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The Effects of a Technology Addiction Education Program, Implemented for Parents in Socioeconomically Disadvantaged Areas, on Children and Parental Outcomes[1]

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Abstract

The primary aim of this study was to provide a technology addiction education program to parents of children aged 9-15 residing in a socioeconomically disadvantaged region and to measure the program's subsequent impact. A mixed-methods approach was employed in the research design. The qualitative phase of the study involved pre-test and post-test interviews, while the quantitative phase utilized the "Parental Attitudes Towards Children's Use of Information and Communication Technologies Scale," the "Internet Addiction Scale," and the "Family-Child Internet Addiction Scale." The study was conducted with parents attending a family life academy located in a socially disadvantaged area within Ankara, the capital of Turkey. The technology addiction training program, developed by the researchers, was administered to the parents over one day in two separate sessions. The results indicated a statistically significant difference in parents' attitudes towards Information and Communication Technologies in favor of the post-test scores. Furthermore, the findings demonstrated an increase in parental knowledge levels regarding technology addiction, and parents frequently utilized the concept of "conscious technology use" in their post-

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[1] This study was presented as a poster at the 11th Congress of the European Academy of Paediatric Societies (EAPS), held in Lisbon from October 18–20, 2025.

intervention discourse. Based on these findings, it is recommended that the technology addiction education program be offered for longer durations and be more widely disseminated.

Keywords: Parents, Disadvantaged families, Addiction.

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Introduction

Technology use has become an inseparable part of human life today (Amudhan et al., 2022). With the rapid advancement of the Internet and digital technologies, children's access to and use of technology have increased. This situation has brought with it the risk of technology and internet addiction in children. While some children use technology productively, others may encounter problems as a result of excessive use (Almagul et al., 2023). When the scope and form of technology use are excessive and inappropriate, they can harm physical and psychological health, causing problems not only for children but also for families and society. Considering these issues, it is necessary to acknowledge technology addiction as a significant public health concern. Therefore, multi-level approaches within an integrated socio-ecological framework are recommended to address various risk factors at different levels to promote healthy behaviors regarding technology use in children and adolescents (Amudhan et al., 2022). Central to these approaches is the importance of addressing the child together with the family.

Since the home environment is where young children begin to exhibit problematic behaviors related to the use of digital devices (Pazarcikci, 2024), parents need to guide children for healthy technology use (Almagul et al., 2023). It is considered important that parents, first and foremost, use tools like mobile phones and social media only as much as needed and avoid developing addiction themselves (Kanbul et al., 2019). This is because negative modeling and digital neglect by adults who are in communication with

the child can be significant predictors of technology addiction in children (Pazarcikci, 2024).

Research conducted by Türen and Bağçeli Kahraman (2025) found that the time spent by the child and the mother on digital devices, along with mothers' awareness of digital parenting, were significant predictors of children's digital game addiction tendencies. Furthermore, low household income also increases the risk of technology addiction in young children (Pazarcikci, 2024), suggesting that children and parents residing in socioeconomically disadvantaged regions should be considered in the fight against technology addiction.

As technology continues to be a part of life, the number of children struggling with excessive technology use will likely continue to rise, and it is becoming increasingly critical for parents and clinicians to understand how best to support children and families grappling with this issue (Gagliardi and O'Brien, 2025). With the belief that children learning to use technology consciously and responsibly can reduce the risk of addiction (Almagul et al., 2023), it is thought that the development and implementation of family-focused interventions will contribute to efforts to prevent and treat technology addiction in children (Pazarcikci, 2024). At this juncture, the need for qualitative data regarding what parents do to prevent technology addiction in their children is also emphasized (Gagliardi and O'Brien, 2025). Driven by these considerations, this study aimed to provide a technology addiction education program to parents residing in a socioeconomically disadvantaged region and to measure its impact.

Method

The model of the research, the study group, data collection instruments, data collection procedure, and data analysis utilized for investigating the effectiveness of the technology education program prepared for parents are presented below.

Research Model

A mixed-methods approach was employed in the study. In this context, the quantitative dimension of the research utilized a one-group pretest-posttest design from the weak experimental designs. The one-group pretest-posttest design involves applying a pretest to a ready group, implementing the training, and then applying a posttest to determine the effect of the program on that specific group (Büyüköztürk et al., 2016). The reason for choosing this design was to increase awareness among parents who are at socioeconomic risk. The qualitative dimension of the research utilized a phenomenological case design. The phenomenological case design is a method conducted to gather the opinions of individuals with experience in a specific field regarding that subject (Creswell, 2016). The phenomenological case design was chosen to elicit parents' perspectives on technology use.

Study Group

The study was conducted with parents who had children aged 9-15 and were attending a Family Life Academy in Ankara, the capital of Turkey. The region where the Family Life Academy is located is directly proportional to socioeconomic development, and the rate of migration in this area is generally positive, similar to developing regions. This area receives migration from other settlements, and the residents generally work in the manufacturing and service sectors (SEGE, 2022).

The age distribution of the parents forming the study group was as follows: 30.6% were aged 31–35, 27.8% were 41 and above, 25% were 26–30, and 16.7% were 36–41. Regarding educational status, 38.9% were high school graduates, 25% were primary school graduates, 19.4% were middle school graduates, 11.1% were university graduates, and 5.6% were illiterate. Regarding occupation and employment, 88.9% were homemakers, 8.3% were civil servants, and 2.8% were teachers; 97.2% were unemployed and 2.8% were employed. In terms of the number of children, 50% had two children, 36.1% had one, 11.1% had three, and 2.8% had four or more children. Of the children, 58.3% were girls and 41.7% were boys. The age distribution of the children was: 63.9%

aged 12 and above, 19.4% aged 9, 11.1% aged 10, and 5.6% aged 11. Regarding technology access, 97.2% of the parents had a mobile phone, while 2.8% did not; 94.4% had Internet access, while 5.6% did not.

Data Collection Instruments

Data in the research were collected using the "General Information Form" developed by the researchers, the "Semi-Structured Interview Form" developed by the researchers, the "Parental Attitudes Towards Children's Use of Information and Communication Technologies Scale" developed by Türel and Gür (2018), the "Internet Addiction Scale" developed by Günüç (2009), and the "Family-Child Internet Addiction Scale" adapted by Eşgi (2014). The "Technology Addiction Training Program" was also developed and implemented by the researchers.

- **General Information Form:** This form was prepared by the researchers to determine the sociodemographic characteristics of the parents and children participating in the study. The form includes questions about the parent's age, educational status, occupation, employment status, number of children, children's gender, children's age, and mobile phone and Internet usage status.

- **Semi-Structured Interview Form:** This form was prepared by the researchers and finalized with expert opinion to determine the technology and internet usage status of the parents and their children. The form contains questions regarding social media usage, internet safety, and the relationship between the child and technology.

- **Parental Attitudes Towards Children's Use of Information and Communication Technologies Scale:** Developed by Türel and Gür (2018), this scale measures parents' attitudes towards their children's use of information and communication technologies. The 18-item scale consists of 3 sub-dimensions and is evaluated on a 5-point Likert type scale. During the development phase, Cronbach's Alpha values were determined as .83 for the sub-dimension of Use for Educational Purposes, .80 for the sub-dimension of Supervision and Restrictions, .70 for the sub-dimension of Negative Effects, and .77 for the entire scale. In the

reliability analysis conducted within the scope of the study, the Cronbach's Alpha values were found to be .70 for the Use for Educational Purposes sub-dimension, .70 for Supervision and Restrictions, .80 for Negative Effects, and .85 for the entire scale.

- **Internet Addiction Scale:** This scale was developed by Günüç (2009) to determine individuals' perceptions of the Internet's place in daily life from their own perspectives. The 35-item scale is evaluated on a 5-point Likert type scale and consists of four sub-dimensions. During the development phase of the scale, Cronbach's Alpha values were found to be .88 for the Deprivation sub-dimension, .86 for Difficulty Controlling, .83 for Impairment in Functionality, .79 for Social Isolation, and .94 for the entire scale. In the reliability analysis conducted within the scope of the study, the Cronbach's Alpha values were determined as .62 for the Deprivation sub-dimension, .75 for Difficulty Controlling, .60 for Impairment in Functionality, .65 for Social Isolation, and .78 for the entire scale.

- **Family-Child Internet Addiction Scale:** Developed by Young (1996) and adapted into Turkish by Eşgi (2014) to evaluate children's internet addiction status from the parents' perspective, the scale consists of 20 items and 4 sub-dimensions, evaluated on a 6-point Likert type scale. During the development phase of the scale, Cronbach's Alpha values were determined as .94 for the Social Isolation sub-dimension, .85 for the Dysfunctional sub-dimension, .89 for the Deprivation sub-dimension, .91 for the Difficulty Controlling sub-dimension, and **.87 for the entire scale**. In the reliability analysis conducted within the scope of the study, the Cronbach's Alpha values were determined as .70 for the Social Isolation sub-dimension, .60 for the Dysfunctional sub-dimension, .60 for the Deprivation sub-dimension, .60 for the Difficulty Controlling sub-dimension, and .85 for the entire scale.

- **Technology Education Program:** The technology education program was created by the researchers based on the reconstructionist perspective. The program was prepared for adult education and focused on active participation by the adults. The two-session training program included topics such as technology, technology use, children and technology, benefits and harms of technology, safe internet use,

digital parenting, and parental responsibilities. Each session lasted 120 minutes, and the training was completed in a total of 240 minutes.

Data Collection Procedure

Initially, contact was made with the local government of the region where the research would be conducted, and information about the study was provided. Through the local government, the directors of the family life center were reached, and institutional permissions were obtained after informing them about the research. After obtaining institutional permissions, parents were contacted, informed about the research, and asked to sign the consent form after verbal permissions were secured. Following the completion of the consent forms, pretest procedures were carried out. During the pretests, the measuring instruments were administered individually to the parents by the researchers. After the completion of the pretests, the training program was implemented in two sessions, ensuring the active participation of the parents. Post-tests were administered after the implementation of the education program.

Data Analysis

Content analysis and the SPSS statistical software package were utilized for the data analysis. Descriptive statistics were performed to determine the sociodemographic characteristics of the parents. Since the sample size was above 30, the Kolmogorov-Smirnov test results and the skewness and kurtosis values were examined to determine the distribution of parents' responses to the scale items (Büyüköztürk, 2020). The results of the normality analysis regarding the parents' responses are presented in Table 1.

Table 1. Results of Normality Analysis for Pre-test and Post-test Mean Scores Obtained by Parents from the Scales (n=36)

Scale	Sub-dimension	Pre-test				Post-test			
		X	Skewness	Kurtosis	p	X	Skewness	Kurtosis	p
Parental Attitudes Towards Children's Use of Information and Communication Technologies Scale	Use for educational purposes	22,33	-0,44	-0,64	.09	28,05	-0,25	-0,42	.04
	Control and Limitations	17,69	-0,55	1,01	.01	24,75	-0,49	-0,93	.05
	Negative Effects	17,50	-0,05	-1,25	.05	11,92	-0,26	0,26	.15
	Total	57,53	-0,53	-0,02	.11	64,72	-0,52	-0,36	.07
Internet Addiction Scale (IAS)	Deprivation	24,28	-0,30	-0,72	.20	25,33	-0,37	-0,56	.06
	Control Difficulties	18,69	0,32	-0,84	.18	19,78	-0,21	0,03	.02
	Impaired Functioning	12,75	0,68	0,79	.19	12,58	-0,08	0,33	.01
	Social Isolation	11,08	0,44	-1,14	.01	11,94	-0,02	1,27	.03
	Total	66,80	-0,04	-1,11	.20	69,64	0,17	-0,55	.13
Family Child Internet Addiction Scale	Social Isolation	7,78	-0,81	0,15	.03	8,42	0,62	-0,15	.01
	Dysfunction	8,03	-0,86	0,02	.02	9,75	-0,18	-0,64	.15
	Deprivation	4,75	-0,29	-1,24	.04	4,42	-0,24	0,75	.06
	Control Difficulties	6,83	0,11	0,05	.14	7,47	0,06	-0,59	.02
	Total	27,39	-0,83	0,21	.07	30,05	0,21	-0,23	.20

As shown in Table 1, the pre-test results revealed a non-normal distribution for the sub-dimensions of Supervision and Restrictions, Social Isolation, Social Abstinence, Dysfunctional, and Deprivation. Furthermore, the post-test results showed a non-normal

distribution for the sub-dimensions of Use for Educational Purposes, Difficulty Controlling, Impairment in Functionality, Social Isolation, Social Abstinence, and Difficulty Controlling. However, the remaining sub-dimensions exhibited a normal distribution. Despite the deviations from normality, the skewness and kurtosis values for all sub-dimensions were found to be between -2 and +2. Therefore, to ensure analytical consistency (or integrity), parametric techniques were utilized for the analysis. The paired-samples t-test, a parametric technique, was used in the analysis to determine whether there was a statistically significant difference between the pre-test and post-test scores.Categories and sub-categories were created based on the parents' responses to the content analysis form, and expert opinion was sought. Following the expert review, the parents' responses were coded by two independent researchers. The inter-rater reliability between the independent researchers was found to be 90%. The responses provided by the parents were coded as P1, P2... P35, P36 and are presented in the Findings section. Table 2 shows the categories and sub-categories related to the content analysis form.

Table 2. Categories and Sub-categories of the Content Analysis Form

Category	Under Category	
	Pre-training	**Post-training**
Owned social media accounts	Facebook Instagram Whatshapp Twitter	
Internet security	Restriction Thoughts on security Foreign websites Harms Being child-oriented Lack of knowledge	Related to security Being useful Providing control Applying filters
Thoughts on content that may harm the child	Restriction Concern Providing control Lack of knowledge Inappropriateness	Restriction Setting a password
What they do to protect the child from the harms of technology	Safe content Concern Monitoring Setting a password Warning Watching together Spending more time	Restriction Natural environment Playing games Filter

	Allowing at specific hours	
Thoughts on the harms of technology	Addiction Physical problems Psychological problems	Addiction Physical health issues Psychological issues
Thoughts on the benefits of technology	Gaining information I don't know Quick access Lack of benefit	Making life easier In the field of education Being fast
What needs to be done for the proper use of technology	I don't know Restriction Being conscious Setting rules Seminars/courses	Providing control Using consciously Using passwords

Ethical Considerations

To conduct fieldwork in the area where the study was carried out, official permission for implementation was obtained from the local government. In addition to these permissions, protecting the rights of the participants and ensuring their voluntary participation was of paramount importance. All parents included in the study were provided with an informed consent form containing detailed information about the research's purpose, duration, the confidentiality of the collected data, and their right to withdraw from the study at any time. Written consent forms indicating voluntary participation in the study were subsequently obtained.

Results

The findings of the study, which was conducted to investigate the effectiveness of the technology education program provided to the parents, are presented below.

Table 3. Pre-test and Post-test Mean Scores Obtained by Parents from the Measurement Instruments and Paired-Samples (n=36)

Scale	Subdimension	Group	X	ss	t	df	p	η^2
Parents' Attitudes Toward Their Children's Use	Educational use	Pre test Post test	22,33 28,05	4,32 1,87	-7,30	70	<.001	.66

|			Mean	SD	t	df	p	
of Information and Communication Technologies	Supervision and restrictions	Pre test Post test	17,69 24,75	3,44 1,57	-11,20	70	<.001	.80
	Negative effects	Pre test Post test	17,50 11,92	4,42 2,00	6,90	70	<.001	.64
	Total	Pre test Post test	57,53 64,72	9,02 3,72	-4,42	70	<.001	.47
Internet Addiction Scale	Deprivation	Pre test Post test	24,28 25,33	5,98 3,06	-0,94	70	.35	
	Control difficulty	Pre test Post test	18,69 19,78	5,80 2,01	-1,06	70	.29	
	Impairment in functionality	Pre test Post test	12,75 12,58	3,80 1,38	0,25	70	.80	
	Social isolation	Pre test Post test	11,08 11,94	3,60 1,94	-1,26	70	.21	
	Total	Pre test Post test	66,80 69,64	1,83 4,45	-1,25	70	.21	
Family-Child Internet Addiction Scale	Social withdrawal	Pre test Post test	7,78 8,42	3,20 2,12	-0,99	70	.01	.03
	Dysfunction	Pre test Post test	8,03 9,75	3,51 1,89	-2,59	70	.53	
	Deprivation	Pre test Post test	4,75 4,42	2,11 1,59	0,64	70	.37	
	Control difficulty	Pre test Post test	6,83 7,47	3,60 2,17	-0,90	70	.37	
	Total	Pre test Post test	27,39 30,05	1,35 3,97	-1,33	70	.19	

When Table 3 is examined, it is observed that there is a significant difference in the sub-dimensions of the Parents' Attitudes towards Their Children's Use of Information and Communication Technologies Scale: Educational Use [t(70)= -7.30; p<.001; η2=.66], Control and Limitations [t(70)= -11.20; p<.001; η2=.80], and Negative Effects [t(70)=6.90; p<.001; η2=.64], with a high level of effect, while the overall scale shows a medium level of effect [t(70)=-4.42; p<.001; η2=.47]. In the Dysfunction sub-dimension of the Family Child Internet Addiction Scale, a weak but significant difference was found [t(70)= -2.59; p<.05; η2=.03]. No significant difference was found between other sub-dimensions and the Internet Addiction Scale or its sub-dimensions (p>.05).

In the Educational Use sub-dimension, the parents' post-test mean scores (x=28.05) were higher than their pre-test mean scores (x=22.33); in the Control and Limitations sub-dimension, the parents' post-test mean scores (x=24.75) were higher than their pre-test mean scores (x=17.69); in the Negative Effects sub-dimension, the parents' pre-test mean scores (x=17.50) were higher than their post-test mean scores (x=11.92); and in the total scale, the parents' post-test mean score (x=64.72) was higher than their pre-test mean score (x=57.53). In other words, the training provided to parents was effective, and significant increases were observed except for the Negative Effects dimension. Although the effect size was weak, in the Dysfunction sub-dimension, the parents' post-test mean scores (x=9.75) were found to be higher than their pre-test mean scores (x=8.03).

When the qualitative analysis results of the interview questions conducted with parents were examined, it was determined that 29 parents had a social media account, while 4 parents did not. Among the parents with social media accounts, 21 had Instagram, 19 had Facebook, 11 had WhatsApp, and 1 had a Twitter account.

Parents' opinions about internet security were collected before and after the training. The results of the responses given by the parents are presented in Figure 1.
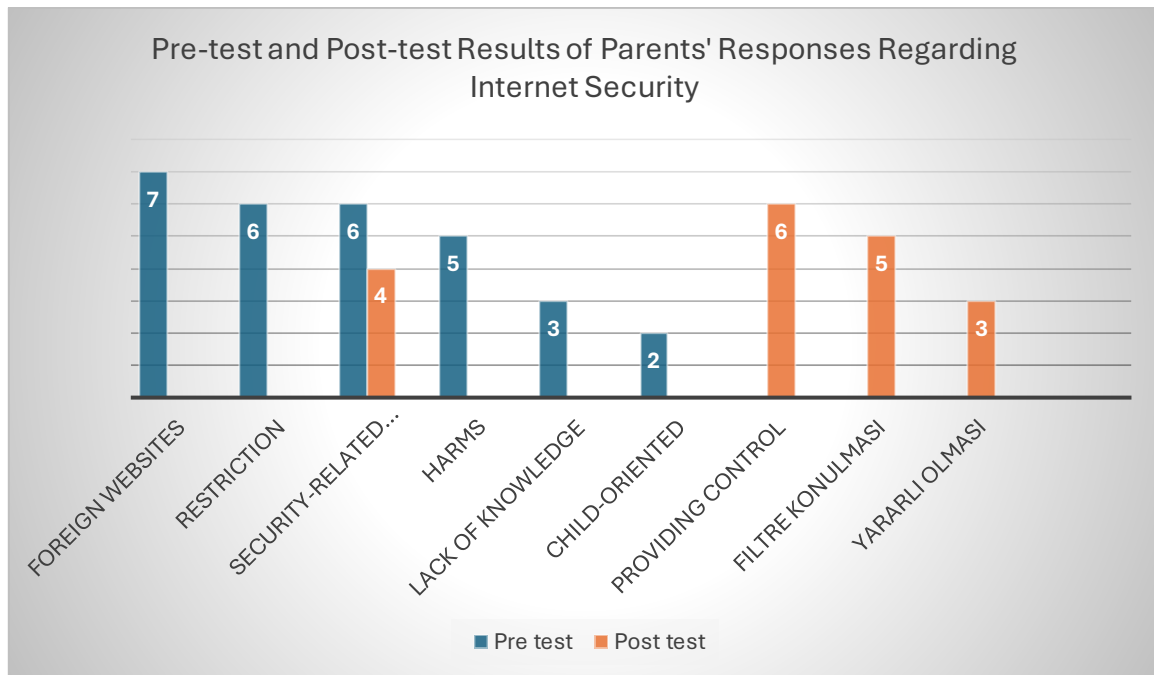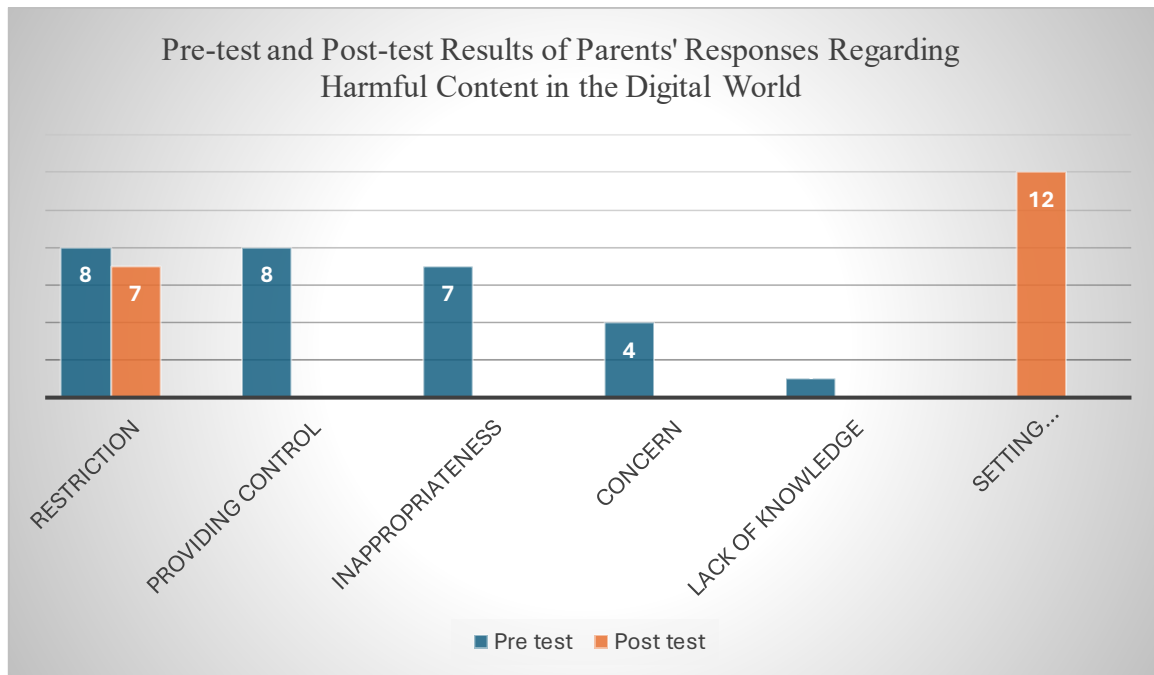
Figure 1. Pre-test and Post-test Results of Parents' Responses Regarding Internet Safety

As seen in Figure 1, before the training, parents most frequently mentioned foreign websites (n=7) regarding internet safety, followed by the presence of restrictions (n=6), security-related issues (n=6), potential harms (n=5), lack of knowledge (n=3), and content targeting children (n=2). Parent E1 stated, "The security of personal data should be ensured, and access to sites that children should not reach should be restricted," while parent E10 expressed, "I don't think it is safe. I don't find it secure because everyone has started to reflect everything into the virtual world."

When the parents' responses regarding internet safety after the training were examined, the most frequently given response was the need to ensure control (n=6), followed by setting filters (n=5), security-related considerations (n=4), and usefulness (n=3). Parent E24 stated, "A special framework should be developed for children," while parent B34 shared, "I learned that there is parental control. I'm considering implementing this in my life, such as using filters."

Parents' opinions about harmful content on technology for children are presented in Figure 2.

Figure 2. Pre-test and Post-test Results of Parents' Responses Regarding Harmful Content in the Technological World

As seen in Figure 2, before the training, parents most frequently stated that harmful content in the technological world should be restricted (n=8). This was followed by ensuring control (n=8), content being inappropriate (n=7), feelings of concern (n=4), and lack of knowledge (n=1). Parent E14 expressed, "I am worried about my child being negatively affected," while parent E21 stated, "There are situations regarding the internet, especially nowadays, that I cannot prevent in my child's use, and I think this happens because we don't have enough knowledge."

After the training, parents most frequently stated that passwords/filters (n=12) should be implemented, followed by restrictions (n=7). Parent E3 shared, "Parental control and filters. I don't visit unfamiliar sites. I check what my children are viewing," while parent E31 stated, "There should be a password for every type of content."

Parents' opinions about what they do to protect their children from the harms of technology are presented in Figure 3.
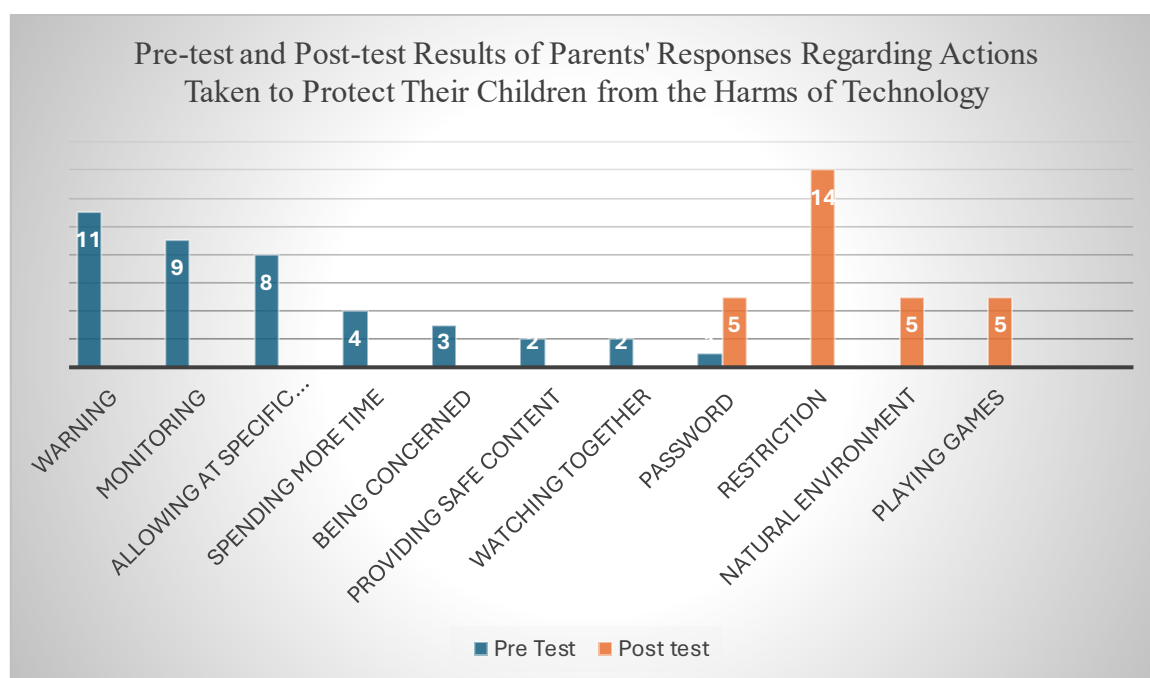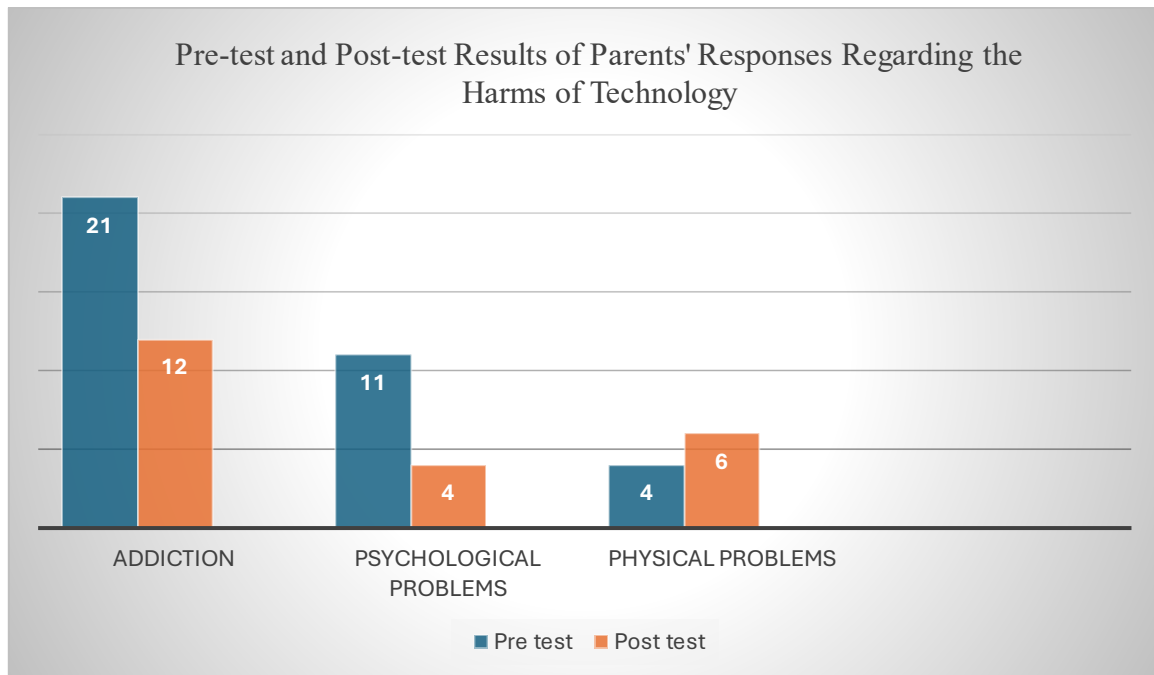
Figure 3. Pre-test and Post-test Results of Parents' Responses Regarding Actions Taken to Protect Their Children from the Harms of Technology

As seen in Figure 3, before the training, parents most frequently stated that they warned their children (n=11) to protect them from the harms of technology. This was followed by monitoring (n=9), allowing use only at specific times (n=8), spending more time together (n=4), worrying (n=3), providing safe content (n=2), watching together (n=2), and setting passwords (n=1). Parent "E8" expressed, "I check everything my child watches. I pay close attention to the advertisements in between," while parent "E13" stated, "I provide safe content on the phone and tablet."

After the training, parents most frequently stated that they imposed restrictions (n=11), followed by providing natural environment experiences (n=5), playing games together (n=5), and setting filters (n=5). Parent "E9" stated, "I set restriction and blocking settings on web pages," while parent "E16" shared, "I am considering applying filtering. Although I don't want them to spend too much time on it, in a way, they do. I'm thinking of setting time limits."

Parents' opinions regarding their thoughts on the harms of technology are presented in Figure 4.
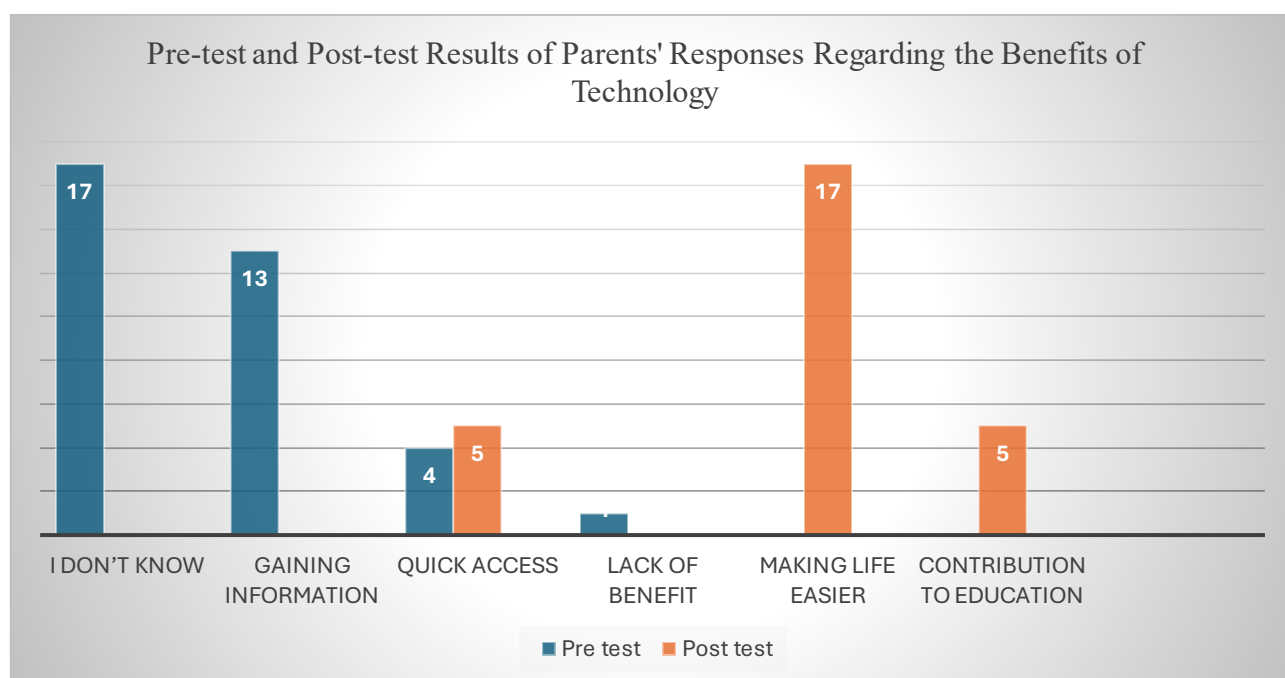
Figure 4. Pre-test and Post-test Results of Parents' Responses Regarding the Harms of Technology

As seen in Figure 4, before the training, parents most frequently identified addiction (n=21) as a harm of technology, followed by psychological problems (n=11) and physical problems (n=4). Parent "E11" stated, "When it becomes too addictive, it prevents people from living their normal lives. When people become addicted, they may not even have time for their family and children. Therefore, it should be used only as needed," while parent "E27" simply said, "It causes addiction."

After the training, parents again most frequently mentioned addiction (n=12), followed by physical health problems (n=6) and psychological problems (n=4). Parent E2 expressed, "It has psychological, mental, and physical harms," while parent "E36" stated, "It leads to time waste and family conflicts. It causes addiction, distancing from natural life, and becoming antisocial individuals."

Parents' opinions regarding their thoughts on the benefits of technology are presented in Figure 5.
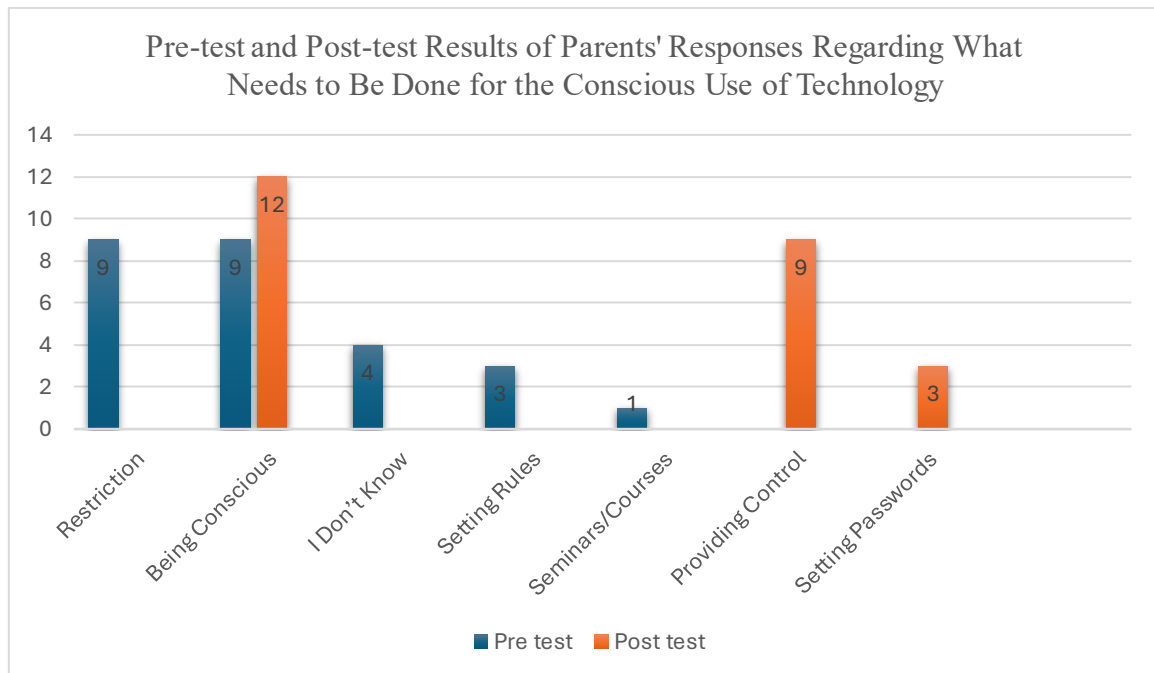
Figure 5. Pre-test and Post-test Results of Parents' Responses Regarding the Benefits of Technology

As seen in Figure 5, before the training, parents most frequently stated that they did not know (n=17) the benefits of technology. This was followed by acquiring information (n=13), fast access (n=4), and the opinion that technology has no benefits (n=1). Parent "E6" stated, "It is useful in terms of communication and gaining information," while parent "E29" expressed, "We can quickly access the information we are looking for. We can review lessons and research topics related to our course."

After the training, parents most frequently stated that technology makes life easier (n=17), followed by contributing to education (n=5) and speed (n=5). Parent E17 expressed, "It helps us understand better by listening to videos when we don't understand something," while parent "E30" stated, "We can access everything very quickly and easily."

Parents' opinions regarding what can be done for the proper use of technology are presented in Figure 6.

Figure 6. Pre-test and Post-test Results of Parents' Responses Regarding Necessary Actions for the Conscious Use of Technology

As seen in Figure 7, before the training, parents most frequently stated restriction (n=9) as a way to ensure the conscious use of technology. This was followed by being conscious (n=9), not knowing (n=4), setting rules (n=3), and offering seminars/courses (n=1). Parent "E12" expressed, "We can use technology as much as necessary," while parent "E22" stated, "It can be used for limited periods, specific sites can be accessed, and seminars and courses can be provided."

After the training on the conscious use of technology, parents most frequently mentioned conscious use (n=12), followed by ensuring control (n=9) and setting passwords (n=3). Parent "E17" stated, "It should be used in a controlled and limited way," while parent "E34" shared, "There can be restrictions and passwords."

Discussion

The results of the study, which aimed to investigate the effectiveness of the technology education program provided to parents, revealed a statistically significant difference with a high effect size in parents' attitudes towards their children's use of information and communication technologies. Education today is rapidly advancing, especially in the

technological domain. In other words, education and technology are converging (Akpınar & Akyıldız, 2022; Aslan & Çakmak, 2021; Karahasan, 2023). However, problematic situations that may be encountered in technology increase parents' anxiety levels, leading to difficulties in utilizing technology, particularly for educational purposes (Danet, 2020; Rivera Vargas et al., 2024; Schriever, 2021). Indeed, pre-training interviews with parents highlighted responses such as safety, restriction, and the presence of foreign sites regarding the Internet. After the implementation of the training, however, parents' responses shifted to ensuring control and using filter applications to enhance Internet safety. Evaluated in this context, it can be interpreted that the topics covered in the training, especially those concerning the integration of technology with education, created a significant difference in the parents' perspectives. This result suggests that the parents utilized the knowledge they gained during the training. In fact, one of the most important elements in Internet safety is ensuring control and activating filter applications (Aslan & Karakuş Yılmaz, 2017; Saral & Kasapbaşı, 2025).

The study found that before the training, parents expressed the need to control and restrict content that could be harmful in the technological world. After the training, they articulated the necessity of using passwords in addition to restriction. Passwords and filters are crucial for blocking harmful content from the technological world, and it is important for parents to ensure control to prevent their children from encountering such content (Aktaş, 2025; Huang et al., 2020). This finding suggests that the parents implemented the filter applications demonstrated practically during the training into their lives.

The results show that both before and after the training, parents primarily applied restrictions and time limits to protect their children, as well as all children, from the harms of technology. Post-training, they additionally mentioned providing a natural environment. Technology is a significant power, and when combined with the immaturity of children's developmental areas, it can lead to dangerous situations (Gezgin, 2023; Gökel, 2020; Yılmaz & Güney, 2021). The most important step to protect children from the harms of technology is to ensure they gain real-life experiences alongside restriction (Yılmaz & Güney, 2021), a fact clearly visible in the parents' post-test responses.

Parents stated that technology is addictive both before and after the training, which indicates their pre-existing knowledge about technology. Indeed, one of the most significant characteristics of technology is its potential to cause addiction very quickly if used uncontrollably. However, technology also offers important benefits (Johnson & Rogers, 2024; Kimball et al., 2023; Oğuz & Kutluca, 2020; Storer et al., 2023). The study results indicate that parents most frequently mentioned information acquisition as a benefit, though some also stated it offered no benefits. After the training, however, parents discussed technology's role in making life easier, contributing to education, and its speed. Technology is a vital force that simplifies life (Aslan Çetin, 2020; Diaz Kane, 2022; Oli, 2023). Educational systems are changing and developing thanks to technology (Diaz Kane, 2022; Elvan & Mutlubaş, 2020; Ochoa & Reich, 2020; Soyoof et al., 2024). In this context, the goal should be to ensure conscious use and consider its benefits as well as its harms, a perspective reflected in the post-training results.

Regarding the necessary actions for the conscious use of technology, the highest response in the study was the need to be conscious. However, there were also parents who expressed a lack of knowledge before the training, but no such parents remained after the training. The most important features required for the conscious use of technology are being conscious, controlled use, and employing a password system (Aktaş, 2025; Aslan & Karakuş Yılmaz, 2017; Huang et al., 2020; Saral & Kasapbaşı, 2025). The observation that this awareness was established, based on the parents' post-training responses, can be considered evidence that the training reached its goal.

The study found a statistically significant difference with a low effect size in favor of the post-test in the Social Isolation sub-dimension of the Family-Child Internet Addiction Scale, but no significant difference was found in the Internet Addiction Scale. This can be attributed to children's excessive technology use, resulting in their separation from peer groups, activities, and social environments—in other words, social isolation. Indeed, in pre-training interviews, parents expressed that their children used technology excessively, stating they wished to prevent this but were sometimes unsuccessful. Despite its many benefits, technology can be a significant factor in isolating individuals. It is frequently reported that children who spend excessive time with technology experience social isolation and face difficulties transitioning to normal life (Abu-Taieh et al., 2022; Arıcı Doğan & Döğer, 2023; Karabulut & Gökler, 2023; Thabrew et al., 2022). The lack

of a significant difference found in the Internet Addiction Scale can be attributed to the short duration of the training program, even though parents actively and effectively participated. Sustained behavioral changes require a certain amount of time (Kuzu & Erdem, 2024). Therefore, the inability of parents to fully reflect these behaviors and the subsequent lack of a significant difference, due to the completion of the training within one day, can be considered an expected outcome.

Conclusion and Recommendations

As a result of the study conducted to investigate the effectiveness of the technology education program provided to parents, a statistically significant difference with a high effect size was observed in favor of the post-test scores on the Parental Attitudes Towards Children's Use of Information and Communication Technologies Scale. A statistically significant difference with a low effect size was obtained in the Social Isolation sub-dimension of the Family-Child Internet Addiction Scale, yet no significant difference was found in the Internet Addiction Scale. It was observed that parents' knowledge about technology was limited before the training but increased significantly afterward.

Based on the findings obtained from the research, the following recommendations can be made:

- Implementing longer-duration technology education programs, given that despite a significant difference in the Parental Attitudes towards ICT scale and the Social Isolation sub-dimension of the Family-Child Internet Addiction Scale, no significant difference was found in the main Internet Addiction Scale.
- Developing and implementing training programs tailored for individuals from different socioeconomic levels.
- Promoting the more frequent use of filter and encryption techniques for children's conscious technology use, and in this context, auditing technology programs for safety.
- Organizing activities in schools and communities that provide children with age-appropriate real-life experiences.

- Developing and implementing education programs specifically designed for different age groups of children.

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