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The Effect of the Cognitive Behavioral Therapy Based Cyberbullying Prevention Program¹

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Abstract

A school-based program of cognitive behavioral therapy was evaluated in a randomized control study of 158 secondary school students ages 12-14 years. The program was delivered for 40 minutes, for 5 weeks. Students completed questionnaires assessing their's cyber bullying behaviours and cognitions immediately before and following the 5-week period. Experimental and control groups were compared with t-test, intra-group comparisons were performed by covariance analysis. Additionally, focus group interviews were conducted with 12 students in the experimental group and the effectiveness of the psychoeducation program was evaluated in depth. It has been concluded that the cognitive behavioral cyberbullying prevention program had a positive effect on cyberbullying behaviors. Additionally, qualitative data showed that prevention program reached its aim to cope with cyberbullying. For future works, it is recommended to disseminate prevention programs for a more effective fight against cyberbullying and to include other parties such as families and schools into such programs.

Keywords: Cyberbullying, Bullying, Cognition, Prevention Program, Secondary School Students.

1. Introduction

Peer bullying (Olweus, 1994), which has attracted the attention of scientists for almost half a century and has been the subject of various studies, has taken the name of cyberbullying by adopting a new shape with the development and spread of technology since the first quarter of 2000s (Hinduja and Patchin, 2009). Cyberbullying is defined as "repeated hostile behaviors showed by an individual or a group aiming to hurt or disturb others through electronic or digital technologies" (Tokunaga, 2010). The most common cyberbullying behaviors are online fighting, harming, denigration, impersonation, deception, exclusion, and cyber-harassment (Willard, 2007).

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Being common among children and young people both in the world (Brochado, Soares, and Fraga, 2016) and Turkey (Ayas and Horzum, 2012; Bayram and Saylı, 2013), cyberbullying negatively affects the individuals' education life regardless of their age group, country, and culture. Also, it leads to social, psychological, academic, and interpersonal problems for children and young people (Erdur-Baker ve Topçu, 2013). Therefore, preventive interventions against cyberbullying, awareness raising, and prevention studies that will be made before the problem arises are important steps in the fight against cyberbullying. As a matter of fact, the prevalence of bullying behaviors, which was 28% in the USA in 2005, has decreased to 22% thanks to the applied prevention programs (Musu-Gillette, Hansen, Chandler, ve Snyder, 2015) and the programs have been found to be effective in reducing bullying behaviors by approximately 25%. Farrington and Ttofi (2009) reported as a result of their systematic literature review that peer bullying prevention programs reduce bullying rates between 20% and 23% and victimization rates between 17% and 20%.

Cyberbullying has common features with peer bullying in terms of both its prevalence (Li, 2007; Paez, 2016) and its effects (Olweus, 2011; Ybarra and Mitchell, 2007). Therefore, it is necessary to act on what is known about bullying in the studies to be made in order to prevent both types of bullying. Cognitive Behavioral Therapy (CBT) is a frequently used model in intervention or prevention programs for aggression, anger and maladaptive behaviors seen in children and adolescents. According to CBT, cognitions play a role in the development of all types of aggression (Türk and Hamamcı, 2016). Indeed, psychoeducation practices based on cognitive behavioral approach in preventing violence and bullying, produce effective results (Donat-Bacıoğlu, 2014; Sukhodolsky, Kassinove, and Gorman, 2004; Robinson, Smith, Miller, and Brownell, 1999).

There are some assumptions that cognitive behavioral therapy will (a) help individuals to better understand their feelings and thoughts about bullying, (b) help to change the increasing negative thoughts and inner conversations of the bullied individual about himself/herself and his/her destructive thinking patterns and eliminate the cognitive distortions of the individual, (c) change the bullying individual's cognition causing this behavior, (d) enable the victim to learn new behaviors to cope with bullying (Büller, 2012; Abdulkader, 2017). Based on these assumptions, the theoretical basis of this study is cognitive behavioral approach. When the related literature was examined, it wasn't found that a cyberbullying prevention program which was developed considering the basic principles of Cognitive Behavioral Approach. The lack of a program to prevent cyberbullying prepared with a cognitive behavioral approach indicates a deficiency in this field. To address this deficiency in the literature, the aim of this study is to test the effectiveness of the cognitive behavioral based cyberbullying prevention program developed by the researchers on cyberbullying. It is thought that this study will pave the way for cyberbullying prevention and intervention programs that will be prepared in the future, based on cognitive behavioral or different theoretical frameworks. In accordance with this purpose, the hypotheses below have been examined.

1.1. Hypotheses:

- (1) The CBT based cyberbullying prevention program is significantly effective in reducing the cyberbullying behavior of children.
- (2) The CBT based cyberbullying prevention program is significantly effective in reducing cyber victimization of children.
- (3) The CBT based cyberbullying prevention program is significantly effective in reducing bullying cognitions of children.

2. Method

2.1. Study Design

The mixed method, a research approach in which the results are obtained by integrating two sets of qualitative and quantitative data, was used in this study (Creswell, 2017, p.2). One of the most common used mixed method studies in education is explanatory mixed method (Firat, Kabakçı, Yurdakul, Ersoy, 2014). The most important feature of the explanatory mixed method is that qualitative data is collected and analyzed after the quantitative data is collected. Qualitative data allow a more in-depth interpretation of statistical results (Creswell and PlanoClark, 2006, p.85-87). This study, conducted by using explanatory mixed method, consists of two parts. In the first part of the study, the effect of the applied cyberbullying prevention program and in the second part, the participants' views on the cyberbullying prevention program, applied within the scope of this study, have been examined.

2.2. The Method Used in the Quantitative Part of the Study

The effect of the CBT based cyberbullying prevention program on the cyberbullying, cyber victimization and bullying cognition of secondary school 7th grade children were examined in this part of the study. The pre-test and post-test, control group quasi-experimental design without random assignment was used to examine the effect of this program (Ferguson and Takane, 1989; Kirk, 1968; Büyüköztürk, Kılıç Çakmak, Akgün, Karadeniz, and Demirel, 2015). The study design is shown in Table 1.

Table 1.:Study Design

Groups	Pretest	Process	Posttest
Experiment	RCBI	CBT based cyberbullying prevention program	RCBI
	CSBC		CSBC
Control	RCBI		RCBI
	CSBC		CSBC

RCBI: Revised Cyberbullying Inventory

CSBC: Cognition Scale about Bullying for Children

2.3. Process

This study was conducted with 7th grade students studying in two different secondary schools, having features in common, in the Şahinbey district of Gaziantep province in 2016-2017 academic year. Necessary permissions were obtained from Gaziantep University Ethics Committee at the beginning of the study (ANNEX-1). This study was conducted on 7th grade students because of the following reasons: (a) the cognition behavioral based preventions programs' being effective on children between the ages of 11-13 (Durlak, Fuhrman and Lampman 1991), (b) views of domain experts and related literature (Sukhodolsky, Kassinove and Gorman, 2004, Donat Bacıoğlu, 2014; Varlık-Özsoy, 2017) on the benefitting level of children from the cognition behavioral approach.

Convenience sampling method was used to determine the schools where the study would be conducted. In other words, easily accessible schools in terms of data collection and application of the program were selected. Convenience sampling method is defined as "collecting data from a sample that is easily accessible to the researcher" (Büyüköztürk et al., 2015, p.92). One of the schools was determined as the experimental group and the other as the control group. Maximum variation sampling method was used in the selection of students to be included in the experimental group. Maximum variation sampling is defined as "the determination of the

homogeneous different situations related to the problem that are examined in the population and conducting the study on these situations" (Büyüköztürk et al., 2015, p.90). Three classes showing high, average, and low academic success in trial exams were chosen among the 7th graders in the experimental school. The school administration, teachers giving lessons to those students, and the psychological counselor of the school afford assistance about the academic standing of the chosen three groups. Permission was obtained from the parents of the students who were selected to the experimental group for participation in the study through the parent permission form prepared by the researchers (ANNEX-3). In order to collect the pre-test data of the study, the school administration of both the experimental and control groups were interviewed and a convenient time was determined. The schools were visited to collect pre-test data on the determined days. In order to carry out the process of data collection in a more healthy way, the help of the teachers of the lessons in which the study was conducted was received. The data were collected in the classroom environment. The purpose of the study was explained to each class by the researchers. It was stated that the answers to the questionnaire would be used in a scientific study and participation was voluntary. It was explained that the data obtained from the study would not be used for individual evaluation and only the changes of experimental and control groups before and after the application would be examined. For this purpose, students were asked to write their student numbers and it was stated that this information would not be shared with third parties such as the school administration, the teacher, etc. without the permission of the students. It was reminded that this application was not an exam and therefore every question should be answered by giving honest answers. The application lasted for approximately 25 minutes. The pre-test data collection process was completed by thanking the participants for their contributions. The procedures performed in the experimental group are explained in detail in the process of application of the program. After the application of the program, post-test data were collected with the same method used in the collection of pre-test data.

As the number of questions left blank in the control group was high in the post-test data, 9 scales and two scales of mainstreaming students were excluded from the study. The pre-test and post-test data were matched with the student numbers. 43 of the scales were excluded from the study since 15 of them had no post-test and 28 of them had no pre-test. 14 of the excluded scales belonged to the control group and 29 belonged to the experimental group. A total of 54 scales were not included in the study. The study was conducted on the pre-test and post-test data obtained from 78 participants in the experimental group and 80 in the control group, 158 in total.

2.4. Participants

Participants were selected from students who applied to the announcements of two different schools' psychological counseling. Nine of the students who volunteered to participate in the study and whose parents were asked for permission left the majority of the scales blank and two students were continuing their mainstreaming education. As a consequence, they were not included in the study group. 84 female and 74 male students, continuing their education in 7th grade of secondary school, being able to attend the prevention program regularly, with the permission from their parents and answering the measurement tools completely and sincerely, participated in the study. While one of these two schools was determined as the experimental group (n = 78), the students in the other school were included in the control group (n = 80). The ages of 158 students participating in the study ranged between 12 and 14 years.

2.5. Quantitative Data Collection Tools

Revised Cyberbullying Inventory (RCBI): The Cyberbullying Inventory developed by Erdur-Baker and Kavşut (2007) was revised by Topçu and Erdur-Baker (2010) as the Revised Cyberbullying Inventory. The Revised Cyberbullying Inventory contains 14 items. The scale

consists of two parallel forms including Cyberbullying and Cyber Victimization. The participants evaluated their cyberbullying experiences and the scale items such as "Disclosing confidential information shared on the internet without permission" and "Making fun of comments, information shared on the internet" by using 4-point likert type scale (1= never, 2= once, 3= twice or three times 4= more than three times) in the columns of "It happened to me" and "I did it once". The lowest score to be taken from the scale was 14 and the highest score was 56. Confirmatory factor analysis of the RCBI shows that it has a single factor structure for both cyberbullying and cyber victimization. The internal consistency coefficient was reported as .82 for cyberbullying and .75 for cyber victimization form (Topçu and Erdur-Baker, 2010).

Cognition Scale about Bullying for Children (CSBC): The scale developed by Gökkaya and Sütçü (2014) consists of 22 items. It is developed to evaluate the cognitive characteristics of children related to bullying (Gökkaya, 2015). Items such as "Bullying is a normal situation for children", "Some children are bullied for what they deserve" are evaluated in 4-point Likert type through statements such as "Totally right", "Quite right", "A little right", "Not right at all". The validity and reliability study was conducted with secondary school students aged between 11 and 15 years. The internal consistency coefficient of the scale was found to be .91. As a result of the test-retest method, one of the methods to determine the reliability, the reliability coefficient was reported as .79 (Gökkaya and Sütçü, 2015).

2.6. Cognitive Behavioral Based Cyberbullying Prevention Program

Developed by the researcher, "The Cognitive Behavioral Based Cyberbullying Prevention Program" consists of 10 sessions. The aim of the program is to prevent cyberbullying, which is becoming a serious problem and widespread gradually. The program is designed to prevent both cyberbullying and cyber victimization. Each session lasts 40 minutes (one lesson hour).

Before the program was designed, the related literature was reviewed and prevention and intervention programs were examined. The program was designed as a result of the studies. The opinions of the two different academicians, being experts in the field of bullying and cognitive behavioral therapy, about the program were received and the sessions were put into the final form. The achievements to be covered in the sessions were discussed with cognitive behavioral approach. The main elements of the program content are as follows:

- (1) Bullying and its types, effects of cyberbullying and its prevalence, roles of bullying and causes of cyberbullying.
- (2) Thoughts about cyberbullying and cyber victimization.
- (3) Safe online behaviors to prevent cyberbullying.
- (4) Behavioral skills to avoid cyberbullying.
- (5) Skills to avoid cyber victimization and what to do when cyber victimization occurs.

2.7. Method Used in the Qualitative Part of the Study

Purposeful sampling method, one of the non-random sampling methods, was used in the qualitative part of the study. This method is a sampling method that meets certain criteria or selects information-rich elements depending on the purpose of the study (Büyüköztürk et al., 2015). The processes of reclaiming the program, obtaining the necessary permissions, application of the program, collecting the pre-test and post-test data lasted until the end of the second semester of the 2016-2017 academic year. Therefore, the students who would be included in the focus group interview were the students in the experimental group who came to the school that day. Hence, the convenience sampling method, one of the non-random sampling methods, was used in the second part of the study. The qualitative part of the study was conducted with 6 girls and 6 boys, 12 students in total selected from the experimental group.

2.8. Qualitative Data Collection Tool

Focus Group Interview Questionnaire: The focus group interview questionnaire prepared by the researcher was used to determine the opinions on the cyberbullying prevention program of the students selected from the experimental group. The focus group interview is a qualitative data collection method that is conducted in accordance with pre-planned instructions in order to obtain in-depth information on a subject and that focuses on the characteristics of the interviewees, (Çokluk, Yılmaz and Oğuz, 2011). The focus group interview was carried out to consult the opinions on the cognitive based cyberbullying prevention program of the participants in the experimental group.

A session plan was designed for the focus group interview in order to provide convenience before the application. Three evaluation criteria were determined as subject, content and achievements and in this direction, 7 open-ended questions were asked to the participants. It was taking into account that the questions were not directive.

- Subject: Opinions about the subject of the training were asked.
- Content: The suitability of the topic titles discussed in the program was evaluated.
- Achievement: Behavioral changes expected from the participants at the end of the training program.

2.9. Collection and Analysis Process of Qualitative Data

The interview was carried out by gathering the participants around the round table in the conference hall where the experimental group was given training and by using the questions that were prepared previously. The general template of the program was copied and given to each participant. The researchers made necessary explanations to the participants and asked for permission to obtain interview record. With the consent of the participants, voice records were taken from two different devices during the interview. It lasted for approximately 56 minutes. The voice records obtained from the interview were deciphered by numbering the participant names. The qualitative data obtained from the focus group interview were analyzed by using descriptive analysis method. Descriptive analysis is an analysis method that aims to summarize and interpret the qualitative data collected by various methods and present them to the reader (Yıldırım and Şimşek, 2003) and that frequently includes direct citations (Özdemir, 2011).

3. Results

3.1. Quantitative Findings

Before analyzing the study data, the normality assumptions of the data obtained in the experimental and control groups were examined. The skewness and kurtosis coefficients obtained from the pre-test and post-test measurements of both experimental and control groups ranged from .16 to 1.98. According to George and Mallery (2003), the coefficients of skewness and kurtosis between -2 and +2 are considered sufficient for the assumption of normality. After obtaining the normality assumption, independent samples t-test was used to determine whether there was a significant difference between the pre-tests of the experimental and control groups and whether there was a significant difference between the post-tests of the experimental and control groups. Although there was no significant difference between experimental and control groups before the process, pre-tests of experimental and control groups were kept the same and covariance analysis (ANCOVA) was performed on post-tests in order to increase statistical power (Keppel, 1991).

Findings on the Effect of Cyberbullying Prevention Program: Descriptive statistics of the pre-test and post-test measurements of the scores obtained from the Cyberbullying Inventory and Cognition Scale about Bullying for Children of the experimental and control groups are given in Table 2 below.

Table 2: Descriptive Statistics of RCBI And CSBC Pre-Test and Post-Test Scores of Experimental and Control Groups

		Pretest			Posttest		
		n	X	sd	n	X	sd
Cyberbullying	Experiment	78	18.76	3.24	78	16.56	4.98
	Control	80	18.16	5.73	80	19.92	6.92
	Total	158	17.47	4.71	158	18.36	6.22
Cyber victimization	Experiment	78	17.58	3.61	78	16.89	4.65
	Control	80	17.71	4.13	80	18.41	4.91
	Total	158	17.65	3.87	158	17.66	4.83
CSBC	Experiment	78	74.70	10.87	78	79.27	8.45
	Control	80	72.43	10.72	80	75.43	14.87
	Total	158	75.07	10.77	158	75.81	12.58

When Table 2 is examined, it is seen that although the score average of cyberbullying, cyber victimization and bullying cognitions of the experimental and control group were equal to each other before the experimental process, the score average of the experimental and control groups obtained from the same measurement tools differed after the experimental process. Firstly, the score average of the experimental and control groups were examined by t-test.

Table 3: T-Test Results of the Experimental and Control Group Pre-Test Scores Obtained From Cyberbullying Inventory and Cognition Scale for Children

Pretest		n	X	Sd	df	t	p
Cyberbullying	Experiment	78	18.76	3.24	156	1.61	.109
	Control	80	18.16	5.73			
Cyber victimization	Experiment	78	17.58	3.61	156	.100	.621
	Control	80	17.71	4.13			
CSBC	Experiment	78	74.70	10.87	156	-.717	.414
	Control	80	72.43	10.72			

When the values in Table 3 are examined, it is seen that there is no significant difference between the pre-test score average of the experimental and control groups' cyberbullying, cyber victimization and bullying cognition scale. Then, the average post-test scores of the experimental and control groups were compared through ANCOVA analysis and the results are shown in the tables.

Table 4: Results of Covariance Analysis (ANCOVA) of Cyberbullying Scores of Experimental and Control Groups

Source of Variance	Sum of Squares	df	Mean Square	F	p	n2
Model	.993	2	.496	55.662	.000	.418
Cyberbullying (Posttest)	.818	1	.818	91.729	.000	.372
Group	.089	1	.089	10.017	.002	.061
Error	1.382	155	.009			
Total	247.092	158				

According to the ANCOVA results, the difference between the revised post-test score average of the students in the experimental and control groups according to the cyberbullying pre-test scores of the cyberbullying inventory is significant ($F(1,155) = 10.017, p < .05$). When the revised averages are examined, it will be seen that the cyberbullying scores of the experimental group are lower. From this point of view, it can be said that cognitive behavioral cyberbullying

prevention program has a positive effect on cyberbullying levels of the students. In addition, the eta squared value was calculated as .061. This value can be interpreted as a moderate effect (Cohen, 1988; Green and Salkind, 2005). Accordingly, the presence of the students in the experimental or control groups explains 6.1% of the variability in the post-test scores as independent of the pre-test scores.

Table 5: Results of Covariance Analysis (ANCOVA) of Cyber Victimization (CV) Scores of the Experimental and Control Groups

Source of Variance	Sum of Squares	df	Mean Square	F	p	n2
Model	.455	2	.228	29.014	.000	.272
Cyberbullying (Posttest)	.401	1	.401	51.108	.000	.248
Group	.052	1	.052	6.623	.011	.041
Error	1.216	155	.008			
Total	242.145	158				

According to ANCOVA results, the difference between the post-test score average of the students in the experimental and control groups revised according to the pre-test scores of cyber victimization of the cyber bullying inventory is significant ($F(1,155) = 6.623, p < .05$). When the revised averages are examined, it will be seen that the cyber victimization scores of the experimental group are lower. From this point of view, it can be said that cognitive behavioral cyber bullying prevention program has a positive effect on cyber victimization levels of students. In addition, the eta squared value was calculated as .041. This value can be interpreted as a moderate effect (Cohen, 1988; Green and Salkind, 2005). Accordingly, the presence of students in the experimental or control groups explains 4.1% of the variability in the post-test scores as independent of the pre-test scores.

Table 6: Results of the Covariance Analysis (ANCOVA) of the Scores Obtained from the Bullying Cognition Scale for the Children of the Experimental and Control Groups

Source of Variance	Sum of Squares	df	Mean Square	F	p	n2
Model	9.559	2	4.780	30.918	.000	.285
CSBO (Posttest)	7.362	1	7.362	47.621	.000	.235
Group	2.675	1	2.675	17.304	.000	.100
Error	23.961	155	.155			
Total	166.389	158				

According to ANCOVA results, the difference between the revised post-test score average of the students in the experimental and control groups according to the pre-test scores of the bullying cognition scale for children is significant ($F(1,155) = 17,304, p < .05$). When the revised averages are examined, it will be seen that the bullying cognition score of the experimental group is lower. From this point of view, it can be said that cognitive behavioral cyberbullying prevention program has positive effect on bullying cognition of the students. In addition, the eta squared value was calculated as .10. This value can be interpreted as a moderate effect (Cohen, 1988; Green and Salkind, 2005). Accordingly, the presence of the students in the experimental or control groups explains 10% of the variability in the post-test scores as independent of the pre-test scores.

As a result, the Cognitive Behavioral Based Cyberbullying Prevention program has reduced the cyberbullying and cyber victimization levels of the participants. It also has a positive effect on their bullying cognition.

3.2. Qualitative Findings

In this part of the study, qualitative findings obtained as a result of the focus group interview with the students in the experimental group were discussed and interpreted in the light of the literature. In this context, the opinions of the participants on (a) content, (b) cyberbullying and (c) cyber victimization and (d) effectiveness of the program were taken. The following questions were asked to the participants during the focus group interview in this context.

1. *How far have we achieved our goal during this program?*

All participants (n = 12) stated that the program achieved its goals in terms of (a) providing information on what is cyberbullying and its prevalence during the program, (b) being aware of the effects of cyber bullying on the victim, (c) recognizing the purposes of cyber bullying, (d) learning the thoughts on cyberbullying and cyber victimization (e) opting for face-to-face communication and not seeing cyber bullying as a way of solving problems, (f) showing empathy to understand the emotions of the victim, (g) taking measures to avoid cyberbullying and (h) raising awareness about cyber bullying. Some of the participants' explanations for this question are as follows.

"I already knew how to protect against cyberbullying. I have learned more in detail thanks to you." (Participant 12)

"Thanks to this training I have learned what the effects of cyberbullying are." (Participant 7)

"We have learned that cyberbullying should not even be a joke. We have learned that cyberbullying is a serious issue." (Participant 8)

"My classmates were cyberbullying each other as a joke. I have learned that we should not do it." (Participant 2)

2. *What did you learn / remember from this program?*

All of the participants (n = 12) stated that they remember the emotional, behavioral, social and academic effects of the cyberbullying. Some of the participants' explanations for this question are as follows.

"It may be a lack of self-confidence or desire to be alone." (Participant 1)

"A person who is cyber-bullied may feel left out and insecure." (Participant 7)

"A person who is cyber-bullied may lock himself/herself in the house when someone from the WhatsApp group cyberbullies her/him as he/she thinks the others will make fun of him/her." (Participant 10)

3. *What did you learn about not doing cyberbullying?*

Half of the participants (n = 6) mentioned the cognitive and behavioral factors that they learned about not doing cyberbullying. They stated that in order not to do cyberbullying, it is necessary (a) to show empathy, (b) to get training, (c) to know the effects of cyberbullying, (d) to solve the problems by communicating face to face and not by cyberbullying, (e) to know that cyberbullying is not the solution (f) to learn that it is not right to cyberbullying as a joke. Some of the participants' explanations for this question are as follows.

"We have learned that cyberbullying is not a solution, but it is better to sit down and talk in order to find other solutions." (Participant 2)

"I think when we have a problem, we should deal with it by talking face to face instead of cyberbullying." (Participant 1)

"Let's say I am cyberbullying B. "In such a case, I have to think about how I would feel if the same joke is made to me." (Participant 6)

4. *What did you learn about not being a cyber victim?*

Almost all of the participants ($n = 11$) mentioned the cognitive and behavioral factors they learned about not being a cyber victim. They stated that in order not to be a victim, it is necessary to (a) not share personal information on the internet, (b) to not give their Facebook password to anyone, (c) not spend too much time on the internet, (d) not be friends with strangers on the internet and not share private information with these people, (e) not share photos containing location information, (f) use antivirus programs, (g) not read the messages coming from strangers. Some of the participants' explanations for this question are as follows.

“For example, we have learned that we should not give our Facebook password to someone.” (Participant 6)

“We should not share our personal information on private websites.” (Participant 8)

“We should not be friends with strangers and not share our private information with them.” (Participant 11)

Some of the participants ($n = 3$) said that they learned when they were cyber-bullied, it was wrong to think that it was the crime of the victim, that parents were not informed about the cyberbullying with the thought that they would forbid the use of the internet in such a situation, and that the thought that the others would make fun of them because they were cyber-bullied. Some of the participants' explanations for this question are as follows.

“When a child was a cyber victim, he/she felt very sad and thought he/she was doing something wrong. However, he/she did nothing wrong. It was due to the lack of empathy that the cyberbullying person has.” (Participant 2)

5. *Do you think this program contains information that you can use in daily life? If the answer is yes, what is this information?*

The participants mentioned the cognitive and behavioral factors they learned about not being a cyber victim. More than half of the participants ($n = 7$) stated that after the program (a) they became more sensitive about sharing their location information in daily life, (b) they did not share many photos, (c) they updated their privacy and security settings, (d) they started to use antivirus programs, (e) they did not enter the websites that they do not trust, (f) they did not swear while playing online games. Some of the participants' explanations for this question are as follows.

“I don't care about bad words anymore. I put those messages on silent and never look at them.” (Participant 2)

“I don't swear to those who swear at me in games anymore.” (Participant 8)

“For example, only my friends can see my posts and profile.” (Participant 12)

6. *What do you remember about the wrong thoughts about cyberbullying?*

Some of the participants ($n = 5$) stated that cyberbullying is done for the purposes of (a) taking revenge, (b) having fun, (c) being jealous, (d) hurting someone, (e) boredom. Some of the participants' explanations for this question are as follows.

“For fun.” (Participant 5)

“To take revenge” (Participant 11)

“With the thought that he/she should be hurt too.” (Participant 3)

“Because of being jealous.” (Participant 12, Participant 2)

7. *What do you remember about the wrong thoughts about being cyber victim?*

Some of the participants ($n = 3$) stated that they think it is wrong to (a) think that being a cyber victim was their own fault, (b) take revenge when someone is cyber-bullied, (c) think that everyone will make fun of him/her when he/she is cyber-bullied.

“When a child was a cyber victim, he/she felt very sad and thought he/she was doing something wrong. However, he/she did nothing wrong. It was due to the lack of empathy that the cyberbullying person has.” (Participant 2)

“He/she may want to take revenge. He/she may cyberbully the other person.” (Participant 5)

4. Discussion

It is known that the most effective programs in terms of prevention and intervention are evidence-based programs (Ttofi & Farrington, 2009). Therefore, scientific achievement is an important component for the preparation of a strong cyberbullying prevention-intervention program (Cioppa, Neil and Craig, 2015). Testing the developed programs by using a control group with similar characteristics to the experimental group, using a sample with large size, using experimental design with pre-test and post-test control group, collecting data from multiple sources, providing monitoring measurements, having a handbook of the developed program and therefore, providing ease of application are the criteria used for scientific success. The cognitive behavioral cyberbullying prevention program developed and tested within the scope of this study fulfills the criteria such as (a) using a quasi-experimental design with a pre-test and post-test control group, (b) using a control group that has similar characteristics to the experimental group, (c) reporting the results stating that this program is effective on cyberbullying and cyber victimization (d) the program is designed as a handbook for ease of application.

The findings of this study show that cyberbullying prevention program based on cognitive behavioral approach has an effect on cyberbullying and cyber victimization levels of the children. When the related literature is examined, the cyberbullying prevention program based on social learning and cognitive behavioral approach which is named "The Media Heroes" and developed by Krumbholz et al. (2018) is found to be effective in reducing the behavior of cyberbullying similar to this study. Likewise, Wölfer et al. (2013) found that cyberbullying prevention program based on social learning and cognitive behavioral therapy has an effect on participants' cyberbullying levels. The qualitative data obtained within the scope of this study also support the claim that the program is effective in terms of cyberbullying and cyber victimization in the experimental group of the program. When participants were asked whether the program included skills that they could use in daily life and whether they used the skills they learned from the program in daily life, more than half of the participants (n= 7) stated that after the program (a) they became more sensitive about sharing their location information in daily life, (b) they did not share many photos, (c) they updated their privacy and security settings, (d) they started to use antivirus programs, (e) they did not enter the websites that they do not trust, (f) they did not swear while playing online games. Participants stated that after the program, some of their classmates started to (a) pay attention to sharing fewer photos, (b) prefer safer websites when they research for their homework.

Findings show that cognitive behavioral cyberbullying prevention program also has a positive effect on bullying cognition of the participants. In the peer bullying intervention program prepared by Gökkaya (2015) with a cognitive behavioral approach, establishing a connection between thought-emotion-behavior, recognizing the thoughts about bullying behavior and replacing the thoughts that cause these behaviors were studied just as in this study and it has been determined that the program has a positive effect on the participants' bullying cognition. Bullying cognitions are frequently studied in peer bullying prevention and intervention programs. For example; Olweus (2004) studied on changing the cognitions of bullies within the scope of the prevention program. Newman-Carlson and Horne (2004) trained teachers on changing students' views of bullying with positive alternatives in the peer bullying prevention program named "Bully-Busters". Eweniti et al. (2013) studied on changing the negative thoughts of participants about bullying which has an effect on their behaviors, with positive

statements such as "I need to overcome with bullying" and "I need to think twice before bullying" in their study about the effect of giving instructions oneself to prevent peer bullying.

It is noteworthy that the participants touched upon the cognitive and behavioral factors they learned about not to cyberbullying and not to be a cyber victim during the focus group interview. They stated that (a) taking revenge, (b) having fun, (c) being jealous, (d) hurting the other person, (e) boredom are the reasons of cyberbullying and that (a) thinking that being a cyber victim is their own fault, (b) thinking to take revenge when the person is cyber-bullied, (c) thinking that everybody will make fun of the person when he/she is cyberbullied are the wrong thoughts about cyber victimization. They also stated that they learned (a) thinking that it is the fault of the person who is cyberbullied, (b) not informing the parents about the situation with the thought that the parents would forbid the use of internet, (c) the others will make fun of the person who is cyberbullied are the wrong thoughts about cyber victimization. When the participant opinions are examined, it can be said that the cyberbullying program based on cognitive behavioral is effective in distinguishing the cognitive distortions related to bullying and the behaviors caused by these distortions and it is consistent with the quantitative data and the literature.

In conclusion, both quantitative and qualitative data obtained within the scope of the study reveal that the CBT-based cyberbullying prevention program increases the participants' awareness of cyberbullying and cyber victimization and changes their thoughts. In addition, qualitative and quantitative data obtained from the participants also show that these changes are reflected in their behavior.

5. Limitations

This study has two main limitations. The first one is that members are not impartially appointed to the experimental and control groups. The second limitation is that the application is carried out with large groups in the classroom. This may be a disadvantage for a psychoeducation program aimed at providing behavioral skills. In order to minimize the negative effects of this situation, the psychological counselor of the school participated in the groups as an auxiliary leader.

6. Suggestions

- (1) It is recommended to increase the number of preventive studies by starting from childhood in order to fight cyberbullying which is increasing together with the increase of technology use, in a more effective way.
- (2) It is recommended to adopt a school-based holistic view (Murray-Harvey et al., 2012) which includes all parties such as parents, psychological counselors of the school, teachers, school administrators and legislators (Huebner and Morgan, 2002) to the prevention process of cyberbullying. For this reason, it is recommended to provide training for (a) parents, educators and teachers, (b) developing the education policies in line with the outputs of the cyberbullying prevention programs in our country, (c) extending the use of the prepared prevention and intervention programs, (d) raising awareness of the psychological counselors of schools which has a key role in studies related to the prevention of cyber and peer bullying as well as to provide in-service training on this issue if it is necessary.
- (3) The applied cognitive behavioral based cyberbullying prevention program is found to be effective in preventing cyberbullying. Since the effect of the cognitive behavioral-based cyberbullying prevention program on cyberbullying and cyber victimization is examined for the first time, it is not enough to test it on a single group. This program is recommended to be tested in different samples by different implementers.

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