

# Social Competence and Promoting Alternative Thinking Strategies – PATHS Preschool Curriculum\*

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## Abstract

In this study, it was aimed to evaluate the effects of Promoting Alternative Thinking Strategies (PATHS) - Preschool Curriculum on Preschool Children's Social Skills. The six years old children (N= 95) and their teachers (N=7) were included in participant group in İzmir. With a pretest-intervention-posttest design, data was collected through Promoting Alternative Thinking Strategies Preschool Evaluation Kit, Kusche Emotional Inventory, Head Start Competence Scale-Teacher Version, Teaching Style Rating Scale, Classroom Atmosphere Rating Scale. The evaluation findings indicated that (i) the training effects were large for increasing concentration and attention skills  $F(1,93)= 6.24^*$ ,  $p<.05$ ) and social emotional competence ( $F(1,93)= 11.69^*$ ,  $p<.05$ ;  $F(1,93)= 29.23^{**}$ ,  $p<.001$ ); (ii) reducing aggression and disruptive behaviors ( $F(1,93)= 7.06^{**}$ ,  $p<.001$ ); (iii) no significant intervention effects could be detected on any emotion knowledge skills ( $F(1,84)= 10.80$ ). However, as compared to the control group, it was found that (iv) the intervention improved the level of children's compliance, cooperation, problem solving, feeling expression ( $F(1,93)= 29.23^{**}$ ,  $p<.001$ ), and (v) the level of teachers' discipline strategies, emotional support, problem solving, and preventing misbehavior ( $F(1,5)= 8.24^*$ ,  $p<.05$ ;  $F(1,5)= 30.42^{**}$ ,  $p<.001$ ;  $F(1,5)= 31.20^{**}$ ,  $p<.001$ ;  $F(1,5)= 35.07^{**}$ ,  $p<.001$ ). At the end of the study, it was found that PATHS-Preschool was an effective program in terms of improvement of children's social emotional competence and to lay groundwork for a comprehensive evaluation of the program as a preventive intervention for Turkish children.

## Key Words

Social and Emotional Competence, Preschool Children, Preventive Intervention, Social Problem Solving.

Living in a disadvantaged neighbourhood, poor parental supervision and discipline, low income and poor housing affect preschool children's reaching education, and their educational (AÇEV, 2005, 2009; Eğitim Reformu Girişimi, 2009) Besides this, it is observed that aggressive and noncompatible behaviors between children have increased in school and society, and children cannot cope with

their emotions when they await his/her turn, lose the games, cannot share materials, cannot handle their angry and disappointing feelings, then they bully and use verbal violence (Elias, Parker, Kash, Weissberg, & O'Brien, 2008; Kam, Greenberg, & Kusche, 2004; Webster-Stratton, Reid, & Hammond, 2001). In this context, teaching how to play with peers, express their feelings, get on well when conflicts arise are important in early childhood. It is stated that conducting preventive interventions studies improving social and emotional competence skills like communicating, problem solving, understanding own and other's feelings, and putting away tendency of violence are required for reducing or preventing these risk factors in preschool (Elias et al., 2008; Kam et al., 2004; Webster-Stratton et al., 2001). It is seen that in the literature there

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are various programs that teach children prosocial skills such as being calm and generous, self-control, emotional regulation, sharing, cooperation, compliments, and telling the truth by using social and emotional learning (Domitrovich & Greenberg, 2000; Elias et al., 1997; Geller, 1999; Joseph & Strain, 2003; Powell, Dunlap, & Fox, 2006; Shure, 2001; Terzian & Fraser, 2005; Walker et al., 1998; Webster-Stratton, Reid, & Hammond, 2001; 2004; Vaughn, Ridley, & Levine, 1986; Wang, Haertel, & Walberg 1997; Weissberg & O'Brien, 2004). Although some preventive interventions have been also implemented in Turkey like in other countries (Anliak, 2004; Avcioglu, 2003; Dereli, 2008; Duru- alp & Aral, 2010; Ekinci-Vural, 2006; Durmuşoğlu Saltalı, 2010; Polat-Unutkan, 1998; Shure; Walker et al., 1998), but additional researches are needed to conduct for proving the effectiveness of interventions (Anliak). Evaluating these program outcomes, effectiveness of evidence - based the Preschool Promoting Alternative Thinking Strategies - Preschool PATHS program program (Domitrovich, Cortes, & Greenberg, 2007) that develop children's self control, promote recognizing and expressing feelings, contribute problem solving skills (Greenberg & Kusché, 1998), reduce aggressive and disruptive behaviors by improving social and emotional competence (Domitrovich et al., 2007; Riggs, Greenberg, Kusché, & Pentz, 2006) is required to implement in Turkey sample.

### Purpose

The purpose of this study was to figure out to what extent The Preschool Promoting Alternative Thinking Strategies - The Preschool PATHS - program effective on 6 - year - old children's social and emotional skills. The research was interested in revealing teacher' s discipline methods or strategies and classroom management techniques which were used in classroom and then comparing behaviors of teachers implementing PATHS Preschool Curriculum with teachers who did not.

### Method

#### Research Design

This study, which aims at determining the effects of The Promoting Alternative Thinking Strategies -

PATHS Preschool Program on preschool children's social skills, was designed and conducted according to the pretest-posttest control group model.

### Universe and Sampling

6 - Year - old - children and their teachers attending from Ege Üniversitesi Kampüs Anaokulu (Ege University Campus Preschool), Tip Fakültesi Anaokulu (Tip Fakültesi Preschool), and Özel Üntaş Çamlık Anaokulu (Private Untas Camlik Preschool) whose intervention and control groups were selected randomly in İzmir in 2010 - 2011. Ege University Kampus Preschool has one intervention group and one control group, Ege University Tip Fakültesi Preschool has two intervention groups and one control group, and Ege University Private Untas Camlik Preschool has just one control group, included 99 students (52 in the intervention group, 48 in the control group) and 7 teachers (44 in the intervention group, 3 in the control group). Because of absences and dropping out of children, the last total number of students is 95 (51 in the interventional group, 45 in the control group). All teachers - rated forms were filled out for 95 children, but 87 students (47 in the intervention group, 40 in the control group) attended in the Kusche Emotional Inventory

### Instruments

**Teacher Self Report:** The form gets informations about the teacher's backgrounds including their education information, experiences, and programs used in the classrooms (FACES, 1999).

**The Preschool Promoting Alternative Thinking Strategies Evaluation Kit:** The form contains 31 individual behaviors in the 3 key behavioral areas that are *aggression/disruptive behavior, concentration/attention and social and emotional competence*. This form was developed within the scope of this research was prepared with the intention to assess 3 - 6 year - old - children's behaviors in their class (Domitrovich, Greenberg, Kusche, & Cortes, 1999). This form asks teachers to report on how often a student engages in a behavior, using a scale from 0 (never or almost never) to 5 (almost always). The Teacher Satisfaction Survey that consists of 11 items collects teachers' feedbacks on

their experience with the PATHS curriculum as a whole using a scale from strongly agree to strongly disagree. The results of content validity were evaluated with 175 children that are 4 and 5 years old and it was found  $\alpha = .93$  for aggression/disruptive behavior,  $\alpha = .97$  for concentration/attention, and  $\alpha = .94$  for social and emotional competence part.

**Kusché Emotional Inventory:** A revised version of the Recognition of Emotion Concepts subtest from the Kusche Emotional Inventory (KEL; Kusche, 1984) was managed to children to evaluate their receptive emotion vocabulary (Speltz, DeKlyen, Calderon, Greenberg, & Fisher, 1999). The subtest consisted of 30 items (Cronbach's  $\alpha = .75$  at pretest and  $.81$  at posttest) that are consisted of 15 emotions such as happy, love, disappointed, angry etc. Children receive two points for the correct response and zero for an incorrect response, and one point for the response that depicts an emotional expression of the same valence as the target feeling word. For the original version of this subtest, Kusche (1984) reported a split-half reliability of  $.89$  and test-retest reliability of  $.85$  (Domitrovich et al., 1999). In Turkish sample, the results of content validity were evaluated with 175 children that are 4 and 5 years old and it was found  $\alpha = .84$

**Head Start Competence Scale (Teacher Version):** The form that is a 12-item measure of children's social and emotional skills that reflect interpersonal relationships and emotion regulation (Domitrovich, Cortes, & Greenberg, 2001). Teachers were asked to point out how well each item that depicts the child by using a 4 - point scale that ranges from "(1) not at all well" to "(4) very well." The results of this scale measuring children's emotional management and agreement of peer relationships rates were evaluated by a confirmatory factor analysis. In terms of this factor analysis, a total score was created by averaging all of the items on the measure. The internal consistency of the scale was  $\alpha = .74$ , which was adequate. In Turkish sample, the results of content validity were evaluated with 175 children that are 4 and 5 years old and it was found  $\alpha = .94$

**Classroom Atmosphere Rating Scale:** This form is designed to reveal the effects of the PATHS preschool program on children's behavior from aggression to pro-social behaviors based on social-

emotional development (Conduct Problems Prevention Research Group, 1999a). Non-participant observation method is used to collect data on behaviors of PATHS group and non PATHS group of children by two researchers takes 4 times of 30 minute cycle (first 20 minutes for observation). Observers coded 10 items that include student's level of compliance, cooperation, and interest/enthusiasm/involvement, how students handle transitions and follow rules, solve problems, express feelings and also teacher's responsiveness to student needs and support for student effort generally. This scale has demonstrated good internal consistency (Cronbach's alphas ranging from  $.94$ -  $.95$ ) and adequate inter-rater reliability (ICC= $.55$  -  $.70$ ). In the present study internal adequate inter-rater reliability (ICC= $.99^{**}$ ,  $**p < .01$ ) and good internal consistency (Cronbach's alpha:  $.99$ )

**Teaching Style Rating Scale:** This form is developed to disclose teachers' behaviors and management techniques, and to get the nature of the interactions between teachers and children that reflects the quality of the classroom climate in the classrooms (Domitrovich, Cortes, & Greenberg, 2000). Non-participant observation method is used to collect data on behaviors of PATHS teacher and non PATHS teacher by two researchers takes 4 times of 30 minute cycle (first 20 minutes for observation). The measure consists of 9 items that includes five subscales: The Classroom Structure and Management, Discipline, Emotional Communication and Support, Social Awareness and Problem Solving, and Preventing Misbehavior with a 5-point Likert-type rating scale that focuses on the behavior of a teacher. Average agreement on TSRS items was 93% within 1 scale point. Intraclass correlations for individual items ranged from  $r = .60$  to  $r = .75$ , median  $r = .68$ . In the present study adequate inter-rater reliability (ICC= $.99^{**}$ ,  $**p < .01$ ) and good internal consistency for each subscales (Cronbach's alpha:  $\alpha = .82$ ,  $\alpha = .84$ ,  $\alpha = .71$ )

## Intervention

The Preschool PATHS Curriculum is developed for using with children ages 3-5 to promote social emotional competence, problem solving skills, self control, prevent or reduce behavior and emotional problems, create a positive classroom

atmosphere that supports social- emotional learning (Domitrovich et al., 2009; Greenberg, Kusche, Cook, & Quamma, 1995). The Curriculum consists of 44 lessons in 9 thematic units adapted of the original PATHS Curriculum (Kusche & Greenberg, 1994). These units included compliments, basic and advanced feelings, a self control strategy lessons. Moreover the program has some extension activities that can easily adapted preschool program to generalize the concepts of the curriculum. The PATHS Preschool curriculum presents a guidelines and a variety of materials, photographs and drawings, feeling faces cards, story books, posters etc.

### Process

In this study, the pretest-posttest control group model was used as the data collection method. After getting permission from Ege University, teachers and children were observed 4 times that takes 2 hours by researchers as pretest observations. Teachers filled out the forms and researchers made interviews with children using Kusche Emotion Inventory. After obtaining the forms, the PATHS Preschool teacher education was given teachers to conduct this program regularly in January 2011. Teachers conducted the program during 9 weeks. The same assessment battery was used end of the program with only a few exceptions. Teacher demographics were only collected at pretest, and Teacher Satisfaction Survey was collected at posttest. In the research, for the outcome analyses we conducted an analysis of variance (ANOVA).

### Findings

There were 99 six - year - old children that 52 of them in the intervention classes, 48 of them in the control classes for participating during the pretest process. Pretest assessments were gathered 95 of these children because of absences and dropping out. But in the Kusche Emotion Inventory, 87 children's data gathered. 52,5 % of the final sample of 95 children were intervention children ( $n = 51$ ) that included 51,9% girls and 48,1 % boys; 47,5 % of the final sample children were control children ( $n = 44$ ) that included 48,9 % girls and 51,1 % boys. In the study, 7,1 of the sample children are 5;

92,9 of these children were 6 years old. Examining Teacher Self Report, 25% of intervention teachers have 0 – 3 year – work experience; 25% of them have 11–15 year – work experience; 50 % of them have more than 15 – year- old- – work experience 11–15 year. 33.3 % of control teachers have 0 – 3 year – work experience; 50% of them have 11–15 year – work experience; 66.7 % of them have more than 15 – year- old. According to the educational background, 50% of intervention teachers are high - school graduate; 25% of them are 2 year license; 25% of them are university graduate. 50% of intervention teachers are high - school graduate; 50% of them are 2 year licensed; 50% of them are university graduate.

The significant difference between the intervention and control group was consistent across all three subscales of the the Preschool PATHS Evaluation Kit composite. There was significant main intervention effect for children's aggression/disruptive behaviors,  $F(1,93) = 7.06, p < .001$ ; concentration/attention,  $F(1,93) = 6.24, p < .05$ ; social and emotional competence,  $F(1,93) = 11.69, p < .05$ . When the evaluation kit was examined totally, significant group differences the intervention and control group was consistent  $F(1,93) = 10.80, p < .05$ . Significant group differences were found on the measure of social competence. Results show that there is a significant intervention effect on the Head Start Social Competence,  $F(1,93) = 29.23^{**}, p < .001$ .

According to the observation outcomes, the significant difference between the intervention and control group classrooms was consistent with Classroom Atmosphere Rating Scale,  $F(1,93) = 29.23^{**}, p < .001$ . Follow up analyses suggested that the intervention effect was present for children with higher mean levels of compliance, cooperation, and interest/enthusiasm/involvement, handling transitions and following rules, problem solving. When all five subscales of Teacher Style Rating Scale were analyzed, there were no differences between intervention and control teachers' classroom structures and managements,  $F(1,5) = 6.15$ . On the other hand, there were differences between intervention and control teachers' discipline methods,  $F(1,5) = 8.24, p < .05$ ; emotional Communication and Support,  $F(1,5) = 30.42, p < .001$ ; social awareness and problem solving skills,  $F(1,5) = 31.20, p < .001$ ; and preventing misbehavior  $F(1,5) = 35.07, p < .001$ . As

the evaluation kit was analyzed totally, significant group differences the intervention and control teachers was consistent,  $F(1,5)= 28.59, p<.00$ .

There was no significant main intervention effect for the children's emotional verbal ability outcome measures,  $F(1,84)= 10.80$  according to the Kusche Emotion Inventory. Finally, Teacher Satisfaction Survey teachers filled out at the posttest suggested that all teachers expressed positive opinions about the Preschool PATHS program and wanted to implement again next year.

### Discussion

This research presented findings from the Preschool PATHS, an early intervention program designed to develop children's awareness and communication regarding their own and others' emotions; teach self-control of arousal and behavior; support peer relations; develop children's problem solving skills by fostering the integration their self-control, affect recognition, and communication skills; and create a positive classroom atmosphere supporting social-emotional learning (Domitrovich et al., 1999, 2007; Kusche & Greenberg, 1994; Riggs et al., 2006). In addition to this, results stated that the program with many activities focused on interaction between emotional and intellectual functions had an effect on reducing aggressive and disruptive behaviors. Children were calm, thought about their own emotions, and solved the problems by using the problem solving steps. This program also presents prosocial behaviors helping children to prevent problems (Greenberg & Kusché, 1998; Kam et al., 2004).

Assessing the preventive intervention researches, studies about reducing / eliminating the risk factors and developing protective factors are needed for children. As a matter of the fact that the goals of the Preschool PATHS curriculum that prevent / reduce risk factors (like decreasing disruptive and aggressive behaviors and protective factors are fitted the Turkish sample goals. It is stated that when risk factors are removed and protective factors are supported, their concentration and skills for learning are increased (Coie et al., 1993). The recent study indicated that intervention children were more concentrated than children in the control group. This is why the program has funny dialogs

that point out children's attention helped children to focus and listen the program.

In this the Preschool PATHS study, there were no intervention effects on children's receptive emotion language. It is thought that both study groups children expressed their feelings the basic level due to the fact that the schools that placed in the study implemented "36-72 Aylık Çocuklar için Okul Öncesi Eğitim Programı (The Turkish Preschool Curriculum for 36 - 72 months - children)" (Milli Eğitim Bakanlığı [MEB], 2006) program which included some practices about learning emotion words and some emotion notice boards that were seen by the researchers in the observations. In the study, it is examined not only level of children's emotion recognition by using the Kusche Emotion Inventory but also expressing their own emotions and other's emotions, accepting individual similarities and differences, and considering the other's views.

The results of this randomized trial of the Preschool PATHS program suggest that intervention children's social and emotional competences were increased in terms of the control children's. These may be a reason why intervention children had knowledge and skills of awaring and regarding the other's feelings, and positive relationships with teachers and peers by the help of the program's units, stories, and materials thus their social and emotional development is supported. It is proven that children's social and emotional skills gained in preschool is important for academical skills (Elias, 2006; Greenberg et al., 2003; Rhoades, Greenberg, & Domitrovich, 2009; Weissberg & O'Brien, 2004) and positive classroom atmosphere (Domitrovich et al., 2007; Zins & Elias, 2006) in the future.

The classroom observations has revealed that there is a difference between PATHS and non PATHS children in respect of children's disruptive behaviors and compliance, communication and problem solving skills and classroom interaction levels. These findings are consistent with other social-emotional interventions with young children (Conduct Problems Prevention Research Group, 1999a, 1999b; Domitrovich et al., 1999; Kam, Greenberg, & Walls, 2003; Zins, Bloodworth, Weissberg, & Walberg, 2004). For example, the FAST TRACK

Project that developed for high – risk children was evaluated on 1st grade children that were taken the Preschool PATHS intervention and it is found that this program strengthened peer interactions and social status, and decreased compliance problems (Conduct Problems Prevention Research Group, 1999a, 1999b). Assessing the all children outcomes, it is stated that the program is really effective on reducing children's disruptive behaviors, improving attention skills, and supporting social – emotional competence.

In addition to finding significant intervention effects on child indicators of social competence, observation reports described PATHS teacher as better in discipline techniques, emotional communication and support, social awareness, problem solving, and preventing misbehavior compared to the teachers in the control condition. With the exception of observation ratings of the classroom structure and management, the intervention effects were consistent across both sites. One of the factors of this outcome might be that PATHS teachers participated in teacher education before implementing this program, and taking weekly training during the program in this study. These findings are consistent with other interventions including the teacher training (Eccles & Roeser, 1999; Jennings & Greenberg, 2009; Kam et al., 2003). This study stated that the learning environment is shaped by teachers who are socially and emotionally competence, and has encouraging relationships with children, and so they affect classroom's social – emotional atmosphere and children's learning outcomes (Jennings & Greenberg). Additionally in this study, intervention teachers satisfactions were examined by asking teacher satisfaction survey. Teachers stated that intervention children understood their own emotions, showed empathy towards others, solved problems by using problem solving steps, and treated more socially.

As a summary, the Preschool PATHS Curriculum enhanced children social and emotional competence, reduced disruptive behaviors and compliance problems, supported positive classroom atmosphere, and promoted teachers' discipline and emotional managements in Turkish sample. The results of this study are promising and interpreted as initial support for the efficacy of Preschool PATHS. However, additional research is needed to replicate these findings.

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