

The Role of Child's Temperament Predictor on Preschool Social Competence

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Received 16 May 2014; revised 19 June 2014; accepted 29 June 2014

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Abstract

This research has been conducted to examine the predictor effects that children's temperament traits have on the social competence variable. In total of 112 preschool children (57 boys, 55 girls), and their mothers and teachers participated in the study. To collect data, the Social Competence and Behavior Evaluation scale, short form (SCBE-30) as well as the Short Temperament Scale for Children were completed by their mothers and teachers. According to the results, there is a significantly positive relationship between the level of social competence and the persistence and rhythmicity level of temperament traits. In other results there was found to be a significant positive relationship between the level of anger/aggression and the reactivity temperament trait. According to the results of the multiple regression analysis social competence also has a significant effect related to temperament traits.

Keywords

Preschool Education, Social Competence, Temperament

1. Introduction

For many children, preschool period represents the opportunity to interact with many peers in the first social arena outside their family, establish positive relationships with teachers, and develop social skills (i.e. ability to cooperate and establish empathy) (Baumgartner & Strayer, 2008; Coplan & Armer, 2008; Denham et al., 2009; Martin et al., 2005; O'Connor, 2010; Rubin & Coplan, 2004). The critical aspects of social-emotional development throughout the preschool period include children's ability to build positive social ties with adults and their peers, understand other people's feelings, control their own feelings and behaviors, and regulate their feelings (Denham et al., 2003; Izard et al., 2001). Therefore, it is very important for early childhood educators to assess and support children's socio-emotional development (Dunsmore, Noguchi, Garner, Casey, & Bhullar, 2008;

Öneren-Şendil, 2010). In this context, social competence was found to have a significant impact on development of a child's social interactions in the future (Fabes et al., 2006; Rubin et al., 2006).

Social competence during early childhood is defined as children's success in being involved in social interactions, achieving social goals, establishing and maintaining friendships, and getting accepted by peers (Brophy-Herb, Lee, Nievar, & Stollak, 2007; Chen & French, 2008; Rubin, Bukowski, & Parker, 2006). Katz and McClellan (1991) represent that social competence generally involves the ability to start communication and mutually maintain one's relationships with his/her peers in a satisfying manner. Social competence often refers to the ease and effectiveness of a child's interactions with others. Social competence development is considered one of the milestones of development (Thomas & Chess, 1980). Kerr and Nelson (1989) stated that an individual's social competence develops with positive feedback received by him/her from the environment as a result of him/her displaying his/her social skills in appropriate places or environments at appropriate time. Gresham and Reschly (1987) describe social competence in two dimensions, including adaptive behavior and social skills. Adaptive behaviors consist of independent functioning skills, physical development, academic competences, and language development of children and young people. Social skills are comprised of three sub-dimensions. These dimensions are interpersonal behaviors, self-related behaviors and task-related behaviors. Interpersonal behaviors cover accepting authority, speaking skills, cooperative behaviors and play behaviors; self-related behaviors cover expressing one's own feelings, ethical behavior, adopting positive attitudes toward one's own self, and task-related behaviors cover paying attention to warnings, fulfilling one's responsibilities, following instructions/directions, and working independently (Gresham, 1988). Gresham (1986) added a third sub-dimension called "peer acceptance" to social competence. Peer acceptance is both a part of social competence and an outcome of adequate social behaviors. Children gain peer-based social competence during the preschool period. If children encounter problems or failures in their peer relationships in this period, this will pose a risk for them in the future in terms of behavior and social maladjustment (Brown, Odom, & Conroy, 2001). If children show more positive interactions and more collaborative plays in comparison to their aggressive or introverted peers, they are accepted more by their peers (Sette, 2012). Displaying aggressive behaviors may further lead to the ruin of peer relationships (Merrell et al., 2001).

In addition to social skills and peer relationships, children's temperament was also indicated to have an impact on children's social competence (Rubin et al., 2006; Sanson et al., 2002). Acting as a bridge between a child's home environment and his/her social world, temperament is a structure which could influence social relationships (Szewczyk-Sokolowski, Bost, & Wainwright, 2005). Sanson, Hemphill and Smart (2002) defined temperament as individual differences in one's behavioral styles, that are evident from early childhood years. Temperament refers to individual differences in reactivity and self-regulation (Rothbart & Bates, 1998). Thomas et al. (1963) suggested that temperament consists of nine dimensions, including approach-withdrawal, adaptability, quality of mood, intensity of reaction, distractibility, persistence/attention span, rhythmicity, threshold of responsiveness, and activity level. Approach-withdrawal refers to the response to a new object or person. Adaptability, refers to the child either adjusts to changes in routines or plans easily or resists transitions. Quality of mood, refers to the amount of pleasant and cheerful behavior (positive mood), as contrasted with fussy, sad and unpleasant behavior (negative mood). Intensity of reaction refers to the energy level of a response whether positive or negative. Distractibility, the child is either easily distracted from what he is doing or shuts out external distractions and stays with the current activity. Persistence/attention span refers to the length of time a child's continues in activities in the face of obstacles. Rhythmicity refers to the regularity of child's sleep, wakefulness, eating, and elimination. Threshold of responsiveness refers to the child's reaction to a range of external stimuli or environmental changes. Activity level refers to the child's physical energy. Researchers have found that children can be categorized into three temperament groups based on these individual differences: easy, difficult, and slow-to-warm-up (Chess & Thomas, 1996; Thomas & Chess, 1977; Thomas, Chess, & Birch, 1968).

Temperament is an important element for preschool children in terms of peer acceptance and social competence (Eisenberg et al., 2003). Temperament in childhood is regarded as a basic feature which influences personality, emotionality and social behaviors (Berdan, Keane, & Calkins, 2008; David & Murphy, 2007; Rothbart, Ahadi, & Evans, 2000; Sterry et al., 2010). Various aspects of temperament such as sociability, inhibition, effortful-control, activity level, and negative emotionality all act to influence social competence (Bohlin, Hagekull, & Andersson, 2005; Çorapçı, 2008; Diener & Kim, 2004; Mendez et al., 2002). Temperamental dimensions may contribute differently to different aspects of social competence (Rubin et al., 2006). It is possible for children who display high level of emotionality to show antisocial behaviors or behaviors such as aggression, fight or

possessiveness (Rubin, Burgess, Dwyer, & Hastings, 2003). Similarly, children who used to be shy or introverted from preschool to primary school period are likely to be less prosocial than their more sociable peers (Eisenberg, Shepard, Fabes, Murphy, & Guthrie, 1998; Rydell, Bohlin, & Thorell, 2005). Wichmann, Coplan, and Daniels (2004) discovered that socially introverted children exhibit lower level of social competence than their non-introverted peers.

Recent research showed that children who could not develop any social competence skills during the first six years of their lives are more likely to exhibit emotional and behavioral problems and become a socially incompatible person in adulthood (Ladd, 2000). Researchers have also investigated the role of temperamental traits in predicting child's social competence. For example, the relationship between children exhibiting inhibited temperamental traits and social competence has been shown repeatedly, with inhibited children displaying higher levels of shy behaviors and lower levels of social competence (Fox et al., 1995; Rubin, Burgess, Dwyer, & Hastings, 2003). In line with the aforementioned statements, it is of great importance in terms of supporting and improving children's social competence skills at an earlier period that the effects of temperament on children's social competence are revealed. Further to this, no study has been found which deals with the temperament features and social competence that often surface during the preschool period in Turkey. The current study is an original study in Turkey. Therefore, this study was designed to investigate the relationship between preschool children's temperament and social competence. Answers to the following questions have been sought:

- 1) Is there a relationship between preschool children's social competence and temperament traits (approach/withdrawal, persistence, rhythmicity and reactivity dimensions)?
- 2) Do temperament trait variables have a predictive effect for the social competence dimensions of children?

2. Methodology

2.1. Participants

The present study was conducted in the city of Uşak, in Turkey. The participants in the present study consisted of 112 children between the ages of 5 - 6, all enrolled in one of five public preschools in Uşak, Turkey. There were 57 boys and 55 girls, from middle or middle-high socio-economic status (SES) families. The average age of the children was five years, six months. The sample group for the study was selected using a random sampling method. The sampling method was applied by drawing lots among the names of kindergartens in the city center of Uşak, resulting in five schools being accepted for participation in the study. Schools were gotten contact with in accordance with the permissions obtained from the Provincial National Education Directorates of Uşak.

2.2. Measures

In order to measure temperamental characteristics of the children in the sample, their mothers completed the Turkish version (Yağmurlu & Sanson, 2009) of the Short Temperament Scale for Children (STSC) (Prior, Sanson, & Oberklaid, 1989). The mothers evaluated their children's temperamental characteristics on a basis of a Likert-type scale, with six frequency choices. The scale consists of 30 items with four subscales, which measured approach/withdrawal, persistence, rhythmicity and reactivity dimensions. Sample items for dimensions were: Approach/withdrawal (e.g. "My child is shy when first meeting new children"); Persistence (e.g. "My child is unwilling to leave a game or activity that he/she has not completed"); Reactivity (e.g. "If my child resists some activity such as having hair brushed, he/she will continue to resist it for months"); and Rhythmicity (e.g. "After my child is put to bed at night, he/she takes about the same length of time to fall asleep"). The scale has proved to be a reliable form of measurement, with an average Cronbach Alpha of .70 for the reactivity subscale; .50 for the approach/withdrawal subscale; .66 for the persistence subscale; and .60 for the rhythmicity subscale.

The Social Competence and Behavior Evaluation Scale, short form (SCBE-30): (LaFreniere & Dumas, 1996). This 30-item scale for children in the 30 - 78 months age range is composed of three subscales; two distinct patterns of maladaptive behavior (the Anger-Aggression or AA and Anxiety-Withdrawal, or AW subscales) and one adaptive pattern (the Social Competence, or SC, subscale). The scale was completed by the children's teacher. The AA subscale reflects children's angry, aggressive, and irritable behaviors. Children were evaluated as angry and aggressive who showed negative affects and was unable to regulate their negative emotions. The AW sub-

scale is composed of items that measure dependent, anxious, and isolated behaviors. These children spend much of their time alone and unoccupied and demonstrate little interest in group activities. Finally, the SC subscale includes items used to assess positive social interaction (e.g., can negotiate solutions, works easily in groups) as well as prosocial behavior/empathy toward their peers at school (e.g., cooperates, shares toys, comforts others). Socially competent children show positive affect in their interactions and are well appreciated by their peers and teachers. Responses were given on a 6-point Likert scale from 1 (never) to 6 (always). [Çorapçı, Aksan, Arslan-Yalçın and Yağmurlu adapted the scale into Turkish in 2010](#). The Cronbach's alpha value averages for the original version of the scale were .87 for the SC, .84 for the AW, and .88 for the AA respectively ([LaFreniere et al., 2002](#)). The Cronbach's alpha for the current study were .86 for the SC and .90 for the AA.

2.3. Procedure

First of all necessary documents related to this study were prepared and given to the Ministry of Education to obtain permission to collect the data in schools. The selected schools were visited in order to inform teachers about the study and measurement. Data on children's social competence was collected from their teachers. The STSC in this study was completed by the mothers of children. Permission was obtained from parents prior to initiating the study. The mothers and teachers were informed about the objectives of the research and the measurement tools prior to the data collection process. Teachers filled in the forms in parallel with their general observations of the children for a period of approximately seven months.

2.4. Data Analysis

Data on the printed instruments was recorded on a personal computer. SPSS version 20.0 was used to analyze the data. The Pearson Product-Moment Correlation Coefficient and multiple regression analysis were used to analyze the data. The Pearson Product-Moment Correlation Coefficient technique was used to reveal the relationship between social competence and temperament dimensions. A multiple regression method was used to determine the social competence of children possessing the various temperament traits.

3. Results

Correlation coefficients were computed to examine associations among teachers' reports of child social competence, as well as mothers' reports of child temperament.

As seen in [Table 1](#), social competence was positively related to persistence and rhythmicity, although social competence was unrelated to either the approach/withdrawal or reactivity dimensions. However, anger/aggression was positively correlated with reactivity.

[Table 2](#) shows that persistence ($p < 0.01$) and rhythmicity ($p < 0.01$), were significant predictors of social competence for children. The results indicate that the selected variables all together predict 27% of social competence.

[Table 3](#) illustrates that the multiple regression analyses were significant ($p < 0.01$). As demonstrated by the results, the variables of approach/withdrawal and reactivity temperament dimensions reveal a positive significant relationship with social competence.

Table 1. The means, standard deviations and correlation coefficients of the variables in this study.

Variables	Means ± SD	1	2	3	4	5	6
1) Social Competence	31.65 ± 8.86	--	-.23*	.16	.43**	.24*	-.08
2) Anger-Aggression	22.58 ± 10.60		--	.16	.03	.02	.70**
3) Approach/withdrawal	27.39 ± 3.79			--	.08	-.04	.06
4) Persistence	29.36 ± 5.68				--	.02	.03
5) Rhythmicity	25.77 ± 3.67					--	.11
6) Reactivity	26.55 ± 7.32						--

Note: N = 112; * $p < .05$, ** $p < .01$.

Table 2. Results of the multiple regression analysis for predicting social competence.

	B	β	t	p
Approach/withdrawal	.28	.12	1.463	.15
Persistence	.66	.42	5.077	.00**
Rhythmicity	.60	.25	3.005	.00**
Reactivity	-.15	-.12	-1.481	.14
R = .52 R ² = .27**				
F(4, 111) = 10.009				

Note: N = 112; **p < .01.

Table 3. Results of the multiple regression analysis for predicting anger/aggression.

	B	β	t	p
Approach/withdrawal	.58	.20	3.176	.00**
Persistence	-.02	-.01	-.179	.85
Rhythmicity	-.12	-.04	-.672	.50
Reactivity	1.05	.0911	.078	.00**
R = .74 R ² = .55**				
F(4, 111) = 32.291				

Note: N = 112; **p < .01.

4. Discussion

The results of this study are consistent with the idea that there is a significant relationship between some of children's temperamental dimensions and their social competences. According to the results of Pearson Product Moment Correlation Coefficient Technique, the persistence and rhythmicity sub-scales of the children's temperament levels have a significant positive relationship to social competence. On the other hand a high level of positively significant relationship was found between anger/aggression and reactivity temperament sub-scales. Another result obtained from the study is that children's temperament traits have a predictor effect on child social competence. According to the results of the study, persistence and rhythmicity temperament sub-scales were significant predictors of social competence for children. The results of this study concluded that the reactivity and approach/withdrawal temperament dimensions had a significant predictive effect on the anger/aggression.

The studies conducted on the subject also show parallel with the finding obtained from the present study. Temperament has been recognized as an important factor in social competence among preschool children, including behavior around peers and peer acceptance (Sterry et al., 2010). A child's temperamental features play a critical role on development of social competence and other social behaviors in children. For instance, temperamental features may have a significant influence on supporting or hindering social competence behaviors (Fabes et al., 2006). It is argued that the child's temperament is in a way correlated with the problems he/she is to encounter in his/her social relations (Denham et al., 2003; Moon, 2001). Walker, Berthelson, and Irving (2001) have ascertained within the scope of their research that children who are not socially accepted have more problematic temperamental characteristics compared to those of popular children. In a study conducted on 42 children of 5 - 6 years of age, Öneren-Şendil (2010) investigated the relationship between sex, peer choices and temperamental features. As a result of the research, it was revealed that children with high level of persistence and approach possess high level of social competence, while those with high level of reactivity experience anger/aggression behavior problem more.

The results of this study concluded that the reactivity and approach/withdrawal temperament dimensions had a significant predictive effect on the anger/aggression. Anger-Aggression (AA) subscale measures externalization problem indicators, including defiance against adults, displaying incompatible and aggressive behaviors in

peer relationships. Olweus (1984) focused on emotional problems related to social competence such as aggression and anger and identified a correlation between temperament and aggression. In a longitudinal study by Eisenberg et al., children with high level of approach/withdrawal scores were found to have low level of self-control and aggression (Eisenberg et al., 1998). Howes and Phillipsen (1998) observed children in various environments for 9 years. As a result of the study, they determined that children who have played with their peers and acquired social skills during infancy displayed less aggressive and less introverted behaviors in later stages of their lives. Lower social competence is associated with a temperament quality of high reactivity (Rothbart, 2007; Rothbart, 2011). Children with higher temperamental reactivity and emotional regulation capacity are characterized as extroverted, sociable, and boundless, and on the contrary, those with higher emotional regulation capacity but with lower reactivity are characterized as non-extroverted and highly-controlled (Nolen-Morse, 2013). In a study by Çorapçı (2008), children who obtained a low score from temperamental dimension of impulsivity were found to have high social competence. Sokhey and Sokhey (2010) conducted a study to identify the role of temperament on children's social competences. As a result of the research, temperamental dimension of approach-withdrawal was demonstrated to correlate with social competence. In another study, Rydell et al. (2005) discovered that preschool children having temperamental feature of approach are more withdrawn than their sociable peers in starting social interactions with their peers. These results indicate that temperamental reactivity and approach-withdrawal sub-dimensions interact in important ways to influence a child's social competence.

In preschool period, socially competent children are expected to build stronger emotional ties with their parents, have self-confidence, be accepted to play group by peers, have positive relationships with peers and other adults, cooperate, and have friends with whom they'll be involved in activities (Thompson & Happold, 2002; Verschueren, Buyck, & Marcoen, 2001). Previous research revealed that children with relatively high social competence are those accepted by their peers (Bandon et al., 2010; Spinrad et al., 2004; Spivack & Howes, 2011), having more positive emotions about school, and displaying high level of participation at school (Ladd, Kochenderfer, & Coleman, 1996; Thompson & Happold, 2002). Gleason et al. (2005) emphasized that some temperamental dimensions are influential on the development of friendship in preschool children. Conversely, children who are unsuccessful in their social relationships may pose serious risks in terms of social nonconformity in time (Buhs et al., 2006; Denham et al., 2009; Ladd, 2006). Socially incompetent children show more behavioral problems, peer rejection, and lower school success than those with adequate social competence (Bierman, 2004; Chen & Jiang, 2002; Malti, 2006). Conclusions from various researches have shown that lower social competence leads the way to such negative outcomes as troubled peer relations, loneliness and peer rejection, internalization and externalization (Bierman, 2004; Burt, Obradovic, Long, & Masten, 2008; Bush & Ladd, 2001; Ladd, 2006; Ladd & Troop-Gordon, 2003; Parker & Asher, 1987).

Preschool children's social competences have a lasting impact on peer acceptance (Johnson, Ironsmith, Snow, & Poteat, 2000). In a study conducted by Mendez, Fantuzzo and Cicchetti (2002), the correlation between personality characteristics of Afro-American children attending Head Start program and peer play competence was investigated. Children's social competence was examined in terms of interactive competence and direct aggression. Children with interactive competence were found to possess positive temperamental features, and displayed successful peer play interactions. Children who displayed direct aggression spoiled peer plays, and did not share their toys with others. In a study by Lewis (1988), the correlation between preschool children's peer acceptance and coping skills were investigated within the scope of social skills. Ten children with developmental incompetence and four children without developmental incompetence were included in the study. Children's peer acceptance and coping skills were monitored for 6 months. The children who were successful in coping were found to get high scores from social competence test. It was also concluded that coping skills enhanced peer acceptance (cited by Ummannel, 2007). In a study by Flanagan (1994), a social skill education program in accordance with the results of the teacher's form of "Social Skill Rating System" was applied to a total of 51 kindergarten students of African, American, and Spanish origin either under risk or free from risk in terms of social competence. When the program was completed, it was evident that social skill scores of both groups increased; there was a significant correlation between development of social skills and academic achievement, and academic achievement increased.

5. Conclusion

Acquiring social competence skills in early childhood increase children's success in social environments outside home. More importantly, developing social competence in preschool children may reduce the likelihood of these

children showing emotional/behavioral adaptation (such as internalization and externalization problems) (Rubin, Bukowski, & Parker, 2006; Sanson, Hemphill, & Smart, 2004).

This study had some limitations. First, in the current study, the sample size (N = 112) was too small. Future research should be considered larger samples to utilize. Secondly, a longitudinal study could be conducted in the future. Third, futures studies can be planned to investigate the various effects of the other variables have on children's social competence. For example, examination of additional child characteristics, namely intelligence, would have made for a stronger study. In addition, the current study is that children's social competencies were assessed by the same teacher. Consequently, there is an evident need for future studies in which children's social competence is examined by independent raters, such as observers, parents, or peers.

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