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The Effect of Family-centered "I Recognize My Emotions Asynchronous Activity Series" on Children's Emotion Regulation Skills

Volkan KANBUROĞLU[1]
Marmara University
Esin DİBEK[2]
Marmara University
Asude BALABAN DAĞAL[3]
Marmara University
Ozana URAL[4]
Marmara University

Abstract

The main purpose of this study is to evaluate the effectiveness of emotion-related video activities in the "Family-Centered I Recognize My Emotions Asynchronous Activity Series" which is prepared for children on children's emotion regulation skills. Within the framework of this main purpose, differences in children's emotion regulation skill levels were determined according to the demographic data obtained both from the whole group and from the experimental group of children included in the pre and post-tests. At the beginning of the study, 103 children participated in the research. However only 25 children were able to complete the study. In this study, the four-point Likert type "Emotion Regulation Skills" scale consisting of 24 items, adapted to Turkish by Batum and Yağmurlu in 2007, was used. It was conducted as quasi-experimental research in a single-group pretest-posttest model. In the part of the research conducted with 103 children, it was found out that the children of mothers with postgraduate education degree had higher emotional regulation skill levels than those of mothers with undergraduate education degree. It has been revealed that children whose mothers were employed have higher emotional regulation skills than children whose mothers do not work. In addition, as a result of the series of asynchronous video-based activities given to the children in the second part of the study, it was observed that the children's post-test results increased significantly in terms of emotion regulation skill scores.

Keywords: Technology, asynchronous education, video-based education, preschool, emotional regulation skills.

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[1] Lecturer Dr. Atatürk Faculty of Education, Marmara University, Istanbul, Turkey, ORCID: 0000-0002-5513-4466 Correspondence: volkan@marmara.edu.tr
[2] Ress. Ass. Dr. Atatürk Faculty of Education, Marmara University, Istanbul, Turkey, ORCID: 0000-0002-8716-9786 Email:edibek@marmara.edu.tr
[3] Assoc. Prof. Dr. Atatürk Faculty of Education, Marmara University, Istanbul, Turkey, ORCID: 0000-0002-9527-5335 Email:asudebd@marmara.edu.tr
[4] Prof. Dr. Atatürk Faculty of Education, Marmara University, Istanbul, Turkey, ORCID: 0000-0002-5067-3655 Email:oural@marmara.edu.tr

Introduction

The COVID-19 pandemic and the resulting disruptions in areas such as economy, health and education have negatively affected every aspect of the lives of not only adults but also young people and children. It is predicted that this effect of the pandemic will continue in the near future, and there will be changes in psychological and academic lives (Benner and Mistry, 2020; Rabe et al., 2021).

It has been emphasized that the most important consequence of the disruptions experienced in the education process during the pandemic may be the increase in the learning gap between the children of low-income and high-income families due to process-specific precautions such as continuing education online and closing schools occasionally (Addi Raccah and Seeberger Tamir, 2023). In addition, teachers had to consider how to adapt the learning materials to the new circumstances and ensure that students who do not have access to wireless internet, computers or a suitable environment to study are not left behind in the learning process. It has been mentioned that if teachers cannot take precautions regarding this situation, the current health crisis may turn into a social crisis that will have long-term consequences, especially on children of low-income families (Van Lancker and Parolin, 2020).

Various studies have demonstrated that, in addition to disruptions in education during the COVID-19 quarantine, there are also changes in the mood, emotions and behavior of children and adolescents (Athapathu, et al., 2022; Braksiek et al., 2022; Christner, 2021; Di Giorgio, 2021; McKune et al., 2021; Pudpong et al., 2023; Rabe et al., 2021; Rathgeb et al., 2022; Spinelli et al., 2021; Wu et al., 2023). Cohen Arazi et al., (2022) conducted a study in which they received opinions from families about children's emotional changes during the pandemic period. In this study, families stated that children aged between 3-5 were bored, angry and in a sad mood while they stayed at home during the pandemic. In addition, families stated that they observed an increase in crying spells, although not intense, and a regression in previously overcome behaviors.

In their study by Demirtaş and Koçak (2020), where they evaluated the emotions felt during the epidemic, it is observed that the emotion of "apprehension" is expressed the most, followed by "anxiety" and "fear". It is stated that the least expressed emotions are "courage, self-confidence, curiosity, jealousy, surprise, respect, excitement, peace, disappointment, regret, gratitude, loneliness, relief, responsibility, haste, distress of conscience, unhappiness, abstention, uneasiness, and fatigue." During the pandemic, children also experienced different emotional states. It has been stated that children express their fears in the form of tantrums, crying for no reason, irritability, and shouting. It is mentioned that the interaction of parents with their children is effective in solving psychological and behavioral problems that may occur (Alisinaoğlu, et al., 2020; Athapathu, et al., 2022; Spinelli, 2021). Children's stress responses are affected by parents' emotional regulation and level of exposure to stress. However, it is stated that playfulness of the parents is inversely related to fathers' stress reactions. Accordingly, in stressful times, parents' emotional skills are important for their children's emotional adaptation

(Shorer M. and Leibovich L., 2022). In their study on the Cyprus education system, Tümkan and Tümkan (2020) stated that teachers and administrators emphasized that it was necessary to communicate with parents to prevent education from being disrupted due to the compulsory breaks in education, and that the change and development that computer-aided education brought to primary education was mostly in the field of easy access to information. In addition, teachers mentioned that families' contribution to education is the most effective practice among the arrangements they made during this period.

Parents who worked remotely and were always with their children during the pandemic had to plan their time of working and taking care of their children in a balanced way. It can be said that especially parents who were working and whose socioeconomic status were low for various reasons were exposed to more stress and needed more support (Christner et al., 2021; Di Giorgio et al., 2021; Kilinc et al., 2023; McKune et al., 2021; Spinelli et al., 2021). During the time parents spend with their children throughout the pandemic, daily activities included physical activities (such as hide and seek, sports and exercising together, chasing at home), intellectual activities (such as reading bedtime stories, playing intelligence games), handcraft activities (such as making shapes with play dough, salt dough and clay), interaction-based activities (such as drama, having fun with different imitations, organizing puppet shows), activities given by the school and initiated by the teachers, and activities watched in social media posts (Kurt Demirtaş and Sevgili Koçak, 2020).

It was thought that children who could not perform such activities with their peers during the pandemic, where there were closures and emotions were negatively affected, should be supported in different ways, and the necessity of this was emphasized in various studies conducted (McKune et al., 2021; Phelps and Sperry, 2020; PLH, 2020; Singh et al. 2020; WHO, 2020). Studies mention the positive effect of drama on children's emotion regulation skills (Aktaş, 2019; Cantekin and Gültekin Akduman, 2020) and the relationship between engaging in games and emotions (Aksoy and Tozduman Yaralı, 2017; Koçyiğit et al., 2015; Yurdakul et al., 2021). For this reason, it is considered that practices including drama activities will positively affect children's emotional state.

During a period when face-to-face communication was not possible, online applications were the most important tool for children to continue their education and open to the outside world. However, as stated in the literature, access to technological tools such as tablets and computers, as well as access to the internet, has not been possible for every individual, due to both economical and regional reasons. For this reason, it was thought that different, alternative ways may be needed to reach all children and parents who are at home with their children for a long period of time. In this context, phones and simple video-based activities delivered via phones have been deemed useful in supporting children and their families as the most accessible tools. Considering the problems children experience with emotions, the main purpose of this study is to evaluate the effectiveness of the video-based activities in the "Family-Centered I Recognize My Emotions Asynchronous Activity Series" prepared for children on children's

emotion regulation skills. In line with this main objective, the following sub-objectives have been determined:

1. What is the level of emotional regulation skills of children in the 5-6 age group?

2. Do the pre-test emotion regulation skills of children in the 5-6 age group differ according to their demographic characteristics (child's gender, parent's employment status, parent's education level, parent's income level)?

3. Do the pre-test emotion regulation skills of the children in the 5–6-year-old experimental group differ according to their demographic characteristics (child's gender, parent's employment status, parent's education level, parent's income level)?

4. Is there a significant difference between the pre- and post-test emotion regulation skills of children in the 5–6-year-old the experimental group?

5. Do the post-test emotion regulation skills of the children in the 5–6-year-old experimental group differ according to their demographic characteristics (child's gender, parent's employment status, parent's education level, parent's income level)?

Method

Research Model

The research is a quasi-experimental study in a single-group pretest-posttest model. The single-group pretest-posttest model is one of the most commonly used quasi-experimental research designs in which a single group of research participants is pretested, given some procedures or independent variable manipulations, and then subjected to the posttest (Colman, 2009). In this study, it was planned to conduct the research using a pretest-posttest quasi-experimental model with an experimental-control group, but since the data in the study was tried to be obtained through the online methods due to the ongoing pandemic process, the participation in the posttests of the control group was very low. For this reason, the study was conducted in a single-group pretest-posttest quasi-experimental model.

Study Group

The study group of the research consists of children within the age range of 5 to 6 years. Before the study starts, participation criteria were determined. They were "Being 60-72 months old, attending a pre-school education institution, completing the entire measurement tool as both pre- and post-test, and applying the activities to be given with the child on time." In 2021, 103 preschool children in the 5-6 age group were included in the study. It was planned that 50 of these children would be in the experimental group and 53 of them would be in the control group. However, only those children who applied all the video activities, responded to the post-tests, and met the criteria for receiving pre-school education were able to participate in the study. And very little amount of post-test data was collected from the group designated as the control group. Therefore, the study group was completed with 25

children who met these criteria. After collecting the data of the study, within the scope of work ethics, the "Family-Centered Video-Based I Recognize My Emotions" activity series was sent online to all 103 families. Thus, all children included in the study were given the right to access the video-based activities.

Data Collection Tools

Personal Information Form: The personal information form prepared by the researchers included demographic data on the gender of the children, the working status of the parents, the education level of the parents, and the income level of the parents.

Emotion Regulation Scale

The Emotion Regulation Scale was developed by Shields and Cicchetti in 1997. It was adapted into Turkish by Batum and Yağmurlu in 2007. The four-point Likert-type measurement tool, consisting of 24 items, consists of two subscales: "Emotion Regulation Subscale" and "Lability/Negativity Subscale". For each item, one of the following expressions: "Never/rarely, sometimes, often, almost/always" is preferred. The internal consistency coefficient of the emotion regulation scale is at the level of .73 and .75. Additionally, 6 of the 24 items were designed as reverse items.

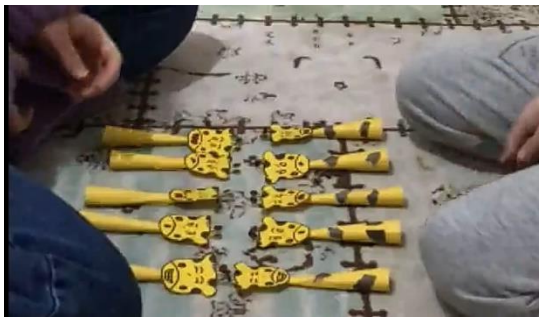
Data Collection Process

The study was planned during the 2020 Pandemic period (The pandemic took place in March 2020). Since vaccines had not yet been developed during this period, only videos regarding the process could be prepared. Meanwhile, due to the increase in hospitalization rates and the high number of death reports, the data collection process has been postponed to 2021. Due to pandemic conditions data was determined to be collected via Google forms. It was decided to collect the data on a voluntary basis using easily accessible sampling and snowball sampling methods. While data was being collected, families in the experimental group who could participate in the research and who would carry out the pre-test and post-test applications on time were interviewed. In determining the families, schools were not contacted, but families in the immediate vicinity of the researchers and other families close to these people were reached out to. Participants in the experimental group were selected according to the criteria conveyed in the study group.

Process of the Study

The "Family-Centered Video-Based I Recognize My Emotions" activity series was designed together with teacher candidates who participated in the community service project course during the pandemic period in 2020, and with the expert educator researchers in the field. The video-based activities and application methods were recorded clearly, using appropriate expressions, and sample applications were included in these recordings. In order to ensure that the videos prepared by the teacher candidates in the community service project group, were easily understandable and applicable, and arranged according to the sample format prepared by the researchers, reviews and arrangements were

made in at least five different sessions in each activity group. Before preparing the video activities, the prospective teachers were shown the format prepared by the researcher educators, and the training of this format was conveyed to the prospective teachers in three sessions. It took four months to create the videos in the activity series. These video activities include training on flash cards, games for emotions, concept-based activities, video-based art, and science activities to improve children's emotion identification skills. A few examples from the video-based activities in the series are given below.



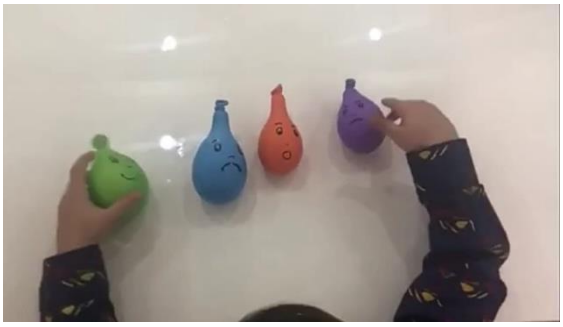


Figure 1. Emotion regulation skills activity examples.

The video-based activities prepared in 2020 were revised in 2021, converted into a presentation format, and suitable video activities were selected among them. The selection of video activities was made by researcher educators. Researcher educators paid attention to the fact that the video activities could easily be done with the materials available at home, that they were directly related to emotions, and that they included different stages such as recognizing and defining emotions. During the recording, it was highly essential that the teacher candidate used the correct tone of voice and fluently demonstrated the activity. The activity series was planned as 8 sessions, twice a week. In the activities, it was ensured that the videos did not exceed 10 minutes in order not to bore parents and children. The main purpose was to enable families spend effective time with their children, and to positively affect children's emotional regulation skills through these videos. Families shared short videos and photos of the application process with the researchers.

Analysis of Data

Since the kurtosis and skewness values of the 103 data obtained within the scope of the questions in the first two sub-objectives of the study were between -1 and +1 in terms of both the total scale score and subscale scores, parametric analyzes were used in this part of the study. Skewness-kurtosis values of emotional regulation skills total scale scores were ,057 - -,211; skewness-kurtosis values of emotion regulation subscale scores were -,496 - -,095; lability/negativity subscale skewness-kurtosis values were between ,465- ,538. Therefore, the first two objectives of the study were analyzed with means, ANOVA and independent group t test. However, each variable in the demographic data such as mother's age, father's age, mother's education level, and father's education level have a sample size below 30, it was deemed appropriate to use non-parametric analyses. When examining the father’s

employment status variable, it was decided not to include this analysis due to the fact that only one father was unemployed.

Findings

In this section of the study, an analysis on the levels of emotional regulation skills of children who occasionally stayed at home or continued to school during the 2021 pandemic period, the factors influencing these skills, the factors affecting pre-test scores of children in the experimental group, the impact of the online family interactive emotion video-based activities implemented during this process and on the factors influencing the post-test scores of children in the experimental group is provided.

The table below includes the analysis findings regarding the levels of emotional regulation skills of children in the 5-6 age group.

Table 1. Arithmetic Mean, Standard Deviation and Standard Error Values of the Emotion Regulation Skill Scale and its Sub-Dimensions

Dimensions	*N*	$\bar{x}$	*ss*
Avg	103	2,9320	,31038
Emotion Regulation Subscale1	103	3,0527	,51039
Negativity Subscale 2	103	2,0453	,41499

As seen in table 1 above; the overall average of emotion regulation scale scores across the entire scale is 2.93 out of 4 points; with 3.05 from the emotion regulation subscale and 2.045 from the lability/negativity subscale.

The tables below include the difference analysis findings according to the demographic characteristics of the emotional regulation skills levels of children in the 5-6 age group.

Table 2. Kruskal Wallis-H Test Results to Determine Whether Emotion Regulation Skill Scale Scores and Subscale Scores Differentiate According to Parental Education Level Variables

	Score	**Groups**	*N*		x^2	*sd*	*p*	**Difference**
Mothers' educational status	Average	Primary/secondary school (1)	7	35,36	11,975	3	,007	4>3
		High school (2)	25	39,58				
		Undergraduate (3)	65	56,28				
		Postgraduate (4)	6	76,75				
		Total	103					
	Emotion Regulation Subscale1	Primary/secondary school (1)	7	55,07	2,752	3	,431	-
		High school (2)	25	46,70				
		Undergraduate (3)	65	52,17				
		Postgraduate (4)	6	68,67				
		Total	103					
	Lability/Negativity Subsca	Primary/secondary school (1)	7	70,36	12,883	3	,005	3>4
		High school (2)	25	63,46				
		Undergraduate (3)	65	48,25				
		Postgraduate (4)	6	23,42				
		Total	103					

	Average	Primary (1)	8	36,69				3>2
		Secondary (2)	8	27,13				4>2
		High School (3)	17	59,41				5>2
		Undergraduate (4)	58	54,03	9,545	4	,049	
		Postgraduate (5)	12	58,46				
		Total	103					
Fathers' educational status	Emotion Regulation Subscale 1	Primary (1)	8	49,19				
		Secondary (2)	8	52,38				
		High School (3)	17	59,91				
		Undergraduate (4)	58	50,97	1,629	4	,804	
		Postgraduate (5)	12	47,42				
		Total	103					
	Lability/Negativity Subscale 2	Primary (1)	8	60,88				
		Secondary (2)	8	72,19				
		High School (3)	17	50,88				
		Undergraduate (4)	58	50,99	6,717	4	,152	
		Postgraduate (5)	12	39,08				
		Total	103					

As seen in Table 2 it was found out that there was a difference in the total score averages of the emotion regulation scale and the lability/negativity sub-dimension according to the mother's education level (x^2 =11,975; p< .05; x^2 =12,883; p< .05). No difference was detected in the other subscale of the emotion regulation scale (p> .05). Each variable was analyzed with each other using the Mann Whitney U test to determine the aspect of the difference. According to the analysis results, there is a difference between the emotion regulation scores of the children of mothers with postgraduate education and those of mothers with undergraduate degrees in favor of mothers with postgraduate degrees (U=546,000; p= .016). In addition, in the lability/negativity sub-dimensions, a difference was detected between the children of mothers with undergraduate and postgraduate degree, in favor of the children of mothers with an undergraduate degree (U=566,000; p= .026).

It was found out that there was a difference in the total mean score of the emotion regulation scale according to the father's education level (x^2 =9,545; p<.05). However, no difference was detected in other sub-dimensions (p> .05). Mann Whitney U test was conducted between each variable to determine the aspect of the difference in the emotion regulation scale. As a result of the analyses, there was a difference between the emotion regulation skill scores of the children of secondary school graduate fathers and postgraduate, undergraduate and high school graduate fathers in favor of the children of postgraduate, undergraduate and high school graduate fathers (U secondary school-high school = 25,000, p = .011; U secondary school-postgraduate = 104.5, p=.012; U secondary school-undergraduate=21,000, p= .039).

Table 3. Independent Group t Test Results Conducted to Determine Whether Emotion Regulation Scale Scores Differ According to the Mother's Working Status Variable

	Score	Groups	N	$\bar{x}$	ss	$Sh_{\bar{x}}$	t Test		
							t	Sd	p
Mother's Working Status	**Average**	Yes	53	3,0031	,31961	,04390	2,452	101	,016
		No	50	2,8567	,28437	,04022			
	Emotion Regulation Subscale 1	Yes	53	3,1267	,47518	,06527	1,524	101	,131
		No	50	2,9743	,53894	,07622			
	Negativity Subscale 2	Yes	53	1,9723	,39945	,05487	101	,066	,066
		No	50	2,1227	,42107	,05955			

Table 4. Results of Wilcoxon Analysis Conducted to Determine Whether There is a Difference Between Pretest and Posttest Scores of the Experimental Group on the Emotion Regulation Scale

		N	**Avg**	**Groups**	N	$\bar{X}_{rank}$	$\sum_{rank}$	**z**	**p**
	Average Pre	25	3,14	Decreasing	5[a]	10,60	53,00	-2,184	,029
Average				Increasing	16[b]	11,13	178,00		
	Average Post	25	3,22	Equal	4[c]				
				Total	25				
	Average Pre	25	3,17	Decreasing	5[d]	4,50	22,50	-3,114	,002
Emotion Regulation Subscale 1				Increasing	15[e]	12,50	187,50		
	Average Post	25	3,34	Equal	5[f]				
				Total	25				
	Average Pre	25	1,93	Decreasing	12[g]	12,96	155,50	-,946	,344
				Increasing	10[h]	9,75	97,50		
Negativity Subscale 2	Average Post	25	1,87	Equal	3[i]				
				Total	25				

When the table above was examined, a significant difference was seen in the pretest and posttest emotion regulation scores of the experiment and in the emotion regulation subscale, which is the subtest of the emotion regulation scale (z=-2.184, p< .05; z=-3.114, p< .05). It was revealed that the difference in every significant dimension was in favor of the post-test (ScaleAvgPre=3.14, ScaleAvgPost=3.22; EmotionregsubscaleAvgPre=3.17, EmotionregsubscaleAvgPost=3.34).

Below, the differences in the post-test emotion regulation skills of the children in the 5–6-year-old experimental group according to their demographic characteristics are given.

Table 5. Results of Kruskal Wallis-H Test Performed to Determine Whether Emotion Regulation Skill Scale Scores and Subscale Scores Differentiate According to Mother-Age Variables

Score	**Groups**	N	$\bar{X}_{rank}$	x^2	sd	p	**Difference**
Average	25-30 (1)	9	17,22	7,855	2	,020	1>2
	30-35 (2)	9	7,72				
	35-40 (3)	7	14,36				
	Total	25					
Emotion Regulation Subscale 1	25-30 (1)	9	14,72	3,705	2	,157	
	30-35 (2)	9	9,28				
	35-40 (3)	7	15,57				
	Total	25					
Lability/Negativity Subscale 2	25-30 (1)	9	7,78	8,760	2	,013	2>1
	30-35 (2)	9	18,00				
	35-40 (3)	7	13,29				
	Total	25					

According to the results of the Kruskal Wallis-H Test, which was conducted to determine whether the Emotion Regulation Skill Scale Scores and Subscale Scores differ according to mother's age variable, the emotional regulation skills differ between mothers in the 25-30 age group and mothers in the 30-35 age group in favor of those who are between 25 to 30. Similarly, the difference in the lability/negativity sub-dimension is in favor of mothers in the 30-35 age group. While the emotional regulation skills of children with mothers aged 25-30 were better, the difference between the ages of 25-30 and 30-35 in the lability/negativity sub-dimension of emotional regulation skills was in favor of mothers in the 30-35 age group. In this case, we can conclude that young mothers follow a more supportive attitude towards their children in terms of emotional regulation skills.

Table 6. Mann Whitney-U Test Results Performed to Determine Whether Emotion Regulation Subscale Scores Differ According to Mother Study Variable

Score	**Working Status**	N	$\bar{X}_{rank}$	$\sum_{rank}$	U	z	p
Emotion Regulation Subscale	Yes	15	15,60	234,00	36,000	-2,180	,031
	No	10	9,10	91,00			
	Total	25					

As seen in the table above, "Emotion Regulation Subscale Scores" differ depending on the mother's working status variable. When the aspect of the difference was evaluated, it was found that the emotion regulation subscale scores of children whose mothers worked were higher than those of children whose mothers did not work.

When similar analyzes were evaluated in terms of children's gender, father's age group, mother's education level and father's education level, no differences were found. Additionally, based on the father's employment status, analysis was not carried out because only one of the fathers participating in the study group was unemployed.

Results, Discussion and Recommendations

The results of the study, which examined the effectiveness of asynchronous video-based activities prepared to increase children's emotion regulation skills within the scope of the community service practices course held during the 2020-21 pandemic period, in improving children's emotion regulation skills, are presented and discussed in this section.

As a result of the analysis, 103 families were interviewed at the beginning and the forms were shared online. Based on the data obtained, children's emotion regulation skill levels were determined. When the scores of 103 children from the emotion regulation scale are examined, it can be said that the scores of the children from the emotion regulation scale are above the average, according to the averages obtained. However, when the scores of children in the lability/negativity subscale are analyzed, it was found out that they had a moderate level of emotion regulation skills.

When the pre-tests of 103 participants were evaluated, it was seen that as a result of non-parametric analyzes there was no difference in the emotion regulation skills of children aged 5 to 6 ($p > .05$). In addition, as a result of the analyzes made to determine the differences according to mother's age, father's age and child's gender, it was revealed that the gender variable did not make a difference ($p > .05$). Analyzes based on the father's employment status could not be performed due to insufficient data.

The results of the analysis conducted to determine whether there is a difference in the emotion regulation skills of 103 children according to various demographic characteristics showed that the education levels of the parents cause differences in the emotion regulation skills of the children, and there is no difference according to the mother's age, father's age and the gender of the child. In the study conducted by Bozkurt Yükçü and Demircioğlu (2017), it was concluded that while the mother's education level influenced children's emotion regulation skills, the father's education level did not make a difference. In addition, in this study, emotion regulation skills were not affected by age, gender, number of siblings, mother's working status, father's age and father's education. However, it was influenced by the mother's education level, age, and the monthly income of the family. Similar results have been achieved in various studies (Pudpong et al., 2023; Spinelli, 2021).

In parallel with the results of our research, there are sources concluding that there is no difference in emotion regulation skills according to gender (Aksoy and Tozduman Yaralı, 2017; Bayındır et al., 2018; Çomak, 2022; Demiral Tetik, 2022; Yurdaışık, 2023). Sala et al., (2014) also reported that although it was concluded that boys use behavioral strategies more frequently than girls, whereas girls prefer social support strategies, they did not find any gender differences regarding other measures of emotion regulation. Apaydın Demirci et al. (2020) and Yurdakul et al. (2021) found a difference in emotion regulation skills in favor of girls in their study, and they also mentioned that they reached out other studies with similar results.

In addition, the study revealed that children's emotion regulation skills differ depending on the educational level of the parents. There is a difference between the emotion regulation scores of children of mothers with postgraduate education and those of mothers with undergraduate degrees in favor of mothers with postgraduate degrees. Additionally, in the lability/negativity sub-dimension, a difference was found between the children of mothers with an undergraduate degree and those of mothers with a postgraduate degree, in favor of the children of mothers with an undergraduate degree.

It was found out that there was a difference in the total score averages of the emotion regulation scale according to the father's education level. However, no differences were detected in other sub-dimensions. A difference was seen between the emotion regulation skill scores of children of secondary school graduate fathers and postgraduate, undergraduate, and high school graduate fathers, in favor of the children of postgraduate, undergraduate, and high school graduate fathers. Some studies show similar findings to the results of this research (Liman, 2020; Vardi and Demiriz, 2021). However, Vardi and Demiriz (2021) also stated in their study that they came across with studies showing that maternal education level influences emotion regulation skills, as well as with studies stating that it has no effect at all. Demiral Tetik (2022) pointed out in their study that parent’s educational status did not affect the child's emotion regulation skills.

When the emotion regulation skills of 103 children were evaluated according to the mother's working status, a significant difference was detected in favor of the children with employed mothers. While some studies do not support this result (Çomak, 2022), it appears to be supported by some other studies (Demiral Tetik, 2022).

In this study, no differences were observed in children's emotion regulation skills according to gender and the age of the parents. There are studies in the literature where similar results are obtained (Bozkurt Yükçü and Demircioğlu, 2017; Dağlı and Dağlıoğlu, 2021). However, unlike others in Bozkurt and Demircioğlu's (2017) study, it is stated that maternal age has an impact on the child's emotion regulation ability.

Emotion regulation skill scale scores and subscale scores in the pre-test results of 25 children in the experimental group did not show difference depending on the gender of the children, the age groups of the parents, their education levels, and the working status of the mother. It is seen that this result differs from the results of 103 children. Considering that participation in the study was voluntary, it can be said that the volunteers have similar profiles. In this case, it seems normal that there is no difference in the pre-test scores of the families of the 25 children who want to participate in the research, depending on their demographic characteristics. Since only one of the fathers was not working, analysis could not be carried out according to the father's employment status.

After the pre-test, the video-based activities in the "Family-Centered I Recognize My Emotions Asynchronous Activity Series" prepared by the researchers were presented to these families online. As

a result of the families applying the video activities provided to them with their children, a significant difference was obtained in the children's emotion regulation scale scores and emotion regulation subscale scores. In this case, it has been observed that the video activities in the "Family-Centered I Recognize My Emotions Asynchronous Activity Series" have a positive effect on children's emotion regulation skill levels. However, in this study, no difference was detected in the lability/negativity sub-dimension. Based on the results obtained, it can be said that the series of activities recommended to families is effective despite being presented asynchronously, as it takes place with the participation of volunteer families and allows these families to spend quality and enjoyable time with their children. However, it can be thought that families used video activities for the intended purpose. In many studies conducted during and after the COVID 19 epidemic, it has been suggested to support children and families both by using technological tools and in other different ways (Addi Raccah and Seeberger Tamir, 2023; Di Giorgio, 2021; PLH, 2020; Pudpong et al., 2023; Singh et al., 2020; WHO, 2020). It can be concluded that our study supports the accuracy of these recommendations.

When the literature is examined, results are found that programs aimed at supporting emotional development carried out by researchers or teachers are effective in this regard (Cantekin & Gültekin Akduman, 2020; Durmuşoğlu Saltalı and Deniz, 2010; Mestci et al, 2019; Özdemir Beceren & Zembat, 2016; Ünal Bozcan and Kömleksiz, 2015). Some of these studies emphasize that parents should also be included in training on emotional regulation (Durmuşoğlu Saltalı & Deniz, 2010; Mestci et al., 2019; Ünal Bozcan & Kömleksiz, 2015).

A different result was found out in the study conducted by Aral et al. (2021) to determine the effects on the self-regulation and emotional regulation skills of 36-72 month old children who continued distance education during the COVID 19 pandemic period. As a result of the teacher-based breathing awareness and movement activities applied online to children, it was observed that the online breathing awareness and movement activities did not have a significant effect on "Self-Regulation and Emotion Regulation Skills".

In this study, the emotion regulation skills of children who participated in the video activities in the “Family-Centered I Recognize My Emotions Asynchronous Activity Series" were also evaluated before and after in terms of demographic characteristics. In the analyzes conducted according to the pre-test results of the 25 children included in the experimental group, although there was no difference in the emotion regulation skill scale scores and subscale scores according to the gender of the children, age groups of their parents, education levels, and working status of the mother, differences were found in some variables in the post-test results. The post-test results of the 25 children included in the experimental group showed differences according to the mother's age and working status.

After participating in the video-based activities in the "Family-Centered I Recognize My Emotions Asynchronous Activity Series", a difference in the emotion regulation skills of children of mothers aged between 25-30 and between 30-35. While this difference is in favor of mothers aged 25-

30 in terms of emotion regulation skills, it is in favor of mothers aged 30-35 in the lability/negativity subscale. In this case, it can be said that the children of relatively young mothers manage their emotions better after the practices than the children of mothers in the other group. It is thought that women between the ages of 30-35 experience more intense conditions in their business and private lives. However, it can be said that this difference arises because they are in a critical period in the maturation process. Bozkurt and Demircioğlu's (2017) study also stated that maternal age has an impact on the child's emotion regulation skills.

When the emotional regulation subscale post-test scores of the children in the experimental group were examined according to the working status of the mothers, it was concluded that the findings were significantly different in favor of the children of working mothers. Active working life may have been effective in mothers' understanding of video activities and their regular implementation.

It was observed in the findings that there was a difference according to the working and age status of the mothers. According to this result, the combined effect of mothers' working and age status can be evaluated. Since our study was limited to 25 children and their families, these analyzes could not be performed. In order to conduct these analyses, it is recommended that the studies be repeated with more children and families.

As a result of the study, after the experiment there was a positive difference in the emotional regulation skills of children whose mothers were employed. In this case, it may be recommended to determine the reasons for this result by recording the entire application process of the mothers and analyzing it.

It can be concluded that with the results of application of video-based activities in the "Family-Centered I Recognize My Emotions Asynchronous Activity Series" families can effectively use online video-based activities to bring positive changes in children's emotion regulation skills.

Policy Implications

To promote the development of emotion regulation skills in preschool children, a series of activities involving family participation was curated. To ensure their effectiveness, the activities were implemented through the interactive asynchronous education model. This decision was based on the varying work schedules and availability of families from different professions. Thus, every family was afforded the chance to reinforce and practise to their heart's content at their own pace and convenience, independent of time and place. A comprehensive analysis and research on family involvement in education is imperative. Hence, this study is anticipated to make a significant contribution to the literature.

The activity video series' scenario underwent meticulous design using professional video editing programs. While producing the videos, we developed unique activity sequences accompanied by visuals to reinforce the training. The materials used in the videos were readily available in family

homes. The training was structured to involve preparation of activities, followed by guidance on implementation and concluding with enquiries and feedback. Our objective was to maximise training efficiency while offering a fresh and innovative approach to sustaining family participation. This article aims to contribute to the development of technology-supported policies for family involvement activities, in accordance with the journal's objectives and policies. Biased or subjective evaluations are avoided, technical term abbreviations are explained upon first use, and conventional academic structure and formatting are maintained. Language is clear, concise and formal, with precise word choice, passive tone and impersonal construction, and avoidance of biased, emotional, figurative or ornamental language. Causal connections and logical flow of information are ensured, and grammatical correctness is maintained, while adhering to British English spelling and grammar conventions.

Conflict of Interest

The authors declare no conflicts of interest.

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Ethical Statement

The authors of this article state that there are no ethical conflicts or issues that may prevent the publication of the research. This research was approved by the Ethics Committee of Marmara University Institute of Educational Sciences Research and Publication Ethics Committee with the approval number 2020/6-5 at its meeting dated June 19, 2020.

Credit Author Statement

The authors contributed equally to this study. Contribution of the authors is as follows:

Author 1: Conceptualization, Methodology, Investigating, Validation, Writing, Software, Data Curation. Author 2: Conceptualization, Methodology, Investigating, Validation, Writing, Software, Data Curation. Author 3: Conceptualization, Methodology, Investigating, Validation, Writing, Software, Data Curation. Author 4: Conceptualization, Methodology, Investigating, Validation, Writing, Software, Data Curation.

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