

## **Examining the Temperamental Effortful Control, Extraversion, and Negative Affectivity as Predictors of Children's Social Competence**

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### **ABSTRACT**

The current study examined the children's temperament as predictor of their social competence, with a particular focus on children's regulatory temperament (i.e., effortful control) as moderators of associations between extraversion and social competence, and negative affectivity and social competence. A total of 94 children (56 boys, 38 girls) with mean age of 7.05 years ( $SD= 0.88$ ) enrolled in 24 classrooms from five elementary schools in Istanbul. Mothers reported on children's temperament and teachers reported on children's social competence. Nested children within classrooms were tested by using hierarchical regression models via SAS PROC MIXED. Results showed that temperamental effortful control was positively associated with children's social competence. Effortful control significantly moderated the association between temperamental extraversion and children's social competence. Low levels of effortful control (1  $SD$  below the mean) and lower extraversion was associated with less social competence. Limitations and future directions of the current study are discussed.

**Keywords:** Temperament, Social Competence, Effortful Control, Negative Affectivity, Extraversion.

## **Özdenetim, Dışadönüklük ve Olumsuz Duygulanımın Çocukların Sosyal Yeterliğine Etkisinin İncelenmesi**

### **ÖZ**

Bu çalışmada, çocukların mizacının onların sosyal yeterlikleri ile ilişkisi incelenmiştir. Özellikle de, düzenleyici mizacın (özdenetim) dışa dönüklük ve sosyal yeterlilik ayrıca da negatif duygulanım ve sosyal yeterlilik arasındaki ilişkilerini nasıl değiştirebileceği incelenmiştir. İstanbul'da beş ilköğretim okulunda bulunan yaş ortalaması 7.05 ( $SS = 0.88$ ) olan 94 çocuk (56 erkek, 38 kız) çalışmaya katılmıştır. Çocuk mizaç formunu ebeveynler ve sosyal yeterlik formunu öğretmenler doldurdu. Çocukların sınıfların içersinde olması sebebiyle, toplanan veriler SAS PROC MIXED aracılığıyla hiyerarşik regresyon modelleri test edildi. Sonuçlar özdenetim ile sosyal yeterlik arasında olumlu ilişkili olduğunu göstermiştir. Mizaçsal özdenetim anlamlı bir şekilde dışa dönüklük ve sosyal yeterlik arasındaki ilişkiyi önemli ölçüde yordamıştır.. Bu bağlamda, çocukların düşük seviyedeki özdenetim ve dışa dönüklüğe sahip olduklarında sosyal yeterlikleri düşük seviyede olduğu sonucuna ulaşılmıştır.. Sonuçlar kapsamında mevcut çalışmanın sınırlılıkları ve gelecek yönelimleri tartışılmıştır.

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**Anahtar Kelimeler:** Mizaç, Sosyal Yeterlik, Özdenetim, Olumsuz Duygulanım, Dışa Dönüklük .

## INTRODUCTION

Children's social competence has been in a scope of the research in child development and education; therefore, a large body of research has focused on it by investigating a variety of factors influencing social competence in early and late childhood (Brophy-Herb, Lee, Nievar, & Stollak, 2007; Chen & French, 2008). Social competence defined as ability to integrate feelings, thinking, and express behaviors to achieve personal goals within a given context and culture (Kostelnik, Whiren, Soderman, & Gregory, 2005). In short, within peer interactions it is defined as "sustaining positive engagement with peers" and "effectiveness in interaction" (Rose-Krasnor & Denham, 2009; p.163). Researchers have found associations between social competence and, parenting, temperament, peer group influences, teacher interactions, and cognitive abilities (Anthony et al., 2005; Griggs, Gagnon, Huelsman, Kidder-Ashley, & Ballard, 2009).

Temperament has reactive and regulatory components; reactive temperament taps on individual characteristics such as surgency, fear, activity level, impulsivity, and anger. Regulatory temperament (i.e., effortful control) taps on individual characteristics such as attentional focusing, inhibitory control, and perceptual sensitivity (Putnam & Rothbart, 2006; Rothbart & Bates, 2006). Children's regulatory temperament (i.e., effortful control) has been found to be related to higher levels of social competence (Valiente et al., 2003), in contrary, children's activity level has been found to be related lower level of social competence (Gleason, Gower, Hohmann, & Gleason, 2005; Szewczyk-Sokolowski et al., 2005). From the perspectives of interplay of temperamental characteristics on child development (Rothbart & Bates, 2006), the current study was focused on examining the contributions of regulatory (i.e., effortful control) and reactive temperament (i.e., surgency) to children's social competence. In particular, the current study was aimed at exploring interplay between effortful control and surgency on early elementary children's social competence.

### **Children's Social Competence**

Children's socialization in early childhood is one of the building blocks for concurrent and future development (Eisenberg, Fabes, & Spinrad, 2006; Hartup, 1996; Rogoff, 1990). The long-term goal of socialization is to help the individual become an active and engaged member of the community (Kagitcibasi, 2007). In the process of socialization, children learn values of the social environment in which they live and how to behave properly, according to social rules and norms (Rogoff, 1990). Children need social competence to understand what social response is required within a particular social context (Denham, Basett, & Wyatt, 2007; Ladd, 2005). Social competence is the ability to use appropriate social skills in a given social context to understand social cues and respond them accordingly (Ladd, 2005). Social competence is an important tool for children's

social relationships and school success (Halberstadt, Denham, & Dunsmore, 2001; Rose-Krasnor & Denham, 2009).

During the peer interactions, children need a set of social skills that contribute to formation of positive peer interactions (Ladd, 2005). Even though social competence is somewhat compromised of social skills, there is a conceptual and hierarchical distinction between social skills and social competence (Gresham & Reschly, 1987; Greene & Bursleson, 2003; McFall, 1982). Social skills are part of the broader construct that is social competence (Winner, 2008). In return, social competence is the broader picture encompassing the ability to interact successfully with peers and adults in a variety of social situations (Ladd, 2005; Winner, 2008). Social skills refer to the ability to perform a behavior to meet demands of a specific social situation and the personal goal of the child, such as asking for help to get his/her shoes tied (McFall, 1982; Winner, 2008). According to McFall's (1982) and Rose-Krasnor's (1997) Prism Model of social competence, social skills are important foundations for social competence. For example, actions such as displaying aggressive behavior with peers predicts behavioral outcomes such as limited classroom engagement, peer rejection, and problems for the future development of teacher-child interactions, which are seen as behavioral indicators of social incompetence (Asher, Oden, & Gottman, 1977; Estell et al., 2008; Ladd & Burgess, 1999). In contrast, children who had positive interactions with peers in childcare had better social and communicative skills with peers in third grade, were less aggressive, and showed more cooperative skills with peers, which are seen as manifesting social competence (National Institute of Child Health and Human Development Early Child Care Research Network [NICHD ECCRN], 2008).

Social competence in early years is crucial for children's concurrent and future development including social, academic, and cognitive skills (Denham et al., 2004; Halberstadt et al., 2001). For example, previous research has showed that children with higher levels of social competence in early years demonstrated higher levels of social relationships with peers and adults as well as academic competence in later years (Domitrovich, Cortes, & Greenberg, 2007). The next section will talk about temperamental effortful control and extraversion as antecedents of children's social competence.

### **Children's Temperament and Social Competence**

Temperament in childhood is considered as a central characteristic that influences personality, emotionality, and social behaviors (see Berdan, Keane, & Calkins, 2008; David, 2007; Sterry, et al., 2010, for relevant review). Temperament is defined as individual differences in reactivity and self-regulation that has biological foundations and evolve through interactions with environmental characteristics (Rothbart, 2011; Rothbart & Bates, 2006). Temperament has two main dimensions: reactivity and regulation. Reactivity refers to an individual's intensity of arousability or responsivity to the social context or situations (Rothbart, Derryberry, & Hershey, 2000). Regulatory dimension of temperament refers to mechanism such as attention, avoidance, and inhibition that individual regulate (Rothbart, 2011). Extraversion as

temperamental characteristic falls under reactive and effortful control falls under regulatory dimension of temperament (Rothbart, 2011).

Temperamental extraversion is a reactive component of temperament, refers to positive emotions, higher levels of activity in social interactions, and quick approach to given environmental rewards (Evans & Rothbart, 2007; Rothbart, 2011). Surgency as component of temperament is considered to be related to the extraversion personality factor (Rothbart, 2011). Factors analysis of Rothbart's Child Behavior Questionnaire showed that surgency includes *activity level, approach (positive anticipation), high-intensity pleasure, impulsivity, shyness (negative loading), and smiling and laughter* (Putnam & Rothbart, 2006; Rothbart, 2011). Surgency children have excessive levels of excitement towards new objects, gifts and rewards particularly, and higher activity levels during social interactions with peers (Rothbart, 2011; Szweczyk-Sokolowski et al., 2005). From this perspective, the current study used surgency as extraversion temperamental characteristic for children as relates to their social competence.

Another reactive temperamental domain is negative affectivity that refers to a general disposition to experience negative emotions (Putnam & Rothbart, 2006; Rothbart, 2011). Negative affectivity includes *anger/frustration, discomfort, falling reactivity and soothability (negative loading), fear, and sadness* (Putnam & Rothbart, 2006; Rothbart, 2011). Fear and anger are the most researched dimensions of negative emotionality in child development (e.g., Rothbart, Ahadi, & Evans 2000). Considering negative affectivity consists of emotions such as anger, frustration, and discomfort, research has shown that negative emotion is a predictor of concurrent and future problem behaviors such as antisocial behavior and over-reaction to environmental stimuli (Boyce & Ellis, 2005; Lengua & Long, 2002; Rothbart, 2011). For example, children (8-10 years old) with higher levels of negative emotionality perceived their parents' divorce as more negative and stressful compared to children with lower levels of negative emotionality (Lengua & Long, 2002). The researchers concluded that children with higher levels of negative emotionality experienced higher levels of stress in the event of their parent's divorce; this is likely indicative of their experiences with many stressful events.

The third temperamental dimension, effortful control, is regulatory component of temperament. Effortful control refers to voluntary inhibition of inappropriate response and replacement with an appropriate response (Rothbart, 2011). Effortful control includes *attentional focusing, inhibitory control, low-intensity pleasure, and perceptual sensitivity* (Putnam & Rothbart, 2006; Rothbart, 2011). In general, effortful control has been negatively related to externalizing behaviors and predictive of positive peer and teacher relations over time during the preschool years. For example, children with high effortful control are more likely to be prosocial, high in social competence, and relatively low in problematic behaviors (Eisenberg Fabes, Guthrie, & Reiser 2000; Rothbart & Bates, 2006; Rudasill & Konold, 2008; Valiente et al., 2003).

Theoretical conceptualizations and previous research have suggested that one temperamental characteristic can work with another temperamental characteristic as they influence social outcomes (Acar et al., 2015; Rothbart & Bates, 2006; Yoleri, 2014; Zentner & Bates, 2008). From this perspective, it is expected that regulatory temperamental characteristics may eliminate the detrimental effects of reactive or difficult temperamental characteristics on children's social outcomes (Eisenberg et al., 2000; Rothbart & Bates, 2006). For example, Rudasill and Konold (2008) found that shy children had higher levels of self-control and cooperation as part of social competence when they had higher levels of inhibitory control and attentional focusing as part of their temperamental effortful control. Considering these previous findings, the current study attempted to examine how effortful control would moderate the associations between extraversion and social competence as well as between negative affectivity and social competence.

### **The Current Study**

The contribution of temperament on children's social competence has been widely examined in Western samples with different age groups (e.g., Gleason et al., 2005; Rudasill & Konold, 2008; Valiente et al., 2003). However, the research examining the associations between children's temperamental characteristics and their social competence has been lacking in Turkish samples. Therefore, the current study aimed at exploring the association between temperament (effortful control and extraversion) and early elementary children's social competence. In particular, the interplay of effortful control and extraversion on children's social competence was warranted. Findings from the current study are expected to contribute to the existing literature and provide guidelines for parents and teachers to support children's social competence depending upon their temperamental characteristics.

The following research questions and hypotheses were addressed. First, to what extent are the temperamental extraversion, negative affectivity, and effortful control related to children's social competence? It was hypothesized that temperamental extraversion and negative affectivity as reactive characteristics would be negatively related to children's social competence (Hypothesis 1A) conversely, effortful control would have a positive association with children's social competence (Hypothesis 1B). Second, to what extent does effortful control as regulatory temperament moderate the association between children's extraversion and negative affectivity, and children's social competence? It was hypothesized that effortful control would moderate the association between children's negative affectivity and extraversion, and their social competence. Such that, effortful control as regulatory temperament would eliminate the detrimental effects of extraversion and negative affectivity as reactive temperaments on children's social competence (Hypothesis 2).

## METHOD

### Participants

Ninety-four children (38 girls and 56 boys) children from 24 classrooms across three elementary schools were recruited for the current study. Each classroom had four to five children at average, to maximize generalizability of the sample. Children aged from 5 to 9 with the mean age of 7.05 ( $SD=.84=5$  years). Most of the children were from low socioeconomic background living in suburbs in Istanbul. A total of 62 % of the parents completed elementary school, 26.6% of parents completed middle/high school, 3.2 % of parents completed college, and 1.1% earned their Master's degree. See Table 1 for complete demographic information.

Table 1. *Participant's Demographic Information*

Child Characteristics	n (%)	Missing	M	SD	Range
Gender					
Boy	56(59.6)				
Girl	38(40.4)				
Age (years)	94		7.05	.85	5-9
Family Characteristics					
Parent Age	94		33.47	4.88	25-49
Parent Education					
Elementary	62(66)				
Secondary/High School	25(26.6)				
College	3(3.2)				
Master's Degree	1(1.1)				
Parent Gender					
Male	26(27.7)				
Female	68(72.3)				
Family Income ( ₺)					
1000	36(38.3)				
1000-1500	47(50)				
2500 and higher	11(11.7)				

### Measures

#### *Demographic Information*

Children's demographic information such as gender and age as well parents' age, level of education, and family income was reported by parents.

#### *Child Temperament*

*Children's Behavior Questionnaire* –short form (CBQ; Putnam & Rothbart, 2006; Rothbart, Ahadi, & Hershey, 1994) was completed by parents. The Turkish version of the CBQ was translated and validated by Akin-Sari, Iseri, Yalcin, Akin-Aslan, and Sener (2012). The short form CBQ is composed of 94 items and

contains 15 subscales designed to measure the temperament of children. The CBQ is a 7-point scale (where 1 = "Extremely untrue of your child" and 7 = "Extremely true of your child"; Rothbart et al., 1994).

In the current study, three main dimensions of the CBQ were used. Three dimensions are Surgency-Extraversion, Negative Affectivity, and Effortful Control (Putnam & Rothbart, 2006). 25 items capturing surgency/extraversion dimension were used (example item; "*Gets so worked up before an exciting event that s/he has trouble sitting still,*"). 31 items capturing Negative Affectivity dimension were used (example item; "*has temper tantrums when s/he doesn't get what s/he wants*"). 24 items capturing Effortful Control dimension were used (example item "*Can easily stop an activity when s/he is told 'no.'*"). Similar approach was used in previous research (e.g., Putnam & Rothbart, 2006; Suurland et al., 2016). Internal consistency for Extraversion (Cronbach's  $\alpha = .77$ ), Negative Affectivity (Cronbach's  $\alpha = .76$ ), and Effortful Control (Cronbach's  $\alpha = .72$ ) was acceptable for the current study.

### ***Child Social Competence***

Teachers reported on children's social competence using The *School Social Behavior Scale* (SSBS; Merrell, 1993) which was adapted into Turkish by Yukay-Yuksel (2009). The Social Competence subscale of the SSBS is composed of 32 items (e.g., "*Is skillful at initiating or joining conversations with peers*") and asks teachers to rate the social behaviors of children on a 5-point scale (1 = "Never" and 5 = "Frequently"). In the current study, the internal consistency of the social competence (Cronbach's  $\alpha = .97$ ) was acceptable.

### **Data Collection Procedures**

School principals were contacted to grant permission for the study. Once principals agreed, teachers were asked to voluntarily complete the SSBC. Parents were contacted through teachers to ask for their permissions. Once parents agreed to participate, they were given demographic questionnaire and the CBQ to complete. Parents returned the questionnaires to teachers and researchers picked up from teachers.

### **Statistical Analysis Approach**

Before running conceptualized models, all study variables were tested for normality assumptions. It was found that variables did not violate the normality assumptions considering criteria of skewness  $< 3$  and kurtosis  $< 8$  (Kline, 2005). Therefore, no log transformation was applied to any variable.

As following, a series of hierarchical linear regression models were run to test each hypothesis. Given all children were nested in classrooms, random intercept models were run to account for non-independence observations of children in classrooms as a random effect at the classroom level within the statistical models (Raudenbush & Bryk, 2002). Intraclass correlation from unconditional model (i.e., empty model) was .09 for social competence. SAS PROC MIXED was used to run all analyses (SAS Institute Inc. 2011). Satterthwaite was used in PROC

MIXED as denominator degrees of freedom method to control unbalanced classroom size in analysis (West, Welch, & Galecki, 2015).

Children's temperament (extraversion, negative affectivity, and effortful control) as independent variables were standardized (i.e., transforming to z-scores) to create interactions terms for moderation models (Aiken & West, 1991). To examine the significant interaction between temperamental characteristics (i.e., extraversion x effortful control and negative affectivity x effortful control), simple slope analysis was run at three levels of effortful control; high (1 SD above the mean), mean level, and low (1 SD below the mean) (Aiken & West, 1991). In all analysis, children's age and gender were controlled based on previous literature; such that children's age and gender are associated with social competence and temperamental characteristics (Rothbart, 2011; Rose-Krasnor, 1997).

## RESULTS

Table 2. *Descriptive Statistics and Intercorrelations for All Variables*

Variables	<i>M</i>	<i>SD</i>	<i>Range</i>	Skewness	Kurtosis	1	2	3	4	5	6
1. Effortful Control	5.27	0.67	3.65-7	-0.07	-0.34	-					
2. Extraversion	4.43	0.78	2.80-6.28	0.34	-0.46	-.22*	-				
3. Negative Affectivity	4.15	0.74	1.93-5.63	-0.54	0.51	-.03	.09	-			
4. Social Competence	4.24	0.65	1.34-5	-1.41	3.52	.33**	-.02	-.04	-		
5. Child Age (in years)	5	9	5-9	-.10	-.53	-.01	.03	-.09	-.03	-	
6. Child Gender						.25*	-.31**	.29**	.07	.05	-

Note. \* $p < .05$ , \*\* $p < .01$

Mean, standard deviation, and inter-correlations for the study variables are presented at Table 2. Children's negative affectivity was significantly associated with gender ( $r(93) = .29, p = .004$ ), favoring girls. Temperamental extraversion was negatively associated with effortful control ( $r(93) = -.22, p = .02$ ) and child gender ( $r(93) = -.31, p = .002$ ), favoring boys. Children effortful control was positively associated with children's social competence ( $r(93) = .33, p = .001$ ) and child gender ( $r(93) = .25, p = .01$ ), favoring girls.

### Main Effects Models

The current study examined main effects of temperamental characteristics on social competence to warrant testing associations in between them as it was

examined in Western samples. Therefore, to examine the first research question, the main effects of children's temperamental effortful control, negative affectivity, and extraversion were regressed onto children's social competence in main effect only model. In main effect only models, there was no interaction terms included. In main effects only model, effortful control was positively associated with children's social competence, such that for every one-unit increase in effortful control, children's social competence increased significantly by .245 ( $p = 0004$ ). This finding is supported our Hypothesis 1B. None of the other main effects were significant. Therefore, there was no significant support for hypotheses 1A. See Table 3 for complete Main Effects Models.

Table 3. *Final Model Parameters for Main and Moderation Effects for Effortful Control, Extraversion, and Negative Affectivity on Social Competence*

	Children's Social Competence					
	Main Effects Only			Interaction Model		
	<i>Estimate</i> (SE)	<i>t-</i> <i>statistic</i>	<i>p-value</i>	<i>Estimate</i> (SE)	<i>t-statistic</i>	<i>p-value</i>
Intercept	4.20(0.12)	33.98	<.0001	4.17(0.11)	35.27	<.0001
Child Gender (Female)	0.001(0.14)	0.06	0.95	0.01(0.14)	0.09	0.92
Child Age	-0.05(0.08)	-0.68	0.50	0.01(0.07)	-0.22	0.82
<b>Temperament</b>						
Effortful Control	0.24(0.06)	3.66	0.0004	0.19(0.06)	2.79	0.007
Extraversion	0.04(0.06)	0.62	0.53	0.02(0.06)	0.38	0.70
Negative Affectivity	-0.04(0.06)	-0.64	0.52	0.05(0.06)	-0.87	0.38
<b>Interactions</b>						
Effortful Control x Extraversion	-	-	-	0.19(0.06)	-2.90	0.004
Effortful Control x Negative Affectivity	-	-	-	0.03(0.05)	0.59	0.55
<i>Model Fit -2log</i>						
<i>Likelihood</i>	188.6			188.0		

Note. Female was a reference group for gender. SE= Standard errors

### Interaction Models

To examine the second research question, the baseline model was specified as the main effects of child gender, child age, effortful control, negative affectivity, and extraversion. effortful control, negative affectivity, and extraversion were

included in the same interaction models (e.g., effortful control x negative affectivity and effortful control x extraversion) to test moderating effect of effortful control between temperamental extraversion and negative affectivity, and children's social competence. Table 3 presents the final model parameters for the main effects models and the interaction models for social competence as an outcome.

In interaction model, interaction terms were added to the main effects only model. Results from the interaction model showed that temperamental effortful control significantly moderated the association between extraversion and children's social competence ( $\beta = -.19$ ,  $t = -2.90$ ,  $p = .004$ ). Simple slope analysis showed that the slope for children's extraversion on their social competence when effortful control was at mean and high levels was not significantly different from zero ( $t = -0.38$ ,  $p = .70$  and  $t = -1.74$ ,  $p = .08$ , respectively). However, when effortful control was low, the slope for children's extraversion on their social competence was significantly different from zero ( $t = 2.44$ ,  $p = .01$ ). Thus, when effortful control is at mean or high levels, children's temperamental extraversion is unrelated to their social competence. However, when effortful control is low, mean and low levels of extraversion is related to lower levels of social competence. See Figure 1 for interaction plot. This finding partially supported the Hypothesis 2. Surprisingly, effortful control did not moderate the association between negative affectivity and children's social competence ( $t = 0.59$ ,  $p = .55$ ).

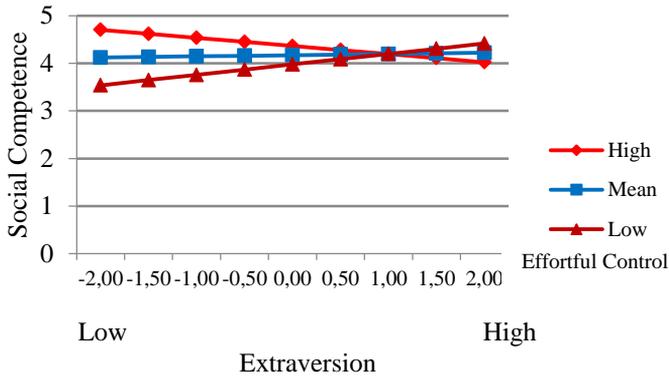


Figure 1. Temperamental Effortful Control and Extraversion Predicting Social Competence

## DISCUSSION and CONCLUSION

The current study aimed at exploring the association between regulatory temperament (effortful control) and reactive temperament (extraversion and negative affectivity), and early elementary children's social competence. Two main findings emerged from this study. First, temperamental effortful control was positively associated with children's social competence. Second, effortful control significantly moderated the association between temperamental

extraversion and children's social competence. These findings are discussed as followings.

First, parents' ratings of temperamental effortful control (i.e., attentional focusing, inhibitory control, and perceptual sensitivity) contributed to teachers' ratings of children's social competence. Such that children with higher levels of effortful control were rated as higher levels of social competence. These results are congruent with the previous research conducted in both Western and Non-Western samples (Rudasill & Konold, 2008; Yagmurlu & Sanson, 2009), considering that effortful control refers to inhibiting inappropriate response and replace it with appropriate response to given environmental stimuli (Rothbart, 2011). Teachers may perceive children with higher levels of effortful control as cooperative and behaving in accordance with classroom rules, following their directions, and getting along with peers, which all are considered as part of the social competence in the classroom (Rudasill & Konold, 2008; Valiente et al., 2003). Children in elementary classroom are expected to attend classroom processes, listen to instructions, focus on classroom learning; therefore, temperamental effortful control appears to be an effective tool for children to succeed in classroom learning and behaviors (Blair, 2002).

Second, effortful control appeared to work together with extraversion as predictors for children's social competence. Specifically, effortful control moderated the association between extraversion and social competence, such that at low levels of effortful control (1 *SD* below the mean) and lower extraversion was associated with less social competence. These finding is somewhat consistent with previous research (Eisenberg et al., 2000; NICHD ECCRN, 2008; Rudasill & Konold, 2008) showing that children's inhibitory control and attentional focusing as part of the effortful control buffered against negative effects of shyness negative emotionality as part of the reactive temperament on their social outcomes. Such that, children with better effortful control (i.e., attentional focusing and inhibitory control) had higher levels of social outcomes (e.g., positive peer interactions and social competence) despite negative effects of reactive temperament (i.e., shyness, negative emotionality) (Acar et al., 2015; Rudasill & Konold, 2008).

### **Implications of the Current Study**

The findings from the current study highlights the importance of recognizing children's both reactive and regulatory temperamental characteristics as related to children's social competence in early elementary school years. In school and classroom contexts, understanding and recognizing children's temperamental characteristics can help teachers to support children's social competence. Hence, the findings from the current study are informative for educational practice. The early elementary classroom contexts emphasize academic and social development of children (Hamre & Pianta, 2001). To scaffold children's academic and social growth in early elementary school years, teachers can facilitate their learning and social context by accommodating children's needs

depending upon their temperamental characteristics. By doing so, children with reactive temperament can reduce detrimental effects of it so that they can easily involve classroom process or peer interactions (Acar et al., 2015); In addition, children regulatory temperament can also benefit from teachers' facilitation by fostering their regulation so that they can sustain their focus on academic process or engage with the classroom material. The results can also inform parent to recognize their children's temperamental characteristics and accommodate their needs by providing nurturing environment so that children can develop better social competence, which is crucially important for their future development and relationships.

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## Geniřletilmiř zet

Sosyal yeterlik ocuk geliřimi ve eđitimi arařtırmalarının ana kapsamı iersinde yer almaktadır. Bu nedenle, geniř bir arařtırmacı kitlesi erken ocuklukta sosyal yeterliđi etkileyen eřitli faktrler üzerindeki arařtırmalara odaklanmıřtır (Brophy-Herb, Lee, Nievar & Stollak, 2007). Sosyal yeterlik; belirli bir bađlam ve kltr ierisinde, nceden belirlenen kiřisel hedeflere ulařmak iin duyguları btnleřtirme, dřnme ve davranıřları ifade etme yeteneđi olarak tanımlanır (Kostelnik, Whiren, Soderman & Gregory, 2005).Yapılan arařtırmalarda, sosyal yeterlik ile ebeveynlik, miza, akran grubu etkileřimleri, đretmen etkileřimleri ve biliřsel yetenekler arasında anlamlı iliřkiler bulunmuřtur (Anthony ve ark., 2005; Griggs ve ark., 2009).

Erken ocukluk dneminde sosyalleřme, ocukların mevcut geliřim srelerinde ve gelecekteki geliřimi iin nemli yapı tařlarından birisidir (Eisenberg, Fabes & Spinrad, 2006; Rogoff, 1990). Sosyalleřmenin uzun vadeli hedefi, bireyin aktif ve giriřimci bir toplum yesi olmasına yardımcı olmaktır (Kađıtbařı, 2007). Sosyalleřme srecinde, ocuklar yařadıkları sosyal evrenin deđerlerini đrenir ve sosyal kurallar ve normlar erevesinde nasıl davranmaları gerektiđini benimserler (Rogoff, 1990). ocuklar belirli bir sosyal bađlam iinde nasıl bir sosyal tepkinin gerekli olduđunu anlamak iin sosyal yeterliđe ihtiya duyarlar (Ladd 2005; Denham, Basett & Wyatt, 2007). Sosyal yeterlik, sosyal bir bađlam ierisinde verilen sosyal ipularını anlamak ve bu ipularına gre cevap verebilme olarak ifade edilmektedir (Ladd, 2005). Bu sosyal yeterlik ocukların sosyal iliřkileri ve okul bařarısı iin de nemli bir aratır (Halberstadt, Denham, & Dunsmore, 2001; Rose-Krasnor & Denham, 2009).

Miza ocukluk ađında kiřilik, duygusallık ve sosyal davranıřlarını etkileyen bir merkezi karakter olarak kabul edilir (bkz. Berdan, Keane, & Calkins, 2008; Sterry, et al., 2010). Miza biyolojik temelleri olan ve evresel faktrlerle etkileřime geerek geliřen bireyin tepkisellik ve zdenetimindeki farklılıkları temsil eder (Rothbart ve Bates, 2006; Rothbart, 2011). Mizacın tepkisellik ve dzenleme olarak iki ana boyutu vardır; Tepkisellik bir sosyal bađlam ve durumda gsterilen uyarılma ve duyarlılık yođunluđunu temsil eder (Rothbart, Derryberry, & Hershey, 2000). Mizacın dzenleme boyutu ise bireyin dzenlenmiř olduđu engelleiyici, dikkatle yođunlařma, kaınma gibi mekanizmaya iřaret eder (Rothbart, 2011). Dıřa dnklk mizacın tepkisellik alt boyutuna girerken zdenetim mizacın dzenleme boyutu altına girer (Rothbart, 2011). Dıřa dnk ve zdenetimi az olan ocuklar yařıtları ile sosyal etkileřimler sırasında yksek seviyede aktiflik gsterip ve yeni nesnelere, hediyeler ve dller ile karřılařtıklarında onlara karřı ařırı heyecan sergilerler (Rothbart, 2011; Szweczyk-Sokolowski ve diđ., 2005). Diđer bir tepkisel miza boyutu olan olumsuz duygulanımın da ocukların eřzamanlı ve gelecekteki problem davranıřlarının belirleyicisi olduđu gzlemlenmiřtir (Boyce & Ellis, 2005; Lengua & Long, 2002; Rothbart, 2011). te yandan, zdenetime sahip ocukların akranları ile yksek seviyede olumlu sosyal davranıř, sosyal yeterlik

ve düşük seviyede problem davranışlar sergilediği tespit edilmiştir (Eisenberg ve ark., 2000; Rothbart & Bates, 2006).

Mizaç ve sosyal yetkinlik arasındaki ilişki uluslararası alanyazında çok derinlemesine araştırılmasına rağmen, ülkemizde Türk kültüründe bu alanda yapılan çalışmalar nadirdir (örn. Yoleri, 2014), bu sebeple bu çalışmanın amacı çocukların mizaç (özdenetim, dışadönüklük, ve olumsuz duygulanım) ve sosyal yeterlikleri arasındaki ilişkiyi incelemektir. Özellikle de çocukların özdenetiminin olumsuz duygulanım ve sosyal yeterlik ve de dışa dönüklük ve sosyal yeterlik arasındaki bağlantıyı nasıl yönlendirdiğini belirlemektir.

Bu çalışmada 5 ila 9 (ortalama yaş= 7,05) yaşları arasında toplam 94 çocuk (38 kız) yer almıştır. Örneklem İstanbul'un dış kısımlarında yaşayan düşük gelirli ailelerden oluşmaktadır.

Çocukların mizacı ebeveynleri tarafından doldurulan Çocuk Davranış Ölçeği - Kısa formu (CBQ; Putnam & Rothbart, 2006; Rothbart, Ahadi, ve Hershey, 1994) ile ölçülmüştür. Çocuk Davranış Ölçeği -Kısa formunun Türkçe versiyonunun geçerlik ve güvenilirliği Akın-Sari, İşeri, Yalçın Akın-Aslan ve Şener (2012) tarafından yapılmıştır. Orijinal versiyonuna paralel olarak, bu çalışmada da iç tutarlık kat sayısı Dışadönüklük (Cronbach  $\alpha = 0,77$ ), Olumsuz Duygulanım (Cronbach  $\alpha = 0,76$ ), ve Özdenetim (Cronbach  $\alpha = 0,72$ ) olarak bulunmuştur. Çocukların sosyal yeterliği Yukay-Yüksel (2009) tarafından Türkçe'ye uyarlanan, Okul Sosyal Davranış Ölçeği (SSBS; Merrell, 1993) ile ölçülmüştür.. Mevcut çalışmada sosyal yeterliliğin iç tutarlılığı (Cronbach  $\alpha = .97$ )'dir.

Çocukların sınıf içerisinde bulunmasını göz önünde bulundurarak hiyerarşik lineer regresyon modelleri SAS PROC MIXED kullanılarak yapılmıştır (Raudenbush & Bryk, 2002). Koşulsuz başlangıç modelinde sosyal yeterlik için sınıf içi korelasyon 0,09 olarak bulunmuştur. Mevcut düzensiz sınıf dağılımını kontrol için serbestlik derecesi olarak Satterthwaite tekniği kullanıldı (West, Welch, & Galecki, 2015). Anlamlı sonuç veren etkileşim sonuçları için moderatör için üç seviyede yüksek (ortalamanın 1SS), ortalama düzeyi ve düşük (ortalamanın 1 SS altında) basit eğilim analizleri gerçekleştirildi (Aiken & West, 1991).

Çocukların olumsuz duygulanımının cinsiyet ile kızlar lehine anlamlı ilişkisi bulunmuştur ( $r(93) = 0,29, p = 0,004$ ). Dışadönüklük ve özdenetim arasında olumsuz ilişki tespit edildi ( $r(93) = -.22, p = .02$ ). Ayrıca, dışadönüklük ve cinsiyet arasında erkekler lehine ( $r(93) = -.31, p = .002$ ) ilişkisi tespit edilmiştir. Çocukların özdenetimi ve sosyal yeterlik arasında olumlu ( $r(93) = 0,33, p = 0,001$ ) ve kızlar lehine cinsiyet ile ( $r(93) = 0,25, p = 0,01$ ) ilişkisi bulunmuştur. Ana etkiler modelinde, özdenetimin pozitif bir şekilde çocukların sosyal yeterliğini etkilediği gözlemlenirken; yani özdenetimdeki bir birim artış, çocukların sosyal yeterliliğinde 0,245 ( $p = 0.004$ ) anlamlı bir artışa denk gelmektedir.

Etkileşim modelinden elde edilen sonuçlar mizaçsal özdenetimin anlamlı bir şekilde dışadönüklük ve çocukların sosyal yeterlik arasındaki ilişkiyi modere ettiği bulundu ( $\beta = -.19$ ,  $t = -2,90$ ,  $p = .004$ ). Bu ilişkinin anlamlılığı için test edilen basit eğilim analizleri (simple slopes analysis) özdenetimin düşük olduğu durumlarda çocukların sosyal yeterlik üzerindeki dışadönüklük için test edilen eğilimin anlamlı bir şekilde sıfırdan farklı olduğu gözlemlendi ( $t = 2.44$ ,  $p = 0,01$ ). Yani, çocukların mizaçsal özdenetimi düşük olduğu zaman, ortalama ve düşük seviyedeki dışadönüklük düşük seviyedeki sosyal yeterlik ile anlamlı olarak ilişkilidir.

Bu çalışmada iki temel sonuca ulaşılmıştır; birincisi, mizaçsal özdenetimin pozitif bir şekilde çocukların sosyal yeterliğini etkilediği tespit edilmiştir. Bu sonuç önceki çalışmalar ile uyum sağlamaktadır ki çocuklar kendi olumsuz davranışlarını özdenetim olarak bastırdıklarında daha iyi sosyal beceri ve akran ilişkileri göstermektedir (Rudasill & Konold, 2008; Yağmurlu & Sanson, 2009). İkincisi, çocukların mizaçsal özdenetimi düşük olduğu zaman, ortalama ve düşük seviyedeki dışadönüklük ile düşük seviyedeki sosyal yeterlik anlamlı olarak ilişkili olduğu tespit edilmiştir. Eisenberg ve arkadaşları, ve Rudasill ve Konold (2008)'de aynı şekilde özdenetimin çocukların negatif etki gösteren diğer mizaçsal boyutlarının etkisini değiştirdiği ve çocukların daha iyi sosyal beceriler gösterdiğini sonucuna ulaşmıştır.

Sonuç olarak, çocukların ilköğretim yıllarında sahip oldukları mizaçsal özellikleri onların sosyal yeterliğini etkilemektedir. Öğretmenlerin çocukların mizaçsal özelliklerini tanıyarak onlara özgü ortamlar oluşturması çocukların daha iyi sosyal beceriler göstermesine katkı sağlayacaktır.