



The Effect of the Psychoeducation Program and the Family Education for the Problematic Internet Prevention*

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| Article Information | ABSTRACT |
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| Received: 10.04.2020 | The purpose of this study is to assess the effectiveness of the group program based on Cognitive-Behavioral Counseling Theories for preventing internet addiction (adolescent education) and to investigate whether families' receiving education about internet addiction and safe internet use (family education) made any differences on the problematic internet use. The study also investigated the common effect of the education provided to both families and adolescents (family-adolescent education) on students' problematic internet use. The study adopted a quasi-experimental design; methodological triangulation method was applied by using the quantitative data with the qualitative data obtained from the interviews conducted with the families and the documents administered in the sessions. While the adolescent education group was provided with a ten-session "Internet Addiction Prevention Psychoeducation Program", the family education group was provided with a three-session education program on internet addiction and safe internet use; the students in the family-adolescent group were composed of the adolescents who received both education programs. The control group was not provided with anything. The findings obtained from the study showed that with the decrease in the problematic internet use levels, the family-adolescent education group demonstrated a significant decrease in the Online Social Interaction Preference and Emotion Regulation levels, and this finding was permanent. The problematic internet use and Negative Results level of adolescent education group decreased significantly, and this finding was found to be permanent. It was also found that the Negative Results level of the family education group decreased significantly, which was found to be permanent. |
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1. INTRODUCTION

The use of the internet has been widespread with the rapid developments in science and technology, and the internet has begun to occupy an important place in human life in a short time. The internet, which has come into people's lives with its many important features, has been a hot topic with its negative aspects due to the ways people use it. Various studies in the world have investigated the negative and unconscious problematic use of the internet. These studies report that particularly adolescents are in risk group in terms of the use of the internet (Cao and Su, 2007; Durkee et al., 2012; Hooi, 2010; Kuss, Griffiths, Karila and Billieux, 2013; Mossbarger, 2008; Yen, Yen, Chen, Chen and Ko, 2007). The use of the internet in Turkey is also increasing day by day. Turkish Statistical Institute (2021) data show that the proportion of internet users in the 16 to 77 age group is 82.6%, which is 79% more in comparison to the year 2020. As the statistical data show, the use of the internet has been increasing in Turkey every day, and excessive use of the internet among adolescents is reported to cause behavior problems such as problematic/pathological internet use or internet addiction (Ayas, Çakır and Horzum, 2011; Cengizhan, 2005; Zorbaz and Tuzgöl Dost, 2014).

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Review of the related literature shows that excessive internet use is defined with the terms such as "compulsive computer use" (Black, Belsare and Schlosser, 1999), "pathological internet use" (Davis, 2001), "problematic internet use" (Caplan, 2002), and "internet addiction" (Goldberg, 1999; Young, 1996). The concept, which was first put forward as "internet addiction" by Young (1996), was defined as "an impulse control disorder that does not involve an intoxicant" by adapting the gambling addiction criteria of DSM IV. Following Young, several researchers discussed the concept of internet addiction, attempted to define it, and investigated this issue by developing various tests (Anderson, 2001; Beard and Wolf, 2001; Brenner, 1997; Caplan, 2002; Davis, 2001; Griffiths, 1999; Kandell, 1998; Morahan-Martin and Schumacher, 2000; Shapira et al., 2003). Although each theorist offers specific explanations for internet addiction, it is possible to list the common diagnostic criteria of internet addiction as follows: The person stays on the internet longer than planned, has difficulty in controlling internet use, sees the internet as a tool to alleviate negative mood, feels nervous and restless, is busy with the internet even when not on the internet, has problems with the environment due to internet use and neglects his responsibilities.

1.1. Statement of the Problem

Researchers (Dinc, 2015; Young and Abreu, 2011) report that the development of prevention programs is a more urgent need than the treatment of internet addiction/problematic internet use because the efforts made for the treatment of internet addiction are only partially successful. Motivating individuals with internet addiction for treatment is rather difficult as long as they tend to deny their problems. Unless they are referred by their parents or teachers, they rarely ask for professional help. Therefore, mainly the importance of accelerating prevention studies in terms of research, practice, and dissemination is highlighted (Dinç, 2015; Young and Abreu, 2011). An analysis of the studies on the prevention of internet addiction/problematic internet use indicates a limited number of studies. The majority of the protection-prevention programs abroad are based on cognitive-behavioral techniques (Acier and Kern, 2011; Caldwell and Cunningham, 2010; Young and Abreu, 2011). In this regard, the Self-Management Training developed by Kwon and Kwon (2002) is a six-week protection-prevention program that involves activities such as identifying the rules in relation to internet use, decreasing internet use slowly by planning other activities in advance, receiving support from others, and learning to cope with stress. As for the protection-prevention program developed by Berdibayeva et al. (2016) for adolescents, the program involves seven sessions with a view to improving communication skills of adolescents who are prone to be internet addicts, increasing their self-respect, and decreasing their anxiety.

The game-control program prepared by Lee (2001) is a nine-session prevention program that is effective in decreasing internet addiction and that involves family education and cognitive reconstruction. Family education is composed of two sessions; the first session includes information about internet addiction and aims to teach how to cope with children's internet use. The second session (after the children's session is over) discusses what has changed and will remain changed and teaches how to develop coping strategies for the remaining problems. Studies on the prevention of internet addiction in Turkey are also limited. Korkmaz and Kiran-Esen (2012) taught students about safe internet use with ten sessions of peer education, and the students who received the training informed their peers in two sessions. Peker (2013) developed a human values-oriented psychoeducation program consisting of nine sessions for adolescents with problematic internet use and cyberbullying. Taş (2015) examined the effect of a ten-session psychoeducation program aimed at reducing psychological symptoms on internet addiction in adolescents. Berber Çelik (2016) conducted a study on increasing academic motivation and using time effectively through a five-session training program. Ataşalar (2017) designed the Digital Life Awareness Responsibility Program, which was planned as ten sessions to prevent problematic internet use and examined its effectiveness.

Internet addiction poses a greater risk to adolescents when the family environment is not suitable, parental attitudes are negative, and families do not show love and attention. (Lei & Wu, 2007; Li, Garland & Howard, 2014; Kuss & Griffiths, 2020). For this reason, it is very important for the family to be knowledgeable about both internet addiction and right family behaviors towards adolescents. Families also have important responsibilities in protecting children and adolescents from internet addiction. The roles of families about this issue can be divided into three: preventing internet addiction and the emergence of the problems it brings, recognizing the early signs of internet and computer addiction, and solving the problem if the internet and computer addiction have emerged (Ögel, 2014; p. 201). Although families have these kinds of duties, group work studies informing families are limited at both national and international levels. The program organized by Lee (2001) informed parents in two sessions, and the books written in our country about this issue give recommendations to parents (Dinç, 2010; Ögel, 2014). Therefore, there is a need for informative programs about internet addiction for families.

1.2. Purpose of the Study

As it is seen, although internet addiction/problematic internet use is an important problem among adolescents, the studies conducted about preventing this problem are inadequate. There is a need for psychoeducational studies for adolescents and parents, especially in Turkey. Therefore, the purpose of this study is to assess the effectiveness of the group program for preventing internet addiction (adolescent education) and the education given to families about internet addiction and safe internet use (family education) on the problematic internet use. The study also evaluated the common effect of the adolescent education program given to the adolescents themselves and the family-adolescent education program on students' problematic internet use.

1.3. Problem of the Study

In line with the purpose of the study, the following questions constituted the main problem of the study: "Is the group program for preventing internet addiction (adolescent education) effective in reducing problematic internet use?", "Does the education given to families about internet addiction and safe internet use (family education) on the problematic internet use make a difference on the problematic internet use?" and "What is the common effect of adolescent education program given to the adolescents themselves and the family-adolescent education program on students' problematic internet use?"

1.3.1. Sub-problems of the study

The following hypotheses were tested in line with the purposes:

Hypothesis 1) There is a significant difference between the "Generalized Problematic Internet Use Scale 2 (GPIUS 2)" and its sub-scales (Online Social Interaction Preference, Emotion Regulation, Inefficient Self-regulation, and Negative Results) pretest-posttest mean score differences of the family-adolescent education group and the control group in favor of the adolescents in the family-adolescent education group.

Hypothesis 2) There is a significant difference between the GPIUS 2 and its sub-scales (Online Social Interaction Preference/OSIP, Emotion Regulation/ER, Inefficient Self-regulation/IS, and Negative Results/NR) pretest-posttest mean scores differences of the adolescent education group and the control group in favor of the adolescents in the family-adolescent education group.

Hypothesis 3) There is a significant difference between the GPIUS 2 and its sub-scales (OSIP, ER, IS and NR) pretest-posttest mean scores differences of the family education group and the control group in favor of the adolescents in the family-adolescent education group.

Hypothesis 4) There are no significant differences between the GPIUS 2 and its sub-scales (OSIP, ER, IS and NR) posttest and follow-up test scores of the family-adolescent education group.

Hypothesis 5) There are no significant differences between the GPIUS 2 and its sub-scales (OSIP, ER, IS and NR) posttest and follow-up test scores of the adolescent education group.

Hypothesis 6) There are no significant differences between the GPIUS 2 and its sub-scales (OSIP, ER, IS and NR) posttest and follow-up test scores of the family education group.

2. METHODOLOGY

This study utilized a quasi-experimental design, an experimental design with a "pretest-posttest experimental model with a control group". In the quasi-experimental design with a pretest-posttest with a control group, participants are administered measurements regarding the dependent variables before and after the experimental design (Karasar, 2009). The triangulation method was utilized as the study was conducted in two phases as qualitative and quantitative. Triangulation refers to the investigation of the same topic using various research methods in tandem. This study utilized methodological triangulation by using numeric data obtained from quantitative research methods and the documents used in the sessions and qualitative data obtained from the interviews conducted with the families. The symbolic representation of the quasi-experimental design with the pretest-posttest control group is shown in Table 1.

Table 1

Symbolic Representation of Quasi--Experimental Design with Pretest-Posttest Control Group Used in the Study

| | | | | | |
|----|--------|---|--------|---|--------|
| G1 | M 1.1. | X | M 1.2. | t | M 1.3. |
| G2 | M 2.1. | | M 2.2. | t | M 2.3. |

G1: Experimental group

G2: Control group

M 1.1.: Premeasurement of the experimental group

M 2.1.: Premeasurement of the control group

X: Internet addiction prevention training group applications

M 1.2.: Final measurement of the experimental group

M 2.2.: Final measurement of the control group

t: Four-week break

M 1.3.: Experiment group follow-up test

M 2.3. Control group follow-up test

2.1. Participants

The participants of the study were 28 students enrolled in ninth and tenth grade in a high school located in Hatay/İskenderun in the 2017-2018 education year and 14 mothers/fathers who volunteered to participate in the study. The study was conducted in the school where the researcher worked as a psychological counselor, and it was chosen in order to manage the study process more easily. The researcher who worked in the institution as a psychological counselor visited the ninth and tenth-year students with a view to identifying the volunteer students to participate in the study, gave information about the study, and asked the students to fill in the GPIUS-2. She stated that she would conduct a pre-interview with the students who filled in the data collection tools and administer the Personal Information Form. The Personal Information Form, which aimed to investigate the factors that might affect the study results, included various questions such as whether the students previously participated in a study aiming to prevent problematic internet use, whether they received any psychiatric treatments, and whether they were exposed to any traumatic events. The Internet Addiction Prevention Psychoeducation Program was conducted to 14 students (6 females and 8 males) who got the highest scores in the GPIUS 2, who volunteered to participate in the study, who did not receive any psychiatric treatments, and who did not have any severe recent traumas. The remaining 14 students (5 females and 9 males) were not administered the psychoeducation program.

Permission was obtained from the parents of these 28 adolescents for participating in the study, and the parents who wanted to participate in the family information group were chosen. Totally 14 parents (3 fathers and 11 mothers) volunteered to receive parent education about the prevention of internet addiction and safe internet use. In this regard, while the adolescents were administered the Internet Addiction Prevention Psychoeducation Program, the families were administered an informative program about the prevention of internet addiction and safe internet use. The group in which only the adolescent received an education but not his/her family was called the "adolescent education group". In this group, 6 students received an education but their families did not. The group in which only the families but not the adolescents received an education was called the "family education group". In this group, 6 students' families received an education but the students themselves did not. The group in which both the families and the adolescents themselves received an education was called the "family-adolescent education group". This group included 8 students whose families and themselves received an education. The group in which neither the adolescent nor the family received an education was called the "control group", and this group included 8 students.

An analysis of the distribution of the students according to gender indicated that there were 3 females and 5 males in the family-adolescent group, 3 females and 3 males in the adolescent education group, 3 females and 3 males in the family education group, and 2 females and 6 males in the control group. Totally 11 females (39.3%) and 17 males (60.7%) participated in the study. The average age of the family-adolescent group was 15.5, the average age of the adolescent education group was 15.16, the average age of the family education group was 15.5, and the average age of the control group was 15.75.

Kruskal Wallis-H Test was performed in order to identify whether there were differences in the family-adolescent education, adolescent education, family education groups and the control group pretest scores of the GPIUS 2 and sub-scales [Online Social Interaction (OSIP), Emotion Regulation (ER), Inefficient Self-Regulation (ISR), Negative Results (NR)]. No significant differences were found between the students' GPIUS 2 total scores and OSIP, ER, ISR and NR sub-scales mean ranks ($X^2 (3)= .151, p>.05$; $X^2 (3)= .307, p>.05$; $X^2 (3)= 1.512, p>.05$; $X^2 (3)= 1.774, p>.05$; $X^2 (3)= 3.494, p>.05$ respectively). These results suggest that the family-adolescent education group, adolescent education group, family education group, and the control group were equal to each other in terms of the GPIUS 2 and sub-scale scores.

An analysis of the demographic features of the mothers/fathers who received education showed that a total of 14 parents, 3 fathers, and 11 mothers participated in family education. Of these parents, 8 had children who received The Internet Addiction Prevention Psychoeducation Program, and others' children received no education. The age range of the mothers/fathers in the group was between 36 and 58, and the average age was 41.79. The mothers in the group did not work anywhere; the fathers worked. There were differences between the education levels of the mothers and fathers in the group. While one participant did not graduate from any school, 7 participants graduated from primary school, 1 participant graduated from secondary school, 3 participants graduated from high school, and 2 participants had an associate degree.

2.2. Data Collection Tools

2.2.1. Personal Information Form

The form was prepared by the researcher to identify the psychological history of the students who wanted to participate in the psychoeducation program. Some of these questions included "Have you ever received support/help from any psychologists or counseling centers?", "Have you experienced a traumatic event recently (separation, death, natural disaster, etc)?". If your answer is "Yes", what kinds of reflections have you experienced in your life?".

2.2.2. Student Interview Form

The interview forms were administered in order to identify whether the students who wanted to receive the psychoeducation program were suitable for participating in the group. The interview form was prepared by the researcher. The form included

information about the psychoeducation program to be conducted as well as the rules. In addition, the students to be involved in the group were identified through questions such as "In this group, there will be students who have difficulties in controlling the use of the internet. Are you willing to share your life with these students?", "What do you want to achieve in this group?", "What contributions will you have for this group?", "Do you think you will be able to follow the rules of the group?"

2.2.3. Generalized Problematic Internet Use Scale 2 (GPIUS 2)

The scale prepared by Caplan (2010) is the updated and revised version of the Generalized Problematic Internet Use Scale (GPIUS) prepared by Caplan (2010). GPIUS 2 is collected under four structures: : (1) Online Social Interaction Preference (Preferring online social interaction instead of face to face interaction), (2) Emotion Regulation (Using the internet with a view to making changes in negative emotional states), (3) Inefficient Self-Regulation (involving compulsive use and cognitive occupation sub-scales. Inefficiency in one's regulating or controlling online behaviors and constant occupation of the mind with the internet), (4) Negative Results (Experiencing personal, social and professional problems caused by internet use).

The original scale is composed of 15 items rated on a scale ranging from 1 (I totally disagree) to 8 (I totally agree). Results of the confirmatory factor analysis performed for the reliability of the original scale showed that the scale was collected under five sub-scales (Online Social Interaction, Emotion Regulation, Compulsive Internet Use, Cognitive Occupation, and Negative Results); and two sub-scales (Compulsive Internet Use and Cognitive Occupation) were collected under one sub-scale called "Inefficient Self-Regulation". The reliability of the original scale was found by calculating Cronbach's Alpha Coefficient. While the Cronbach's Alpha Reliability coefficient of the whole scale was .91, it was .82 for the "Online Social Interaction" sub-scale, .86 for the "Emotion Regulation" sub-scale, .86 for the "Cognitive Occupation" sub-scale, .87 for the "Compulsive Internet Use" sub-scale, and .83 for the "Negative Results" sub-scale.

Turkish adaptation of the scale was published as an article (Canoğulları Ayazseven and Cenkseven Önder, 2019). As the study would be conducted with adolescents, the scale was decreased from 8-point to 5-point Likert type ("I totally disagree", "I disagree", "I am not sure", "I agree", and "I totally agree" options). The relationship coefficient between the total scores of the Turkish and English forms was found to be positive and significant [$r=.93; p<.001$]. The four-factor structure obtained as a result of the confirmatory factor analysis was found to have good compatibility levels [$\chi^2/df = 174.63/80 = 2.18$; RMSEA=.05; SRMR=.05; CFI=.97; NNFI=.95; GFI=.96; AGFI=.93]. On the other hand, positive, low-level, significant relationships were found between the Online Social Interaction sub-scale and Emotion Regulation and Inefficient Self-regulation (.12 and .15 respectively). However, a significant relationship was found between the Online Social Interaction sub-scale and the Negative Results sub-scale ($r=.03, p<.05$). Positive, significant relationships were found between the Emotion Regulation sub-scale and Inefficient Self-regulation and Negative Results sub-scales (.39 and .15 respectively). There was a medium-level, positive, significant relationship between the Inefficient Self-regulation and Negative Results sub-scales ($r=.52, p<.05$). These values indicate that the four-structure model of the scale shows good compatibility.

The relationship between the scores of the Brief Symptom Inventory Depression Sub-scale and Young Internet Addiction Test Short Form was investigated in order to test the criterion validity of the scale. Positive, significant relationships were found between GPIUS 2 total score and Inefficient Self-regulation, Cognitive Occupation, Compulsive Internet Use sub-scales and depression [$r=.19, r=.70, r=.23, r=.85; p<.001$ respectively]. A positive, significant relationship was found between GPIUS 2 total score and Online Social Interaction, Emotion Regulation, Inefficient Self-Regulation, Cognitive Occupation, Compulsive Internet Use, and Negative Results sub-scales [$r=.57, r=.22, r=.43, r=.60, r=.56, r=.38, r=.20; p<.001$, respectively]. Cronbach's Alpha internal consistency values of the sub-scales were .51 for the Social Interaction sub-scale, .83 for the Emotion Regulation sub-scale, .88 for the Inefficient Self-Regulation sub-scale, .73 for the Negative Results sub-scale, and .85 for the whole scale. In conclusion, the Turkish form of GPIUS 2 was found to be a valid and reliable scale that can be used with high school students with a view to identifying the tendency to problematic internet use.

2.2.4. Focus Group Interview Form

The parents who were involved in the education program were interviewed. The interviews aimed to obtain qualitative data together with quantitative data. The questions asked in the interviews aimed to find out the effectiveness of the psychoeducation program on internet addiction and safe internet use, overall attainments of the program, the effectiveness of the education practices provided, and the effectiveness of the psychoeducation provided to the students.

2.2.5. The Critical Incidents Questionnaire

The Critical Incidents Questionnaire (CIQ) was developed by Kivlighan and Goldfine (1991) and translated to Turkish by Çolakkadioğlu (2010). The form was composed of two questions, and it was administered to the members of the group after each session. For instance, one of the questions was "What do you think you have gained from this incident or experience in The Internet Addiction Prevention Psychoeducation Program group session today (1st session)?".

2.2.6. Group-Related Measures Form

The Group-related Measures Form (GRMF) was developed by DeLucia-Waack (2006) and translated to Turkish by Çolakkadioğlu (2010). The rater reliability was performed by analysing the forms filled by the researcher and the expert using Kappa statistics. The first measurement inter-rater kappa values ranged from .70 to .82, the final measurement Kappa values ranged from .52 to .86, the kappa values for the first evaluator ranged from .52 to .91, and the intra-evaluator kappa values ranged from .50 to .94. According to these results, it was seen that the agreement levels of the items were sufficient. The form was used by the group leader in order to evaluate the behaviors of the members in the psychoeducation group. The form measures 9 behaviors rated on a 5-point Likert scale from 0 to 4. Each member receives a minimum of 0 and a maximum of 40 points in ten sessions. While higher scores indicate that the group members benefit from that session, 20 points is taken as the cut-off point. While the highest score to be obtained from the psychoeducation program conducted with 14 members is 56, the lowest score is 0. As 28 was taken as the cut-off point, the scores above 28 indicate that the sessions reached their goals (Çolakkadioğlu, 2010).

2.2.7. Evaluation Form at the End of Group by Members

The Evaluation Form at the End of Group by Members (EFGEM) was developed by DeLucia-Waack (2006) and translated to Turkish by Çolakkadioğlu (2010). The form consisted of 8 items responded by the group members in the psychoeducation groups after the sessions ended, and it involved the general evaluation of all sessions. Six items in the form were responded on a 3-point Likert Scale including 1 (Yes), 2 (No), and 3 (I do not know), but 2 items are composed of open-ended questions assessed qualitatively. The scores to be obtained from the scale range between 6 and 18. Higher scores indicate that the group members achieve higher attainments from the sessions and find the group process beneficial.

2.3. Scope and Content of the Internet Addiction Prevention Psychoeducation Program

The general purpose of the Internet Addiction Prevention Psychoeducation Program is to plan alternative activities for adolescents in the risk group by decreasing their frequency of using the internet and to help them develop social skills and cope with automatic thoughts by learning the sources of these automatic thoughts causing internet addiction. The Internet Addiction Prevention Psychoeducation Program developed based on Cognitive Behavioral Counseling Theories is a group counseling program for helping adolescents aged between 14 and 17 to plan their internet use habits more effectively. The program provides information about what internet addiction is, in what cases it is experienced, and how it develops. It also provides adolescents with information about its cognitive, behavioral and emotional aspects. In addition, it helps adolescents to keep internet use under control and use it in a more planned way by raising awareness about the negative results of excessive internet use on life.

The prevention of internet addiction psychoeducational program involves topics such as recognising internet addiction, learning about the advantages and disadvantages of the internet, identifying the group purposes, identifying students' internet use purposes and finding alternative activities instead of the internet, learning A-B-C-D-E-F in problematic internet use, learning breathing and muscle stretching exercises, safe internet use, and planning time effectively. Group sessions were developed by the first researcher and revised in line with the opinions of five different experts. Books and articles about the treatment and prevention of internet addiction were utilized when the prevention of internet addiction group practices were formed (Kalkan and Kaygusuz, 2013; Kodaman and Dinc, 2016; Young, 1999; Young and Abreu, 2011). The group practices that involved the Cognitive Behavioral Counseling Theories and cognitive-behavioral techniques (Beck, 2001; Gümüş, 2010; Hackney and Cormier, 2005; Leahy, 2007; Selçuk and Güner, 2004).

The prevention of internet addiction psychoeducational program prepared based on the Cognitive Behavioral Counseling Theories was planned as 10 sessions; the practices were piloted first. The researcher applied the Generalized Problematic Internet Use Scale 2 to the 9th-grade students and involved 12 students who received high scores from the scale. At the end of the pilot study, it was observed that the students had difficulties in understanding some of the sessions that included cognitive exercises and got bored, and some of the sessions were too long. Therefore, more detailed studies were conducted in some of the sessions, and some of the points that were identified were improved and the group practices were made ready. The sessions were planned as 60 minutes. The procedures in the sessions were as follows:

First session: The purpose of the first session is to meet the group members, explain the purpose of the program, learn the group rules, learn the advantages of using the internet and introduce the subject of internet addiction. Like at the beginning of the psychoeducation groups, the session started with introduction and group rules. For disclosure, the sessions continued with the importance of the internet in students' life and the advantages of internet use (Abreu and Goes, in press; in Young and Abreu, 2011). Then the slight show prepared in the scope of Turkish Fight against Addiction Education (TFAAE) by Kodaman and Dinc (2016) was used as an introduction to the issue of internet addiction. The form prepared by the researcher in order to record students' daily internet use was assigned by the researcher to be filled in the next session.

Second Session: The purpose of the second session is to learn the disadvantages of internet use and identify group goals. , the disadvantages of internet use were discussed through the complaints from their family members or friends (Abreu and Goes, in e-ISSN: 2536-4758

press; in Young and Abreu, 2011). The students were asked to prepare a card in which they would write about five fundamental problems caused by their internet use and five fundamental benefits they might get by ceasing internet use (Young, 1999). This activity aimed to make students focus on decreasing the internet use. "My Goals" activity was conducted to identify what students wanted to change in their lives by participating in the group sessions (Hackney and Cormier, 2005). The students were assigned to look at the cards they prepared and start to apply their goals when they want to connect to the internet.

Third Session: The purpose of the third session is to help students to determine their purpose of internet use and to identify alternative activities instead of internet. After the assignments were received, students' internet use goals were identified, and they were asked to identify alternative activities that would meet these goals. The students were asked to prepare a list of things they ignored due to internet use (Young, 1999). They were then assigned to do the most important activity in this list at least once by the following week.

Fourth Session: The purpose of the fourth session is to learn the effect of negative automatic thoughts on internet addiction by explaining problematic internet use with the A-B-C (Action-Belief-Conclusion) Model. After the assignments were received, explanations were made about the presence of dysfunctional thoughts that accompanied problematic internet use; internet-related sample cases prepared by the researcher were shared so that the students could understand the A (Action)- B (Belief)- C (Conclusion) Model, and the students were asked to respond to the questions prepared in the form. Then they were presented with sample cases about the negative automatic thoughts (Gümüş, 2010) so that they could understand negative automatic thoughts better. The effect of negative automatic thoughts on internet addiction was explained to the students through a form prepared by the researcher by benefitting from Kalkan and Kaygusuz (2013) and Young (2011). For the assignment, the students were administered a form (Leahy, 2007) that they could note down the starting action, belief and conclusion about internet addiction.

Fifth Session: The purpose of the fifth session is to test the negative automatic thoughts that cause internet addiction. After the assignments were received, the students were asked to fill in the "Automatic Thoughts Assessment Form" (Beck, 2001; Hackney and Cormier, 2005). The form aimed to test whether negative automatic thoughts about internet addiction were correct or not. The same form was assigned as homework at the end of the session, and the students were asked to test other negative automatic thoughts, if any.

Sixth Session: The purpose of the sixth session is to help students develop realistic positive thoughts instead of negative automatic thoughts. After the assignments were received, sample cases were shared by the leader to develop realistic positive thoughts instead of negative automatic thoughts; the A (Action)- B (Belief)- C (Conclusion)- D (Discussion against irrational thoughts)-E (effect)- F (fresh emotion and behavior) Model was instructed (Altunkol, 2017; Hackney and Cormier, 2005). Once the A-B-C-D-E-F Model was reinforced with commercials, the students were asked to fill in the form in order to develop counter-arguments against the internet-related negative thoughts (Leahy, 2007). While some parts were filled during the session, some parts were assigned to be filled at home.

Seventh Session: The purpose of the seventh session is to help students learn impulse control and emotion management related to internet access using breathing and muscle stretching-relaxation exercises. After the assignments were received, the students were instructed deep breath meditation and progressive muscle relaxation, and the practices were performed (Relaxation techniques, t.y.). They were asked to apply these exercises at home as well with a view to enabling impulse control and emotion management).

Eighth Session: The purpose of the eighth session is to help students learn the skills to limit internet use and use the time effectively. With the questions regarding limiting internet use indicated by Young (1999), the students were given some recommendations by receiving answers regarding internet use. The students were required to list the tasks they undertook for using time effectively (Selçuk and Güner, 2004) and prepare a weekly plan in which they would fulfill their tasks as assignments.

Ninth Session: The purpose of the ninth session is to help students learn about safe internet use. The students who had difficulty in preparing a weekly plan worked on preparing a plan again. In addition, the students were shown a video about safe internet use and provided with some explanations.

Tenth Session: The purpose of the tenth session is to evaluate session purposes and end the sessions. Each group member's personal files were reviewed in order to see the extent to which they reached the goals they set at the beginning of the session, and the session goals were assessed. Then the session was ended with the "Love Bombardment" activity.

2.4. The Scope and Content of the Education given to the Families about the Prevention of Internet Addiction and Safe Internet Use

The education given to the families about the prevention of internet addiction and safe internet use was an informative group program prepared for improving the communication skills of the families with their children and raising awareness about safe internet use. The program provides families with information about what internet addiction is, when it is experienced, how it

develops, how it continues, and what the cognitive, behavioral and emotional dimensions are. By strengthening intra-family communication, it helps them to control adolescents' internet use and use the internet in a more planned way.

The Family Education program involves topics such as recognizing internet addiction, learning the advantages and disadvantages of the internet, determining group goals, learning the effect of family communication on internet addiction, explaining the appropriate and inappropriate behaviors related to the internet, giving information about safe internet use, developing coping strategies about the remaining problems, learning problem solving skills, and identifying activities as an alternative to the internet use.

The group practices included techniques and exercises for enabling families to evaluate their emotions and thoughts about their children's problematic internet use from different viewpoints by sharing them with the group members, to support each other, and to apply the skills they learned in the group environment at home as well. Sources such as books and articles about the treatment and prevention of internet addiction and the features of the adolescence period and family-adolescent communication were utilized while the Internet Addiction Prevention Psychoeducation Program and Safe Internet Use was formed, (Barossi, Meira, Goes and Abreu, 2009; Erkan, 2006; Gordon, 2007, 2016; İnanç, Bilgin and Atıcı, 2008; Kalkan and Kaygusuz, 2013; Kodaman and Dinç, 2016). The education given to the families was planned as 3 sessions in two-week intervals, and the sessions took about 110 minutes. The process was as follows in the sessions:

First Session: Once the families met with each other and with the group leader, the group rules were explained by giving information about the purpose and function of the group. Parent Booklet 1 was prepared by the researcher by utilizing the Turkish Fight against Addiction Education Program (Kodaman and Dinç, 2016). The booklet was administered to the families, and some explanations were made through a slight show. The families were instructed the relationship between intra-family communication and internet addiction and given information about the "Adolescent Period and Communication Skills with Adolescents" through the Parent Booklet 2 (Campell, 2007; Deniz, 2007; İnanç, Bilgin and Atıcı, 2008; Gordon, 2007, 2016). The parents were asked to read this booklet and strengthen communication with their children. In addition, they were administered a form developed by the researcher so that they could observe their children's internet use until the next session.

Second Session: After the assignments were received, children's internet-related inappropriate behaviors were evaluated (Barossi, Meira, Goes and Abreu, 2009). The families were asked a number of questions for assessing this (McElhaney, 2011; in Kalkan and Kaygusuz, 2013) and instructed how they would be a model for their children by not reinforcing the behaviors that they responded as "yes". The "Internet Use Contract" developed by Kalkan ve Kaygusuz (2013) was administered to the families, and the families were asked to write down their responsibilities about their children's internet use. Then the families were informed about the dangers that might be encountered on the internet (Canberk and Sağıroğlu, 2007) as well as how they should use the internet safely through a video called "Safe Life-Safe Internet" (www.eba.com). The families were asked to sign the "Parent Commitment" (sakarya.meb.gov.tr, Conscious, Safe CT and Internet Use) and apply the tasks about internet use until the next session.

Third Session: After the assignments were received, the parents were asked which cases about their children's internet use habits did not change and remained as a problem, and write down the methods they could develop in order to cope with these problems and share them with the group (Lee, 2001). Then the "Six-Step Problem Solving Method" (Erkan, 2006) was introduced to the families, and they were recommended to use these steps when they had problems with their children. Then the families were asked to take common decisions about their and their children's internet use and think of the activities they would enjoy as a family. After these kinds of activities were explained by the group leader with examples, each group member was asked to plan and apply a weekly cultural activity. The researcher thanked all the members of the group and ended the session.

2.5. Data Collection and Analysis

Ethics committee approval (Çukurova University Social Sciences Institute Ethics Committee, 08/02/2018-E.22705) and necessary permissions were received from the Provincial Directorate of National Education. Once the researcher identified the students and parents to work with, she formed a "Family Information and Acceptance Form" in order to inform the families to be involved in the Internet Addiction Prevention Psychoeducation Program about the content of the program and ask for their permission for the students to be involved in the study. Consent was received from the students and parents.

Pretest and posttest data collected from the GPIUS-2 from the adolescent education group, family education and family-adolescent education group and the control group were analyzed using the Mann Whitney U Test and Kruskal Wallis-H test for the sub-problems of the study. While these analyzes were performed, the differences between the pretest-posttest arithmetic mean scores of the GPIUS-2 and its subscales (online social interaction preference, emotion regulation, inadequate self-regulation and negative results) were examined. Posttest data collected from the GPIUS-2 and the sub-scales and follow-up test data from the adolescent education, family education and family-adolescent education groups were analyzed for the sub-problems of the study using the Wilcoxon Signed Ranks Test. Data were analyzed using SPSS 17.

The qualitative aspect of the study included document analysis by compiling the Critical Incidents in Group Work Form filled by the experimental group members and the Evaluation Form at the end of Group by Members, and Group-Related Measures Forms filled by the group leader. Document analysis includes the analysis of the written materials that include information about the case (s) targeted (Balci, 2005). Data collected from the focus group interviews conducted with the mothers and fathers were analyzed using content analysis. Prior to content analysis, the interviews were listened from the voice records and transformed into written texts. Converting interview records into written texts was done by the researcher herself. A 14-page document was obtained in total. Then the data coding process was started, which included the formation of the code lists according to the answers given to each question in the written text. The themes that could explain these codes under specific categories were found. The similarities and differences of the codes that emerged in the thematic coding were identified, and the codes that brought the related codes were identified. Expert opinions were received in the phases of forming and reporting the coding list and themes.

3. FINDINGS

Firstly, descriptive values of the groups were analyzed. For this, standard deviation and arithmetic mean values were examined. Table 2 demonstrates the arithmetic mean and standard deviation values of the pretest, posttest and follow-up test scores of the students in the family-adolescent education, adolescent education and family education groups and the control group in the Generalized Problematic Internet Use Scale 2 and its sub-scales.

When Table 2 is examined, it is noteworthy that there are differences between the mean scores of pretest and posttest measurements of the families and the students who received education and the control group, which did not receive any education. Whether the differences between these scores were significant were examined by using Mann Whitney U Analysis. The findings are presented in the order of the hypotheses in the research.

Table 2.

Arithmetic Average and Standard Deviation Values Regarding the Pretest, Posttest and Follow-Up Test Scores of the Family-Adolescent Education, Adolescent Education, Family Education Groups and Control Group Participants from the GPIUS-2 and its Sub-Scales

| Scales | Family-Adolescent Education | | | | | | Adolescent Education | | | | | |
|-------------------------|-----------------------------|------|----------------|----------|----------------|-------|----------------------|-------|----------------|---------------|----------------|-------|
| | Pretest | | Posttest | | Follow-Up Test | | Pretest | | Posttest | | Follow-Up Test | |
| | X ² | Ss | X ² | Ss | X ² | Ss | X ² | Ss | X ² | Ss | X ² | Ss |
| GPIUS 2 | 57.38 | 4.68 | 34.37 | 12.08 | 38.62 | 16.37 | 57.83 | 2.56 | 38.83 | 13.45 | 37.66 | 13.03 |
| OSIP | 11.25 | 2.54 | 7.12 | 3.04 | 7.62 | 4.20 | 10.66 | 2.87 | 10.83 | 3.43 | 8.66 | 3.44 |
| ER | 12.50 | 3.02 | 6.50 | 3.25 | 7.50 | 3.96 | 12.33 | 1.86 | 8.16 | 4.35 | 8.16 | 4.26 |
| ISR | 24.25 | 3.10 | 12.12 | 5.11 | 13.37 | 6.11 | 22.33 | 4.03 | 13.33 | 5.35 | 13.50 | 5.68 |
| NR | 9.37 | 3.92 | 8.12 | 4.54 | 9.75 | 4.52 | 12.00 | 2.19 | 7.16 | 3.48 | 7.33 | 3.14 |
| Family Education | | | | | | | | | | | | |
| Scales | Pretest | | | Posttest | | | Follow-Up Test | | | Control Group | | |
| | X ² | Ss | X ² | Ss | X ² | Ss | X ² | Ss | X ² | Ss | X ² | Ss |
| GPIUS 2 | 55.83 | 9.38 | 40.00 | 6.63 | 40.66 | 19.89 | 58.37 | 10.66 | 51.75 | 10.75 | 48.25 | 14.11 |
| OSIP | 11.00 | 3.16 | 8.66 | 2.58 | 9.16 | 3.43 | 11.37 | 2.32 | 10.87 | 1.95 | 11.00 | 3.85 |
| ER | 11.50 | 4.81 | 9.16 | 2.92 | 8.33 | 4.13 | 13.62 | 1.68 | 12.50 | 1.93 | 11.87 | 2.69 |
| ISR | 21.33 | 3.67 | 14.66 | 3.61 | 14.83 | 9.90 | 23.75 | 5.52 | 17.87 | 6.85 | 17.00 | 8.15 |
| NR | 12.00 | 2.36 | 8.16 | 2.63 | 8.50 | 4.32 | 9.75 | 3.28 | 10.62 | 3.20 | 9.00 | 3.54 |

GPIUS 2= Generalized Problematic Internet Use Scale 2

OSIP = Online Social Interaction Preference

ER= Emotion Regulation

ISR = Inefficient Self-Regulation

NR= Negative Results

3.1. Findings about the Differences Between Pretest and Posttest Arithmetic Mean Scores of the Family-Adolescent Education, Adolescent Education and Family Education Group and Control Group in the GPIUS-2 and Its Sub-Scales

Table 3 demonstrates findings about the differences between the pretest and posttest arithmetic mean scores of the Generalized Problematic Internet Use Scale 2 and its sub-scales (Online Social Interaction Preference, Emotion Regulation, Inefficient Self-Regulation and Negative Results). An analysis of Table 3 shows that differences between the pretest and posttest arithmetic mean scores of the family-adolescent education group and control group were statistically significant in the Generalized Problematic Internet Use Scale 2 ($U = 10.50$, $p < .05$) and the "Online Social Interaction Preference" ($U = 8.00$, $p < .05$) and "Emotion Regulation" ($U = 11.00$, $p < .05$) sub-scales. The significant difference was found to be in favor of the family-adolescent education group. No significant difference was found between the mean scores of the family-adolescent education group and control groups in the "Inefficient Self-Regulation" ($U = 20.00$, $p > .05$) and "Negative Results" ($U = 22.00$, $p > .05$) sub-scales.

Table 3.

Results of Mann Whitney U Analysis on the Differences Between Pretest and Posttest Mean Scores of the Family-Adolescent Education, Adolescent Education and Family Education Group and Control Group in the GPIUS-2 and Its Sub-scales

| Scales | Groups | N | Mean Rank | Sum of Ranks | U |
|----------------|-----------------------------|---|-----------|--------------|--------|
| GPIUS 2 | Family-Adolescent Education | 8 | 5.81 | 46.50 | |
| | Control | 8 | 11.19 | 89.50 | 10.50* |
| OSIP | Family-Adolescent Education | 8 | 5.50 | 44.00 | |
| | Control | 8 | 11.50 | 92.00 | 8.00* |
| ER | Family-Adolescent Education | 8 | 5.88 | 47.00 | |
| | Control | 8 | 11.13 | 89.00 | 11.00* |
| SR | Family-Adolescent Education | 8 | 7.00 | 56.00 | |
| | Control | 8 | 10.00 | 80.00 | 20.00 |
| NR | Family-Adolescent Education | 8 | 7.25 | 58.00 | |
| | Control | 8 | 9.75 | 78.00 | 22.00 |
| GPIUS 2 | Adolescent Education | 6 | 4.83 | 29.00 | |
| | Control | 8 | 9.50 | 76.00 | 8.00* |
| OSIP | Adolescent Education | 6 | 7.67 | 46.00 | |
| | Control | 8 | 7.38 | 59.00 | 23.00 |
| ER | Adolescent Education | 6 | 6.25 | 37.50 | |
| | Control | 8 | 8.44 | 67.50 | 16.50 |
| ISR | Adolescent Education | 6 | 6.83 | 41.00 | |
| | Control | 8 | 8.00 | 64.00 | 20.00 |
| NR | Adolescent Education | 6 | 3.92 | 23.50 | |
| | Control | 8 | 10.19 | 81.50 | 2.50* |
| GPIUS 2 | Family Education | 6 | 5.58 | 33.50 | |
| | Control | 8 | 8.94 | 71.50 | 12.50 |
| OSIP | Family Education | 6 | 6.42 | 38.50 | |
| | Control | 8 | 8.31 | 66.50 | 17.50 |
| ER | Family Education | 6 | 6.33 | 38.00 | |
| | Control | 8 | 8.38 | 67.00 | 17.00 |
| ISR | Family Education | 6 | 7.50 | 45.00 | |
| | Control | 8 | 7.50 | 60.00 | 24.00 |
| NR | Family Education | 6 | 4.75 | 28.50 | |
| | Control | 8 | 9.56 | 76.50 | 7.50* |

Note: *p<0.05

GPIUS 2= Generalized Problematic Internet Use Scale 2

OSIP = Online Social Interaction Preference

ER= Emotion Regulation

ISR = Inefficient Self-Regulation

NR= Negative Results

It was found that differences between the pretest and posttest arithmetic mean scores of the adolescent education group and control group in the GPIUS-2 ($U = 8.00$, $p < .05$) and the "Negative Results" sub-scale ($U = 2.50$, $p < .05$) were significantly different from each other. The significant difference was found to be in favor of the adolescent education group. No significant difference was found among the mean scores of the adolescent education group and control group in the "Online Social Interaction Preference" ($U = 23.00$, $p > .05$), "Emotion Regulation" ($U = 16.50$, $p > .05$), and "Inefficient Self-Regulation" sub-scales ($U = 20.00$, $p > .05$).

The differences between the pretest and posttest arithmetic mean scores of the family education group and control group in the "Negative Results" sub-scale ($U = 7.50$, $p < .05$) were found to be significantly different from each other. The significant difference was in favor of the family education group. No significant difference was found among the mean scores of total score of the GPIUS-2 ($U = 12.50$, $p < .05$) and the "Online Social Interaction Preference" ($U = 17.50$, $p > .05$), "Emotion Regulation" ($U = 17.00$, $p > .05$) and "Inefficient Self-Regulation" ($U = 24.00$, $p > .05$) sub-scale scores of the family education group and control group.

3.2. Findings about the Posttest and Follow-up test Scores of the Family-Adolescent Education, Adolescent Education and Family Education Group in the GPIUS-2 and Its Sub-Scales

Table 4 demonstrates the findings about the posttest and follow-up test scores of the groups in the GPIUS-2 and its sub-scales (Online Social Interaction Preference, Emotion Regulation, Inefficient Self-Regulation and Negative Results). An analysis of Table 4 shows that there is no significant difference among the posttest and follow-up test scores of total score of the GPIUS-2 ($Z = -.986$; $p > .05$) and the "Online Social Interaction Preference" ($Z = .000$; $P > .05$), "Emotion Regulation" ($Z = -.542$; $p > .05$), "Inefficient Self-Regulation" ($Z = -1.190$; $p > .05$) and "Negative Results" ($Z = -.763$; $p > .05$) sub-scale scores of the students of family-adolescent education group. No significant difference was found among the posttest and follow-up test total scores of

the GPIUS-2 ($Z=-.314$; $p>.05$) and the "Online Social Interaction Preference" ($Z=-.674$; $p>.05$), "Emotion Regulation" ($Z=-.135$; $p>.05$), "Inefficient Self-Regulation" ($Z=-.105$; $P>.05$) and "Negative Results" ($Z=.000$; $p>.05$) sub-scales in the adolescent education group. There was also no significant difference among the posttest and follow-up test scores of the GPIUS-2 ($Z=-.314$; $p>.05$) and the "Online Social Interaction Preference" ($Z=-.378$; $p>.05$), "Emotion Regulation" ($Z=-.420$; $p>.05$), "Inefficient Self-Regulation" ($Z=-.210$; $p>.05$) and "Negative Results" ($Z=-.106$; $p>.05$) sub-scale scores of the students in the family education group.

Table 4.

Results of Wilcoxon Signed Ranks Test Analysis on the Posttest and Follow-up test Scores of the Family-Adolescent Education, Adolescent Education and Family Education Group in the GPIUS-2 and Its Sub-Scales

| Post Test/Follow-up Test | Ranks | N | Mean Rank | Sum of Ranks | Z |
|------------------------------------|---------------|---|-----------|--------------|-------|
| Family-Adolescent Education | | | | | |
| GPIUS 2 | Negative Rank | 3 | 3.67 | 11.00 | -.986 |
| | Positive Rank | 5 | 5.00 | 25.00 | |
| | Equal | 0 | | | |
| OSIP | Negative Rank | 4 | 3.50 | 14.00 | .000 |
| | Positive Rank | 3 | 4.67 | 14.00 | |
| | Equal | 1 | | | |
| ER | Negative Rank | 2 | 2.75 | 5.50 | -.542 |
| | Positive Rank | 3 | 3.17 | 9.50 | |
| | Equal | 3 | | | |
| ISR | Negative Rank | 2 | 3.50 | 7.00 | - |
| | Positive Rank | 5 | 4.20 | 21.00 | 1.190 |
| | Equal | 1 | | | |
| NR | Negative Rank | 2 | 4.75 | 9.50 | -.763 |
| | Positive Rank | 5 | 3.70 | 18.50 | |
| | Equal | 1 | | | |
| Adolescent Education | | | | | |
| GPIUS 2 | Negative Rank | 3 | 3.67 | 11.00 | -.986 |
| | Positive Rank | 5 | 5.00 | 25.00 | |
| | Equal | 0 | | | |
| OSIP | Negative Rank | 4 | 3.50 | 14.00 | .000 |
| | Positive Rank | 3 | 4.67 | 14.00 | |
| | Equal | 1 | | | |
| ER | Negative Rank | 2 | 2.75 | 5.50 | -.542 |
| | Positive Rank | 3 | 3.17 | 9.50 | |
| | Equal | 3 | | | |
| ISR | Negative Rank | 2 | 3.50 | 7.00 | - |
| | Positive Rank | 5 | 4.20 | 21.00 | 1.190 |
| | Equal | 1 | | | |
| NR | Negative Rank | 2 | 4.75 | 9.50 | -.763 |
| | Positive Rank | 5 | 3.70 | 18.50 | |
| | Equal | 1 | | | |
| Family Education | | | | | |
| GPIUS 2 | Negative Rank | 3 | 4.00 | 12.00 | -.314 |
| | Positive Rank | 3 | 3.00 | 9.00 | |
| | Equal | 0 | | | |
| OSIP | Negative Rank | 3 | 3.33 | 10.00 | -.674 |
| | Positive Rank | 2 | 2.50 | 5.00 | |
| | Equal | 1 | | | |
| ER | Negative Rank | 2 | 3.50 | 7.00 | -.135 |
| | Positive Rank | 3 | 2.67 | 8.00 | |
| | Equal | 1 | | | |
| ISR | Negative Rank | 3 | 3.33 | 10.00 | -.105 |
| | Positive Rank | 3 | 3.67 | 11.00 | |
| | Equal | 0 | | | |
| NR | Negative Rank | 2 | 2.50 | 5.00 | .000 |
| | Positive Rank | 2 | 2.50 | 5.00 | |
| | Equal | 2 | | | |

GPIUS 2= Generalized Problematic Internet Use Scale 2

OSIP = Online Social Interaction Preference

ER= Emotion Regulation

ISR = Inefficient Self-Regulation, NR= Negative Results

3.3. Findings about the Observations of the Group Leader on the Experiences in Sessions of the Group Members Who Participated in the Internet Addiction Prevention Psychoeducation Program

In order to evaluate the Internet Addiction Prevention Psychoeducation Program developed by using Cognitive-Behavioral Therapy techniques, the group leader observed the behaviors of the group members by using the "Group-Related Measures Form". The behaviors of the group members were limited to the items stated in the form. Abbreviations such as S.1, S.2, S.3... etc. were used for the sessions in the research. Abbreviations such as GM. 1, GM. 2, GM. 3 etc. were used for the group members who were observed. As a result of the group leader's observations, the scores obtained from the "Group-Related Measures Form" in each session, the total scores of 10 sessions and the total scores of each session are given in Table 5. For the sessions where some participants did not participate, the average of the sessions in which the participants attended was calculated by recording the average value indicated in parentheses.

Table 5.

As a Result of the Group Leader's Observations, the Scores of the Group Members in the Group-Related Measures Form, The Total Scores of All Sessions and The Total Scores of Each Session

| Members | S.1 | S.2 | S.3 | S.4 | S.5 | S.6 | S.7 | S.8 | S.9 | S.10 | Total |
|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-------|
| GM. 1 | 3.55 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 3.44 | 4.0 | (3.88) | 4.0 | 38.87 |
| GM. 2 | (2.97) | 2.77 | 3.11 | 3.11 | 3.11 | 2.66 | 3.0 | 2.77 | (2.97) | 3.22 | 29.69 |
| GM. 3 | 2.88 | 2.66 | 3 | 2.66 | 2.77 | 2.44 | (2.9) | 3.33 | 3.0 | 3.33 | 28.97 |
| GM. 4 | 2.66 | 3.44 | (3.46) | 3.66 | 3.44 | 3.77 | 3.44 | 3.88 | 3.55 | 3.33 | 34.63 |
| GM. 5 | 3.11 | 3.66 | 3.66 | 3.66 | 3.66 | 3.0 | 4.0 | 3.33 | 3.55 | 3.77 | 35.4 |
| GM. 6 | 2.66 | 3.66 | 3.11 | 2.88 | 3.0 | 4.0 | 3.22 | 3.66 | 3.0 | 3.44 | 32.63 |
| GM. 7 | 3.0 | 3.44 | 2.66 | 2.66 | 2.55 | (2.76) | 2.11 | (2.76) | 2.55 | 3.11 | 27.6 |
| GM. 8 | 3.55 | 3.77 | 3.77 | 4.0 | 4.0 | 4.0 | 3.0 | 3.77 | 3.77 | (3.73) | 37.36 |
| GM. 9 | 3.11 | 3.44 | 3.66 | 3.44 | 3.0 | 3.0 | 2.44 | 2.88 | 2.77 | 3.88 | 31.62 |
| GM. 10 | 3.0 | 3.66 | 3.33 | 3.22 | 3.33 | 3.66 | 3.66 | 3.44 | 3.44 | 3.33 | 34.07 |
| GM. 11 | 3.0 | 3.11 | 3.11 | 3.0 | 3.22 | 3.22 | 3.22 | (3.21) | 3.33 | 3.66 | 32.08 |
| GM. 12 | 3.11 | 3.22 | 3.33 | 3.66 | 3.66 | 2.77 | 3.66 | 3.33 | 3.44 | 3.88 | 34.06 |
| GM. 13 | 2.66 | 3.22 | 3.33 | 3.33 | 3.22 | 2.88 | 3.55 | 3.33 | 3.22 | 3.77 | 32.51 |
| GM. 14 | 2.77 | 3.22 | 3.66 | 3.55 | 3.0 | 3.66 | 2.77 | 2.77 | 2.88 | 3.77 | 32.05 |
| Total | 42.03 | 47.27 | 47.19 | 46.83 | 45.96 | 45.82 | 44.41 | 46.46 | 45.35 | 50.22 | |

An analysis of Table 5 shows that the total average scores which the group members obtained from the Group-Related Measures Form in each session are 20 and above. This shows that the group members achieved the attainments of the sessions and benefit from the group process. In addition, average scores of above 32 in each session might indicate that the goals of the sessions were achieved.

3.4. Findings on the General Opinions of the Group Members Participating in the Internet Addiction Prevention Psychoeducation Program

At the end of the tenth session, the experiences of the group members were evaluated with the "Evaluation Form at the End of Group by Members" in order to assess the effect of the Internet Addiction Prevention Psychoeducation program activities developed using Cognitive-Behavioral Therapy techniques. Since the sixth and eighth items in this form are open-ended questions, they are examined by document analysis. The questions asked to evaluate the general views of the Internet Addiction Prevention Psychoeducation program, the responses of the group members, and the frequencies of the responses are given in Table 6.

Table 6

Questions to Evaluate the General Opinions of the Group Members Participating in the Internet Addiction Prevention Psychoeducation Study, Responses of Group Members and Frequencies of Answers

| | Yes | No | I don't know |
|---|-----|----|--------------|
| Internet Addiction Prevention Psychoeducation group helped students to feel better. | 1 | | 1 |
| Internet Addiction Prevention Psychoeducation group helped students to reveal their emotions. | 1 | | 4 |
| Internet Addiction Prevention Psychoeducation group helped students to learn new things about family, friends and teachers. | 1 | 1 | 1 |
| Internet Addiction Prevention Psychoeducation group helped me to control my internet use. | 1 | | 2 |
| The leader of the group managed the Internet Addiction Prevention Psychoeducation group well. | 1 | | |
| I will tell my friends to join the Internet Addiction Prevention Psychoeducation group. | 1 | | |

An analysis of Table 6 shows that the members of the experimental group answered all the questions. When the opinions of the group members about the Internet Addiction Prevention Psychoeducation group practices were examined, 13 members answered "yes" and 1 member answered "I don't know" to "Internet Addiction Prevention Psychoeducation group helped

students to feel better". 10 members answered "yes" and 4 members answered "I don't know" to "Internet Addiction Prevention Psychoeducation group helped students to reveal their emotions." 12 members replied "yes", 1 member replied "no" and 1 member replied "I don't know" to "Internet Addiction Prevention Psychoeducation group helped students to learn new things about family, friends and teachers". 12 members answered "yes" and 2 members answered "I don't know" to "Internet Addiction Prevention Psychoeducation group helped me to control my internet use". All group members answered "yes" to "The leader of the group managed the Internet Addiction Prevention Psychoeducation group well." and "I will tell my friends to join the Internet Addiction Prevention Psychoeducation group". The results show that the group members have positive opinions about the Internet Addiction Prevention Psychoeducation group practices. Table 7 presents the two open-ended questions and answers given by the group members in the "Evaluation Form at the End of Group by Members".

Table 7

Group Members' Answers to Open-Ended Questions in the Evaluation Form at the End of Group by Members and Frequencies of Answers

| Questions | Answers | Frequencies (f) |
|--|--|-----------------|
| 1. What I learned at the end of the Internet Addiction Prevention Psychoeducation group? | I learned how to reduce the internet and use the internet safely. | 9 |
| | I learned to access the internet only for homework, to keep social media confidential and not to communicate with people we do not know. | 4 |
| | I learned to do nice things when I didn't use the internet. Like studying, traveling, spending time with my family. | 4 |
| | I learned to use the internet regularly. | 4 |
| 2. My recommendations for better functioning of the Internet Addiction Prevention Psychoeducation group? | I learned that using the Internet too much is harmful. | 2 |
| | It was fine, I have no suggestions. | 7 |
| | It is a good idea not to include students who speak a lot to the group. | 5 |
| | I'm going to recommend the study to other friends. | 2 |

As shown in Table 7, the question "What I learned at the end of the Internet Addiction Prevention Psychoeducation group?" was answered as follows: "I learned how to reduce the internet and use the internet safely." by 9 members, "I learned to access the internet only for homework, to keep social media confidential and not to communicate with people we do not know." by 4 members, "I learned to do nice things when I didn't use the internet; for instance studying, traveling, spending time with my family.", by 4 members, "I learned to use the internet regularly." by 4 members, and "I learned that using the Internet too much is harmful." by 2 members. "My recommendations for better functioning of the Internet Addiction Prevention Psychoeducation group" was answered as follows: "It was fine, I have no suggestion." by 7 members "It is a good idea not to involve students who speak a lot to the group." by 5 members, and "I'm going to recommend study to other friends." by 2 members. An analysis of the answers of the group members showed that the students reduced their internet use and used the internet more regularly, learned to use the internet safely, spent more time with their family and started to study more at the end of the Internet Addiction Prevention Psychoeducation group experience.

3.5. Qualitative Findings of Parents' Post-Training Opinions about Internet Addiction and Safe Internet Use

After the training given to 14 mothers and fathers about the prevention of internet addiction and the safe internet use, a focus group discussion was conducted to examine the opinions of the families about this training. A total of 9 parents, 2 fathers and 7 mothers, participated in the focus group interview. The parents were asked 6 questions in the focus group interview and their responses are briefly summarized in this section. The number of times the answers given to the questions asked to the parents are stated in parenthesis as numerical data. Since the parents gave more than one answers to some questions, the sum of the numbers in parentheses may be higher than the parents participating in the interview.

At the end of the focus group interview with the families, it was found that most of the families were both upset because of the ending of the group sessions (6) and happy to learn new things (6). At the end of the training given to the families, the families stated that their gains from the process are learning to communicate and interact effectively with children (9), using the internet consciously (4) and learning to spend time with the family (2). The families were asked the question "How do you plan to put into practice what you learn in the group in your daily life?"; they answered that they would do so by teaching what they learned to people around them (5), by listening to the children more (3) and by acting together in the family. (3). When the opinions of the families regarding the effectiveness of the educational practices given to families were examined, it was seen that families' communication with their children was strengthened (6), their approach to their children changed (3) and they learned to use the internet safely (2). Lastly, when the parents were asked what they wanted to say about the study, they stated that it would be better to join the education together with their children(7) to give children education about internet addiction (2), and to make educational studies more frequently (2).

4. RESULTS, DISCUSSION AND RECOMMENDATIONS

4.1. Discussion and Interpretation of the Qualitative and Quantitative Findings in relation to the Problematic Internet Use of the Adolescent Education Group

Statistical analyses regarding the relevant hypotheses showed that the Internet Addiction Prevention Psychoeducation Program had a significant effect on the problematic internet use and Negative Results scores of the students in the adolescent education group, and the permanence of this effect was found to continue in the follow-up measurement.

Treatment and prevention of internet addiction programs based on Cognitive Behavioral Therapy methods involve topics such as learning to keep daily records of internet use, learning time management strategies; recognizing the benefits and harms of the internet; increasing self-awareness and awareness of others, and awareness about the environment; identifying the triggers of extreme behaviors on the internet such as specific internet applications, emotional state, incompatible thoughts, and life events and learning how to change them; learning impulse control and emotion management related to internet access using muscle or breathing-relaxation exercises; improving interpersonal relations and interaction skills; and improving interest in alternative activities (Kwon and Kwon 2002; Lee, 2001; Young, 2007, 2011). Parallel to the theoretical knowledge, intervention sessions used in the study and the group sessions utilized techniques for decreasing the participants' internet use, ice-breaking activities for preparing them for the sessions, and support activities for strengthening the communication within the group, which made the group sessions effective for the students. In addition, the assignments given contributed to the improvement of the members by enhancing the information presented in the sessions and the practices. The "Evaluation Form at the end of Group by Member" indicated that after the Internet Addiction Prevention Psychoeducation Program experience, the students reduced their internet use, used the internet more regularly, learned to use it safely, spent more time with their family, and started to study more. Considering the study findings and the students' statements, the program was found to have effects on students, and this effect was found to be permanent.

An analysis of the experimental studies on the prevention of internet addiction (Ataşalar, 2017; Berber Çelik, 2016; Berdibayeva et al., 2016; Dicle, 2018; Han, Kim, Lee and Renshaw 2012; Kim, 2008; Liu et al., 2015; Li et al., 2017; Neverkovich et al., 2018, Park, Kim and Lee, 2014; Rooij, Zinn, Schoenmakers and Mheen, 2012; Peker, 2013; Shek, Tang and Lo, 2009; Shek, Yu, Leung, Wu and Law, 2016; Taş, 2015) indicates that this result is in line with the literature. These studies also reported that the interventions focusing on preventing internet addiction had effects on reducing adolescents' internet use. The study also showed that the Internet Addiction Prevention Psychoeducation Program had significant effects on the students' Negative Results sub-scale scores, and this effect was found to be permanent in the long term. In the Generalized Problematic Internet Use Scale 2, Negative Results are defined as "experiencing personal, social and professional problems caused by the internet use" (Caplan, 2010). One of the diagnosis criteria of internet addiction, as mentioned in the Negative Results sub-scale, is experiencing problems at work, in lessons, with families and friends, etc due to internet use (Baubeta et al., 2015; Caplan, 2002, 2010; Demetrovics et al., 2008; Goldberg, 1999; Meerkerk et al., 2009; Shapira et al., 2003; Tao et al., 2009; Young, 1996). Therefore, the students who were involved in the psychoeducation program were given a session for identifying alternative activities instead of using the internet (3rd session). In this session, the students stated that they ignored their families, friends, sports activities, lessons, and playing games out. In this regard, the students were assigned to do the activities they ignored. In the Critical Incidents Form applied at the end of the third session, the majority of the students stated that they wanted to do social and sports activities instead of the internet", and in the following session (4th session) mentioned in the group that they became more interested in their families, friends, and courses. This session in the psychoeducation program seemed to have led to a decrease in the students' Negative Results scores and the permanence of this decrease.

4.2. Discussion and Interpretations of the Quantitative and Qualitative Findings in relation to the Problematic Internet Use of the Family Education Group

The results of the statistical analyses performed in accordance with the hypotheses tested showed that the prevention of internet addiction and safe internet use group work performed with the families had significant effects on the students' Negative Results sub-scale of the problematic internet use, and this effect was found to continue in the follow-up measurement as well.

The prevention of internet addiction and safe internet use group work focused on the activities for helping families to spend more time with their children and strengthen their communication. An analysis of the related literature shows that adolescents who spend time with their family and have strong family bonds and communicate with their family easily are less likely to have internet addiction (Chen, Li, Bao, Yan, Zhou, 2015; Cho and Cheon, 2005; Ding, Li, Zhou, Dong and Luo, 2017; Li, Garland and Howard, 2014; Soh, Chew, Koay and Ang, 2018; Xu et al., 2014). Although no significant decrease was found in the students' problematic internet use in the family education group, there was a decrease in the problems they experienced with their families, which is in line with several studies in the literature. The results of the focus group interviews performed with the families about the effectiveness of the education practices on internet addiction and safe internet use indicated that the parents thought effective communication with the children made changes, they began to speak with their children in a more calm manner, they started to give importance to their children's ideas, and they set their children free instead of limiting them. Based on these results, it can be concluded that the education given to the families of adolescents who had problematic internet use might decrease the personal, social, and professional problems caused by internet use. In the study conducted by Barossi, Meira,

Goes, and Abreu (2009) on adolescent families, an empathetic relationship was found to develop between parents and children, contributing to the development of common solutions to adolescents' problems related to excessive internet use with their parents. This study also revealed that, similar to previous research, family education improves the communication between parents and adolescents. It was also found that even only informing families is effective in reducing internet use.

4.3. Discussion and Interpretations of the Quantitative and Qualitative Findings in relation to the Problematic Internet Use in the Family-Adolescent Education Group

The results of the statistical analyses about the related hypotheses showed that the "GPIUS 2" total score was significantly lower in favor of the group in which both the students and the families received education, and this case was found to continue in the follow-up test. The focus group interviews conducted with those who volunteered to receive family education indicated that the education provided to the families of the adolescents who had problematic internet use was effective, the families were happy about the education they received, and they reported to establish more effective communication with their children. The families reported that the education they received was beneficial in terms of giving importance to their children's ideas, having common decisions together, learning safe internet use, and spending quality time with their children. Once the communication between the family and children got stronger after the education received, there was a decrease in children's internet use.

Studies reported that the relationship between family and adolescents was an important factor in the problematic internet use drew attention to this issue (Lee and Chae, 2007; Li, Garland and Howard, 2014; Xu et al., 2014). These studies indicated that adolescents who had difficulty in establishing communication with their family were more likely to have internet addiction. It was also reported that strong family ties and intra-family trust environment decreased adolescents' risky internet use (Chen, Li, Bao, Yan, Zhou, 2015; Cho and Cheon, 2005; Ding, Li, Zhou, Dong ve Luo, 2017; Lei ve Wu, 2007; Soh, Chew, Koay ve Ang, 2018). The findings of this study are in line with these results. The education program given to the families included activities that helped families to learn the importance of intra-family communication on internet addiction and gain effective communication skills for having more effective communication with their children. A brochure was prepared for this purpose, and the families were encouraged to apply what they learned in the family environment as well. The focus group interviews showed that the parents could limit their children more easily as they learned to establish more effective communication and how to use the internet more safely.

Yen et al. (2007) compared the family functions of adolescents who had internet addiction with those who had drug addiction and found similarities between the groups. Therefore, they claimed that internet addiction should be considered as a behavioral symbol that disturbs family functions and parent-adolescent conflict. Therefore, a family-based preventive approach is recommended in order to prevent internet addiction in adolescents who have intra-family risk factors (Xin et al., 2018). The six-session multiple family group therapy was found to be effective in decreasing adolescents' internet addiction behaviors. As the family support system is critical in maintaining the effects of the intervention, encouraging positive parent-adolescent interaction and dealing with the adolescents' psychological needs could be preventive for internet addiction (Liu et al., 2015). This study also showed that involving children in the education program together with the families in order to prevent internet addiction made more differences in students' internet addiction levels and some sub-scales (Online Social Interaction Preference, Emotion Regulation).

This study also found that the "Emotion Regulation" and "Online Social Interaction Preference" sub-scale scores decreased significantly in the family-adolescent group in which both the adolescents and the families received education, and this case was found to continue in the follow-up test. In the Generalized Problematic Internet Use Scale 2 "Emotion regulation" was defined as "using the internet in order to get rid of negative emotions", and Online Social Interaction Preference is defined as "preferring online social interaction instead of face to face interaction" (Caplan, 2010). In this regard, it can be concluded that the group in which both the family and the adolescents received education began to use the internet less in order to get rid of negative emotions, and they started to prefer face to face interaction instead of online interaction. This case could be related to the factors such as using Cognitive-Behavioral Therapy techniques in the student sessions and students' sharing their emotions with their family thanks to the stronger ties they began to have with their family.

This study has a number of limitations. The participants in the study group were composed of 9th and 10th grade students who were enrolled in a vocational high school in Hatay, and the generalizability of the findings obtained from this study is limited with students and families who had similar conditions. The effect of the individual characteristics of the participants and culture are also among the limitations of the study. Besides, as the study was conducted in one school, there are some limitations to its external validity. The Internet Addiction Prevention Psychoeducation Program was limited with 10 sessions, and the follow-up sessions were limited with the measurements taken from the posttest conducted in 30-day intervals.

A number of recommendations regarding research and practice could be made based on the results of the study. The Internet Addiction Prevention Psychoeducation Program developed and applied in this study and Safe Internet Use and Decreasing Problematic Internet Use education developed and applied for the families of adolescents who had internet addiction are recommended to be prepared as a booklet or a document for counselors and other experts working in the field of psychological support. The Internet Addiction Prevention Psychoeducation Program used in this study should be tested individually through a study after necessary changes are made so that it could be used for individual practice as well. As the Internet Addiction

Prevention Psychoeducation Program was found to have no significant effects on students' Emotion Regulation, Online Social Interaction, and Inefficient Self-Regulation sub-scales, more comprehensive and long-term psychoeducation programs that include face to face communication skills, emotion regulation skills and cognitive techniques could be prepared and tested. Common sessions involving families and adolescents together could be organized, and the internet addiction levels after the sessions could be compared with the levels before the sessions.

Research and Publication Ethics Statement

Ethics committee permission was obtained for the research and the research was carried out in accordance with ethical rules.

Contribution Rates of Authors to the Article

Authors contributed to the study of fifty percent and fifty percent.

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The authors have no conflict of interest with any author.

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