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Full Length Research Paper

Investigating the effectiveness of solution-focused group counselling and group guidance programs to promote healthy internet use of university students#

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ABSTRACT

This research aims to investigate the effectiveness of a *"solution-focused group counseling program to increase healthy Internet use"* and *"group guidance to increase healthy Internet use"* to increase healthy Internet use among young people. The study group for the research comprised 39 university students (22 females 56%, 17 males 44%). In this study, the Personal Information Form, Interview Form and Problematic Internet Use Scale were used as data collection tools. Analysis of data used the ANOVA for mixed measures and content analysis of interviews with participants in the solution-focused group counseling program about increasing healthy Internet use about their experiences. In the results of the research, it was determined that the solution-focused group was more effective than the guidance group and the control group. It was determined that the guidance group was also more effective than the control group. In addition, it was determined that this differentiation in the groups continued to be effective in the follow-up measurements made 3 months after the completion of the application.

Keywords: Solution-focused therapy, solution-focused group counseling, healthy internet use, problematic internet use, university students.

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#This study arose from the first author's PhD research which was made under the supervision of the second author.

INTRODUCTION

Internet use has shown significant degrees of increase in the world in general in recent years. The benefits offered by the Internet of access to available information online, research, use related to work and communication, gaming, socialization and self-expression have caused more use of the Internet by young people especially. Case studies of young people revealed that young people are a more sensitive group to Internet use because they spend a lot of time on the Internet and they experience deficiencies in their personal, social and academic performances. This situation which forms a source of worry for the young population is qualified as problematic Internet use and is defined as risky, excessive or impulsive Internet use causing negative life outcomes like notable physical, emotional social or functional disorder (Mihajlov and Vejmelka, 2017; Moreno, Jelenchick and Breland, 2015; Prasad et al., 2017; Tserkovnikova et al., 2016; Wallace, 2014).

The need for studies about treatment and therapy approaches for Internet problems among young people is increasing. Studies have been performed about the effectiveness of some psychotherapy approaches to resolve this problem and additionally, meta-analysis studies were completed reviewing these studies. A meta-analysis study up to 2017 revealed that group counseling programs, cognitive behavioral therapy (CBT) and sport interventions significantly reduced problematic Internet use (Liu et al., 2017). In light of this information, it appears studies about coping with Internet problems have been oriented towards cognitive approach (Lindenberg et al., 2017; Liu et al., 2017), realistic approach (Kim, 2008), positive psychology approach (Khazaei et al., 2017) and integrative approaches (Chun et al., 2017) and successful results have been obtained.

These studies in the literature reveal that studies based on different approaches in the regulation of Internet use yield effective results. The general main target in these studies is to focus on addiction, time management, problems related to Internet use and coping with these problems. As an alternative to these existing studies in the literature, an alternative study based on the solution-focused psychological counseling approach, which is one of the post-modern approaches, can be done on young people.

Solution-focused counseling developed in the USA in the 1970s and 1980s by names such as De Shazer and Berg, also known as systemic therapies, deals with solutions rather than problems. It focuses on the present and the future rather than the past and emphasizes the resources and strengths of the clients. During solution-focused counseling, care should be taken to use a solution-focused language rather than a problem-focused one. Even minor changes in clients' lives are crucial to this approach. In addition, each client is considered an expert in their own life. In this approach, the process takes place between 4 and 6 sessions and a collaborative structure that puts the client in the center is provided. The basic techniques of solution-focused counseling approach are; pre-session change technique, first session task formulation, miracle question, scaling questions, exception situations, crystal ball and coping questions technique (De Jong and Berg, 1998; De Jong and Berg, 2008; De Shazer,1985; De Shazer and Berg, 1997; Murdock, 2004; Simon and Berg, 1997; Sklare, 2005). Considering these general features of the solution-focused counseling approach, it is thought that the solution-focused approach can yield effective results in studies aimed at increasing the healthy Internet use of individuals. As a result of the literature review, studies based on different approaches to healthy Internet use of university students were found; but it was found to be insufficient. In this context, a study based on a solution-focused approach to healthy Internet use will offer a different perspective with short and systematic solutions. In addition, the fact that the current studies were mostly conducted on the adolescent group, focusing on addiction and being based on a single approach limited the subject. To eliminate this limitation and try different methods, group guidance studies for healthy Internet use can also be used functionally. Group guidance enables individuals to receive information, share their experiences and opinions in line with their common needs, and give feedback to each other. Therefore, with the group guidance interaction process, individuals have the opportunity to both test themselves and get to know themselves better in the social context in this environment where they experience interpersonal relationships (Gibson and Mitchell, 2003; Lan and Lee, 2016; Stone and Shertzer, 1963; Voltan Acar, 2009).

At the point of intervention for healthy Internet use among university students, it is thought there is a need for studies based on psychology, counseling and group guidance which is functional in the educational field. The use of the Internet is important in terms of accessing information today. However, it is necessary to make arrangements in terms of planning the time and working order in a way that will not adversely affect the social, psychological and academic development of the individual. Therefore, it is considered very important for the psychological support professions to have an effective program in order to solve this problem. It is thought that solution-focused therapy, which is one of the effective approaches apart from cognitive therapy and integrative therapy, will be important in healthy Internet use. In addition, the absence of a study in the literature that deals with the comparison of solution-focused group counseling approach and group counseling for healthy Internet use will make an important contribution to the field of psychological counseling and guidance. With these justifications, this research attempted to answer questions about whether a solution-focused group counseling approach affected healthy Internet use among university students and the degree to which group guidance studies about increasing healthy Internet use contributed to this use.

This research aims to investigate the effectiveness of a solution-based group counseling program and a group guidance program about increasing healthy Internet use among university students. Within the framework of this aim, when creating trials in the research, Experiment 1 group *"Solution-focused Group Counseling to Increase Healthy Internet Use Group",* Experiment 2 group *"Group Guidance to Increase Healthy Internet Use Group"* and a control group were formulated and answers to the following hypotheses were researched:

1. There will be a significant decrease in the post-test scores of the Problematic Internet Usage Scale dimensions of the university students who participated in the solution-focused group compared to those who did not participate in this group (guidance group and control group). In addition, there will be a significant decrease in the post-test scores of the Problematic Internet Use Scale dimensions of university students who participated in the guidance group compared to those who did not participate in this group (control group). This differentiation in the groups will continue to be effective in the follow-up measurements to be made 3 months after the completion of the application.
2. Healthy Internet usage experiences of solution-focused group participants and psychological counseling group participants will increase positively after the sessions.

MATERIALS AND METHODS

Research pattern

This research is a study with a quasi-experimental design. The study was carried out with 3×3 split-plot

(experiment-1 / experiment-2 / control group × pre-test / post-test / follow-up measurement) design.

Study group

The study was conducted at Afyon Kocatepe University in Turkey in the spring term of the 2018-2019 academic year. For the study, flyers were initially given to students at the university. Participants were screened from a sample of 201 university students who applied for voluntary participation in the study. First, interviews were conducted with 201 volunteer university students. These students were evaluated according to the criteria determined by the researchers (members chosen from among university students, no clinical diagnosis, volunteering, not continuing in any other psychological support program or receiving individual psychological aid, using the Internet for at least 8-12 hours per day, responding yes to seven or more questions on the Interview Form). A list was created by determining a total of 39 university students (22 females 56%, 17 males 44%) who met the criteria determined by the researchers. Later a lottery method was used and students were assigned to three groups randomly. When the distribution of participants in the research is investigated according to groups, the experiment-1 group comprised 7 women and 6 men, the experiment-2 group comprised 8 women and 5 men and the control group comprised 7 women and 6 men. Participants were university students aged 18-23 who had not received psychological help before related to healthy Internet use. When Internet use was determined, 15 stated they used it for 8-12 hours per day, 13 used it for 12-16 hours per day and 11 used it for 18-24 hours per day.

Data collection tools

Personal information form

Personal information form was prepared by the researchers and requested information about sex, age, daily Internet use amount and whether they had received psychological assistance previously.

Interview form

Interview form prepared by the researchers benefitted from criteria in the DSM-5 "Internet Gaming Disorder" APA (2013) and Suler (1999) to create the study group. The form comprised of 13 items and responses to each question were in the form of yes or no. These questions included *"Do you feel the need to spend more time on the Internet with each passing day?", "Do you share things you cannot express in real life in the virtual environment due to Internet activities?",* etc. Those who responded yes to 7 or more items on this form were taken for assessment in terms of the study groups.

Problematic Internet use scale (PIUS)

The Problematic Internet Use Scale (PIUS) was developed by Ceyhan et al. (2007) to determine healthy and unhealthy Internet use levels. The scale is a 5-point Likert type, comprises 33 items and has three subscales of "negative consequences of the Internet", "social benefit / social comfort" and "excessive use". These are three subscales together account for 48.96% of the total variation. Internal consistency of the scale is (α) .94, and those of the three subscales comprising it .93, .84 and .73, respectively. In this study, the internal consistency of the total scores of the scale was (α) .96, and the internal consistency of the three subscales constituting the scale was determined as .94, .90 and .75, respectively.

Procedure

The researchers obtained ethics committee permission from the Afyon Kocatepe University Ethics Committee (No: 70813604-044-E.) in Turkey and written and verbal consent from participants stating they voluntarily participated in the study.

After preparing the "*Solution-focused Group Counseling Program to Increase Healthy Internet Use"* and the "*Group Guidance Program to Increase Healthy Internet Use",* the programs were assessed by two professors and one associate professor in the field of Guidance and Psychological Counseling. Program targets, content and session durations were reframed according to feedback. After developing the program, separate six-session pilot applications were completed for both programs.

Experimental groups and the control group had the problematic Internet use scale applied as a pretest before the sessions. Later experiment-1 group had 6 sessions of the "*Solution-focused Group Counseling Program to Increase Healthy Internet Use"* with one session each week lasting 120 minutes. Experiment-2 group had 6 sessions of the "*Group Guidance Program to Increase Healthy Internet Use"* with one session each week lasting 120 minutes. When sessions were completed, participants in all groups were offered the Problematic Internet Use Scale as a posttest. The control group did not have any applications performed. Three months after post-test, the same scale was applied as a follow-up test to experiment-1, experiment-2 and control groups.

Additionally, participants in the "*Solution-focused Group Counseling Program to Increase Healthy Internet Use"* were requested to answer questions related to experiences about healthy Internet use related to each

session they attended after the session. These questions included “what did you experience during the session?”, “how do you feel?”, “what did you learn?”, “what discoveries did you make?”, “in general, what experience did you gain in this session?”, “if you had to grade your day from 0-10 (0 unhealthy and problematic Internet use, 10 healthiest Internet use), how many points would you give yourself?”, and “explain the numbers you gave?”. Participants responded to these questions about opinions before the next session and sent them to the researcher by email when the sessions were completed.

Data analysis

In order to evaluate the distribution of the data in the study, firstly the Skewness and Kurtosis values of the pre-tests were examined. When the Problematic Internet Use Scale Skewness and Kurtosis values of the groups were examined, it was determined that the obtained values met the criteria of normal distribution (PIU(T): Problematic İnternet Use (Total)Solution-Focused Group= Skewness (-.45), Kurtosis (.65), Guidance Group= Skewness .49), Kurtosis (-.33), Control Group= Skewness (-.03), Kurtosis (-.05).). In distributions with a perfectly normal distribution, the Skewness and Kurtosis values are zero (Field, 2005; Tabachnick and Fidell, 2013). However, it seems acceptable for these values to deviate up to a certain point. According to Tabachnick and Fidell (2013), acceptable limits for Skewness and Kurtosis values are ±1.50, for the normal distribution. Therefore, since the Skewness and Kurtosis values of the groups in this study were between ±1.50, they are within acceptable limits in terms of normal distribution. It was determined that there was no difference between the variances of the groups (Problematic İnternet Use (Total)=2.71, p>.05). Therefore, according to the pre-test measurements, it is understood that the variances of the experimental and control groups for all dependent variables are homogeneous. Before proceeding to the temporal and group evaluations, whether the pre-test measurements differed according to the groups was evaluated with One-Way ANOVA. As a result, it was seen that the variables met the homogeneity assumption (Problematic İnternet Use (Total)=.08, p>.05). Whether the pre-test measurements differed according to the groups was evaluated with One-Way Analysis of Variance (One-Way ANOVA). (Problematic İnternet Use (Total) (F(2, 36)=3.72, p<.05). Scheffe was applied as a Post Hoc test to variables where differentiation was determined by groups. ANCOVA (analysis of covariance) technique was used in cases where there was a significant difference between the pretests during the hypothesis tests (Negative Consequences of the Internet and Problematic Internet Use (Total)). By controlling the pre-tests, the differentiation of the scores obtained from the post-tests according to the groups was evaluated with ANCOVA. Based on the findings, it was decided that parametric tests could be used. ANOVA (Mixed ANOVA) analysis technique was used for mixed measurements to determine whether there was a significant difference between the measurement and groups in the analysis of the data obtained from the pre-test, post-test and follow-up test measurements. In the statistical analysis of the study, the margin of error was taken as $p < .05$. After the data were transferred to the computer environment, they were tested with the IBM SPSS Statistics 21 (Statistical Package for Social Sciences) package program (Büyüköztürk, 2011). In addition, the experiences of the participants participating in the “Solution-Focused Group Counseling Program for Increasing Healthy Internet Use” regarding the healthy Internet use related to each session were subjected to content analysis. The data obtained in this analysis have been conceptualized first. Then, a logical arrangement was made according to the concepts determined. Themes explaining the data related to this have been determined.

Solution-focused group counseling program to increase healthy internet use

The general aim of this program was for university students to acquire a solution-focused view and to use the Internet in a healthier, more controlled, conscious and functional way. A literature review was conducted during the development phase of the program (Ateş, 2014; Baygül, 2015; Fang-ru and Wei, 2005; Kim and Franklin, 2009; Lindenberg et al., 2017; Park and Kim, 2011; Tsai, 2009; Busari, 2016; Yang and Kim, 2018). The program included solution-focused techniques such as the miracle question, examining exceptions to the problem, asking rating questions and praising the client, giving homework, attempting to find the client’s strong aspects and searching for solutions, determining targets, techniques and basic components, rating questions, exception times, paying attention to small changes, coping techniques and positive design for the future. The program also included activities which assisted in reducing problematic Internet use such as healthy Internet use, social adjustment-interaction against loneliness, time management and procrastination, feelings regulation and reframing, recurrence management and problem-solving.

Group guidance program to increase healthy internet use

The general aim of the *“Group Guidance Program to Increase Healthy Internet Use”* was to contribute to the use of the Internet in a healthy way with a group guidance program about increasing healthy Internet use among university students. The focus was interventions related to problematic Internet use in literature and when determining activities for the program, applications which

contribute to controlled use of the Internet in programs prepared by Yang and Kim (2018); Park and Kim (2011) and Lindenberg et al. (2017) were used. When implementing the *"Group Guidance Program to Increase Healthy Internet Use"*, the implementer focused on performing applications according to group guidance principles. The content summaries for both programs developed in this research are given in Table 1.

Table 1. Content of solution-focused counseling program and group guidance program to increase healthy internet use.

Solution-focused group counseling program to increase healthy Internet use					Group guidance program to increase healthy Internet use		
Session	**Number of participants**	**Duration**	**Aim**	**Solution-Focused techniques**	**Duration**	**Aim**	**Group guidance content**
1st session	13	120 minutes	Creation of group, to inform about solution-focused approach and healthy Internet use	Power sources, encouragement, exceptions	90-120 minutes	Creation of the group and to inform about healthy Internet use	Ensure they experience awareness by performing guidance work about healthy Internet use
2nd session	13	120 minutes	To determine suitable accessible aims, to ensure awareness in terms of social adjustment-interaction motivation against loneliness	Rating questions, miracle question technique	90-120 minutes	To create awareness about social adjustment-interaction against loneliness among group members	Ensure group members experience awareness of this topic by performing guidance about social adjustment-interaction against loneliness
3rd session	13	120 minutes	To ensure they become aware of times when they were successful and power sources, regulate negative feelings from a positive aspect during Internet use	Exceptions/rare situations technique, coping questions technique	90-120 minutes	To ensure awareness of positive and negative feeling during Internet use, awareness about feeling regulation	Group guidance about feeling regulation
4th session	13	120 minutes	To ensure awareness about time management in terms of healthy Internet use and interventions to procrastination behavior	Exceptions/rare situations technique, coping questions technique	90-120 minutes	To ensure awareness about time management and procrastination behavior	Group guidance about time management and procrastination behavior
5th session	13	120 minutes	To gain problem solving skills with awareness of recurrence and coping in terms of healthy Internet use	Reading the future technique, three chairs technique, exceptions/rare situations technique, coping questions technique	90-120 minutes	To ensure awareness about problem-solving skills	Group guidance about problems solving
6th session	13	120 minutes	To ensure assessment of the group process and end the process	Exception, encouragement	90-120 minutes	General assessment and closure	General assessment

RESULTS

Findings related to problematic Internet use of the solution-focused counseling group, guidance group and control group

Mixed ANOVA technique was used to test the first hypothesis of this study. However, before ANOVA was applied, ANCOVA was applied for Negative Consequences of the Internet (NCI) and Problematic Internet Use (Total), which differed between the pre-tests. When the pre-tests were controlled, the differences in the post-test scores according to the groups were evaluated with ANCOVA. The results are given in Tables 2, 3, 4 and 5.

As can be seen in Table 2, it was determined that the post-test scores differed significantly according to the groups after the pre-test scores were controlled for the analysis results ($F_{(2, 35)}$=11.85, p<.05, η_p^2=.40). Since the differentiation was determined, the post hoc test was applied to determine the differentiation between the groups. To determine the source of the difference, the 'Multiple comparisons with Bonferonni correction' test was performed. Obtained results are presented in Table 3.

As can be seen in Table 3, the Negative Consequences of the Internet results of the problem Internet use scale of the solution-focused group are significantly lower than the averages of the individuals in the control group with their post-test scores from this test. Similarly, ANCOVA was applied since the difference between the pre-tests of the problematic Internet use scale total scores was determined. When the pre-tests were controlled, the differences in the post-test scores according to the groups were evaluated with ANCOVA and the analysis results are given in Table 4.

As seen in Table 4, according to the results of the analysis, after controlling the pre-test scores of the problematic Internet use scale, it was determined that the post-test scores differed significantly according to the groups ($F_{(2,35)}$=14.94, p<.05, η_p^2=.46). Since the differentiation was determined, the post hoc test was applied to determine the differentiation between the groups. To determine the source of the difference, the 'Multiple comparisons with Bonferonni correction' test was performed. Obtained results are presented in Table 5.

As seen in Table 5, the problem Internet use scale post-test scores of the solution-focused group and the guidance group were significantly lower than the averages of the individuals in the control group. There is no significant difference between the guidance group and the solution-focused group. However, the solution-focused group had a higher post-test score. After controlling the pre-test scores for Negative Consequences of the Internet (NCI) and Problematic İnternet Use (Total), ANOVA analysis was started. The mean and standard deviation values of the pre-test, post-test, and follow-up test scores were calculated before ANOVA. The findings are given in Table 6.

Table 2. NCI - after controlling the pre-test scores, differentiation of the post-test scores by groups ANCOVA results.

Source of Variance	TS	DF	TS	F	P	η_p^2
Corrected Model	6453.79	3	2151.27	8.00	0.00	0.41
Intersection	510.68	1	510.68	1.90	0.18	0.05
Pre-test	42.67	1	42.67	0.16	0.69	0.01
Groups	6371.92	2	3185.96	11.85	0.00	0.40
Error	9409.80	35	268.85			

NCI: Negative Consequences of the Internet, R^2= .407 (Adjusted R^2= .356), TS: total squares, DF: degree of freedom, MS: mean squares, F: F test, P<.05, η_p^2: partial eta square.

Table 3. NCI - paired comparison (Bonferonni Corrected) test results of post-test scores of experimental and control groups.

(I) Groups	(J) Groups	Average Difference (I-J)	Standard Error	P
Solution-Focused Group	Guidance Group	-13.876	6.75	0.14
Solution-Focused Group	Control Group	-31.875*	6.55	0.00
Guidance Group	Control Group	-17.999	7.22	0.05

NCI: Negative Consequences of the Internet, P<.05.

As seen in Table 6, when the descriptive statistics of the Problematic Internet Use scale were examined, it was determined that there was a decrease in the post-test and follow-up tests compared to the pre-test scores. This

Table 4. PIU(T) - after controlling the pre-test scores, differentiation of the post-test scores by groups ANCOVA results.

Source of Variance	TS	DF	TS	F	P	η_p^2
Corrected Model	25204.70	3	8401.57	10.30	0.00	0.47
Intersection	855.67	1	855.67	1.05	0.31	0.03
Pre-test	24.35	1	24.35	0.03	0.86	0.00
Groups	24367.28	2	12183.64	14.94	0.00	0.46
Error	28547.19	35	815.63			

PIU(T): Problematic İnternet Use (Total), R^2= .469 (Adjusted R^2= .423), TS: total squares, DF: degree of freedom, MS: mean squares, F: F test, P<.05, η_p^2: partial eta square.

Table 5. PIU(T)- paired comparison (Bonferonni corrected) test results of post-test scores of experimental and control groups.

(I) Groups	(J) Groups	Average Difference (I-J)	Standard Error	P
Solution-Focused Group	Guidance Group	-27.759	11.53	0.06
Solution-Focused Group	Control Group	-62.561*	11.45	0.00
Guidance Group	Control Group	-34.802*	12.30	0.02

PIU(T): Problematic İnternet Use (Total), P < .05.

Table 6. Descriptive statistics related to pre-test, post-test and follow-up test points for the problematic internet use scale of experiment and control groups.

Scale	Measures	Solution-Focused Group		Guidance Group		Control Group	
		X	SD	X	SD	X	SD
NCI	Pre-test	59.54	9.48	66.08	9.21	55.62	7.30
	Post-test	18.54	2.11	33.23	19.86	49.92	19.72
	Follow-up	19.77	3.98	30.69	8.74	45.62	13.94
SB/SC	Pre-test	36.46	1.83	34.77	1.83	35.08	1.83
	Post-test	13.77	2.57	21.46	2.57	29.62	2.57
	Follow-up	13.23	2.08	20.77	2.08	29.69	2.08
EU	Pre-test	25.46	2.76	26.23	3.11	25.92	2.72
	Post-test	8.62	3.10	14.46	5.88	23.54	4.61
	Follow-up	8.08	2.53	16.31	4.40	22.92	4.65
PIU(T)	Pre-test	121.46	8.60	127.08	12.33	116.62	7.83
	Post-test	40.92	7.53	69.15	36.41	103.08	31.60
	Follow-up	53.15	11.86	68.54	16.14	98.23	27.35

NCI: Negative Consequences of the Internet, SB/SC: Social Benefit / Social Comfort, EU: Excessive Use, PIU(T): Problematic İnternet Use (Total).

decrease remained at low levels in the control group. ANOVA for mixed measures was used to assess whether this variation was statistically significant.

The ANOVA results for the "*Solution-focused Group Counseling Program to Increase Healthy Internet Use*", "*Group Guidance Program to Increase Healthy Internet Use",* and the control groups are presented in Table 7.

As seen in Table 7, the means for the pretest, posttest and follow-up tests for the problematic Internet use scale subdimensions and total points significantly differed from each other regardless of group. This continued to be important when group activity (interventions) was added. As a result, it was determined that pre-test, post-test and follow-up test differentiation occurred between the groups (NCI F(1.48, 2.97)=13.04, p<.05, ηp^2=.42; SB/SC F(1.49, 2.99)=7.63, p<.05, p<.05, ηp^2=.30; EU F(2, 4)=26.31, p<.05, ηp^2=.59; PIU(T) F(1.56, 3.12)=14.58, p<.05, ηp^2=.45). According to the partial eta square results in terms of problematic Internet use scale subdimensions and total points, this effectiveness was stated to be large. Analysis results also explored assessments between groups. According to these results, it was determined that the measurements differed between the groups (NCI F(1, 2)=13.46, p<.05, ηp^2=.43; SB/SC F(1, 2)=10.66, p<.05,

Table 7. Anova for mixed measures results for experiment and control groups.

Scale	Source of Variance	TS	DF	MS	F	*p*	η_p^2
NCI							
	Measure	19657.56	1.48	13248.91	97.27	0.00	0.73
Within Groups	Measure * Groups	5269.73	2.97	1775.86	13.04	0.00	0.42
	Error (Measure)	7275.39	53.41	136.21			
	Intersection	207481.44	1.00	207481.44	894.27	0.00	0.96
Between Groups	Groups	6244.43	2.00	3122.21	13.46	0.00	0.43
	Error	8352.46	36.00	232.01			
SB/SC							
	Measure	5108.22	1.49	3421.53	58.34	0.00	0.62
Within Groups	Measure * Groups	1336.75	2.99	447.68	7.63	0.00	0.30
	Error (Measure)	3152.36	53.75	58.65			
	Intersection	79665.03	1.00	79665.03	815.66	0.00	0.96
Between Groups	Groups	2082.53	2.00	1041.27	10.66	0.00	0.37
	Error	3516.10	36.00	97.67			
EU							
	Measure	2715.61	2.00	1357.80	153.31	0.00	0.81
Within Groups	Measure * Groups	932.03	4.00	233.01	26.31	0.00	0.59
	Error (Measure)	637.69	72.00	8.86			
	Intersection	42503.42	1.00	42503.42	1510.60	0.00	0.98
Between Groups	Groups	1980.33	2.00	990.16	35.19	0.00	0.66
	Error	1012.92	36.00	28.14			
PIU(T)							
	Measure	63904.82	1.56	40994.66	110.80	0.00	0.76
Within Groups	Measure * Groups	16820.67	3.12	5395.19	14.58	0.00	0.45
	Error (Measure)	20762.51	56.12	369.97			
	Intersection	920360.08	1.00	920360.08	1323.02	0.00	0.97
Between Groups	Groups	22723.44	2.00	11361.72	16.33	0.00	0.48
	Error	25043.49	36.00	695.65			

Note: Negative Consequences of the Internet, SB/SC: Social Benefit / Social Comfort, EU: Excessive Use, PIU(T): Problematic İnternet Use (Total), TS: total squares, DF: degree of freedom, MS: mean squares, F: F test, P<.05, η_p^2: partial eta square.

ηp^2=.37; EU F(1, 2)=35.19, p<.05, ηp^2=.66; PIU(T) F(1, 2)=16.33, p<.05, ηp^2=.48). Similarly, when the partial eta square results are examined between the groups, the intervention effect was found to have large effects on the measurements. In addition, Wilks'Lamda values were also examined for the intervention and time interaction effectiveness, and the obtained analysis results are given in Table 8.

According to Table 8, it is seen that the problematic Internet use scale shows a significant change over time (NCI Wilks' λ=.15, F(2,35) = 98.39; *p*<.001; SB/SC Wilks' λ=.314, F(2,35) = 38.18; *p*<.001; EU Wilks' λ=.137, F(2,35) = 110.05; *p*<.001; PIU(T) Wilks' λ=.163, F(2,35) = 89.60; p<.001). Similarly, measurement * group interaction effective were also found to be significant (NCI Wilks' λ=.456, F(4,70) = 8.42; *p*<.01; SB/SC Wilks' λ=.35, F(4,70) = 4.67; *p*<.01; EU Wilks' λ=.287, F(4,70) = 15.16; *p*<.01; PIU(T) Wilks' λ=.451, F(4,70) = 8.57; p<.01). With the aim of determining the source of the difference, the Bonferroni corrected multiple comparison test was performed. The obtained results are presented in Table 9.

According to Table 9, it was determined that the solution-focused group's problem Internet use scale pre-test and post-test score difference was higher than the other groups. It is seen that this difference is followed by the guidance group in the second place. In the control

Table 8. ANOVA results of the repetitive measurements according to wilks' lambda test.

Scale	Effectiveness	Wilks' λ	F	Sd	*P*	η_p^2
NCI	Measurement	0.151	98.39	2	0.00	0.85
	Measurement *Groups	0.456	8.418	4	0.00	0.33
SB/SC	Measurement	0.314	38.18	2	0.00	0.85
	Measurement *Groups	0.635	4.67	4	0.00	0.33
EU	Measurement	0.137	110.05	2	0.00	0.86
	Measurement *Groups	0.287	15.16	4	0.00	0.46
PIU(T)	Measurement	0.163	89.60	2	0.00	0.84
	Measurement *Groups	0.451	8.57	4	0.00	0.33

Note: Negative Consequences of the Internet, SB/SC: Social Benefit / Social Comfort, EU: Excessive Use, PIU(T): Problematic İnternet Use (Total), F: F-test, Sd: degrees of freedom, η_p^2:partial eta square.

Table 9. Two-way comparison (Bonferroni correction) test results of the groups' pre-test, post-test and follow-up test scores.

Scale	Groups	(I) Measurement	(J) Measurement	Difference	Standard Error	p
NCI	Solution-Focused Group	Pre-test	Post-test	41.000*	2.58	0.00
		Pre-test	Follow-up	39.769*	2.86	0.00
		Follow-up	Post-test	1.23	1.16	0.93
	Guidance Group	Pre-test	Post-test	32.846*	6.16	0.00
		Pre-test	Follow-up	35.385*	3.15	0.00
		Follow-up	Post-test	-2.54	4.26	1.00
	Control Group	Pre-test	Post-test	5.69	5.40	0.94
		Pre-test	Follow-up	10.00	4.36	0.12
		Follow-up	Post-test	-4.31	3.09	0.57
SB/SC	Solution-Focused Group	Pre-test	Post-test	22.692*	2.45	0.00
		Pre-test	Follow-up	23.231*	2.32	0.00
		Follow-up	Post-test	-0.54	0.27	0.20
	Guidance Group	Pre-test	Post-test	13.308*	3.61	0.01
		Pre-test	Follow-up	14.000*	2.25	0.00
		Follow-up	Post-test	-0.69	2.77	1.00
	Control Group	Pre-test	Post-test	5.46	3.08	0.30
		Pre-test	Follow-up	5.39	3.58	0.48
		Follow-up	Post-test	0.08	1.03	1.00
EU	Solution-Focused Group	Pre-test	Post-test	16.846*	1.03	0.00
		Pre-test	Follow-up	17.385*	0.87	0.00
		Follow-up	Post-test	-0.54	0.37	0.51
	Guidance Group	Pre-test	Post-test	11.769*	1.72	0.00
		Pre-test	Follow-up	9.923*	1.45	0.00
		Follow-up	Post-test	1.85	1.01	0.27
	Control Group	Pre-test	Post-test	2.39	1.02	0.11
		Pre-test	Follow-up	3.00	1.31	0.12

Table 9. Continues.

		Follow-up	Post-test	-0.62	1.22	1.00
	Solution-Focused Group	Pre-test	Post-test	80.538*	3.09	0.00
		Pre-test	Follow-up	68.308*	4.73	0.00
		Follow-up	Post-test	12.231*	3.72	0.02
PIU(T)	Guidance Group	Pre-test	Post-test	57.923*	11.03	0.00
		Pre-test	Follow-up	58.538*	5.91	0.00
		Follow-up	Post-test	-0.62	7.33	1.00
	Control Group	Pre-test	Post-test	13.54	8.38	0.40
		Pre-test	Follow-up	18.39	7.57	0.10
		Follow-up	Post-test	-4.85	3.94	0.73

Note: Negative Consequences of the Internet, SB/SC: Social Benefit / Social Comfort, EU: Excessive Use, PIU(T): Problematic İnternet Use (Total).

group, it was not determined that the pre-test and post-test scores did not differ. At the same time, no difference was found in any of the groups in the post-test and follow-up test. All results are given in Figure 1.

As seen in Figure 1, the pre-tests usually start close to each other. In the post-test, it was determined that the sharpest decrease was in the solution-focused group. Although there was a general decrease in the control group, it was found to be at a lower level compared to the other groups.

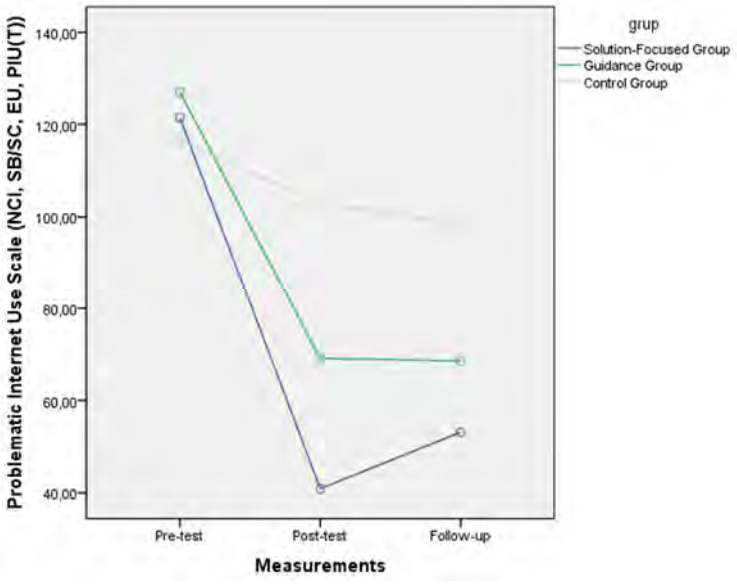

Figure 1. The problematic ınternet usage scale (NCI, SB/SC, EU, PIU(T)) mean scores and standard error graph of the solution-focused group, guidance group, and control group from pre-test, post-test, and follow-up measurements.

As a result, it was determined that the solution-focused group was effective in reducing the problematic Internet use of university students. In addition, it was determined that the guidance group was more effective than the control group in reducing the problematic Internet use of university students. However, it can be said that the solution-focused group is more effective in reducing the problematic Internet use of university students than the

guidance group.

Findings related to experiences of university students participating in the solution-focused group counseling program to increase health Internet use

The researchers requested that university students participating in the "*Solution-Focused Group Counseling Program to Increase Healthy Internet Use"* assess their experiences related to each session attended and to send their experiences in relation to using the Internet with healthier purposes after each session written in an e-mail before the next session. The researchers applied the content analysis technique to analyze the opinions sent by email and findings are given in Table 10.

As seen in Table 10, when experiences of group members related to the sessions are investigated, it appeared the categories (themes) like "awareness", "ability to use the Internet healthily", "increased auto control of Internet use", and "positive change" were frequently repeated. Throughout the program, the themes were "awareness", "ability to use the Internet healthily", "My Reasons for Using the Internet a lot", "Basic Needs", "Recognizing Environmental Supports to Say Enough", "Reducing Internet Usage Time", "Auto Control in Internet Usage' Increasing", "Peer Support", "Positive Change", but these six themes came to the fore in all sessions.

Table 10. Experiences related to solution-focused group counseling sessions.

Categories (Themes)	***Statements from interviews***
Awareness	*In fact, I noticed that even if I didn't want to fully leave the Internet, I could reduce my Internet use over time. My other friends in the group were like me and we are experiencing the same things like all the people in this room* (2nd female, 20)
	I noticed most people are Internet addicts. I felt that here people don't control the Internet, the Internet controls people. But I noticed that if we use the Internet in a measured way, we can increase our quality of life. (6th male, 22).
Ability to Use Internet Healthily	*I learned the ways to free myself of my addiction due to my group friends and our leader. I obtained an idea about healthy Internet use. The session helped me discover myself. It was a good experience to improve and develop myself. The most important acquirement for me in this session was to discover myself, it ensured I faced problems I was avoiding.* (4th female, 21).
	When I went outside I understood that I had learned many things, I learned how to cope with the Internet, that I won't allow it to imprison me, what solution-focused therapies are and that was very beneficial for me (3rd male, 20)
My reasons for excessive Internet use	*The days I use the Internet most are Saturdays and Sundays for 14-18 hours, this situation does not give me the opportunity to allocate time to my responsibilities* (4th male, 21)
	I became aware I use the Internet most on weekends, Saturdays and Sundays, for nearly 12 hours, weekends should be free (3rd female, 21)
Increase in autocontrol of Internet use	*I placed a new limit for myself to use the Internet more consciously, controlled and healthily, I made an effort. The power assisting me in succeeding with this was my belief and confidence in myself. That day I read a book and I learned new words* (1st male, 19)
	The most important acquirement from the session was that I learned you can live without the Internet, that I need to allocate time for myself, that I need to spend more time with my friends, with my family, that I can use my time to read books and do social activities not just on the Internet (5th male, 21)
Positive Change	*Generally what we learned from the first week to this week, what we worked on passed in front of me like a film strip, due to these sessions my Internet use has not just reduced; I've socialized and read books, progressed with my talking and diction and I think I can express myself better* (4th male, 21)
	I believe I use the Internet more efficiently with positive changes from the first session until now, before I wouldn't get up for hours from the computer watching irrelevant videos, I would skip from one video to another, but now the computer is not in my room (3rd male, 20)

DISCUSSION, CONCLUSION AND SUGGESTIONS

Conclusion and discussion of problematic Internet use of the psychological counseling group, guidance group and control group with solution-focused group

As a result of this research, a significant decrease was observed in the post-test scores of the Problematic Internet Use Scale dimensions of the university students who participated in the solution-focused group compared to the guidance group and the control group. In addition, it was observed that there was a significant decrease in the post-test scores of the Problematic Internet Use Scale dimensions of the university students participating in the guidance group compared to the control group. This differentiation in the groups continued to be effective in the follow-up measurements made 3 months after the completion of the application.

The reduction in problematic Internet use in the context of negative consequences of the Internet, social benefit/social comfort and excessive use with the "*Solution-focused Group Counseling Program to Increase Healthy Internet Use"* obtained in this research support the findings for the reduction in problematic Internet use obtained in solution-focused approach-based experimental research by Fang-ru and Wei (2005), Lien (2007), Tsai (2009), Mun et al. (2011), Busari (2016) and Zhang et al. (2020) when the relevant literature is investigated. The finding in a study by Fang-ru and Wei (2005) that participants significantly reduced time online on the Internet, is supported by the significant variations obtained in terms of the dimension of quitting an addiction for participants in a study by Lien (2007), the finding that participants had better control of time online on the Internet as a result of research completed by Tsai (2009) and the finding of reduced duration of Internet use and healthier use of the Internet by participants in a study by Zhang et al. (2020). This program may have assisted students in reorganizing themselves and strengthened them to discipline their Internet use habits. It may have assisted in deeper research into students' own resources and strong aspects and more functional use of the Internet by developing resistance to problematic Internet use and organization of daily experiences. An attempt was made to create a program that would offer the opportunity for participants to take action themselves about healthy Internet use and to assess Internet use from a more positive perspective.

Another alternative study to increase healthy Internet use in this study is group guidance. Although the guidance group was not as effective as the solution-focused group, it was determined that it was more effective than the control group that did not receive any treatment. Guidance group practices are not just work dominated by the group leader; it also includes activities based on the interaction of all group members with the group leader. In this way, as the sessions progressed, the sharing of group members with each other increased and this may have caused a decrease in their problematic Internet use. At this point, the guidance group in the research can be considered as an alternative to the solution-focused group and the psychological counseling group. However, in this study, the solution-focused group was more effective than the others. This result can be attributed to the nature of the solution-focused counseling approach, which enables the solution-focused sessions to progress more systematically and deeply, allowing group members to face their own characteristics and see their own potentials from a more optimistic perspective.

Additionally, techniques in the research focused on solution-based approaches for participants to develop skills on their own in relation to the topic to assist group members participating in the "*Solution-focused Group Counseling Program to Increase Healthy Internet Use"* to cope with problematic Internet use. As a result, though participants in the "*Group Guidance Program to Increase Healthy Internet Use"* had a reduction in problematic Internet use, this reduction developed in a more regular fashion for participants in the "*Solution-focused Group Counseling Program to Increase Healthy Internet Use"* and this can be said to be due to the direct application of the solution-focused counseling program.

Conclusion and discussion regarding the experiences of university students participating in the solution-focused group counseling program to increase healthy Internet use

When participants in the "*Solution-focused Group Counseling Program to Increase Healthy Internet Use"* shared their experiences and opinions of each session through email in the Internet environment, themes like 'awareness', 'ability to use the Internet healthily', 'my reasons for excessive use of the Internet', 'increased auto control of Internet use', and 'positive change' were frequently repeated.

These results revealing the significant effectiveness of a solution-focused group counseling program on reducing problematic Internet use supports findings of reductions in problematic Internet use obtained in solution-focused approach-based experimental research in the relevant literature (Fang-ru and Wei, 2005; Lien, 2007; Tsai, 2009; Zhang, Shi, Xu, Qiu, Turel and He, 2020). Additionally, the results about the experiences of participants in the "*Solution-focused Group Counseling Program to Increase Healthy Internet Use"* appear to be consistent with the quantitative results of the research. It may have assisted in disciplining Internet use habits through self-organization and renewed strengthening. In addition to assisting healthy Internet use, it may have contributed to preserving this change and be generalized to other areas of life.

In conclusion, this study showed the "*Solution-focused Group Counseling Program to Increase Healthy Internet Use"* was more effective compared to the "*Group Guidance Program to Increase Healthy Internet Use"*. However, these research results are limited to data from participants. The effect of group dynamics on the program is not examined in the results of this research. In future studies, the effect of group dynamics can be examined. The research is limited to university students. In terms of healthy internet use, healthy internet use programs can be developed for students in education levels such as high school and secondary school and students of different age groups. In addition, longitudinal studies can be carried out in order to make broader determinations about healthy internet use during the university period. In this research, studies to increase healthy internet use are limited to a solution-focused approach-based program and alternatively a guidance program. Programs for other psychological counseling approaches can be developed to increase healthy internet use. It can also be examined by comparing it with the programs in this research. The experiences of university students participating in the solution-focused group in this study regarding healthy internet use in sessions are limited to some questions. In addition, their experiences of healthy internet use were obtained only via e-mail. In another study, university students' experiences with healthy internet use can be examined with different methods.

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