 11th grade high school student, to submit his and his parent's written consent to participate in the study.

Study Exclusion Criteria: Not to be a high school student in 11th grade, not to have parental consent to participate in the study, and not to attend the session more than once.

Data Collection Forms

Socio-demographic Information Form and Young Internet Addiction Test Short Form were used as data collection forms in the study.

Socio-demographic Information Form: In this form that the researchers developed by examining the literature, there are twelve questions to gather information. They are: Age, gender, parents' education status, family type, family income level, possessing his/her own mobile phone and computer, presence of internet connection at home,

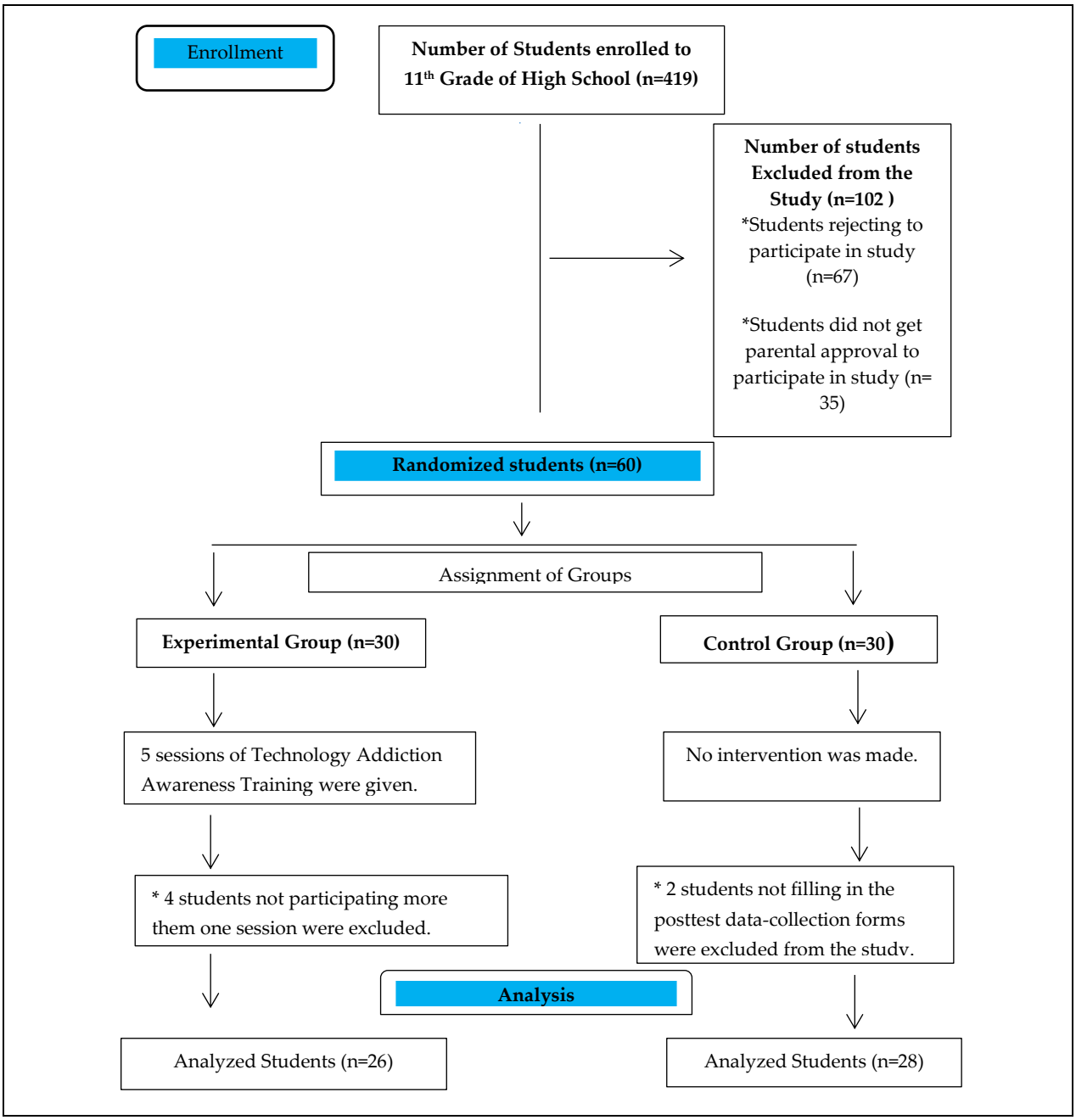

Figure 1. *Study Flow Chart*

the social medias mostly used, status of playing digital games and total time spent on the internet daily (Sezer-Efe et al., 2021).

Young Internet Addiction Test Short Form: Kutlu et al. (2016) conducted the Turkish validity and reliability study of the scale, which was developed by Young (1998), and it was later converted into a short form by Pawlikowski et al. (2013) in 2016. YIAT-SF consists of a five-point Likert type (1=Never, 5=Very often) and a total of 12 items.

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The internal consistency reliability coefficient of YIAT-SF was calculated as 0.85. As a result of the validity and reliability study, it was determined that the scale is valid and reliable. There is no reverse scored item among the scale items. The minimum score taken from the scale is 12 and the maximum score is 60, and the higher the score, the higher the level of internet addiction (Kutlu et al., 2016). In this study, the Cronbachs alpha coefficient was calculated as 0.87.

Collecting Study Data and Training Intervention of Research

After determining the experimental and control groups of the research, the pre-test data of the students in the experimental group were collected in the first session the pre-test data of the students in the control group were also collected simultaneously on the same day. Technology Addiction Awareness Training was given to the students in the experimental group for 5 weeks, but no intervention was made to the students in the control group. The sessions of trainings were carried out as group education. After the training program of the students in the experimental group was completed, the posttest data of both the experimental and control groups were collected. The students filled data collection forms. It took an average of 10-15 minutes to fill out each form.

The content of the Technology Addiction Awareness Training was prepared by the researchers. After the Technology Addiction Awareness Training program was prepared, opinions were received from 5 experts in their fields. The training program was finalized in line with expert opinions. In the study, Technology Addiction Awareness Training was applied by the researchers. The content of Technology Addiction Awareness Training is given in Table 1.

Technical materials such as computers, projectors, smart boards and sound systems were used in the training sessions. Technology Addiction Awareness Training continued for 5 weeks, one class hour per week (40 minutes), and was completed in 5 sessions.

The content of the Technology Addiction Awareness Training sessions was determined as follows:

Session 1: In this session, it was aimed to introduce Technology Addiction Awareness Training and to get to know the students in the experimental group. In this session, the researcher explained the content of Technology Addiction Awareness Training, the frequency and schedule of training program, and the importance of regular participation in the training. The pretest data of the students in the experimental group were collected.

Session 2: In this session, high school students were informed about the concept of technology, technology addiction, the causes of technology addiction, individuals at risk for technology addiction and the symptoms of technology addiction.

Session 3: In this session, high school students were informed about the negative effects of technology addiction on physical, psychological and mental health and social and spiritual development.

Session 4: In this session, high school students were told about the ways to avoid technology addiction and how to use technology correctly and beneficially.

Session 5: In this session, high school students who participated in Technology Addiction Awareness Training were asked to evaluate the program. The researchers listened to the criticisms and suggestions of the high school students in the experimental group about the training program. Posttest data of high school students in the experimental group were collected.

Variables about Study

Dependent Variable: Technology Addiction

Independent Variable: Technology Addiction Awareness Training

Control Variables: Students' ages, genders, mothers' and fathers' education status, family types, income status of the families, possessing their own mobile phones and computers, presence of internet in their houses, mostly used social medias, playing digital games and total time they spend on the internet daily. Information on the control variables of high school students in the experimental and control groups is given in Table 1.

Table 1. *Distribution of Technology Addiction Awareness Training Content by Sessions*

Session	Subject Content	Training Material	Duration
Session 1	- Meeting high school students - Introducing the content of the training program - Determination of days and time of training - Filling in pretest data collection forms		40 min.
Session 2	-What is Technology? -What is technology addiction? -What are the reasons of technology addiction? -Who are under risk of technology addiction? -What are the symptoms of technology addiction?	- PowerPoint Presentation - Video demonstration	40 min.
Session 3	- What are the negative effects of technology addiction on physical, psychological and mental health? - What are the negative effects of technology addiction on social and spiritual development?	-PowerPoint Presentation - Video demonstration	40 min.
Session 4	- What are the protection ways from technology addiction? -To what degree is it true and beneficial the use of technology?	-PowerPoint Presentation -Video Demonstration	40 min.
Session 5	-Evaluation of training program -Feedback from high school students about training program -Filling in posttest data collection forms		40 min.

When the demographic characteristics of the high school students in the experimental and control groups participating in the study were examined, it was observed that 84.6% of the students in the experimental group were female, 30.8% of mothers were illiterate, 38.5% of the fathers were secondary school graduates, 92.3% of them were children of nuclear families and 50.0% families had a financial income equal to their expenses, 65.6% had their own mobile phones, 53.8% did not have their own computers, 57.7% had an internet connection at home. Besides, they used social networks, such as Instagram (88.5%), WhatsApp (84.6%), Youtube (76.9%); and 61.5% did not play digital games, their average age was 17.03±0.91 years, and it was determined that they spent an average of 3.30±2.57 hours on the internet.

On the other hand, 82.1% of the students in the control group were female, 53.6% of mothers were graduate of primary schools and 39.3% of fathers were graduate of high schools, 92.8% had a nuclear family, and 64.3% had an income which was equal to their expenses, 85.7% had their own mobile phones, 67.9% did not have their own computers, and 89.3% had an internet connection at home and they used social medias, mostly Instagram (85.7%), WhatsApp (75.0%), Youtube (67.9%), and (82.1%) of them did not play digital games, their average age was 16.17±0.47 years. In addition, it was found that they spent 3.21±1.37 hours on average on the internet daily. High school students in the experimental and control groups were found to be largely similar in terms of demographic characteristics (Table 2).

Table 2. *Comparison of control variables of students in experimental and control groups*

	Experimental group (n=26)		Control group (n=28)		Similarity
Demographic Characters	**S**	**%**	**S**	**%**	
Gender					
Female	22	84.6	23	82.1	χ^2=0.059
Male	4	15.4	5	17.9	p=0.808
Mother's education level					
Illiterate	8	30.8	6	21.4	
Primary school	7	26.9	15	53.6	F=6.825
Secondary school	6	23.1	3	10.7	p=0.123
High school	5	19.2	4	14.3	
University	-	-	-	-	
Father's education level					
Illiterate	2	7.7	-	-	
Primary school	4	15.4	7	25.0	F=3.318
Secondary school	10	38.5	9	32.1	p=0.569
High school	8	30.7	11	39.3	
University	2	7.7	1	3.6	
Family Type					
Nuclear Family	24	92.3	26	92.8	F=1.355
Large Family	2	7.7	1	3.6	p=0.798
Single Parent family	-		1	3.6	

Income Status of Family					
Less income than expenses	12	46.2	3	10.7	F=10.516 p=0.005
Income equal to expenses	13	50.0	18	64.3	
Income more than expenses	1	3.8	7	25.0	
His/her Own Mobile Phone					
Available	17	65.6	24	85.7	χ^2=3.048
Unavailable	9	34.6	4	14.3	p=0.081
His/her own computer					
Available	12	46.2	9	32.1	χ^2=1.114
Unavailable	14	53.8	19	67.9	p=0.291
Internet connection at home					
Available	15	57.7	25	89.3	χ^2=5.458
Unavailable	11	42.3	3	10.7	p=0.019
Social medias used					
Twitter					
Yes	3	11.5	4	14.3	F=0.090
No	23	88.5	24	85.7	p=0.764
Instagram					
Yes	23	88.5	24	85.7	F=0.090
No	3	11.5	4	14.3	p=0.764
Tiktok					
Yes	4	15.4	6	21.4	F=0.049
No	22	84.6	22	78.6	p=0.825
WhatsApp					
Yes	22	84.6	21	75.0	χ^2=0.768
No	4	15.4	7	25.0	p=0.381
Youtube					
Yes	20	76.9	19	67.9	χ^2=0.552
No	6	23.1	9	32.1	p=0.457
Snapchat					
Yes	9	34.6	6	21.4	χ^2=1.169
No	17	65.4	22	78.6	p=0.280
Digital game playing					
Yes	10	38.5	5	17.9	χ^2=2.853
No	16	61.5	23	82.1	p=0.091
		X±S.S			
Age	17.03±0.91		16.17±0.47		t=4.376 p=0.107
Time spent on internet daily (hour)	3.30±2.57		3.21±1.37		t=0.168 p=0.867

* χ^2= Pearson Chi-square, F=Fisher's Exact test, t= Independent Samples t test, p<0.05 significance value

Analysis of Study Data

Data of the study were analyzed using SPSS (Statistical Package for the Social Sciences) 26.0 package program. The skewness and kurtosis values of the pretest and posttest total scores of the experimental and control groups were checked for compliance with the normal distribution, and the distributions of the scores were accepted as normal if the coefficients of these values were between -1.5 and +1.5 (Tabachnick & Fidell, 2013).

Descriptive statistics such as number, percentage, mean, standard deviation and the chi-square test were used to evaluate the data, which were found to have normal distribution as a result of the analyses. In comparison of Young Internet Addiction Test Short Form mean scores of the students in the experimental and control groups, independent samples t test and dependent samples t test were used.

The Ethic Dimension of the Study

Approval was obtained from Batman University Scientific Ethics Committee (dated 04.01.2023 and numbered 2023-01-38) to conduct the study. After obtaining the approval of the ethics committee, institutional permission was obtained from the Provincial Directorate of National Education (dated 21.03.2023 and numbered 70715415). Written consents were obtained from high school students and their parents who agreed to participate in the study before the data were collected. After explaining the purpose of the research, the high school students participating in the research were informed that the information they provided would not be used anywhere other than this study, and that this information would be kept confidential and that the students had the right to withdraw from the research at any time.

Results

The Young Internet Addiction Test Short Form pretest posttest descriptive statistics of high school students in the experimental and control groups are given in Table 3. As seen in Table 3, while Young Internet Addiction Test Short Form score average of the high school students in the experimental group who participated in the research before the Technology Addiction Awareness Training program prepared for high school students was 27.76±8.50 (Min;12- Max;51), after training program, Young Internet Addiction

Test Short Form mean score turned out to be 19.96±12.65 (Min;12- Max;46).

Table 3. *Descriptive Statistics of Young Internet Addiction Test Short Form Scores*

		Experimental Group (n=26)			Control Group (n=28)		
Scale	**Test**	**(X±S.S)**	**Min.-Max.**	**Skewness/ Kurtosis**	**(X±S.S)**	**Min.-Max.**	**Skewness/ Kurtosis**
YIAT-SF	**Pre-Test**	27.76 ± 8.50	12 - 51	-0.106/ -1.267	28.60 ± 10.53	19-49	0.546/ -0.689
	Post-Test	19.96 ± 12.65	12 - 46	0.806/ -1.362	31.35 ± 10.70	13-56	0.478/ -0.781

Young Internet Addiction Test Short Form mean score of the high school students in the control group to whom Technology Addiction Awareness Training program was not applied was found to be 28.60±10.53 in the pretest (Min;19-Max;49) and 31.35±10.70 in the posttest (Min;13-Max;56). It was determined that the skewness and kurtosis values of Young Internet Addiction Test Short Form pretest and posttest scores of high school students in the experimental and control groups were between -1.5 and +1.5, and therefore the data showed a normal distribution (Table 3).

When Young Internet Addiction Test Short Form pretest and posttest mean scores between the experimental and control groups of high school students were analyzed, it was determined that the difference between the mean scores was statistically significant ($p<0.05$, Table 4). It was determined that Young Internet Addiction Test Short Form posttest mean score of the high school students in the experimental group decreased compared to the pretest, while Young Internet Addiction Test Short Form posttest mean score of the high school students in the control group increased compared to the pretest mean score ($p<0.05$, Table 4).

When the in-group Young Internet Addiction Test Short Form of high school students in the experimental and control groups was analyzed with the pretest-posttest mean score; it was determined that the difference between the mean scores was statistically significant ($p<0.05$, Table 5).

Table 4. *Comparison of the Young Internet Addiction Test Short Form pretest-posttest mean scores of high school students in the experimental and control groups between groups (n=54)*

Young Internet Addiction Test Short Form			
Groups	**Pretest**	**Posttest**	***Test and Significance**
	(X±S.S)	**(X±S.S)**	
Experimental Group (n=26)	27.76±8.50	19.96±12.65	*t=-2.860* ***p=0.006***
Control Group (n=28)	28.60±10.53	31.35±10.70	*t=-3.052* ***p=0.004***

** Independent Samples t test, p<0.05 significance value*

It was determined that the post-test mean score of the Young Internet Addiction Test Short Form (19.96±12.65) of the high school students in the experimental group decreased compared to the mean score of the pretest (27.76±8.50) ($p<0.05$, Table 5).

Table 5. *Intra-group comparison of Young Internet Addiction Test Short Form pretest-posttest mean scores of high school students in the experimental and control groups (n=54)*

Young Internet Addiction Test Short Form			
Groups	**Pretest**	**Posttest**	***Test and Significance**
	(X±S.S)	**(X±S.S)**	
Experimental Group (n=26)	27.76±8.50	19.96±12.65	*t=2.378* ***p=0.025***
Control Group (n=28)	28.60±10.53	31.35±10.70	*t=1.239* *p=0.226*

** Paired Samples t test, p<0.05 significance value*

Discussion and Conclusion

Due to their age and developmental characteristics, adolescents are at serious risk of technology addiction. Because adolescence is a period when the adolescent wants to be understood, needs the most accurate and healthy interaction with parents, teachers and peers, and needs psychological, social and academic support, and especially tries to understand what his/her role is in society. During this period, the adolescent tries to form a healthy identity, but the negative conditions (parental attitudes, problems in family relations, loneliness, inadequacy in academic success, communication problems with peers, etc.) may cause role confusion in him/her (Trumello et

al., 2021). This situation causes the adolescent to be interested in other areas. In the light of this information, in this section, the findings of the research carried out to evaluate the effectiveness of the Technology Addiction Awareness Training given to high school students are discussed in line with the literature.

In the study, it was determined that after the Technology Addiction Awareness Training, the posttest average score of Young Internet Addiction Test Short Form of the high school students in the experimental group decreased compared to the pretest point average. In line with the data obtained from the research, it can be interpreted that Technology Addiction Awareness Training program creates an awareness in high school students about the risks of technology addiction, its negative effects on physical and mental health and social and spiritual development, and how technology can be used correctly and beneficially. In the last session, it was stated by the students that the information given in the training content about the risk factors and symptoms of technology addiction created an awareness in them about their own situation. In addition, it was observed that the post-test mean scores of the students in the control group, who did not receive any training on technology addiction, increased compared to the pre-test mean scores, and the increase in the post-test scores, despite the lack of any training and information on the subject, suggests that there is a risk for the development of technology addiction in adolescents in the future.

A systematic study was conducted by Hamarta et al., (2021) using terms such as internet addiction, psychoeducation etc.. As a result of this study, it was concluded that the experimental attempts made on internet addiction were effective on one of the sub-dimensions of technology addiction. Considering the results of a systematic analysis examining the programs prepared to prevent internet addiction in adolescents, it was stated that the results of the studies carried out to reduce internet addiction in this period were positive (Bağatarhan & Siyez, 2017). In the study conducted by Özcan and Çelik (2021), it was reported that the psychoeducation program based on Motivational Interview Technique developed for high school students effectively reduced the addiction scores of students who did not reach the addiction criteria. Erses and Müezzin(2018), in their research with high school students, concluded that Human Values-Oriented Psycho-Education Program is effective in reducing the use of technology in high school students. According to the results of the study conducted by Dicle (2018), in which the effect of the psycho-education program on internet addiction was investigated, it was concluded that the psycho-education provided for thr individuals was effective in reducing internet addiction. In addition, there are other experimental studies supporting our study in the literature (Browne, 2021; Park & Kim, 2011).

In the study, it was concluded that the Technology Addiction Awareness Training given to high school students is effective in reducing technology addiction. In the light of the research results, it can be said that Technology Addiction Awareness Training is an effective and usable intervention in reducing technology addiction in high school students. In line with these results, it is recommended to carry out more studies on technology addiction, and conduct more informative trainings on the use of technological tools and the internet in adolescents.

Limitations: The limitations of this study are that the permanence of the training intervention was not measured and the study was conducted only with 11th grade students. In addition, data collection using a self-report questionnaire in the study may have biased the findings.

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