

Adaptation of Social Problem Solving for Children Questionnaire in 6 Age Groups and its Relationships with Preschool Behavior Problems

Esra DERELİ-İMAN^a

Eskişehir Osmangazi University

Abstract

Social Problem Solving for Child Scale is frequently used to determine behavioral problems of children with their own word and to identify ways of conflict encountered in daily life, and interpersonal relationships in abroad. The primary purpose of this study was to adapt the Wally Child Social Problem-Solving Detective Game Test. In order to determine validity of 6 years old children (208 -52 % female and 192 male -48 %) scale, data exploratory and confirmatory factor analyses were conducted. Exploratory factor analysis (EFA) identified two factor accounting for 46.534 % of the variance. The confirmatory factor analyses results indicated that the factor structure was partially consistent with the model. Cronbach Alpha internal consistency coefficients were .88 for general scale, were .86 and .73 for subscales. Spearman- Brown coefficients were .80 for general scale, were .81 and .75 for subscales. The secondary purpose of this study was to determine whether social problem solving of children predicted preschool behavior problem, and gender and socio-cultural level variables predicted social problem solving. The results showed that whereas subscales of social problem solving of the students significantly predicted subscales of preschool behavior problem, gender and socio-cultural level did not significantly predicted social problem solving of children.

Key Words

Social Problem Solving, Preschool Behavior Problem, Problem Solving, Wally Child Social Problem-Solving Detective Game Test.

With the social changes, children face many problems such as decrease in recourses and social supports, stress and challenges, addiction in their daily lives. In fixing such social problems, it becomes important that children are able to obtain com-

munication skills and corporative working; to express their own ideas and beliefs; comprehend and understand perspectives of others who have different characteristics, needs and experiences; use effective problem-solving methods when their own interests, needs, beliefs and thoughts conflict with each other. Such skills are used as a shield against many life challenges in particular maladjustment consequences (Battistich, Solomon, Watson, Solomon, & Schaps, 1989). Social problem solving develops with the joint effect of learning, experience, maturity and achievement and affects subsequent development and harmonization of the individual. Social problem-solving involves the fixing of problems encountered in everyday life. Social problem-solving is defined as "self-governing cognitive and behavioral processes determined by a person in de-

^a Esra DERELİ-İMAN, PhD., is currently an assistant professor at Department of Preschool Education. Her research interests include psychosocial development in early childhood, conduct behavior problem, social problem solving, social skills and value education. *Correspondence:* Asist. Prof. Esra DERELİ-İMAN, Eskişehir Osmangazi University, Faculty of Education, Department of Preschool Education, Eskişehir/Turkey. E-mail: esdereli@hotmail.com, derelie@ogu.edu.tr Pho-ne: +90 222 339 3750/1645.

scribing problems encountered in daily life or finding effective solutions or accommodating himself to such problems. The word “social” in the social problem-solving emphasizes that problem solving is the “problem-solving process occurring when a problem is encountered in real-world” (D’Zurilla, Chang, & Sanna, 2003; D’Zurilla & Nezu, 1982, 1990, 1999; D’Zurilla, Nezu, & Maydeu-Olivares, 2004). The follow steps should be followed for a successful social problem-solving process: Recognizing and defining the social problem, finding solutions to social problems, generating alternative solutions to solve the social problems, evaluating outcomes of solutions, choosing the best solution, considering the applicability of the solution chosen, evaluating whether the solution works well or not (Adams & Wittmer, 2001; Crick & Dodge, 1994; Erwin, 1994; Shure, 2001; Webster-Stratton & Reid, 2003). Deficiency in any steps of social problem solving leads to an antisocial solution (Ireland, 2001).

Children may experience problems and conflicts with other children during their development period in their lives. Conflict arises in cases when one’s efforts to reach his goal prevent, inhibit or limit someone else’s efforts made to achieve his goal. Pre-school period is the stage when group games and continuous interaction with children’s peers start. In this period, children can sometimes have conflicts with each other even if they are intimate friends. However, people’s style in handling the conflict may be harmful or destructive as well as self-improving. It is necessary for children to use effective social problem-solving skills for the continuity of group games and peer interaction in case of conflict and problem (Deutsch 1994, 2000; Pickover, 2006). According to Piaget (1983), the fact that children experience conflict plays an important role in the development of children. Conflicts, debates and disputes help children to move away from ethnocentrism enabling them to understand that others have different viewpoints, thoughts, feelings, motives and needs. Children who move away from ethnocentrism start to evaluate the consequences of their behaviors in terms of both themselves and the person with whom they have a conflict. Thus, social conflicts offer opportunities to the children to learn social problem solving (Rubin & Rose-Krasnor, 1992). However, it is important that the strategies used by children in solving social problems when they experience conflict are either prosocial or anti-social. Prosocial behaviors are the intentional and voluntary behaviors that aim to be useful for and help a person or a group. The reason why the individual displays

prosocial behaviors originates from the outcomes of their acts rather than the motivation related to the act. In other words, the reason why he conducts prosocial behaviors is the positive outcomes to be received when the behavior is conducted, rather than his desire for the behavior conducted. Such behaviors consists of a wide range including sharing, being comforting, helping, forgiving, making donations and cooperating (Eisenberg & Mussen, 1989). Antisocial behavior is the behaviors that aim to cause harm to a person or community. Antisocial behaviors include behaviors such as aggression, extortion, ridiculing as well as disdaining peers, postponing requests and disrespecting others’ rights (Bee & Denise, 2003; Kail, 1998). In social problem solving it is generally observed that children who use the prosocial methods are successful in establishing and maintaining friendships with their peers and more cooperative at home and school (Dodge, Pettit, & Bates, 1994). However, the use of the antisocial solution methods in fixing social problems and the failure in social problem solving leads to maladjustment such as exclusion of the children by their peers, more aggressive behaviors and passive-withdrawals (Rubin & Rose-Krasnor, 1992; Webster-Stratton & Lindsay, 1999). Such socially repeated failures cause the children to display behavioral problems by increasing their negative perceptions of self efficacy.

Social skills, anger management, emotion regulation and friendship skills which are parts of children’s social problem-solving skills are influenced by environmental factors. Before the characteristics such as behavioral problems, antisocial behaviors and failures in solving social problems that obstruct interpersonal relationships become permanent, it is of high importance to identify and prevent them in the early childhood and first years of primary education. In the early childhood if the behavioral problems, antisocial behaviors and ineffective social problem-solving methods are not intervened, such behaviors become permanent until the age of eight, increase in later periods and cause characteristics such as learning difficulties, loneliness, low self-esteem, lack of self-confidence, academic problems, school dropout, substance dependence, delinquency, bullying, exposure to bullying, high anxiety and worry, panic disorder, depression, stress disorders, schizophrenia (Baker-Henningham, Walker, Powell, & Meeks-Gardner, 2009; Boivin & Hymel, 1997; Crick & Ladd, 1993; D’Zurilla et al., 2003; Pakaslahti, Karjalainen, & Keltikangas-Järvinen, 2002; Robichaud & Dugas, 2005; Rubin, Bukowski, & Parker, 1998; Webster-

Stratton & Reid, 2010). In the longitudinal studies, it has been found that such problems and maladjustments in early childhood significantly account for the antisocial behavioral problems and incompatibilities especially during adolescence and adulthood. In addition, if any measures are not taken for such problems, they cause more serious problems such as theft, violence, aggression, anger since they continue to increase especially during adolescence and adulthood (Crick & Dodge, 1994; D'Zurilla et al., 2003; Keltikangas-Järvinen & Pakaslahti, 1999; Webster-Stratton & Reid, 2004).

There is a significant relationship between aggression, the lack of social problem-solving and problem behaviors, and aggression and behavioral problems often get along with maladjustment or failure in social problem solving (Lochman & Dodge, 1994; Lochman, Wayland, & White, 1993; Mize & Cox, 1990; Quiggle, Garber, Panak, & Dodge, 1992; Pakaslahti & Keltikangas-Järvinen, 2002).

Children's problem-solving skills in everyday life are the most important determinant of their emotional well-being (Rubin et al., 1998). Assessments on teachers and family's views are carried out for the determination of children with problematic behaviors in Turkey. Social Problem-Solving Scale for Children is used abroad to determine preschool-age children at risk of behavior problems by means of their own expressions (Webster-Stratton, 1999; Webster-Stratton & Hammond, 1997; Webster-Stratton & Reid, 2004, 2010; Webster-Stratton, Reid, & Hammond, 2001). In Turkey, there is not a measuring tool to gauge the social problem-solving skills of children at preschool age. For this reason, the research aims to adapt the Social Problem Solving Scale for Children to be used in Turkey for the children at the age of 6; to determine the level of the prediction given by sub-dimensions of the social problem-solving skills about sub-dimensions of the preschool behavioral problems, and the level of the prediction given by variables of children's gender and adults' socio-cultural-level about the social problem-solving skills.

Purpose

The main purpose of study was to adapt the Wally Child Social Problem-Solving Test for using in Turkey. The secondary purpose of the study was to investigate the whether social problem solving of children predicts preschool behavior problem of children. The third purpose of the study was to investigate the whether childrens' gender and existing socio-cultural level predict social problem solving of children.

Method

This study is a quantitative and relational study aimed at adapting the Wally Social Problem-Solving Test for using in Turkey, examining the whether social problem solving of children predicts preschool behavior problem of children and whether gender, socio-cultural level predicts social problem solving of children (Büyüköztürk, 2002; Karasar, 2010). The data were collected by Wally Child Social Problem-Solving Detective Game Test developed by Webster-Stratton (1990) and Preschool Behavior Questionnaire, which was developed by Behar (1976) and adapted to Turkey by Kanlıkılıçer (2005).

Study Group

In the study, the sample set of the research was composed of the 6 years old children who were attending preschool education in Konya and Eskişehir were chosen by random set sampling method (Büyüköztürk, Kılıç-Çakmak, Akgün, Karadeniz ve Demirel, 2008; Fraenkel ve Wallen, 1993). The research was carried out through the data gathered from 208 (52 %) female and 192 (48 %) male preschool education students. In the study groups, 30.0 % of the participants had primary school graduate mothers, 34.5 % of the participants had high school graduate mothers, and 35.5 % of the participants had university or master/ doctoral graduate mothers. 25.75 % of the participants had primary school graduate fathers, 36.0 % of the participants had high school graduate fathers, and 38.25 % of the participants had university or master/ doctoral graduate fathers. 32.5 % of the participants were from the lower socio-cultural level, 34.5 % of the participants were from the middle socio-cultural level and 33.0 % of the participants were from the upper socio-cultural level.

Instruments

Wally Child Social Problem –Solving Detective Game Test: The test was developed from Spivak and Shures' (1985) Preschool Problem Solving Test and Rubin and Krasnors' (1986) Child Social Problem- Solving Test by Webster-Stratton (1990). The test is assessment both the qualitative and quantitative dimensions of a child's social problem solving. In the test, the child is presented with 15 brightly colored illustrations of hypothetical problem situations related to adult (object acquisition) and peer (peer relations, friendship) problems and is asked to solve the problems in the pictures. The answers

are compared with 100 categories that consist of pro-social and anti-social solutions. The test scores both total of social problem solving scores and sub-dimensions of social problem solving scores. The scale's cronbach's alpha internal consistency coefficients was .65 for pro-social solution categories, and was .64 for anti-social solution categories. Construct validity of the Wally Child Social Problem -Solving Detective Game Test was established by showing satisfactory correlations between the Wally Child Social Problem -Solving Detective Game Test total prosocial score and Rubins and Krosnors' Child Social Problem- Solving Test total positive strategies ($r=.60$) and between the Wally Child Social Problem -Solving Detective Game Test total antisocial score and Rubins and Krosnors' Child Social Problem- Solving Test total negative strategies ($r=.50$) (Johnson, 2000; Webster-Stratton & Lindsay, 1999). The childrens' answers to hypothetical problem situations were recorded video and three different observers were asked to categorize the childrens'answers for the reability of test. Correlation coefficients was .97 between the categories formed by of observers.

Preschool Behavior Questionnaire: The scale developed by Behar (1976) to identify behavioral problems in preschool children was adapted to Turkish by Kanlıkılıçer (2005). The scale was filled out for 3-6 years old children by their teachers. The Cronbach's alpha internal consistency coefficients were .92, the Spearman Brown coefficients were .90, and Guttman coefficients were .89 for total scale. Exploratory factor analysis identified three factors accounting for 46.877 % of the variance for questionnaire as Aggressiveness, Anxiousness/ Tearfulness and Hyperactiveness/Inattentiveness. Criterion-related validity was conducted with Early Childhood Behavior Scale developed by McGuire and Richman (1986) and adapted by Kapçı (1990), and it was found to be compatible with each other.

Process

The adaption study of the "Wally Child Social Problem-Solving Detective Game Test conducted as follows: translation and back-translation procedure were used. First, the instrument was translated into Turkish by the reseachers and two experts who were a professor doctor and an associate professor doctor separately. The three translations were compared and translation was finalized.

The Turkish version of the instrument was translated back to English by an expert in the field (two

assistant professors working at the Department of English Language Teaching). Later, the field expert and the researcher worked together whether the original instrument and back-translated instruments kept the same meaning. The researcher along with the second expert concluded there was no difference between the two versions of the instruments in terms of the meaning. Thus, the researcher concluded that the instrument was ready for validity and reliability studies. Also, instrument was presented to 11 experts with Ph.D. in preschool education, child development, and psychology. Then, the scale was revised based on the experts' opinions. Afterwards, the draft form was piloted with 40 preschool students to check whether the stories were clear and understandable. To analyze the data for the validity and reliability of Wally Child Social Problem-Solving Detective Game Test, the draft form was administrated to 400 students in two different cities in Turkey.

Data Analysis

In the data analyses, descriptive statistics, Pearson's correlation coefficient, Spearman-Brown split half coefficient, Cronbach Alpha internal consistency coefficients subscales, multiple regression analysis, basic linear regression, Exploratory Factor Analysis (EFA), Confirmatory Factor Analysis (CFA) were used. Firstly, factor structure of the scale was examined using exploratory principal component factor analysis with varimax rotation. Secondly, factors provided by the exploratory analysis were used in confirmatory factor analysis to determine whether the factor structure was confirmed or not (Fraenkel & Wallen, 1993; Şencan, 2005; Şimşek, 2007;Thompson, 2000). Preschool Behavior Questionnaire was used to check the criterion validity of the Wally Child Social Problem- Solving Detective Game Test. Also, validity of the instrument was determined with correlation coefficients between subscales. The reability of the instrument was determined with Cronbach alpha correlations (both the total and sub-scales and prosocial-antisocial category), Spearman-Brown split half coefficient (both the total and sub-scales and prosocial-antisocial category, test-retest correlations (both the total and sub-scales and prosocial-antisocial category) were computed. Furthermore, multiple regression analysis was used to determine whether or not social problem solving of children predicts preschool behavior problems, and basic linear regression was used to determine whether or not gender and socio-culturel level predicts social problem solving of children.

Results

Wally Child Social Problem –Solving Detective Game Test's Validity

An Exploratory Factor Analysis (EFA) conducted on the study group through Varimax rotation. KMO value was 0.88 and Bartlett's test was significant ($\chi^2=1450.906$; $p<0.01$). Exploratory factor analysis (EFA) identified two factors accounting for 46.534 % of the variance and it was seen that eigenvalues were over 1. The factors were named as social problem solving for adults and social problem solving for peers. Correlation among the sub-dimensions of Wally Child Social Problem –Solving Detective Game Test were positive and moderate level. In order to provide additional evidence for the validity of Wally Child Social Problem –Solving Detective Game Test, Confirmatory Factor Analysis (CFA) with least squares method was conducted on the data collected from of the study group. The Chi-square value on the model-fit was significant ($\chi^2=211.13$, $df=89$; $p<.001$). The value of χ^2/df ratio between 2 to 5 indicates a good fit if this value is lower than 2, this indicates an excellent fit (Jöreskog & Sörbom, 2001; Bryman ve Cramer,1997; Kline, 2005;) *Quantitative Data Analysis with SPSS for Windows*. Routledge, London.). In this study the χ^2/df ratio indicate a good fit ($\chi^2/df=2.37$). Other goodness of fit indices were presented in Table 1.

Tablo 1.

CFA Model Goodness of Fit Indices for Wally Child Social Problem –Solving Detective Game Test

GFI	0.91
AGFI	0.88
NFI	0.94
IFI	0.96
NNFI	0.95
CFI	0.96
RMSEA	0.05
S-RMR	0.012
Df	89
χ^2	211.13
χ^2/df	2.37

CFA indicates that the two-factor model fits the data well: RMSEA=0.05, NNFI=0.95, CFI=0.96, GFI=0.91, AGFI=0.88, IFI=0.96, SRMR=0.012, NFI= 0.94. The scale model is between the range of $0 \leq RMSEA \leq 0.05$, $0.97 \leq NNFI \leq 1$; $0.97 \leq CFI \leq 1$; $0.95 \leq GFI \leq 1$; $0.90 \leq AGFI \leq 1$ and $0.95 \leq IFI \leq 1$ it demonstrates a perfect fit; and if it is between the

range of $0.05 \leq RMSEA \leq 0.1$, $0.95 \leq NNFI \leq 0.97$; $0.95 \leq CFI \leq 0.97$; $0.90 \leq GFI \leq 0.95$; $0.85 \leq AGFI \leq 0.90$ and $0.90 \leq IFI \leq 0.95$ it demonstrates an acceptable fit (Du Toit, Du Toit, Mels ve Cheng, 2008; Kline, 2005; Şimşek, 2007). When CFA results are evaluated according to these criteria, it is shown that the model is quite good. Given these indices and standardized values, it may be concluded that the model confirms the factor structure.

To check the criterion validity of the Wally Child Social Problem –Solving Detective Game Test, Preschool Behavior Questionnaire was used. There was negative moderate level correlation between social problem solving for peers and aggressiveness ($r=-.63$, $p<.01$), anxiousness/tearfulness ($r=-.56$, $p<.01$) and hyperactiveness/ inattentiveness ($r=-.56$, $p<.01$). There is negative medium level correlation between social problem solving for adults and aggressiveness ($r=-.65$, $p<.01$), anxiousness/tearfulness ($r=-.62$, $p<.01$) and hyperactiveness/ inattentiveness ($r=-.54$, $p<.01$). The correlation coefficient value lower than .30 is low level correlation, .30 to .70 is moderate correlation, .70 and higher than .70 is high level correlation (Büyükoztürk, 2002; Çokluk, Şekercioğlu, & Büyükoztürk, 2010). Based on the findings in the literature, it might be claimed that criterion related evidence supported the validity of Wally Child Social Problem –Solving Detective Game Test.

Reliability of Wally Child Social Problem –Solving Detective Game Test

Reliability of Wally Child Social Problem –Solving Detective Game Test was established by item factor correlations, Cronbach Alpha, split half methods, test-retest correlations. Item factor correlations were ranged from 47 to71 for the two factors. Cronbach Alpha internal consistency coefficients values for the sub-dimensions Wally Child Social Problem –Solving Detective Game Test were as follows, respectively: .88, .86 and .73; split half reliability coefficients were as follows, respectively: .80, .81 and .73; test-retest reliability coefficients were as follows, respectively: .87, .88 and 85.

The Prediction of Social Problem Solving on Preschool Behavior Problems

A multiple regression analysis was performed to predict subdimensions of preschool behavior problems by social problem solving sub-scales. Results indicate that social problem solving are significant on the responsibility of aggressiveness ($R=.735$, $R^2=.541$, $F_{(2,398)}=24.124$, $p<.01$), anxiousness/tearfulness ($R=.685$, $R^2=.470$, $F_{(2,398)}=18.144$, $p<.01$),

and hyperactiveness/ inattentiveness ($R = .639$, $R^2 = .408$, $F_{(2,398)} = 14.119$, $p < .01$). These results indicate that social problem solving for children explains 54.10 % of total variance of aggressiveness, explains 47 % of total variance of anxiousness/tearfulness, and explains 40.8 % hyperactiveness/inattentiveness. According to the standardized regression coefficient, significance order of precursor variables on aggressiveness is as follows: social problem solving for adults ($\beta = -.441$; $p < .01$) and social problem solving for peers ($\beta = -.401$; $p < .01$). According to the standardized regression coefficient, significance order of precursor variables on anxiousness/tearfulness is as follows: social problem solving for adults ($\beta = .461$; $p < .01$) and social problem solving for peers ($\beta = -.320$; $p < .05$). According to the standardized regression coefficient, significance order of precursor variables on hyperactiveness/ inattentiveness is as follows: social problem solving for peers ($\beta = -.390$; $p < .01$), social problem solving for adults ($\beta = -.341$; $p < .01$).

The Prediction of Gender and Socio-Cultural Level on Social Problem Solving

A basic linear regression analysis was performed to predict sub-dimensions of social problem solving by gender and socio-cultural level. Results indicate that gender and social cultural level are not significant on responsibility of social problem solving for peers [($R = .0446$, $R^2 = .00200$, $F_{(1,399)} = .796$, $p > .05$), ($R = .4672$, $R^2 = .00218$, $F_{(1,399)} = .870$, $p > .051$) and social problem solving for adults [($R = .0181$, $R^2 = .00033$, $F_{(1,399)} = .131$, $p > .051$), ($R = .0134$, $R^2 = .00018$, $F_{(1,399)} = .0789$, $p > .051$)].

Discussion

Both EFA and CFA were conducted to establish validity of Wally Child Social Problem-Solving Detective Game Test. KMO value was 0.88; Bartlett's Test ($\chi^2 = 1450.906$; $p < .01$), was found to be significant. Following Varimax rotation, a two-factor solution with eigenvalues was over 1, and they explained 46.53 % of the total variance. Factor loadings of the items ranged from .47 to .78. These two factors were named as Social Problem Solving for Peers and Social Problem Solving for Adults. In order to provide additional evidence, CFA was conducted to check how well data fit to the model. For the model-data fitness, chi-square value was significant ($\chi^2 = 211.13$, $df = 89$; $p < .001$). Chi-square for df value was found to be low ($\chi^2/df = 2.37$) indicating an acceptable level. The fit indices for the model show that the model-data fit is good [RMSEA = 0.05, NNFI = 0.95, CFI = 0.96, GFI = 0.91,

AGFI = 0.88, IFI = 0.96, SRMR = 0.012, NFI = 0.94]. Thus, EFA and CFA values support evidence for the validity of Wally Child Social Problem -Solving Detective Game Test (Bayram, 2010; Kline, 2005).

Wally Child Social Problem -Solving Detective Game Test sub-dimensions had negatively moderate levels of correlations with the preschool behavior problems. Cronbach Alpha, Split-Half, test-retest and item factor correlations provided evidence for the reliability of Wally Child Social Problem -Solving Detective Game Test. These findings might point out that Wally Child Social Problem -Solving Detective Game Test is a reliable scale for preschool children.

In this study, it was found that sub-dimensions of the Social Problem Solving Scale for Children negatively predicted the sub-dimensions of the preschool behavioral problems questionnaire scale at a significant level. Behavioral problems decreased when children's social problem-solving skills increased. Validity of the scale of social problem solving for children abroad was based on the fact that children used more anti-social strategies and used less alternative prosocial strategies while solving a social problem (Johnson, 2000; Webster-Stratton, Reid ve Hammond, 2001). The negative predictive or negative relationship between the prosocial solutions used by children in problem solving and the behavioral problems demonstrates that the Scale of Social Problem Solving for Children is an applicable scale (Hune & Nelson, 2002; Lochman & Dodge, 1994; Webster-Stratton, 1999; Webster-Stratton & Lindsay, 1999). The research findings are compatible with Dinçer and Güneysu's (1999); Drugli, Larsson, and Clifford's (2007) Gouze's (1987); Malik, Balda, and Punia's (2006); Matthys, Cuperus, and Engeland's (1998); Mize and Cox's (1990); Waschbusch, Wals, Andrade, King, and Carrey's (2007); Webster-Stratton and Lindsay's findings.

In this study, the findings showed that children's gender did not affect the social problem solving sub-dimensions. The fact that the gender does not affect the sub-dimensions of social problem solving for children shows that it is a scale that measures social problem-solving skills of male and female children. The research findings are compatible with Dinçer's (1995); Dinçer and Güneysu's (1999); Drugli's (2006) findings. In this study, the findings showed that socio-cultural level did not affect the children's social problem solving sub-dimensions. The research findings are compatible with Dinçer's, Dinçer and Güneysu's, Drugli's findings. The fact that the socio-cultural level does not affect the sub-dimensions of social problem solving for children shows that it is a scale that measures social problem-solving skills of different lived socio

culturel level of children. The research findings are compatible with Punia's (2002) and Youngstrom et al. (2000) findings.

The following recommendations can be made based on the research findings. Reliability and validity of the scale of social problem-solving for children can be analyzed through studying with different age groups. This research analyzes whether it explains the social problem-solving skills for children and behavioral problems. Further researches can be conducted to identify other factors that affect social problem solving. Training programs can be organized to increase the social problem solving by making use of the factors affecting children's social problem-solving skills and their results could be evaluated. In this research, it was analyzed whether gender and socio-cultural variables accounted for the social problems, different studies can be carried out on the personal qualities of the children and their families.

References/Kaynakça

- Adams, S. K., & Wittmer, D. S. (2001). "I had it first" Teaching young children to solve problems peacefully. *Childhood Education*, 78 (1), 10-20.
- Baker-Henningham, H., Walker, S., Powell, C., & Meeks-Gardner, J. (2009). A pilot study of the incredible years teacher training programme and a curriculum unit on social and emotional skills in community pre-schools in Jamaica. *Child: Care, Health and Development*, 35 (5), 624-631.
- Battistich, V., Solomon, D., Watson, M., Solomon, J., & Schaps, E. (1989). Effects of an elementary school program to enhance prosocial behavior on children's cognitive-social problem-solving skills and strategies. *Journal of Applied Developmental Psychology*, 10 (2), 147-169.
- Bayram, N. (2010). *Yapısal eşitlik modellemesine giriş: Amos uygulamaları*. Bursa: Ezgi Kitabevi.
- Bee, H., & Denise, B. (2003). *The developing child*. USA: Pearson.
- Boivin, M., & Hymel, S. (1997). Peer experiences and social self-perceptions: A sequential model. *Developmental Psychology*, 33, 135-145.
- Bryman A., & Cramer D. (1997). *Quantitative data analysis with SPSS for Windows*. London: Routledge.
- Büyüköztürk, Ş. (2002). *Sosyal bilimler için veri analizi el kitabı*. Ankara: Pegem A Yayıncılık.
- Büyüköztürk, S., Kılıç-Çakmak E., Akgün, Ö. E., Karadeniz, S. ve Demirel, F. (2008). *Bilimsel araştırma yöntemleri*. Ankara: Pegem A.
- Çokluk, Ö., Şekercioğlu, G. ve Büyüköztürk, Ş. (2010). *Sosyal bilimler için çok değişkenli istatistik SPSS ve LISREL uygulamaları*. Ankara: Pegem Akademi Yayınları.
- Crick, N. R., & Dodge, K. A. (1994). A review and reformulation of social information-processing mechanisms in children's social adjustment. *Psychological Bulletin*, 115, 74-101.
- Crick, N. R., & Ladd, G. W. (1993). Children's perceptions of their peer experiences: Attributions, loneliness, social anxiety, and social avoidance. *Developmental Psychology*, 29, 244-254.
- D'Zurilla, T. J., & Nezu, A. M. (1990). Development and preliminary evaluation of the social problem-solving inventory. *Psychological Assessment*, 2, 156-163.
- D'Zurilla, T. J., & Nezu, A. M. (1999). *Problem-solving therapy: A social competence approach to clinical intervention*. New York: Springer.
- D'Zurilla, T. J., & Nezu, A. M. (1982). Social problem solving in adults. In P.C. Kendall (Eds.), *Advances in cognitive-behavioral research and therapy* (Vol.1 pp. 201-274). New York: Academic Press.
- D'Zurilla, T. J., Chang, E. C., & Sanna, L. J. (2003). Self-esteem and social problem-solving as predictors of aggression in college students. *Journal of Social and Clinical Psychology*, 22, 424-440.
- D'Zurilla, T. J., Nezu, A. M., & Maydeu-Olivares, A. (2004). Social problem solving: Theory and assessment. In E. C. Chang, T. J. D'Zurilla, & L. J. Sanna (Eds.), *Social problem solving: Theory, research, and training* (pp. 11-27). Washington, DC: American Psychological Association.
- Deutsch, M. (1994). Constructive conflict resolution: Principles, training, and research. *Journal of Social Issues*, 50, 13-32.
- Deutsch, M. (2000). Cooperation and competition. M. Deutsch, & P. T. Coleman (Eds.), *The Handbook of Conflict Resolution: Theory and Practice*. Jossey Bass, San Francisco.
- Diñer, Ç. (1995). *Anaokuluna devam eden 5 yaş grubu çocuklarına kişilerarası problem çözme becerilerinin kazandırılmasında eğitimin etkisinin incelenmesi*. Yayınlanmamış doktora tezi, Hacettepe Üniversitesi, Sağlık Bilimleri Enstitüsü, Ankara
- Diñer, Ç., & Güneysu, S. (1999, September). *The effect of problem solving training on the categories used by children in solving their interpersonal problems with peers and mothers and permanence of this training*. Poster paper presented at the 9th European Conference on Quality in Early Childhood Education, Helsinki, Finland.
- Dodge, K. A., Pettit, G. S., & Bates, J. E. (1994). Socialization mediators of the relation between socio-economic status and child conduct problems. *Child Development*, 65, 649-665.
- Drugli, M. B. (2006). *Young children treated because of ODD/CD: Conduct problems and social competence in day-care and school settings*. Unpublished doctoral dissertation, Norwegian University of Science and Technology, Faculty of Medicine.
- Drugli, M. B., Larsson, B., & Clifford, G. (2007). Changes in social competence in young children treated because of conduct problems as viewed by multiple informants. *European Child & Adolescent Psychiatry*, 16 (6), 370-378
- Du Toit, S., Du Toit, M., Mels, G., & Cheng, Y. (2008). *LISREL for windows simples syntax files*. Scientific Software International.
- Erwin, P. (1994). Social problem solving, social behavior, and children's peer popularity. *The Journal of Psychology*, 128 (3), 299-306.
- Eisenberg, N., & Mussen P.H. (1989). *The Roots of Prosocial Behavior in Children*. Cambridge: Cambridge University Press.
- Fraenkel, J. R., & Wallen, N. E. (1993). *How to design and evaluate research in education*. New York: McGraw-Hill
- Gouze, K. R. (1987). Attention and social problem solving as correlates of aggression in preschool males. *Journal of Abnormal Child Psychology*, 15, 181-197.
- Hune, J. B., & Nelson, C. M. (2002). Effects of teaching a problem-solving strategy on preschool children with problem behavior. *Behavioral Disorder*, 27 (3), 185-227.

- Ireland, J. L. (2001). The relationship between social problem-solving and bullying behaviour among male and female adult prisoners. *Aggressive Behavior*, 27, 297–312.
- Johnson, J. L. (2000). *Preventing conduct problems and increasing social competence in high-risk preschoolers*. Unpublished doctoral dissertation, Regent University, Virgine.
- Jöreskog, K., & Sörbom, D. (2001). *LISREL 8.51*. Mooresville: Scientific Software.
- Kail, R. V. (1998). *Children and their development*. New Jersey: Prentice-Hall.
- Kanlıkıçer, P. (2005). *Okul öncesi davranış sorunları tarama ölçeği: Geçerlilik güvenilirlik çalışması*. Yayınlanmamış yüksek lisans tezi, Marmara Üniversitesi, Eğitim Bilimleri Enstitüsü, İstanbul.
- Karasar, N. (2010). *Bilimsel araştırma yöntemi*. Ankara: Nobel Yayın Dağıtım.
- Keltikangas-Järvinen, L., & Pakaslahti, L. (1999). Development of social problem-solving strategies and changes in aggressive behavior: A 7-year follow-up from childhood to late adolescence. *Aggressive Behavior*, 25, 269–279
- Kline, R. B. (2005). *Principles and practice of structural equation modeling* (2nd ed.). New York: Guilford Press.
- Lochman, J. E., & Dodge, K. A. (1994). Social-cognitive processes of severely violent, moderately aggressive, and nonaggressive boys. *Journal of Consulting and Clinical Psychology*, 62, 366–374.
- Lochman, J. E., Wayland, K. K., & White, K. J. (1993). Social goals: Relationship to adolescent adjustment and to social problem solving. *Journal of Abnormal Child Psychology*, 21, 135–151.
- Malik, S., Balda, S., & Punia, S. (2006). Socio-emotional behaviour and social problem solving skills of 6 – 8 years old children. *Journal of Social Sciences*, 12 (1), 55–58.
- Matthys, W., Cuperus, J. M., & Engeland, H. V. (1998) Deficient social problem-solving in boys with odd/cd, with adhd, and with both disorders. *Journal of the American Academy of Child & Adolescent Psychiatry*, 38 (3), 311–321.
- Mize, J., & Cox, R. A. (1990). Social knowledge and social competence: Number and quality of strategies as predictors of peer behaviors. *Journal of Genetic Psychology*, 151, 117–127.
- Quiggle, N. L., Garber, J., Panak, W. F., & Dodge, K. A. (1992). Social information processing in aggressive and depressed children. *Child Development*, 63, 1305–1320.
- Pakaslahti, L., Karjalainen, A., & Keltikangas- Järvinen, L. (2002). Relationships between adolescent prosocial problem-solving strategies, prosocial behaviour, and social acceptance. *International Journal of Behavioral Development*, 26 (2), 137–144.
- Piaget, J. (1983). Piaget's Theory. In P. Mussen (Ed.) *Handbook of child psychology*. New York: Wiley
- Pickover, S. A. (2006). *The relationship between attachment status and social problem solving in four and five year old children: A contemporaneous assesment*. Unpublished doctoral dissertation, Oakland University, Rochester, Michigan.
- Punia, D. (2002). *Intervention programme for inter personal cognitive problem solving skills*. Unpublished doctoral dissertation, Department of Human Development and Family Studies, New York.
- Robichaud, M., & Dugas, M.J. (2005). Negative problem orientation (Part: I): Psychometric properties of a new measure. *Behaviour Research and Therapy*, 43(3), 391–401.
- Rubin, K. H., & Rose-Krasnor, L. (1992). Interpersonal problem-solving and social competence in children. In V. B. van Hasselt & M. Hersen (Eds.), *Handbook of social development: A lifespan perspective* (pp. 2-59). New York: Plenum.
- Rubin, K. H., Bukowski, W., & Parker, J. (1998). Peer interactions, relationships, and groups. In N. Eisenberg (Ed.), *Handbook of child psychology: Social, emotional, and personality development* (pp. 573-631). New York: Wiley.
- Shure, M. B. (2001). What's right with prevention? Commentary on "prevention of mental disorders in school-aged children: Current state of the field". *Prevention and Treatment*, 4 (7), 1-8.
- Şencan, H. (2005). *Sosyal ve davranışsal ölçümlerde güvenilirlik ve geçerlilik*. 1.Baskı, Ankara: Seçkin Yayınevi.
- Şimşek, Ö. F. (2007). *Yapısal eşitlik modellemesine giriş*. Ankara: Ekinoks.
- Thompson, B. (2000). Ten commandments of structural equation modeling. In L. G. Grimm & P. R. Yarnold (Eds.), *Reading and understanding more multivariate statistics* (pp. 261-283). Washington, D.C.: American Psychological Association.
- Waschbusch, D. A., Walsh, T. M., Andrade, B. F., King, S., & Carrey, N. J. (2007). Social problem solving, conduct problems, and callous-unemotional traits in children. *Child Psychiatry & Human Development*, 37 (4), 293–305.
- Webster-Stratton, C. (1999). *How to promote children's social and emotional competence*. London: Sage.
- Webster-Stratton, C., & Hammond, M. (1997). Treating children with early-onset conduct problems: A comparison of child and parent training interventions. *Journal of Consulting and Clinical Psychology*, 65(1), 93–109.
- Webster-Stratton, C., & Lindsay, D. W. (1999). Social competence and early-onset conduct problems: Issues in assessment. *Journal of Child Clinical Psychology*, 28, 25–93
- Webster-Stratton, C., & Reid, M. J. (2003). Treating conduct problems and strengthening social and emotional competence in young children: The dina dinosaur treatment program. *Journal of Emotional and Behavioral Disorders*, 11, 130–143.
- Webster-Stratton, C., & Reid, M. J. (2004). Strengthening social and emotional competence in young children—the foundation for early school readiness and success incredible years classroom social skills and problem-solving curriculum. *Infants and young Children*, 17 (2), 96–113.
- Webster-Stratton, C., & Reid, M. J. (2010). A school-family partnership: addressing multiple risk factors to improve school readiness and prevent conduct problems in young children In S. L. Christenson & A. L. Reschly (Eds.), *Handbook on school-family partnerships* (pp. 204-227). New York: Routledge/Taylor and Francis.
- Webster-Stratton, C., Reid, M. J., & Hammond, M. (2001). Social skills and problem solving training for children with early-onset conduct problems: Who benefits? *Journal of Child Psychology and Psychiatry*, 42 (7), 943–952.
- Youngstrom, E., Wolpaw, J., Kogos, J., Schoff, K., Acherman, B., & Izard, C. (2000). Interpersonel problem solving in preschool and first grade. *Journal of Clinical Child Psychology*, 29, 589–602.