

Development and Investigation of the Effectiveness of Group Psychoeducation in Increasing Internet Altruism Among Adolescents*

Sümeyye BİLGİZ AKBAYIR**

Adem PEKER***

Abstract: This study aims to examine the impact of an internet altruism group psychoeducation program on adolescents' levels of internet altruism. The study was conducted with volunteer 10th grade students studying at Anatolian High School in Erzurum in the 2022–2023 academic year. The study used a 2x3 split-plot experimental design (experimental and control groups x pretest, posttest, and follow-up test). Data were collected through the 'Personal Information Form', including demographic questions and the 'Internet Altruism Scale'. The researchers developed an online altruism psychoeducation program and administered it to 11 students in the experimental group. The program consisted of nine sessions, each lasting approximately 80–90 minutes. The data were analysed using two-factor analysis of variance (ANOVA). The analysis revealed that the internet altruism scores of adolescents in the experimental group, who received group psychoeducation, scored significantly higher than those in the control group on the final test. Additionally, the positive effects of the program were sustained in the follow-up test. These findings indicate that the program effectively increases internet self-esteem in adolescents.

Keywords: Internet altruism, altruism, adolescent, group psychoeducation, experimental design.

Ergenlerde İnternet Özgeciliğini Artırmaya Yönelik Grup Psikoeğitiminin Geliştirilmesi ve Etkililiğinin İncelenmesi

Öz: Bu araştırmanın amacı, internet özgeciliği grup psikoeğitim programının ergenlerin internet özgeciliği düzeyleri üzerindeki etkisini incelemektir. Çalışma, 2022–2023 eğitim-öğretim yılında Erzurumda, Anadolu Lisesinde öğrenim gören gönüllü 10. sınıf öğrencileriyle yürütülmüştür. Araştırma, 2x3'lük split-plot deseni (deney ve kontrol grubu x ön test – son test – izleme testi) ile gerçekleştirilmiştir. Araştırmanın verileri, demografik soruların yer aldığı 'Kişisel Bilgi Formu' ve 'İnternet Özgeciliği Ölçeği' ile toplanmıştır. Araştırmacılar tarafından geliştirilen internet özgeciliği psikoeğitim programı, deney grubundaki 11 öğrenciye uygulanmıştır. Psikoeğitim programı, dokuz oturum olarak gerçekleşmiştir. Oturumların her biri yaklaşık 80–90 dakika sürmüştür. Veriler, iki faktörlü varyans analizi (ANOVA) ile analiz edilmiştir. Analiz sonucunda, grup psikoeğitimi uygulanan deney grubundaki ergenlerin son testteki internet özgeciliği puanlarının, kontrol grubuna kıyasla anlamlı düzeyde yüksek puana sahip olduğu belirlenmiştir. Ayrıca, geliştirilen internet özgeciliği psikoeğitim programın olumlu etkisinin yapılan izleme testinde de sürdürdüğü belirlenmiştir. Araştırma sonucunda elde edilen bu sonuçlar, geliştirilen programın ergenlerde internet özgeciliğini artırmada etkili olduğunu ortaya koymaktadır.

Anahtar Kelimeler: İnternet özgeciliği, özgecilik, ergen, grup psikoeğitimi, deneysel tasarım.

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**Sorumlu yazar, Öğr. Gör. Dr., Atatürk Üniversitesi, Sosyal Bilimler Meslek Yüksekokulu, Çocuk Bakımı ve Gençlik Hizmetleri Bölümü, Erzurum-Türkiye, 0000-0001-5373-9712, sumeyye.bilgiz@atauni.edu.tr

*** Prof. Dr. Atatürk Üniversitesi, Kazım Karabekir Eğitim Fakültesi, Rehberlik ve Psikolojik Danışmanlık Anabilim Dalı Erzurum-Türkiye, 0000-0002-3594-9166, adem.peker@atauni.edu.tr

Introduction

Altruism is a helping behavior that an individual exhibits towards others without expecting reward (Pfattheicher et al., 2022). The primary goal in altruistic behaviors is to consider the benefit of others (Radovanović, 2019). However, individuals who exhibit altruistic behavior also benefit themselves (Abraham & Babu, 2021). Studies have reported significant and positive relationships between altruistic behaviors and subjective well-being (Kasapoğlu, 2014; Seligman, 2002), happiness (Abraham & Babu, 2021; Weiss-Sidi & Riemer, 2023), and life satisfaction (Lu et al., 2021). Thus, altruism can be considered a positive behavior that benefits both the individual and society, in that it involves considering the benefits of others and contributing to the individual's subjective well-being (Sun, 2018).

Altruistic behaviors increase the positive emotional state of individuals and serve as a buffer against negative emotions (Post, 2005). In this context, altruistic actions are closely linked to positive psychology, which aims to address issues by positively impacting individuals' subjective experiences, personal traits, and overall life satisfaction (Yöntem, 2015). According to positive psychology, altruism involves positive experiences and a positive relationships (Kaynak, 2018). Therefore, altruistic behaviors that individuals exhibit due to the need to make a difference for the better and make the world a more meaningful world—are very important in terms of positive psychology (Rashid & Seligman, 2018).

Altruistic behaviors have been observed throughout human history (Bermond, 2019). However, with the widespread adoption of the internet in recent years, the ways in which altruistic behaviors are expressed have changed significantly (Lou & Floridi, 2023). Meter et al. (2019) highlight that how individuals give and receive help has transformed in the online environment. This shift allows people to exchange information, share ideas, and make suggestions with others worldwide via the internet (Zheng et al., 2021a). One of these virtual interactions is internet altruism, which refers to the motivation of internet users to help each other (Wang & Cao, 2022).

Internet altruism is defined as the act of intentionally helping others in the online environment without seeking personal benefit (Zheng et al., 2021b). Examples include organizing donation campaigns, starting virtual petitions, and sharing posts to warn others about fraud (Yumei, 2020). Unlike traditional altruism, internet altruism is influenced by the anonymity, timing flexibility, and variety of interaction formats available in digital spaces (Hao et al., 2025; Bastiaensens et al., 2015). People can help immediately online or choose to reveal their identity openly or stay anonymous (Amichai-Hamburger & Furnham, 2007). These structural features support the expansion and emergence of different types of internet altruism (Han et al., 2016). As a result, internet altruism has become a significant focus of research in today's digital society.

Enhancing internet altruism among adolescents, who make up a significant user group, is crucial for fostering trust and cooperation in digital interactions (Iwasa, 2023; Wang et al., 2021; Zheng et al., 2021b). Data from the Turkish Statistical Institute in 2023 show that adolescents are the leading users of the internet (public network), with a rate of 87.4%. Therefore, their internet usage patterns and social behaviors in this environment are key factors in shaping their identity development (Borca et al., 2015).

Adolescence is a critical developmental period in which an individual's social relationship skills and identity development accelerate (Branje, 2021). During this developmental process, adolescents form their value system through their relationships with their social environment and the social roles they experience (Crocetti, 2017). However, with the advent of digitalization, most social interactions of adolescents in daily life have shifted online, and these new social contexts have a direct impact on identity development (Cascio et al., 2023; Pazer, 2024). Adolescents' easy access to various communication technologies leads them to exhibit helping behaviors that differ from those in face-to-face communication (Bastiaens et al., 2015). This situation helps adolescents establish positive social networks through internet altruism, reducing feelings of loneliness (Melton, 2019). In addition, adolescents' internet altruism increases their tendency to help against negative behaviors they encounter in the digital environment, such as cyberbullying and antisocial online behaviors (Hu et al., 2023; Parlangeli et al., 2019). Thus, encouraging adolescents to exhibit altruistic behaviors online contributes to the development of their moral awareness and moral growth (Chaijkovska et al., 2020; Peng et al., 2024; Wang & Cao, 2022). Additionally, studies have shown that Internet altruism is positively related to subjective well-being (Zheng & Wang, 2017), hope (Zheng & Zhao, 2015), self-efficacy (Zheng et al., 2016), and empathy (Zhang et al., 2019). In this context, it is considered essential to raise awareness about internet altruism to protect adolescents from the negative effects of the internet and to support them in exhibiting positive online behaviors.

Studies have emphasized the importance of increasing individual qualities such as altruism (Lin et al., 2021), empathy (Zhang et al., 2019; Zheng & Zhao, 2015), responsibility (Pastor et al., 2024), self-esteem (Nie et al., 2024), and social self-efficacy (Caprara et al., 2014; Zhu et al., 2020) to support the development of adolescents' altruistic behaviors on the Internet. Supporting these positive personal characteristics of adolescents leads to the emergence of internet altruism (Lin, 2023). At this point, the role of structured interventions in supporting this development becomes increasingly

important. Structured programs such as group psychoeducation are among the effective methods for developing altruism. Indeed, various studies indicate that group psychoeducation is effective in increasing individuals' levels of altruism (Doğru-Çabuker & Ersanlı, 2016; Ghobadi-Isfarjani et al., 2022; Nedim Bal & Topuz, 2015). However, because internet altruism has different dynamics from traditional face-to-face altruism, psychoeducation programs implemented in this area require different structures. The unique characteristics of the digital environment characterize internet altruism. Accordingly, internet altruism is fueled by the convenience, flexibility, and anonymity that the internet offers (Peng et al., 2024). Thanks to these internet features, adolescents can freely help others, share information, and contribute to communities through digital platforms, free from the constraints of time and space. Therefore, group psychoeducation studies targeting internet altruism in adolescents who spend a significant amount of time online are needed.

A review of domestic and international literature reveals a limited number of studies on comprehensive group psychoeducation programs designed to increase adolescents' internet altruism (Mesurado et al., 2019; Mesurado et al., 2021). However, existing studies focus on the broader concept of developing online prosocial behaviors, rather than interventions directly aimed at increasing internet altruism. Therefore, group psychoeducation studies directly targeting adolescents' internet altruism are crucial to addressing specific needs in this area and contributing to the gap in the literature.

In recent years, related designs have been used in studies on internet altruism, and these studies (Zheng et al., 2020; Zheng et al., 2023; Zhou et al., 2024) generally show the relationship between the variables. However, using an experimental design to assess the effectiveness of psycho-educational interventions on internet altruism will significantly contribute to the existing literature. Additionally, it offers effective intervention strategies for school psychological counselors and teachers by enhancing recruitment behaviors, such as developing group psycho-educational programs to increase internet access, providing online resources to support adolescents, sharing information, and participating in community initiatives. Therefore, this study aims to evaluate the effectiveness of a group psychoeducational program designed to boost adolescents' internet altruism.

Hypothesis of the Study

H1: "The change observed in the repeated (pretest-posttest) measurements of the participants' internet altruism scores shows a significant difference between the experimental and control groups. This difference will persist in the follow-up results two months after the end of the program."

H2: "There is a significant difference between the pre-test and post-test measurements of the Internet altruism scores of the participants in the experimental group. This difference will persist in the follow-up results two months after the end of the program."

Method

Research Model

This study investigated the effect of group psychoeducation programs on enhancing internet altruism among adolescents. The study's independent variable is the group psychoeducation program aimed at increasing internet altruism, and the dependent variable is internet altruism. This research employed a quasi-experimental design. In this model, pre-, post-, and follow-up tests were administered to participants in both the control and experimental groups. In the study, which was conducted using a 2x3 split-plot (mixed) design, the first factor represents the control and experimental groups. The second dimension represents internet altruism's repeated measures (pre-test, post-test, follow-up test). The participants were first determined, and experimental/control groups were formed accordingly. Before the implementation of the psychoeducation program, the 'Internet Altruism for Adolescents' scale was distributed to the participants in both groups. A 9-week group psychoeducation program was implemented to increase internet altruism in the experimental group. At the end of the 9-week psychoeducational program, a posttest was administered to both groups. Two months after the end of the psychoeducation program, a follow-up test was conducted on participants in both groups to examine the effects of group psychoeducation. Participants in the control group received two weeks of group guidance after the follow-up test. Thus, the control group did not actively participate in the experimental process and was only subjected to measurements for evaluation purposes.

Participants

We established inclusion and exclusion criteria to identify the participants. The inclusion criteria for the students to be included in the study were (i) students studying in high school, (ii) obtaining parental permission, (iii) students voluntarily participating in the sessions, (iii) students not having participated in a similar study before, and (iv) students using social media accounts (twitter, instagram, tiktok, facebook, etc.).

Exclusion criteria for students who will not be included in the study: (i) being in 9th, 11th, and 12th grades. Given that ninth-grade students often struggle to adapt to school and their peers, and this situation may hinder social interaction during group psychoeducation, ninth-grade students were excluded from the study. 11th and 12th-grade students were not included in the study because they might have difficulty attending the sessions regularly, taking into account factors such as attending special courses, intensifying individual study programs, and tending to increase school absenteeism since they were in the process of preparing for the university exam (Özgözü et al., 2024). For this reason, 10th-grade students, a more homogeneous group that could regularly participate in the process, were included in the study. In addition, the choice of only 10th-grade students as the study group is related to the fact that developmental characteristics and academic pressures are more controllable compared to mixed groups studying at different grade levels (Pharris-Ciurej et al., 2012)

In experimental research, simple random sampling can be used to say that the change in the dependent variable is caused by the intervention (Gürbüz & Sahin, 2015). A simple random sampling method was used to determine the schools and potential participants. First, the schools in Erzurum's central districts were listed, and then lots were drawn among them. As a result of the draw of lots, the research was conducted at Anatolian High School, an institution affiliated with the National Education, in the central district of Palandöken, Erzurum, during the 2022-2023 academic year.

The school guidance service and school administration were informed of the study's purpose. Before data collection, a parental consent form was provided to the parents of 10th-grade students, and the research was conducted with the children of parents who gave their consent after reviewing this form. Fifteen students who did not use social media were excluded from the study. In line with the study's inclusion and exclusion criteria, the "Internet Altruism Scale" was administered to 137 students attending the school.

The arithmetic mean (35.2) and standard deviation (8.5) values of the scores obtained from the scale were calculated. In this regard, it was decided to include 32 students whose arithmetic mean was one standard deviation below the mean in the study. However, 10 students stated they did not wish to participate in the study, and 22 students were assigned to either the experimental or the control group using a simple random assignment method. Male and female students were separated into two lists; students were then selected from these lists using a simple random method and assigned to the experimental and control groups alternately. Although numerical equality was not fully achieved, an approximate balance was established between the groups in terms of gender distribution. Six female and five male students were in the experimental group, while five female and six male students were in the control group.

Data Collection Tool

Internet altruism scale

In the experimental part of the study, the 'Internet Altruism for Adolescents' scale developed by Bilgiz Akbayır and Peker (2023) was used to measure adolescents' altruistic behaviors in the virtual environment. The scale includes 11 items and three sub-dimensions: virtual support, virtual protection, and virtual information. These sub-dimensions explain 63% of the total variance. There are no reverse items in the scale. It contains items such as "I participate in campaigns that I think will benefit society in the virtual environment" and "I complain about fake or counterfeit accounts in the virtual environment." Cronbach's alpha for the entire scale was .86. Strong positive correlations were observed between the total scale score and the sub-dimensions of virtual information ($r = .83$), virtual protection ($r = .81$), and virtual support ($r = .84$). The virtual support factor showed moderate positive correlations with virtual information ($r = .51$) and virtual protection ($r = .55$). The scale's moderate to high correlations between sub-dimensions and the total score indicate it can be used with a total score. Therefore, this study used the scale based on the total score. As the scale score increases, so does the level of internet altruism among adolescents. Additionally, a second-level confirmatory factor analysis was conducted, and fit index values were calculated: $\chi^2/df = 2.93$, RMSEA = .04, CFI = .93, AGFI = .91, TLI = .90, and GFI = .94. These fit indices indicate an acceptable to good model fit (Kline, 2016).

Group psychoeducation to increase internet altruism

In this study, an internet altruism group psychoeducation program was developed. While preparing the psychoeducation program, studies on internet altruism were examined in the domestic and foreign literature. As a result of the literature review, it was determined that there are no structured programs in Turkey aimed at increasing internet altruism. Accordingly, traditional altruism literature was used in the program development process. Structured programs on altruism were examined comprehensively, and the contents of these programs were also used (Doğru-Çabuker & Ersanlı, 2016; Nedim Bal & Topuz, 2015). In addition, while preparing the session contents, the concepts of empathy (Jiang et al., 2023; Li et al., 2018), self-esteem (Zheng et al., 2020), and responsibility (Zhang et al., 2019), which are frequently studied with internet altruism, were also utilized. Additionally, book chapters written by Yöntem (2015) and Kaynak (2018) were utilized to inform the content and activities for the group sessions. These sources are examples of

sessions related to group psychoeducation on altruism. "Suggestions for interventions to improve altruism in schools" (Method, 2015) was adapted to the content planning of the sessions. "Me and Others: We" and 'Attention, There is an Altruist Here' activities in Kaynak (2018) provided technical suggestions for positive psychology-based practices. The sections from these sources were integrated into the group psychoeducation content and adapted during the implementation process.

The Internet altruism group psychoeducation program was developed in accordance with the group psychoeducation preparation process proposed by Çivitci (2023). First, the program's general purpose, the sessions' general objectives, and the sessions' sub-objectives were determined. The general purpose of the intervention program, developed in this context, is to support adolescents' awareness of internet altruism, their behavioral realization of it, and to increase the altruistic behaviors they exhibit online through group life. The sub-objectives of the program were determined as "to provide members with information about the concepts of altruism and internet altruism, to raise awareness about the altruistic behaviors they exhibit on the internet, to enable members to distinguish between altruistic and non-altruistic behaviors on the internet, to provide members with information about the contributions of internet altruism to the individual and society, to help members identify situations that lead to and prevent them from acting altruistically on the internet". Çivitci (2023) states that the objectives in a group psychoeducation program should reflect a theoretical perspective. In this study, group psychoeducation was designed based on the principles of Positive Psychology theory. In this context, some studies conducted with adolescents based on Positive Psychology (Fariz, 2022; Ulusoy, 2020) were examined. In addition, the principles of positive psychological intervention in Positive Psychology were considered (Magyar-Moe, 2009). The concepts of altruism, empathy, positive emotions, and social self-efficacy were utilized in Positive Psychology theory. Information about the sessions in the group psychoeducation program, along with the aims of each session, is provided in Table 1.

Table 1*Group Psychoeducation Sessions to Increase Internet Altruism*

Session	Thema	Session Aims	Session Sub-objectives	Activity and Achievement
Session 1	Introduction	The session aims to include meeting the members, informing them about the group psychoeducation prepared to increase adolescents' internet altruism, and determining the group rules.	- Introduction of the leader and group members, - Informing the members about the group process and content, - Informing the members about the duration and frequency of the sessions, - Determining the group rules, - Determining the members' personal goals and expectations in the context of the psychoeducation program,	➤ Setting group rules and a warm-up activity <i>Group rules</i> were established to create an atmosphere of trust among participants. A <i>warm-up activity</i> was then conducted to increase communication and interaction within the group.
Session 2	Altruism	The session aims to educate members about the concept of altruism.	- Members should understand the importance of helping behavior in human life. - Members should gain awareness of the altruistic behaviors they exhibit, - Members should be able to distinguish between altruistic and non-altruistic behaviors,	➤ Activities to recognize and understand altruism In the session, ' <i>Dominoes</i> ' and ' <i>Black, White, Gray</i> ' activities were carried out to help participants understand the concept of altruism, recognize altruistic behaviors, and evaluate these behaviors from different perspectives.
Session 3	Internet Altruism	The session aims to educate members about the concept of internet altruism.	- Members' awareness of internet altruism, - Members' ability to distinguish between altruistic and non-altruistic behaviors in the virtual environment, - Members' ability to exhibit altruistic behaviors in the virtual environment,	➤ Activities to recognize and understand internet altruism In the session, a ' <i>Brainstorming</i> ' and ' <i>Looking for an Altruist on the Internet</i> ' activity was conducted to help participants understand the concept of internet altruism, identify altruistic behaviors on the Internet, and evaluate these behaviors from different perspectives.
Session 4	Internet Altruism	The session aims to encourage internet	- Supporting members' empathy skills in the virtual environment,	➤ Activities to Develop Empathy on the Internet

	and Empathy	altruism by supporting members' empathy skills in the virtual environment.	<ul style="list-style-type: none"> - Realizing the importance of members' altruistic behavior in the virtual environment in social life, - Realizing the problems that may be encountered in cases where members do not have altruism in the virtual environment, 	Participants understood the importance of empathy in the virtual environment through the activities <i>"We Are All in the Same Virtual World"</i> and <i>"If Only Altruism Did not Exist in the Virtual Environment."</i>
Session 5	Internet Altruism and Responsibility	The session aims to support internet altruism by informing members of their responsibilities in their virtual environment.	<ul style="list-style-type: none"> - Members realize their responsibilities towards users in the virtual environment, - Planning how members can fulfill their responsibilities towards users in the virtual environment, - Realizing the importance of members being responsible towards users in the virtual environment in social life, 	<ul style="list-style-type: none"> ➤ Activities to Develop Responsibility on the Internet <p>Participants understood the importance of responsibility in the virtual environment through the activities <i>"Be Altruistic Online"</i> and <i>"Let's Share"</i>.</p>
Session 6	Internet Altruism and Emotion, Thought, Behaviour	The session aims to ensure that members are aware of their feelings, thoughts, and behaviours regarding the requests for assistance they encounter in the virtual environment.	<ul style="list-style-type: none"> - Identifying the feelings of members when asked for help in a virtual environment - Identifying the thoughts that go through members' minds when asked for help in a virtual environment - Identifying the behaviors that members will exhibit when asked for help in a virtual environment - Identifying the factors that prevent members from meeting the requests for help in a virtual environment 	<ul style="list-style-type: none"> ➤ Activities to Understand Emotion, Thought, and Behaviour on the Internet <p>Through the <i>"Hear, Think, Act Online"</i> activities, participants gained insight into the importance of being aware of their feelings, thoughts, and behaviors towards requests for help in the virtual environment, as well as recognizing the obstacles encountered in this process.</p>
Session 7	Internet Altruism and Social Self-Efficacy	The session aims to support the development of members' social self-efficacy in the virtual environment.	<ul style="list-style-type: none"> - Recognizing members' competence in the virtual environment, - Members learning about the concept of social self-efficacy in the virtual environment, - Members believing in themselves regarding the behaviors they will perform in the virtual environment, - Recognizing the effect of members' social self-efficacy in the virtual environment on their altruistic behaviors on the internet 	<ul style="list-style-type: none"> ➤ Activities to Develop Responsibility on the Internet <p>Participants learned the concept of social self-efficacy in the virtual environment through the activities <i>"My Past Virtual Experiences"</i> and <i>"Increasing Social Self-Efficacy in the Virtual Environment"</i>. They became aware of the impact of their confidence in their own competence and social self-efficacy on their online altruistic behaviors.</p>
Session 8	Internet Altruism and Self-Esteem	The session aims to help members become aware of their positive and negative attitudes towards themselves in the virtual environment and identify the sources of these attitudes.	<ul style="list-style-type: none"> - Members becoming aware of their positive and negative attitudes towards themselves in the virtual environment, - Members learning how to replace negative attitudes towards themselves in the virtual environment with positive ones, - Members find themselves valuable in the virtual environment, - Members realizing the effect of their self-esteem in the virtual environment on their altruistic behaviors on the internet 	<ul style="list-style-type: none"> ➤ Activities to Develop Responsibility on the Internet <p>Through the <i>"Self-Esteem Box"</i> activity, participants gained insight into their attitudes towards themselves in a virtual environment and understood the impact of self-esteem on internet altruism.</p>
Session 9	Finalisation	The session aims to determine the benefits that	<ul style="list-style-type: none"> - Evaluation of the group process and all sessions, - Termination of the group process, 	<ul style="list-style-type: none"> ➤ Session Evaluation and Closing Activity

members gain from group psychoeducation.	Participants evaluated the previous sessions, understanding the importance of raising awareness about altruistic behaviors in school through the "Virtual Altruism Awareness" activity, and prepared a poster.
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During the implementation of the group psychoeducation, the school was visited on the same day every week, and the members met in the school's group counseling room. Group psychoeducation consisted of nine sessions, each lasting 80 to 90 minutes. Care was taken to ensure the sessions did not exceed two class hours.

Two-way analysis of variance for repeated measures was used to analyse the data. In this analysis, both dependent measures and independent groups are analysed simultaneously (Büyüköztürk, 2017; Çokluk et al., 2014). Before analyzing the experimental study data, the fulfillment of the assumptions for the two-way factor analysis with repeated measures was examined. Thus, analyses were performed on the normality distribution of the data, homogeneity of variances, equality of covariance, and the Shapiro-Wilk test.

Skewness and kurtosis were analyzed to determine whether the data from the three measurement tests (pre-test, post-test, and follow-up) of the control and experimental groups exhibited a normal distribution. The skewness and Kurtosis values are given in Table 2.

Table 2
Normality Test Results of Experimental and Control Groups

Tests	Groups	N	Min.	Max.	\bar{X}	SS	Skewness	Kurtosis
Pre-test	Experimental	11	11.00	36.00	24.90	8.41	-.51	-1.06
	Control	11	13.00	40.00	25.27	9.01	.51	-.97
Post-test	Experimental	11	38.00	55.00	44.09	5.08	.87	.71
	Control	11	13.00	19.00	26.72	7.63	-.16	-.43
Follow-Up -Test	Experimental	11	34.00	51.00	43.27	5.04	-.09	1.27
	Control	11	11.00	42.00	27.90	9.40	-.05	-.59

Considering the values in Table 2, the skewness and kurtosis values vary between -1.5 and 1.5. These values show that the variables used in the study are suitable for a normal distribution. The Shapiro-Wilk statistical analysis was performed to assess the normality assumption, taking into account the sample size. The results of the Shapiro-Wilks test are given in Table 3.

Table 3
Shapiro-Wilk Normality Test Results for Pre-Post and Follow-up Test Scores

		Shapiro-Wilk	sd	p
Experimental Group	Pre-test	.92	.11	.41
	Post Test	.93	.11	.43
	Follow-up-test	.96	.11	.82
Control Group	Pre-test	.92	.11	.35
	Post Test	.98	.11	.99
	Follow-up-test	.95	.11	.66

When Table 3 is examined, it is seen that the pre-test, post-test, and follow-up test scores of the participants in the experimental and control groups are normal distribution, according to the Shapiro-Wilk test results ($p > .05$). After the normality distribution of the data was ensured, the homogeneity of variances and covariance equality were examined. The Levene Test was performed to understand whether the variances of the measurements of the control and experimental groups were equal (homogeneity). Table 4 shows the results of the Levene Test.

Table 4
Results of the Homogeneity Test of the Control and Experimental Groups

Tests	Levene İstatistik	sd1	sd2	p
Pre-test	.04	1	20	.846

Post-test	2.02	1	20	.171
Follow-Up Test	4.45	1	20	.053

The findings in Table 4 showed that the variances of the three measurement tests (pre, post, follow-up) scores of the control and experimental groups related to Internet altruism were equal. In other words, the homogeneity condition for the data was met. After the condition of equality of variances was met, Box's Test of Equality of Covariance Matrices was performed for the equality of covariances. The findings of the Equality of Covariance Test results are given in Table 5.

Table 5*Results of Test for Equality of Covariances*

Box's M	16.987
F	1.94
sd1	6
sd2	2898.113
p	.052

When Table 5 is examined, the condition of covariance equality, one of the conditions of two-way analysis of variance for repeated measurements, is met. Thus, the necessary conditions for experimental analysis are met.

Findings**Two-Way Analysis of Variance Results**

The study's first hypothesis is as follows: "The post-test scores of adolescents who have undergone a group psychoeducation program will significantly increase compared to the post-test scores of adolescents in the control group. This increase will continue in the follow-up results two months after the end of the program". Regarding this hypothesis, the arithmetic mean and standard deviation scores of the three measurements (pre, post, and follow-up) for the adolescents in the control and experimental groups were calculated. These results are given in Table 6.

Table 6*Arithmetic Mean and Standard Deviation Results of Pre, Post, and Follow-up Test*

Measurements	Experimental Group			Control Grubu			Total		
	N	\bar{X}	SS	N	\bar{X}	SS	N	\bar{X}	SS
Pre-test	11	24.90	8.41	11	25.27	9.01	11	25.09	8.51
Post-test	11	44.09	5.08	11	26.72	7.63	11	35.41	10.91
Follow up-test	11	43.27	5.04	11	27.90	9.40	11	35.59	10.77

Table 6 shows that the highest success regarding Internet altruism level was in the post-test mean score applied to the adolescents in the experimental group. A two-way analysis of variance was conducted to determine whether the changes between the measurements showed a significant difference according to the scores obtained from the Internet altruism of the adolescents in the experimental and control groups. The findings of this analysis are given in Table 7.

Table 7*Two-Way Analysis of Variance Results Regarding the Pre, Post, and Follow-up Test*

Variance Source	Sum of Squares	Sd	Mean Squares	F	p	(η^2)
Between groups	67712.06	21				
Groups (Experimental/Control)	1920.242	1	1920.242	15.25	.001	.43
Error	2518.364	20	125.918			
Within groups (Subjects)	2626.424	44				
Between measurements (pre-post follow-up test)	1589.485	2	794.742	32.34	.05	.62
Group*Measurement Interaction	1036.94	2	518.470	21.10	.05	.51
Error	982.91	40	24.57			

According to Table 7, the first result from the two-way analysis of variance reveals a significant difference in mean scores between the experimental and control groups, with no test distinction ($F_{1-20}= 15.25$; $p < .001$). These results reveal that the mean scores of the adolescents participating in the experimental and control groups regarding the pre-test, post-test, and follow-up test differ in their responses to internet altruism. The effect size was found to be $\eta^2 = .43$. Additionally,

Cohen's d value was calculated for the effect size of the difference between the experimental and control groups, which was 1.12. Cohen (1988) evaluates $d = 0.2$ as small, $d = 0.5$ as medium, and $d = 0.8$ as a large effect size. In this context, the Cohen's d value of 1.12 obtained is above the large effect level and shows that group psychoeducation has a strong effect.

Two-way ANOVA also yielded that pre-test, post-test, and follow-up mean scores differed significantly regardless of the groups [$F_{(1-20)} = 32.34$; $p < .001$]. This finding shows that the group psychoeducation was effective in increasing internet altruism. The effect size was found to be $\eta^2 = .62$.

There was also a significant interaction effect [$(F(2-40) = 21.10$; $p < .05$)]. When the mean scores were compared, the mean pre-test score of the experimental group was 24.90, the mean post-test score was 44.09, and the mean follow-up test score was 43.27. These scores are higher than the control group. That is, being in the experimental group where the application was made to increase internet altruism had a higher effect than the participants in the control group. The effect size is moderate ($\eta^2 = .51$).

In this study, it was found that 51% of the change in adolescents' internet altruism is due to the experimental intervention ($\eta^2 = .51$). This difference was analysed by the Bonferroni Test, and the findings are presented in Table 7. When these findings were examined, it was found that the mean post-test score ($\bar{X} = 44.09$) of internet altruism of the experimental group was significantly higher than the mean pretest score ($\bar{X} = 24.91$) ($p < .05$). The experimental group's post-test mean scores ($\bar{X} = 44.09$) on internet altruism were significantly higher than the control group's pre-test ($\bar{X} = 25.27$), post-test ($\bar{X} = 26.73$) and follow-up test ($\bar{X} = 27.91$) means ($p < .05$). It was determined that the mean score ($\bar{X} = 43.27$) of the experimental group in the follow-up test for internet altruism was significantly higher than the mean score ($\bar{X} = 24.91$) of the pre-test for the experimental group ($p < .05$). The mean score ($\bar{X} = 43.27$) of the experimental group in the follow-up test on internet altruism was significantly higher than the mean scores of the control group in the pretest ($\bar{X} = 25.27$), posttest ($\bar{X} = 26.73$) and follow-up test ($\bar{X} = 27.91$).

Table 8

Bonferroni Test Results Regarding the Between and Within-Group Differences

(I) group	(J) group	Difference Between Means (I-J)	p
Experimental Group Pro-Test	Experimental group pre-test	19.18	.001
	Control group pre-test	18.81	.001
	Control group post-test	17.36	.001
	Control group follow-up test	16.18	.001
Experimental Group Follow-up Test	Experimental group pre-test	18.36	.001
	Control group pre-test	18.00	.001
	Control group post-test	16.54	.001
	Control group follow-up test	15.36	.001

The interaction graph visualized the results of the analysis of variance and the Bonferroni test conducted by the research. Figure 1 illustrates the changes in Internet altruism scores from the pre-test, post-test, and follow-up tests across the groups.

Figure 1

Changes in the Pre-Post Follow-up Measurement of Internet Altruism Level by Groups

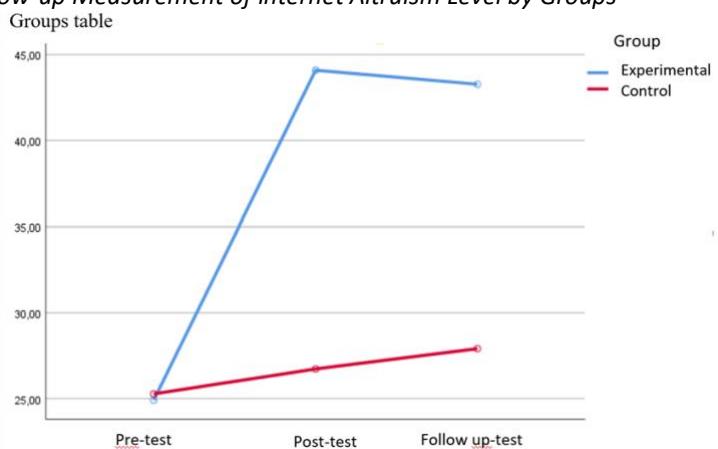


Figure 1 illustrates that the experimental group's Internet altruism scores increased from the pre-test to the post-test. However, there was a slight decrease from the post-test to the follow-up test. This graph reveals that the Internet altruism scores of participants in the experimental group were higher than those of participants in the control group, and this increase was relatively permanent.

Discussion

The primary objective of this study was to examine the effectiveness of a group psychoeducation program developed to increase adolescents' internet altruism. In this context, the first hypothesis of the study was determined as follows: "The change observed in repeated measurements (pretest-posttest) of participants' internet altruism scores demonstrates a significant difference between the experimental and control groups. This difference will persist in the follow-up results conducted two months after the program." The second hypothesis was determined as follows: "There is a significant difference between the pretest and posttest measurements of participants' internet altruism scores in the experimental group. This difference will persist in the follow-up results conducted two months after the program."

The study's findings show that the internet altruism post-test scores of adolescents who participated in group psychoeducation are significantly different from those of adolescents who did not participate in group psychoeducation. This difference is seen with a significant score increase for the adolescents in the experimental group. As a result of the follow-up test, it was determined that this effect on the adolescents in the experimental group continued. In this direction, it can be said that the group psychoeducation was effective in increasing the participants' internet altruism.

The findings of this study, which show that group psychoeducation is effective in increasing adolescents' internet altruism, are consistent with the existing literature, which suggests that internet altruism is a construct that can be developed through various interventions. For example, Suargani et al. (2022) examined the effect of solution-focused expressive art therapy on increasing internet altruism. A collage activity was applied to the experimental group to enable them to understand the problems experienced by other people in the virtual environment and express themselves more easily in this environment. As a result of the application, the internet altruism levels of the individuals in the experimental group increased. This finding is similar to the results of this study. Studies aimed at increasing online prosocial behaviors, including internet altruism (Steineman et al., 2020), are also consistent with these research findings. For example, a study conducted by Mesurado et al. (2019) developed an online intervention program called "Hero" to improve online prosocial behaviors in adolescents. The online program consisted of seven sessions, covering topics such as prosocial behaviors, empathy, emotional awareness, positive emotions, gratitude, and forgiveness. The study determined that the Hero program was effective in increasing online prosocial behaviors in adolescents.

The common themes of empathy and positive emotions in the current study and Mesurado et al.'s (2019) study support the conclusion that strengthening social-emotional skills in adolescents can lead to increased altruistic behavior. Furthermore, while Mesurado et al.'s (2019) study relied on an online intervention program, the similar results obtained with face-to-face group psychoeducation in the current study suggest that studies conducted using different methods can be effective in increasing adolescents' internet altruism. For example, Ahn et al. (2013) reported that experiencing what it is like to be colorblind through virtual reality led to an increase in volunteering to help individuals who are colorblind. These findings suggest that positive experiences individuals encounter in the virtual environment can be effective in increasing altruistic behavior online.

Studies conducted to increase traditional altruism, which forms the basis of Internet altruism, also show consistent results with this research. Traditional altruism literature is a crucial source for understanding the effectiveness of group psychoeducation in promoting internet altruism. Studies show that positive social behaviors performed face-to-face are positively related to participation in positive social behaviors performed in a virtual environment (Wright & Li, 2011). In this context, Nedim-Bal and Topuz (2015) implemented a psychoeducation program to increase the altruism of university students. Within the scope of the psychoeducation program, practices focused on empathy, communication, asking for help and providing help, social relations, compassion, and the importance of helping were implemented to promote altruism. The altruism levels of individuals who participated in this psychoeducation program, based on positive psychology theory, increased. Similarly, Doğru-Çabuker and Ersanlı (2016) generated the "Altruism Skill Psychoeducation Program". The psychoeducation program consists of eight sessions, each meeting includes information about the group process, helping and altruistic behavior, empathy, the emergency effect, bystander effect, spreading responsibility, fair world belief, and termination. The applied psychoeducation program increased the altruism levels of university students. Based on the results of this research, it is concluded that altruism can be taught and developed (Smith et al., 2010; Günor, 2014).

However, these studies were conducted with university students. The current study, by applying similar thematic content to adolescents, demonstrated that altruism skills can be supported through psychoeducation at earlier developmental stages. Thus, the findings of previous studies are confirmed in a different age group. Furthermore, the

current study's focus on online-specific forms of altruism distinguishes it from previous research by offering an expansion of the traditional altruism literature in an online context.

The foundations of altruism behaviors are laid in early childhood and continue to develop through cognitive, emotional, and social interactions during adolescence (Warneken & Tomasello, 2009). However, it may not always be possible for each adolescent to develop these behaviors spontaneously and sufficiently in the natural development process. At this point, the role of structured interventions in supporting this development becomes increasingly important. In this context, as altruism-based psychoeducation programs conducted in face-to-face settings are effective, it is thought that similar interventions can be effectively adapted to increase internet altruism exhibited in online social environments.

Psychoeducation programs for developing positive social behaviors may also be relevant sources for interpreting the effectiveness of Internet altruism group psychoeducation. Group psychoeducation studies developed to increase positive social behaviors also show results consistent with this research (Flores, 2022; Romersi et al., 2011). For example, Caprara et al. (2014) implemented a 16-session group psychoeducation program designed to develop sensitivity to prosocial values, emotion regulation, perspective-taking, and interpersonal communication skills, to increase positive social behaviors in adolescents. The psychoeducation program increased the prosociality levels of adolescents. Based on the results of this research, it can be explained by focusing on the positive and strong aspects of human nature, which are open to development.

In addition to studies directly aimed at increasing internet altruism, there are also experimental studies that aim to enhance attributes that motivate people to be altruistic, such as empathy (Bierhoff, 2010), self-efficacy (Abraham & Babu, 2021), self-esteem, and compassion (Büssing et al., 2013). In a study aimed at increasing empathy, which can be evaluated in this context, the Empathy Development Group Guidance Program was implemented for primary school students. Within the program's scope, sessions are available for individuals to recognize their own emotions, understand the emotions of others, and develop communication and problem-solving skills. The program increased the participants' empathy levels (Yılmaz-Bingöl & Uysal, 2015). In a similar study, experimental and control groups examined the empathy and prosociality skills of children who underwent an empathy training program. Following the applications, a significant difference was observed in the empathic skills of children in the experimental group (Özer-Özbal & Gönen, 2023). Accordingly, programs to increase internet altruism focusing on strengthening basic psychosocial elements such as empathy, social self-efficacy, and self-esteem can potentially encourage the development of positive social behaviors in the online space.

With the spread of Positive Psychology, online positive behaviors are becoming increasingly important (Lou & Floridi, 2023; Yumei, 2020). Positive psychology emphasizes the importance of focusing on constructive and positive emotions that make an individual's life worth living (Seligman & Csikszentmihalyi, 2000). Thus, according to positive psychology, it is crucial to encourage positive behaviors exhibited online. According to positive psychology, internet altruism is considered as one of the positive aspects of the internet (Wang et al., 2017). Thus, increasing the number of adolescents exhibiting altruistic behaviors online is crucial in building a better world and enhancing societal well-being (Lou & Floridi, 2023; Soudi & Aman, 2023). Moreover, examining altruistic behaviors exhibited online provides important insights into the positive effects of digitalization on interpersonal relationships (Peng et al., 2024).

Considering both the findings of this study and the existing literature, internet altruism can be regarded as a teachable and improvable construct. Thus, understanding adolescents' levels of internet altruism and conducting studies to increase this level becomes increasingly important.

Limitations and Recommendations

This research is limited to the data collected from 10th-grade students in the spring term of the 2022-2023 academic year. A similar study in this context could be conducted with students in 9th-, 11th-, and 12th-grade. The psychoeducational program developed in this study consisted of 9 sessions. However, the effects of longer-term interventions were not evaluated in this study. Furthermore, the program's effectiveness was measured with a follow-up test conducted two months later; longer-term effects were not investigated. In this study, only quantitative data were used, and no qualitative data were provided; this limitation restricts the evaluation of the participants' experiences of the process.

Author Contributions

Both authors contribute to the study equally.

Ethics Committee Approval Information

Ethical approval was obtained from the Educational Sciences Ethics Committee of Atatürk University with the decision dated 10.12.2021 and numbered 13.

Conflict of Interest

The authors declare no conflict of interest for this study.

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Genişletilmiş Özeti

Özgecilik, bireyin herhangi bir ödül bekłtisi olmaksızın diğerlerine yönelik sergilediği yardım davranışları olarak tanımlanır (Pfattheicher vd., 2022). İnsanlık tarihi boyunca özgeci davranışlarla karşılaşmaktadır (Bermond, 2019). Ancak son yıllarda internet kullanımının yaygınlaşması ile özgeci davranışların ortaya çıkma şekilleri değişmektedir (Lou ve Floridi, 2023). Bu değişim, bireylerin internet aracılığıyla dünyanın her yerindeki insanlarla bilgi alışverişi yapmalarını, çevrimiçi fikir paylaşmalarını ve önerilerde bulunmalarını sağlamaktadır (Zheng vd., 2021a). Sanal ortamda gerçekleşen bu etkileşimlerden biri kullanıcılarının birbirlerine yardım etme motivasyonuyla sergiledikleri internet özgeciligidir (Wang ve Cao, 2022).

İnternet özgeciligi, sanal ortamda herhangi bir çıkar gözetmeksız bilinçli olarak başkalarına yardım etme davranışını olarak tanımlanır (Zheng vd., 2021b). Bireylerin, sanal ortamda bağış kampanyası düzenlemesi, sanal imza kampanyaları başlatması, dolandırıcılığı engellemek için diğer insanları uyaran paylaşım yapması, internet özgeciligi örnek davranışlardır (Yumei, 2020). Günlük hayatındaki özgeci davranışlardan farklı olarak, internet özgeciligi sanal bağamlar ve zamansal-mekânsal esneklik ile karakterize edilir (Hao vd., 2025).

Ergenlerin çeşitli iletişim teknolojilerine kolaylıkla erişebilmesi, yüz yüze iletişimden farklı yardım davranışları sergilemesine yol açmaktadır (Bastiaensens vd., 2015). Bu durum ergenlerin internet özgeciligi ile olumlu sosyal ağlar kurabilmesine yardımcı olmaktadır (Melton, 2019). Bu açıdan ergenlerin internette özgeci davranışlar sergilemeleri noktasında teşvik edilmesi, ahlaki farkındalıklarının geliştirilmesine ve ahlaki kazanımlarına katkı sağlamaktadır (Chaikovska vd., 2020; Peng vd., 2024; Wang ve Cao, 2022). Bu noktada, yapılandırılmış müdahalelerin, bu gelişimi destekleyici rolü önem kazanmaktadır. Grup psikoeğitimi gibi yapılandırılmış programlar, özgeciligi geliştirilmesinde etkili yöntemler arasında yer almaktadır. Nitekim, çeşitli çalışmalarla grup psikoeğitiminin bireylerde özgecilik düzeyini artırmada etkili olduğu belirtilmektedir (Doğru-Çabuker ve Ersanlı, 2016; Nedim Bal ve Topuz, 2015). Ancak ilgili alan yazını incelendiğinde, ergenlerin internet özgeciligi artırımıya yönelik geliştirilmiş herhangi bir grup psikoeğitimine rastlanmamaktadır. Bu gerekçelerle, internette uzun süre harcayan ergenlerin internet özgeciligi yönlük grup psikoeğitimi çalışmalarına ihtiyaç duyulmaktadır. Bu bağlamda, bu araştırmmanın amacı; ergenlerin internet özgeciligi artırımıya yönelik olarak geliştirilen grup psikoeğitim programının etkililiğini incelemektir.

Araştırmmanın hipotezleri;

H1; “Katılımcıların internet özgeciligi puanlarına ilişkin tekrarlı (ön test-son test) ölçümlede gözlenen değişim, deney ve kontrol grupları arasında anlamlı bir fark göstermektedir. Bu farklılık programın bitiminden iki ay sonra yapılan izleme sonuçlarında da devam edecektir.”

H2; “Deney grubunda yer alan katılımcıların internet özgeciligi puanlarına ilişkin ön test ve son test ölçümüleri arasında anlamlı bir fark bulunmaktadır. Bu farklılık programın bitiminden iki ay sonra yapılan izleme sonuçlarında da devam edecektir” şeklindekiştir.

Yöntem

Bu çalışmada ergenlerde internet özgeciligi artırımıda grup psikoeğitiminin etkisi incelenmiştir. Çalışmanın bağımsız değişkeni internet özgeciligi artırımı amaçlayan grup psikoeğitim programı, bağımlı değişkeni ise internet özgeciligidir. Araştırma, yarı deneysel bir modelle yürütülmüştür. Bu modelde kontrol ve deney gruplarındaki katılımcılara ön-test, son-test ve izleme testleri uygulanmıştır. Araştırma 2x3 split-plot (karma) desende yürütülmüştür. Öncelikle katılımcılar belirlenmiş ve deney/kontrol grupları oluşturulmuştur. Deney grubuna internet fedakarlığını artırımıya yönelik 9 haftalık grup psikoeğitimi programı uygulanmıştır. Programının sonunda her iki gruba da son test uygulanmıştır. Psikoeğitimin bitiminden iki ay sonra her iki gruptaki katılımcılara psikoeğitimin etkilerini incelemek için izleme testi uygulanmıştır.

Çalışma Grubu

Bu çalışmaya, araştırmaya katılmaya gönüllü 10. sınıf öğrencileri dahil edilmiştir. Araştırmacıların yürüttüleceği okullar ve katılımcılar basit rastgele örnekleme yöntemi ile belirlenmiştir. Öncelikle Erzurum ili merkez ilçelerindeki okullar listelenmiş, ardından okullar arasında kura çekilmiştir. Araştırma, 2022-2023 eğitim öğretim yılında Erzurum ilindeki Anadolu Lisesi'nde öğrenim gören 22 öğrenci (11 kız, 11 erkek) ile yürütülmüştür.

Veri Toplama Aracı

Internet Özgeciligi Ölçeği

Çalışmanın deneysel kısmında, Bilgiz Akbayır ve Peker (2023) tarafından geliştirilen 'Ergenler İçin İnternet Özgeçiliği' ölçüği, ergenlerin sanal ortamındaki özgeci davranışlarını ölçmek amacıyla kullanılmıştır. İnternet Özgeçiliği Ölçeği üç alt boyut (sanal destek, sanal koruma ve sanal bilgi) toplam 11 maddeden oluşmaktadır.

İnternet Özgeçiliğini Artırmak İçin Psiko-Eğitim Programı

Bu çalışmada, ergenlerin internetteki özgeci davranışlarını artırmak için psiko-eğitsimsel bir müdahale programı geliştirilmiştir. Bu bağlamda geliştirilen internet fedakarlığını artırma müdahale programının genel amacı, ergenlerin internet fedakarlığına ilişkin farkındalıklarını, internet fedakarlığının davranışsal gerçekleşmesini ve grup deneyimi yoluyla internet özgeçiliğini artırmaktır.

Veri Analizi

Çalışmanın bu bölümünde, verileri analiz etmek için tekrarlı ölçümler için iki yönlü varyans analizi kullanılmıştır. Deneysel çalışmaya ilişkin analizler öncesinde tekrarlı ölçümler için iki yönlü faktör analizinin varsayımlarının karşılanması karşılanmadığı incelenmiştir. Bu bağlamda verilerin normalilik dağılımı, varyansların homojenliği ve kovaryans eşitliği incelenmiştir. Çarşıklık ve basıklık değerlerinin $-1,5$ ile $1,5$ arasında değiştiği belirlenmiştir. Bu değerler, değişkenlerin normal dağılıma uygun olduğunu göstermektedir. Kontrol ve deney gruplarının internet özgeçiliği ile ilgili üç ölçüm testi (ön, son, izleme) puanlarının varyanslarının eşit olduğunu görülmüş bu durum veriler için homojenlik koşulunun karşılanması sağlamıştır. Kovaryansların eşitliği için Box'ın Kovaryans Matrislerinin Eşitliği Testi yapılmıştır.

Bulgular

İki yönlü varyans analizinden elde edilen ilk sonuca göre, herhangi bir test ayırmı yapılmaksızın deney ve kontrol gruplarının ortalama puanları arasında anlamlı bir fark vardır ($F(1-20)= 15,25$; $p<.001$). Buna göre, deney grubu internet fedakarlığında kontrol grubundan $\bar{X} = 26,64$ daha yüksek puan almış olup, ortalaması $\bar{X} = 37,42$ 'dir. Etki büyülüğu $\eta^2=.43$ olarak bulunmuştur. Bu sonuca göre, farklı bir grupta olmak orta düzeyde bir etki göstermektedir.

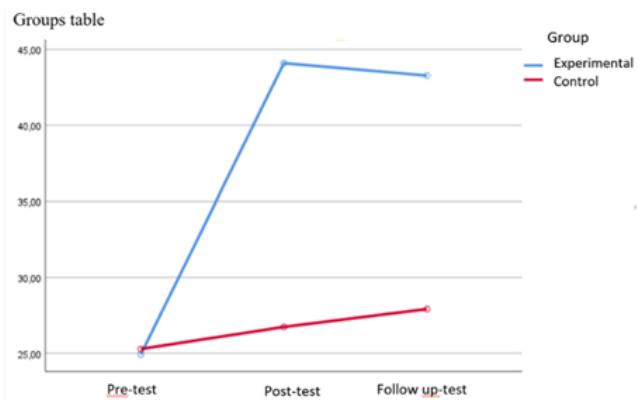
İki yönlü varyans analizinin ikinci bulgusunda, grplardan bağımsız olarak ön test ve son test ortalama puanlarının karşılaştırılmasında anlamlı bir fark olduğu görülmüştür ($F(1-20)= 32,34$; $p<.001$). Ortalama değerler incelendiğinde, son test puan ortalaması ($\bar{X} = 35,41$) ve takip testi puan ortalamasının ($\bar{X} = 35,59$) ön test puan ortalamasından ($\bar{X} = 25,09$) yüksek olduğu bulunmuştur. Bu sonuca göre sürecin önemli olduğu belirlenmiştir. Etki büyülüğu $\eta^2=.62$ olarak bulunmuştur. Bu sonuca göre farklı grupta olmak orta düzeyde etki göstermektedir.

İki yönlü varyans analizinin üçüncü bulgusu, grup ve ölçümün ortak etkisi dikkate alındığında ortalamalar arasında anlamlı bir farkın bulunmasıdır ($F(2-40)= 21,10$; $p<.05$). Bu bulguya göre, internet fedakarlığının artırılmaya çalışıldığı bir grupta bulunmak (grup etkisi) ve ön, son ve takip test uygulama sürecinde meydana gelen değişim (sureç etkisi), katılımcıların internet fedakarlığı puanlarındaki artış üzerindeki ortak etkinin anlamlı olduğunu göstermektedir. Ortalama puanlar karşılaştırıldığında deney grubunun ön test puanı ortalaması $24,90$, son test puanı ortalaması $\bar{X} = 44,09$ ve takip testi puanı ortalaması $\bar{X} = 43,27$ olarak bulunmuştur. Bu puanlar kontrol grubundan yüksektir. Buna göre internet fedakarlığını artırmaya yönelik uygulamanın yapıldığı deney grubunda bulunmak, kontrol grubundaki katılımcılarla göre daha yüksek etkiye sahiptir. Bu etki orta düzeydedir ($\eta^2= .51$).

Bu çalışmada, ergenlerin internet fedakarlığındaki değişimin %51'inin deneysel müdahaleden kaynaklandığı görülmektedir ($\eta^2=.51$). Bu farklılık Bonferroni Testi ile incelenmiştir. Bulgular incelendiğinde deney grubunun İnternet fedakarlığı sontest puanı ortalamasının ($\bar{X} = 44,09$), öntest puanı ortalamasına ($\bar{X} = 24,91$) göre anlamlı düzeyde yüksek olduğu bulunmuştur ($p<.05$). Deney grubunun İnternet fedakarlığı sontest puan ortalaması ($\bar{X} = 44,09$), kontrol grubunun öntest ($\bar{X} = 25,27$), sontest ($\bar{X} = 26,73$) ve takip testi ($\bar{X} = 27,91$) ortalamalarına göre anlamlı düzeyde yüksek bulunmuştur ($p<.05$). Deney grubunun takip testinde İnternet fedakarlığı puanı ortalamasının ($\bar{X} = 43,27$), deney grubunun öntest puan ortalamasına ($\bar{X} = 24,91$) göre anlamlı düzeyde yüksek olduğu belirlenmiştir ($p<.05$). Araştırma doğrultusunda yapılan varyans analizi ve Bonferroni testi sonuçları etkileşim grafiği ile görselleştirilmiştir. İnternet fedakarlığının gruplara göre ön test, son test ve takip testindeki değişimler Şekil 1'de gösterilmiştir.

Şekil 1.

Gruplara Göre İnternet Özgeçiliği Düzeyinin Ön-Son Takip Ölçümündeki Değişiklikler



Şekil 1, deney grubundaki katılımcıların internet özgeçiliği puanlarında ön testten son teste bir artış olduğunu göstermektedir. Ancak, son testten takip testine hafif bir düşüş vardır. Bu grafik, deney grubundaki katılımcıların internet özgeçilik puanlarının kontrol grubundaki katılımcılardan daha yüksek olduğunu ve bu artışın nispeten kalıcı olduğunu ortaya koymaktadır. Deney grubunun takip testinde internet yardımseverliğine ilişkin ortalama puanı ($\bar{X} = 43,27$), kontrol grubunun ön test ($\bar{X} = 25,27$), son test ($\bar{X} = 26,73$) ve takip testinde ($\bar{X} = 27,91$) aldığı ortalama puanlardan anlamlı düzeyde yüksek bulunmuştur. Deney grubunun internet fedakarlığı puanlarında ön testten son teste artış vardır. Ancak son testten takip testine doğru hafif bir azalma görülmektedir. Bu durum, deney grubundaki katılımcıların internet özgeçilik puanlarının kontrol grubundaki katılımcılardan daha yüksek olduğunu ve bu artışın nispeten kalıcı olduğunu ortaya koymaktadır.

Sonuçlar ve Tartışma

Bu araştırma kapsamında, internet özgeçiliğini artırmaya yönelik grup psikoeğitimi hazırlanmış ve deney grubuna uygulanmıştır. Bulgularda, grup psikoeğitimine katılan ergenlerin internet özgeçiliği son test puanlarının, grup psikoeğitimine katılmayanların son test puanlarına göre anlamlı bir şekilde farklılık gözlenmektedir. Bu farklılık deney grubundaki ergenler için anlamlı bir puan artışı ile görülmektedir. Yapılan izleme testi sonucunda, deney grubuna dâhil olan ergenler üzerindeki bu etkinin devam ettiği belirlenmiştir. Bu doğrultuda hazırlanan grup psikoeğitiminin, katılımcıların internet özgeçiliğinin artmasında etkili olduğu söylenebilir.

Grup psikoeğitiminin ergenlerin internet özgeçiliğini arttırmada etkili olduğunu gösteren bu araştırma sonucunda edinilen bulgular, internet özgeçiliğinin çeşitli müdahaleler ile geliştirilebilen bir yapı olduğunu dair alan yazısında yer alan çalışmalarla tutarlıdır. Örneğin; Suargani vd. (2022) çözüm odaklı dışa vurumcu sanat terapisinin, internet özgeçiliğini artırma üzerindeki etkisini incelemiştir. Deney grubuna sanal ortamda diğer insanların yaşadıkları sorunları anlayabilmeleri ve bu ortamda kendilerini daha kolay ifade edebilmelerini sağlamak amacıyla kolaj etkinliği uygulanmıştır. Uygulama sonucunda deney grubundaki bireylerin, internet özgeçiliği düzeyleri artmıştır. Edinilen bulgu, yapılan bu araştırmmanın sonuçları ile benzerlik göstermektedir.

Internet özgeçiliğinin temelini oluşturan; geleneksel özgeçiliği artırmaya yönelik yapılan çalışmalar da bu araştırma ile tutarlı sonuç göstermektedir. Bu açıdan internet özgeçiliği grup psikoeğitiminin etkiliğini yorumlama noktasında geleneksel özgeçilik literatürü önemli bir kaynak niteliğindedir. Bu kapsamında Nedim-Bal ve Topuz (2015), üniversite öğrencilerinin özgeçiliğini artırmaya yönelik bir psikoeğitim programı uygulamıştır. Bu psiko-eğitim programına katılan bireylerin özgeçilik düzeyleri artmıştır. Benzer şekilde Doğru-Çabuker ve Ersanlı (2016) "Diğerkâmlık Becerisi Psikoeğitim Programı" hazırlamıştır. Uygulanan psikoeğitim programı üniversite öğrencilerinin özgeçilik düzeylerini artırmıştır. Bu araştırma sonuçlarından yola çıkarak özgeçiliğin öğretilebilir ve geliştirilebilir olduğu sonucuna ulaşmaktadır (Smith vd., 2010; Günor, 2014). Bu bağlamda, yüz yüze ortamlarda yürütülen özgeçilik temelli psikoeğitim programlarının etkili olduğu gibi, benzer müdahalelerin çevrimiçi sosyal ortamlarda sergilenen internet özgeçiliğini artırmak amacıyla da etkili biçimde uyarlanabileceği düşünülmektedir. Yapılan bu araştırma ve ilgili alan yazısını taramasında elde edilen sonuçlar göz önüne alındığında internet özgeçiliğinin öğretilebilir ve geliştirilebilir bir yapı olduğu görülmektedir. Bu açıdan ergenlerin internet özgeçiliği düzeylerinin bilinmesi ve bu düzeyin artırılması için çalışmalar yapılmasıının önemi ortaya çıkmaktadır.