# Pilot Implementation of A Multicomponent Intervention Program for Children in the Risk Group in Terms of Social-Emotional Development in Preschool Period*

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**ABSTRACT**

The purpose of this study is to examine the effects of a multicomponent intervention program for children who are in the risk group in terms of social-emotional development in preschool period on children's social-emotional development, behavioral problems and well-being, and parents' competence, parenting relationships and parental stress levels. In line with this purpose, the research has a mixed design feature as it includes quantitative and qualitative dimensions. The qualitative part was conducted with a phenomenological design to evaluate the participants' perceptions of the program, while the quantitative part was designed with a pretest-posttest and control group experimental design. Necessary ethical permissions were obtained for the research. The following scales were administered to the participants according to the criteria for assignment to the groups, primarily voluntariness: Social Skills Assessment Scale, Preschool Behavior Questionnaire (PBQ), Social Emotional Well-Being and Psychological Resilience Scale for Preschool Children (PERIK), Perceived Parental Self-Efficacy Scale (PPSE), Parent Stress Scale (PSS), Parenting Relationship Questionnaire (BASC-3) and personal information form. In the statistical analysis of the data, qualitative data were analyzed using MaxQDA-2018 qualitative data analysis program and quantitative data were analyzed using IBM SPSS Statistics 22 package program. Wilcoxon Signed Ranks test and Mann Whitney U test were used in qualitative data. In the experimental group, a significant ($p<0.05$) difference was found in social-emotional development, behavioral problems and parenting relationships and parental stress levels compared to the control group. However, although the well-being levels of the child participants increased, they did not reach the level of significance, while there was no significant difference in parental competence levels ($p>0.05$). It can be concluded that the multicomponent intervention program for children in the risk group in terms of social-emotional development in preschool period is effective in the social-emotional development of children. Comprehensive experimental studies on this subject are needed.



**Keywords:**[1]
Social-emotional development, behavioral problem, multi-component interventio, preschool period.

## INTRODUCTION

Child development is an important determinant of lifelong health (Carande-Kulis et al., 2000). Social-emotional development, which constitutes an important part of child development, is an area of development that includes components that help to understand and adapt in social environments; it is the area of development in which skills are acquired to identify and manage emotions, develop interest and compassion for others, establish positive relationships, make responsible decisions, and make constructive and ethical decisions in the face of challenging situations (Deniz & Eryılmaz, 2021). It has been said that the development of this developmental area, which directs people's attitudes and behaviors, in early childhood (Blewitt et al., 2020; Vandenbroeck et al., 2018) affects not only the future of the child but also the future of the family and society (Öztürk & Deniz, 2014). Because possible social-emotional problems affect the developing child's brain development, relationships and experiences, gene functions, neural connections and cognitive functions throughout life (Shonkoff & Phillips, 2000).

While it has a statistically significant positive effect on social-emotional development and well-being levels, it has a negative significant relationship with behavior problems (Ashdown & Bernard, 2012). 13-18% of all preschool children experience behavior problems with temporary or long-term negative consequences (Schell et al., 2015). In a study conducted with 2- to 5-year-old children with behavioral problems, social-emotional development problems were found in 10-20% of them (Brauner & Stephens, 2006; Egger & Angold, 2006). The acquisition of social-emotional skills helps preschool children to feel more confident and competent in developing relationships, forming friendships, resolving conflicts, persisting in the face of difficulties,

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coping with anger and frustration, and managing emotions (Parlakian, 2003). When social emotional development is intervened, permanent changes in well-being can occur as well as a decrease in behavioral problems (Mendelsohn et al., 2018; Schell et al., 2015).

On the other hand, after the 2000s, when the focus was on school readiness and the skills that children need to be successful in primary school and beyond, the importance of social-emotional development for increasing academic success was recognized (Shonkoff & Phillips, 2000). The capacity to develop positive social relationships, to concentrate on challenging tasks and persist in solving them, to manage emotions effectively, and to solve problems were seen as important social-emotional skills needed to succeed in school (Fox et al., 2006).

A child's development is influenced by genetic makeup, parental relationships and the environment (Briss et al., 2000). In a study conducted in Italy during quarantine, parental stress and quarantine perceptions were found to be associated with children's behavioral and emotional problems (Spinelli et al., 2020). Maternal and paternal attitudes have been found to affect social skills and behavior problems in older age groups (Deniz & Kapıcıoğlu, 2018). Therefore, parents, who have an impact on an individual's life from before birth until the end of life, are of great importance in the development of the child (Gürşimşek, 2002). On the other hand, the contribution of the family to the development of the child is great. However, the family is not the only factor influencing the child's development (Briss et al., 2000). The influence of teachers on children in this period is a known fact (Ekinci -Vural, 2006). Parents and teachers have great duties together in supporting children's social development (Aral et al., 2018). The effective interventions necessary for children are realized through the cooperation of family and teacher (İşmen & Yıldız, 1996). As can be seen, more positive results can be obtained with a program that includes parents and preschool teachers. In this context, "A Multi-Component Intervention Program Proposal for Children in the Risk Group in Terms of Social-Emotional Development in Preschool Period" was presented (Tekgül & Deniz, 2024). This program is a multicomponent program with the participation of children, parents and teachers, which is prepared to support the social-emotional skills, behavioral problems and well-being of preschool children. The program is based on the intervention to be applied by the researcher to children whose social-emotional development is below normal limits or within the risk limits, and parent and teacher participation modules. In the module with parent participants, which constitutes a component of the program, the effect on parents' competence, parenting relationships and parental stress levels will be examined.

As mentioned above, there has been an increasing tendency abroad to investigate the social-emotional development of preschool children after the 2000s and especially after the pandemic. There are intervention programs related to this (e.g. Cosso et al., 2022; Green et al., 2012; Anderson et al., 2003). In our country, there is a need for programs that can appropriately support these developmental areas of children in this period (Pektaş, 2022).

In conclusion, this study has unique value as it addresses a current issue such as social-emotional development in early childhood, is a multicomponent intervention program, has the potential to prevent problems in difficult conditions in practice, and is applicable. In addition, it is thought to contribute to the literature with its content being different from the existing programs, the lack of a similar study in the Turkish literature, and the originality of the variables to be used.

In this context, the aim of the study is to examine the effects of the multicomponent intervention program for children who are in the risk group in terms of social-emotional development in preschool period on children's social-emotional development, behavioral problems and well-being, and parents' competence, parenting relationships and parental stress levels.

**METHOD**

In this study, a simultaneous mixed methods research design (Plano Clark & Ivankova, 2016; Toraman, 2021) was used. In mixed methods, the results obtained from quantitative and qualitative data are integrated (Creswell & Plano Clark, 2018). In this type of research, the quantitative and qualitative dimensions of the study are initiated and conducted approximately simultaneously. It is based on the logic that the result obtained from one method does not affect the sample selection, data collection and analysis of the other (Toraman, 2021).

The quantitative part of the study was designed with a pretest-posttest and control group experimental design. This model is accepted as one of the powerful designs among experimental designs. As a result of observations and analyzes, it is tried to reveal how the change in independent variables affects the dependent

variable (Karasar, 2018). The independent variable of the study is the multicomponent intervention program for children in the risk group in terms of social-emotional development in preschool period. The dependent variable of the study is the social-emotional development, behavioral problems and well-being of the participants in the program and the competence, parenting relationships and parental stress levels of the parents.

In the study, phenomenological analysis was also used to evaluate the teacher participants' perceptions of the program. The purpose of the phenomenological model is to find the meanings created by the participants and to explore their experiences of the phenomenon (Patton, 2014). Since the aim of this study was to examine how the participants defined the concept of social-emotional development, the phenomenological model was used. Finally, the quantitative data obtained with the full experimental model and the qualitative data collected with the phenomenological model were interpreted together.

*WORKING GROUP*

The students, parents and teachers of the preschool students in Istanbul were randomly assigned to the experimental and control groups by purposive sampling method. 12 children (8 boys, 4 girls), 12 parents (12 mothers) and 2 teachers (female) were assigned to the experimental and control groups according to the criteria for participation in the study by purposive sampling method.

The criteria for assignment to the groups were as follows: (1) Child participants' Social Skills Assessment Scale scores were one standard deviation below the arithmetic mean, (2) Child participants did not have a psychiatric diagnosis, (3) Child participants did not have a physical disability, (4) All participants were not currently receiving psychological help, (5) Parents volunteered and the same parent could participate throughout the study.

*MULTICOMPONENT INTERVENTION PROGRAM FOR CHILDREN IN THE RISK GROUP IN TERMS OF SOCIAL-EMOTIONAL DEVELOPMENT IN PRESCHOOL PERIOD*

The program is a multi-component program with child, parent and teacher participation, designed to support the social-emotional skills, behavioral problems and well-being of preschool children. The program is based on the intervention to be applied by the researcher to children whose social-emotional development is below normal limits or within the risk limits, and on the modules of parent and teacher participation in the program. The activities in the program also include activities to be implemented by parents at home.

In this study, the psychoeducational group method was chosen for the development of the parent module of the program in line with the purpose of the study. The psychoeducational group method is a group approach that enables individuals to both learn and develop skills (Brown, 2004). In these groups, it is especially aimed at enriching people's knowledge repertoire, raising self-awareness and teaching certain skills. In this group work, individuals gain various skills such as problem solving, developing communication skills, and decision making (Brown, 2004).

The program was developed by reviewing the literature and adopting an eclectic approach. The program was based on a qualitative study by collecting data from teachers. In this context, Table 1 shows the modules, implementation method, objectives, number of sessions and session durations.

**Table 1.** Summary of the Content of the Multidimensional Social-Emotional Development Intervention Program

| **Module** | Child | Parent | Teacher |
|---|---|---|---|
| **Implementation** | CCOT | Child-Focused Psychoeducation | Child-Focused Guidance |
| **Sessions** | Individually, 15 sessions for each child Psychological counseling services were provided in accordance with the Child-Centered Play Therapy school. | 1. Objective setting and introductions<br>2. Expressing oneself verbally<br>3. Emotions and empathy<br>4. Relationship between emotion, thought and behavior<br>5. Interpersonal skills in the family<br>6. Self-control<br>7. Ability to create goals<br>8. Roles and tasks<br>9. Accepting the consequences<br>10. Building and sharing close relationships<br>11. Dealing with anger<br>12. Coping with peer pressure<br>13. Adaptation<br>14. Reviewing the outcomes that support social-emotional development<br>15. Termination | 1. According to the program; 1, 2, 3, 4, 5, 6, 7 session topics<br>2. According to the program; 8, 9, 10, 11, 12, 13 session subjects<br>3. Termination |
| **Duration** | 1 session of 45 minutes each per week | 120-minute group sessions once a week | Group sessions of 90 minutes, 3 times in total |

*PROCEDURE*

In this study, the experimental process was conducted in 15 sessions for children and parents and 3 sessions for teachers. In addition to these sessions, pre-interviews were conducted with the individuals in the experimental and control groups before the program and pre-tests were administered. Post-tests were administered after the sessions were completed.

The multidimensional intervention program prepared in the study was applied to the experimental group. The program was not applied to the control group. The process regarding the implementation was as follows. Child-Centered Play Therapy (CCPT) was applied to the children for 45 minutes, and group psycho-education was given to the parents in the same week, each session lasting 120 minutes. Both interventions were conducted in a total of 15 sessions. Teachers received guidance services for 3 sessions as indicated in Table 1.

Temporally, this study was conducted on a standard weekday (Friday) between 08.30-17.30 hours. As the location of the study, a child play therapy room suitable for the approach was created for children in the individual interview room, and a group counseling room was preferred for parents and teachers. The sessions were conducted by researchers. The first researcher, the supervisor, is a professor-level academic in the department of guidance and psychological counseling. He also has many studies on group counseling and psycho-education group practices. The second one is a practitioner clinical psychologist and a doctoral student in the field of Psychological Counseling and Guidance. She is pursuing her doctoral education in the department of guidance and psychological counseling, has taken doctoral level courses on group and

individual counseling practices and has received various psychotherapy trainings and has 15 years of experience in the field.

*DATA COLLECTİON TOOLS*

*Social Skills Assessment Scale (SSES)*

Social Skills Assessment Scale (4-6 years) was developed by Avcıoğlu (2007) to be applied to children attending preschool institutions. The 62-item, 5-point Likert-type scale has a total of 9 subscales. The lowest score that can be obtained from the scales is 62 and the highest score is 310. In the internal consistency test conducted to determine the reliability of the scale prepared to measure social skills, the Cronbach alpha reliability coefficient was found to be .98 (Avcıoğlu, 2007).

*Preschool Behavior Questionnaire (PBQ)*

The scale developed by Behar (1976) determines the behavioral problems of 3- to 6-year-old children attending preschool education institutions. The scale adapted into Turkish by Kanlıkılıçer has 3 sub-dimensions and 30 items. It is a 3-point Likert-type scale filled by parents or teachers. In the reliability analysis of the scale, the internal consistency Cronbach $\alpha$ reliability coefficient was found to be .92 (Kanlıkılıçer, 2005).

*Social Emotional Well-Being and Psychological Resilience Scale for Preschool Children (PERIK)*

It was developed by Mayr and Ulich (2009) and adapted for Turkish children by Özbey (2019). The scale consists of a total of 36 items and 6 subscales, with 6 items in each subscale. Alpha reliability coefficients of the scale vary between .86 and .95. As a result of the study, the scale was found to be a valid and reliable measurement tool for Turkish children (Özbey, 2019).

*Perceived Parental Self-Efficacy Scale (PPSE)*

Demir and Gündüz (2014) conducted the adaptation, validity and reliability studies of the Perceived Self Efficacy Scale (PPSE) developed by Caprara, Regalia, Scabini, Barbanelli, and Bandura (2004) into Turkish. The original version of the scale consisted of 12 items and a single-factor structure, and as a result of the factor analysis, a single-factor structure consisting of 11 items was obtained. The Cronbach Alpha internal consistency coefficient calculated to determine the reliability of the scale was found to be .92.

*Parenting Relationship Questionnaire (BASC-3)*

BASC-3 developed by Kmaphaus and Reynolds (2015), was designed to determine the perspective of the parent or the individual assuming a similar role on the parent-child relationship. The scale has two forms: preschool (2-5 years) and child/adolescent (6-18 years). It takes approximately 10 to 15 minutes to administer. Within the scope of the validity study, the correlation values between the sub-dimensions of the measurement tool were found between 0.78-0.93 and the validity of the scale was confirmed (Kamphaus & Reynolds, 2015). It was adapted into Turkish (Pekşen Akça, 2020).

*Parent Stress Scale (PSS)*

It was aimed to develop a tool to measure the stress experienced by parents in their relationships with their children in daily life. It consists of 16 one-dimensional items. It is 4-point Likert type. The Cronbach's alpha value calculated for the internal consistency reliability of the PSS was . 85 and Spearman Brown's two-half test reliability was calculated as .82 (Özmen and Özmen 2012).

*DATA ANALYSİS*

In this study, two types of data analysis, qualitative and quantitative, were utilized.

*Qualitative Analysis*

In this study, semi-structured interviews were used as a qualitative data collection technique. Interviews were conducted with teachers in the form of "focus groups". The data were analyzed using MaxQDA-2018 qualitative data analysis software. In the analysis of the data, important quotations from the opinions of the teachers in the study group were identified and themes were created.

*Quantitative Analysis*

After the data were collected, IBM SPSS Statistics 22 package program was used by the researchers for statistical analysis. In this study, preliminary analyses were conducted before starting quantitative analysis. Before starting the quantitative analysis in this study, it was examined whether the data met the normality assumption. The margin of error was taken as .05. First of all, extreme values were examined to test normality and kurtosis and skewness values of the variables were checked. For normal distribution, kurtosis and skewness values should be between +1 and -1 (Çokluk, Şekercioğlu, & Büyüköztürk, 2016). When the data were examined, it was seen that the data did not meet this condition.

As a result, since parametric conditions were not met, nonparametric tests were preferred in quantitative data analysis. The U test (Mann Whitney), one of the related tests, is used to determine whether there is a significant difference between the pretest and posttest measurements of the experimental group and the pretest and posttest measurements of the control group. On the other hand, the Signed Ranks Test (Wilcoxon) is used to determine which measurement is significant in favor of the difference between the pre-test and post-test measurements within the experimental group and between the pre-test and post-test measurements within the control group.

*ETHİCS COMMİTTEE PERMİSSİON*

This study was conducted with both the ethics committee permission of Istanbul Governorship Provincial Directorate of National Education dated 31.05.2023 and numbered E-59090411-4477177786 and the ethics committee permission of Yıldız Technical University Social and Human Sciences Research Ethics Committee dated 01.02.2023 and numbered 20230201882.

**FINDINGS**

*QUALITATIVE RESULTS*

In phenomenological research, data analysis is conducted in three stages. In the first stage, important sentences or phrases directly related to lived experiences are found. In the second stage, meanings are derived from important sentences and then clustered into themes. The final stage is a comprehensive description of the phenomenon (Creswell, 2007). These three stages were taken into account in the analysis of the present data. The participants for the qualitative research in the pilot study were two teachers working in kindergarten.

The data analysis was carried out in the following way: First, some sentences and paragraphs were identified as important statements. These important statements were used as sampling units to determine the relationships between comprehensive definitions and themes. In the second stage, the themes of "1) social-emotional skills, (2) risk factors for social-emotional developmental risk, (3) protective factors for social-emotional development, (4) temperament, and (5) negative consequences of social-emotional developmental delay" were found from these important statements. In the last stage, a comprehensive definition was made as "Social-emotional development competence" and "Social-emotional development deficiency". Qualitative results are given in Table 2.

**Table 2.** Qualitative Evaluation of the Program

| Comprehensive definition | Theme | Examples of Important Statements |
|---|---|---|
| Social-emotional development competence | Social-emotional skills | Social-emotional development is the ability to understand, adapt and empathize with one's own emotions and those of others |
| | Temperament | Introverted and difficult children may have social difficulties due to their nature. |
| | Protective factors in social-emotional development | Social-emotional development can be more advanced if there is healthy communication with the child, empathy and good family-school relations. |
| Inadequate social-emotional development | Social-emotional developmental risk factors | If family relationships, economic conditions and the social environment in which the child lives are unfavorable, the outcome may also be unfavorable. |
| | Negative consequences of social-emotional developmental delay | In my opinion, children with social-emotional development problems have difficulty communicating with other children, may experience sudden changes in emotions, may be maladaptive and aggressive. |

*QUANTİTATİVE ANALYSİS*

Since parametric conditions were not met in this study, nonparametric tests were preferred in quantitative data analysis. Mann Whitney U Test is used to determine whether there is a significant difference between the pretest and posttest measurements of the experimental group and the pretest and posttest measurements of the control group. On the other hand, the Wilcoxon Signed Ranks Test is used to determine which measurement is significant in favor of the difference between the pre-test and post-test measurements within the experimental group and between the pre-test and post-test measurements within the control group.

*The Results of the Pre-test and Post-test Descriptive Statistics of the Scales Used in the Study*

Table 3 presents the pre-test and post-test descriptive statistics of the total scores of the participants in the experimental and control groups on social-emotional development, behavioral problems and well-being, and parents' competence, parenting relationship and parental stress levels.

**Table 3.** Descriptive Statistics of the Scales Used in the Study Pre-Test and Post-Test

| **Measurement** | | | **Pre-test** | | **Post-test** | |
|---|---|---|---|---|---|---|
| **Scales** | **Group** | ***N*** | ***X*** | ***SS*** | ***X*** | ***SS*** |
| **SSES** | Experiment | 6 | 175.67 | 34.20 | 225.83 | 19.76 |
| | Control | 6 | 187.00 | 11.45 | 183.50 | 19.78 |
| **PBQ** | Experiment | 6 | 47.83 | 8.32 | 42.33 | 6.86 |
| | Control | 6 | 46.50 | 6.05 | 49.17 | 5.34 |
| **PERIK** | Experiment | 6 | 143.17 | 12.58 | 151.33 | 7.89 |
| | Control | 6 | 145.33 | 16.52 | 143.50 | 13.03 |
| **PPSE** | Experiment | 6 | 48.50 | 4.89 | 54.67 | 5.85 |
| | Control | 6 | 53.33 | 10.35 | 52.33 | 4.41 |
| **PSS** | Experiment | 6 | 31.33 | 5.47 | 28.17 | 4.26 |
| | Control | 6 | 34.17 | 2.79 | 36.67 | 6.59 |
| **BASC** | Experiment | 6 | 95.67 | 17.26 | 104.17 | 8.42 |
| | Control | 6 | 97.50 | 6.89 | 94.83 | 5.56 |

*SSES: Social Skills Assessment Scale; PBQ: Preschool Behavior Questionnaire; PERIK: Social Emotional Well-Being and Psychological Resilience Scale for Preschool Children; PPSE: Perceived Parental Self-Efficacy Scale; PSS: Parent Stress Scale; BASC: Parenting Relationship Questionnaire*

*Man Whitney U Pre-test Results*

Table 4 presents the findings of the Man-Whitney U pre-test conducted to determine whether there was a difference between the participants in the experimental and control groups in terms of pre-test based on the total scores they received from the scales related to social-emotional skills, behavior problems, well-being, parental stress, parental competence and parenting relationships variables:

**Table 4.** Pre-test Results

| **Measurement** | **Group** | ***N*** | **Rank Mean** | **Rank Sum** | ***U*** | ***p*** |
|---|---|---|---|---|---|---|
| **SSES** | Experiment | 6 | 6.17 | 37.00 | 16.00 | .748 |
| | Control | 6 | 6.83 | 41.00 | | |
| **PBQ** | Experiment | 6 | 6.67 | 40.00 | 17.00 | .873 |
| | Control | 6 | 6.33 | 38.00 | | |
| **PERIK** | Experiment | 6 | 6.58 | 39.50 | 17.50 | .936 |
| | Control | 6 | 6.42 | 38.50 | | |
| **PPSE** | Experiment | 6 | 5.83 | 35.00 | 14.00 | .520 |
| | Control | 6 | 7.17 | 43.00 | | |
| **PSS** | Experiment | 6 | 5.58 | 33.50 | 12.50 | .374 |
| | Control | 6 | 7.42 | 44.50 | | |
| **BASC** | Experiment | 6 | 6.17 | 37.00 | 16.00 | .748 |
| | Control | 6 | 6.83 | 41.00 | | |

*SSES: Social Skills Assessment Scale; PBQ: Preschool Behavior Questionnaire; PERIK: Social Emotional Well-Being and Psychological Resilience Scale for Preschool Children; PPSE: Perceived Parental Self-Efficacy Scale; PSS: Parent Stress Scale; BASC: Parenting Relationship Questionnaire*

Table 4 shows that there was no significant difference between the pre-test scores of the participants in the experimental and control groups in terms of social-emotional skills ($u$=16.00; $p$>0.05), behavior problems ($u$=17.00; $p$>0.05), children's well-being ($u$=17.50; p>0.05), parental competence ($u$=14.00; $p$>0.05), parental stress ($u$=12.50; $p$>0.05) and parenting relationship (u=16.00; $p$>0.05). These findings show that the experimental and control groups are equalized groups in terms of pre-test scores.

Table 5 presents the findings of the Man Whitney U post-test conducted to determine whether there was a difference between the participants in the experimental and control groups in terms of post-test based on the total scores they received from the scales related to social-emotional development, behavioral problems, well-being, parental stress, parental competence and parenting relationships variables.

**Table 5.** Post-test Results

| Measurement | Group | *N* | Rank Mean | Rank Sum | *U* | *p* |
|---|---|---|---|---|---|---|
| **SSES** | Experiment | 6 | 8.67 | 52.00 | 5.00 | .037 |
| | Control | 6 | 4.33 | 26.00 | | |
| **PBQ** | Experiment | 6 | 4.42 | 26.50 | 5.50 | .045 |
| | Control | 6 | 8.58 | 52.50 | | |
| **PERIK** | Experiment | 6 | 7.75 | 46.50 | 10.50 | .229 |
| | Control | 6 | 5.25 | 31.50 | | |
| **PPSE** | Experiment | 6 | 7.17 | 43.00 | 14.00 | .519 |
| | Control | 6 | 5.83 | 35.00 | | |
| **PSS** | Experiment | 6 | 4.25 | 25.50 | 4.50 | .030 |
| | Control | 6 | 8.75 | 52.50 | | |
| **BASC** | Experiment | 6 | 8.58 | 51.50 | 5.50 | .045 |
| | Control | 6 | 4.42 | 26.50 | | |

*SSES: Social Skills Assessment Scale; PBQ: Preschool Behavior Questionnaire; PERIK: Social Emotional Well-Being and Psychological Resilience Scale for Preschool Children; PPSE: Perceived Parental Self-Efficacy Scale; PSS: Parent Stress Scale; BASC: Parenting Relationship Questionnaire*

Table 5 shows that there was a significant difference between the social-emotional skills ($u$=5.00; $p$<0.05), behavior problems ($u$=5.50; $p$<0.05), parental stress-($u$=4.50; $p$<0.05) and parenting relationship ($u$=5.50; $p$<0. 05); however, there was no significant difference in the total scores of children's well-being ($u$=10.50; $p$>0.05) and parental competence ($u$=14.00; $p$>0.05). This finding shows that the multicomponent intervention program was effective in increasing social-emotional skills in children. However, there was no significant difference in children's social-emotional well-being and parenting competence levels.

*Wilcoxon Signed Rank Test Results*

In order to determine the effectiveness of the implementation process, the pre-test and post-test scores of the participants in the experimental group and the pre-test and post-test scores of the participants in the control group were analyzed by Wilcoxon Signed Rank Test. The analysis findings are shown in Table 6 and Table 7.

**Table 6.** Wilcoxon Signed Rank Test Results of the Experimental Group's Pre-Test and Post-Test Scores

| Measurement | Sequence Markers | *N* | Rank Mean | Rank Sum | *Z* | *p* |
|---|---|---|---|---|---|---|
| **SSES** | Negative I. | 0 | 0 | 0.00 | | |
| | Positive I. | 6 | 3.50 | 21.00 | -2.207 | .027 |
| | Equal I. | 0 | | | | |
| **PBQ** | Negative I. | 6 | 3.50 | 21.00 | -2.207 | .027 |
| | Positive I. | 0 | 0 | 0.00 | | |
| | Equal I. | 0 | | | | |
| **PERIK** | Negative I. | 0 | 0 | 0.00 | | |
| | Positive I. | 6 | 3.50 | 21.00 | -2.207 | .027 |
| | Equal I. | 0 | | | | |
| **PPSE** | Negative I. | 0 | 0 | 0.00 | | |
| | Positive I. | 5 | 3.00 | 15.00 | -2.023 | .043 |
| | Equal I. | 1 | | | | |
| **PSS** | Negative I. | 1 | 4.00 | 20.00 | -1.992 | .046 |
| | Positive I. | 5 | 1.00 | 1.00 | | |
| | Equal I. | 0 | | | | |
| **BASC** | Negative I. | 2 | 2.00 | 4.00 | | |
| | Positive I. | 4 | 4.25 | 17.00 | -1.363 | .173 |
| | Equal I. | 0 | 0 | | | |

*SSES: Social Skills Assessment Scale; PBQ: Preschool Behavior Questionnaire; PERIK: Social Emotional Well-Being and Psychological Resilience Scale for Preschool Children; PPSE: Perceived Parental Self-Efficacy Scale; PSS: Parent Stress Scale; BASC: Parenting Relationship Questionnaire*

Table 6 shows that there was a significant difference between the pre-experimental social-emotional skills ($Z$=-2.207; $p$<0.05), behavioral problems ($Z$=-2.207; $p$<0.05), children's social-emotional well-being ($Z$=-2.207; $p$<0.05), parental competence ($Z$=-2. 023; $p$<0.05) and parenting relationship ($Z$=-1.992; p<0.05) total scores; however, there was no difference in parental competence ($Z$=-1.363; $p$>0.05) total score.

According to the results in Table 7, the participants in the control group had lower social-emotional skills total scores ($Z$=-.405; $p$>0.05), behavioral problems total scores ($Z$= -9.43; $p$>0.05), children's social-emotional well-being total scores ($Z$= -. 946; $p$>0.05), parental competence total scores ($Z$= -.105; $p$>0.05), parental stress total scores ($Z$= -.943; $p$>0.05) and parenting relationship total scores ($Z$= -.674; $p$>0.05) did not differ significantly. These results show that the total scores of the participants in the control group from the scales of social-emotional skills, behavior problems, social-emotional well-being, parental stress, parental competence and parenting relationships did not change compared to the pre-experiment.

**Table 7.** Wilcoxon Signed Ranks Test Results of the Control Group's Pre-Test and Post-Test Scores

| Measurement | Sequence Markers | *N* | Rank Mean | Rank Sum | *Z* | *p* |
|---|---|---|---|---|---|---|
| **SSES** | Negative I. | 2 | 4.50 | 9.00 | | |
| | Positive I. | 3 | 2.00 | 6.00 | -.405 | .686 |
| | Equal I. | 1 | | | | |
| **PBQ** | Negative I. | 3 | 2.00 | 6.00 | | |
| | Positive I. | 3 | 5.00 | 15.00 | -.943 | .345 |
| | Equal I. | 0 | | | | |
| **PERIK** | Negative I. | 5 | 3.00 | 15.00 | -.946 | .344 |
| | Positive I. | 1 | 6.00 | 6.00 | | |
| | Equal I. | 0 | | | | |
| **PPSE** | Negative I. | 2 | 5.50 | 11.00 | -.105 | .916 |
| | Positive I. | 4 | 2.50 | 10.00 | | |
| | Equal I. | 0 | | | | |
| **PSS** | Negative I. | 2 | 3.00 | 6.00 | | |
| | Positive I. | 4 | 3.75 | 15.00 | -.943 | .345 |
| | Equal I. | 0 | | | | |
| **BASC** | Negative I. | 4 | 2.50 | 10.00 | -.674 | .500 |
| | Positive I. | 1 | 5.00 | 5.00 | | |
| | Equal I. | 1 | | | | |

*SSES: Social Skills Assessment Scale; PBQ: Preschool Behavior Questionnaire; PERIK: Social Emotional Well-Being and Psychological Resilience Scale for Preschool Children; PPSE: Perceived Parental Self-Efficacy Scale; PSS: Parent Stress Scale; BASC: Parenting Relationship Questionnaire*

## RESULTS, DISCUSSION and SUGGESTIONS

This study was a pilot study conducted to examine the effects of a multicomponent intervention program for preschool children who are in the risk group in terms of social-emotional development on children's social-emotional development, behavioral problems and well-being, and on parents' competence, parenting relationships and parental stress levels. The results of the study showed that the 15-week multicomponent program was effective on children's social-emotional development and behavioral problems, and parents' parenting relationships and parental stress levels ($p<0.05$); however, no significant difference was observed in children's social-emotional well-being and parenting competence levels ($p>0.05$).

According to the results obtained from the qualitative interviews conducted with the teacher participants before the implementation of the multicomponent intervention program, a comprehensive definition of "social-emotional development competence and social-emotional development insufficiency" was reached. When they defined normal development, they emphasized the importance of social-emotional skills, social-emotional development protective factors and temperament. In the findings defined as abnormal development, they explained the social-emotional developmental risk factors and the negative consequences of social-emotional developmental retardation. As a result, the themes and sub-codes obtained as a result of qualitative data analysis supported the content of the multicomponent intervention program.

In this study, a multicomponent program based on an eclectic approach for preschool children at risk in terms of social-emotional development was implemented in an environment suitable for the psychological counseling process and its effectiveness was evaluated. In this program, cognitive-behavioral approach, systemic approach, Gottman method and child-centered play therapy were used. In the application, cognitive restructuring, role-playing, breathing-relaxation exercises, reconciliation circle, system flower and homework techniques were utilized. In studies, it was reported that participants who regularly did homework showed more improvement than those who did not (Soylu & Topaloğlu, 2015). In this study, homework was assigned in the parents' module and the rate of doing homework was 83.3%. There was no loss of participants in the study.

In the study, the SSES was used to determine whether undiagnosed children were in the risk group in terms of social-emotional development. Since this study was conducted for children at risk in terms of social-emotional development, those who met the following conditions were included in the groups: the child participants' SSES scores were one standard deviation below the arithmetic mean, the child participants did

not have a psychiatric diagnosis, the child participants did not have a physical disability, all participants were not currently receiving psychological help, the parents were volunteers and the same parent could participate throughout the study. In the study, when the pre-test and post-test comparisons of the scores obtained from the SSES in the experimental and control groups were made, a significant decrease was observed in the scores of the experimental group in the post-test. The change detected in the scale scores with the intervention is similar to the results of the multicomponent program study in the literature (Conner & Fraser, 2011).

In the other variables addressed in the study, PBQ was used to measure behavioral problems in children and PERIK to measure well-being, BASC to measure parenting relationships in parents, PPSE to measure parenting competence level and PSS to measure parental stress levels. In the study, when the pre-test and post-test comparisons of the scores obtained from PBQ, BASC and PSS in the experimental and control groups were made, a significant decrease was observed in the scores of the experimental group in the post-test; when the pre-test and post-test comparisons of the scores obtained from PERIK and PPSE in the experimental and control groups were made, no significant decrease was observed in the scores of the experimental group in the post-test. In a similar study (Conner & Fraser, 2011) in which the first component of a multi-component program designed to prevent aggressive behaviors in preschool children was social-emotional skills training (focused on developing children's social and emotional skills) and the second component was a group-based parenting training (focused on parental attitude), the academic competence, social-emotional competence, depression and aggressive behavior levels of children in the intervention group showed significant differences compared to the control group. In parents, parental bonding, communication and developmental expectancy levels in the intervention group showed significant differences compared to the control group. In this pilot study, significant results were obtained in social-emotional development, behavior problems, parental stress and parenting relationships in the experimental group compared to the control group. However, there was no significant difference in children's level of well-being and parents' level of competence.

The multicomponent intervention program was examined due to the lack of significant differences in the well-being level of the child participants and the competence level of the parents. Thereupon, some changes were made. Accordingly, the psychoeducation part related to exercise to increase well-being and parental competence was expanded.

Mental health problems are of great social importance due to their frequency, disruption of function and economic impact (Tekgül, 2022). For this reason, the implementation of the pilot program before the development of mental problems in children who are undiagnosed but in the risk group in terms of social-emotional development can contribute to the psychosocial lives of individuals, as well as alleviate the burden on the health and education sectors and contribute to the national economy.

The fact that the program in this study is the first multicomponent intervention program designed with the experimental research model among the studies conducted in our country has added a unique value; however, the study also has some limitations. The limitations of the study include the lack of follow-up measurements even though it was a pilot study, the bias in school selection, the lack of a tool to assess the psychiatric symptoms of parents, and the fact that the teacher module had fewer sessions compared to the other modules. Taking these limitations into account, similar studies can be recommended.

As a result, social-emotional competence protects children from stress sources, reduces stress, increases sense of well-being and helps prevent serious emotional and behavioral difficulties that may develop later in life (Slaski & Cartwright, 2002), and improves the ability to cope with problems (Trinidad & Johnson, 2002). However, since the importance of social-emotional development is not sufficiently understood in our country, there are a limited number of experimental studies. It is seen that the existing ones are only for children. Considering the relationship of preschool children with their family and social environment, it was thought that it was important to include parents and teachers in an intervention program to improve social-emotional development, not only for children. In this study, a multicomponent (child, parent and teacher) intervention program was piloted and it can be said to be important in this respect. The multidimensional program can be applied within the scope of preventive mental health for children who are not diagnosed but are in the risk group.

**Declarations**

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**Conflict of Interest**

No potential conflicts of interest were disclosed by the author(s) with respect to the research, authorship, or publication of this article.

**Ethics Approval**

The formal ethics approval was granted by the Social and Human Sciences Research and Publication Ethics Committee of Yıldız Technical University (2023.02). We conducted the study in accordance with the Helsinki Declaration in 1975.

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**Research and Publication Ethics Statement**

Hereby, we as the authors consciously assure that for the the following is fulfilled:

- This material is the authors' own original work, which has not been previously published elsewhere.
- The paper reflects the authors' own research and analysis in a truthful and complete manner.
- The results are appropriately placed in the context of prior and existing research.
- All sources used are properly disclosed.

**Contribution Rates of Authors to the Article**

The authors provide equal contribution to this work.

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