TURKISH VALIDATION OF THE SOCIAL COMPETENCE AND BEHAVIOR EVALUATION SCALE (SCBE-30)

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Turkish Validation of
the Social Competence and Behavior Evaluation Scale (SCBE-30)

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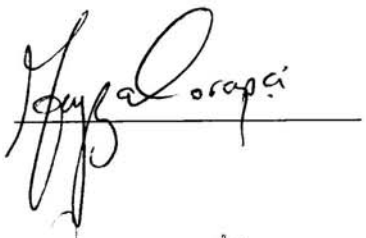

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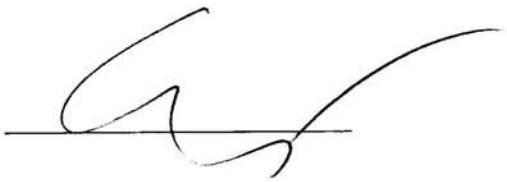

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Thesis Abstract

Duygu Arslan Yalçın, "Turkish Validation of the Social Competence and Behavior Evaluation Scale (SCBE-30)"

This study investigated the psychometric properties of the Turkish version of the Social Competence and Behavior Evaluation Scale (SCBE-30) using a sample of Turkish children aged 3 to 6 years. The reliability and construct validity of the SCBE-30 were addressed by examining the internal consistency, test-retest reliability, factor analytic structure, and interrelations to other constructs related to social competence. Similar to the previous studies, a statistically significant test-retest association (over a 3-month period) of moderate strength was found. Supporting the validity of the scale, the three factor structure underlying the original form was replicated. Furthermore, girls and older children were found to be more socially competent compared to boys and younger children. Children who had higher emotion regulation and effortful control also had higher social competence, before and after covariate control. A significant relation between adjustment problems and social competence was also detected before covariate control. The study filled in an important gap in the Turkish literature by validating a screening tool to identify preschool-aged children at risk for social problems and externalizing as well as internalizing problems. The SCBE-30 proved to be a reliable and valid assessment tool for future research and for clinical practice to identify at-risk children in Turkey.

Tez Özeti

Duygu Arslan Yalçın, "Sosyal Yetkinlik ve Davranış Değerlendirme Ölçeği'nin Psikometrik Değerlendirmesi"

Bu çalışma 3-6 yaş arası Türk çocuklarından oluşan bir örneklem kullanarak Sosyal Yetkinlik ve Davranış Değerlendirme Ölçeği'nin psikometrik niteliklerini araştırmayı amaçlamıştır. Ölçeğin güvenilirliği ve geçerliliği iç tutarlılığı, ölçme-tekrar ölçme güvenilirlliği, faktor analizi yapısı ve sosyal yetkinlikle ilişkili olan diğer değişkenlerle ilişkisine bakılarak incelenmiştir. Daha önceki çalışmalara benzer olarak üç aylık bir dönem içerisinde test–tekrar test güvenilirliği bulunmuştur. Orjinal ölçekteki üç faktörlü yapı bu örneklemde de bulunarak ölçeğin geçerliliği desteklenmiştir. Kız çocuklarının erkek çocuklarına göre daha yüksek sosyal yetkinlik puanlarına ve daha düşük öfke-saldırganlık puanlarına sahip oldukları görülmüş, yaşça büyük olan çocukların da küçük çocuklara göre sosyal yetkinlik puanlarının daha yüksek olduğu bulunmuştur. Duygu düzenleme ve kendini denetleme becerisi daha gelişmiş olan çocukların orta değişkenler kontrol edildikten sonra bile sosyal olarak daha yetkin oldukları bulunmuştur. Ayrıca orta değişkenler kontrol edilmeden bakıldığında sosyal yetkinlikle davranış problemleri arasında negatif bir ilişki bulunmuştur. Araştırma Sosyal Yetkinlik ve Davranış Değerlendirme Ölçeği'nin gelecek çalışmalarda ve klinik uygulamalarda risk altındaki çocukları belirlemede kullanılacak güvenilir ve geçerli bir ölçek olduğu kanıtlanmıştır.

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During the collection of observational data, I shared the joy and the difficulties of this process with a friend, Doli Aseo. I would like to thank her for her companionship and support.

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CONTENTS

TABLES

CHAPTER 1

INTRODUCTION

Social competence with peers is considered a primary component of healthy functioning and development. Peers serve particularly important functions for young children. Peer interactions provide children with opportunities to practice social skills, experience social support, trust, and intimacy (Atkins-Burnett, Nicholson, & Meisels, 1997; Bigras & Dessen, 2002; Howes & Tonyan, 1999; Rubin, Bukowski, Parker, 1998). Raver and Zigler (1997) suggest that social competence may even be a protective factor for disadvantaged children by ameliorating the effects of multiple risk factors in their environment. Social competence among young children has also been related to children's later adjustment, emotional well-being as well as school success (Brody, Kim, McBride Murry, & Brown, 2004; Howes & Tonyan, 1999; Ladd & Troop-Gordon, 2003; Parker & Asher, 1987; Raver & Zigler, 1997; Rubin et al., 1998). These findings have implications for preventive interventions. Identification of children with varying degrees of social competence contributes to the selection of at risk children for such interventions (LaFreniere & Dumas, 1996).

There are a number of tools to measure the level of children's social competence that were developed and validated in the United States and in Europe. These include self and other-report questionnaires or interviews, direct behavioral observations, sociometric techniques, and hypothetical problem sets (Atkins-Burnett et al., 1997; Cavell, Meehan, & Fiala, 2003; Raver & Zigler, 1997; Rubin et al., 1998). The few available measures in Turkey that measure social development focus on children younger than preschool age (i.e. Denver Developmental Screening Test).

Other measures for older children primarily focus on behavior problems (i.e., CBCL) or everyday adaptive behavior (i.e., Vineland Adaptive Behavior Scale; Öner, 2006). As a result, there is a dearth of well-validated measures to assess the quality of social competence in early childhood. The goal of this project is to fill in the gap by examining the psyhometric properties of the Turkish version of the Social Competence and Behavior Evaluation Scale (SCBE-30) for preschoolers. The psychometric examination of the SCBE-30 will include the establishment of its reliability, namely internal reliability and test-retest reliability, as well as its validity.

CHAPTER 2

LITERATURE REVIEW

Definition of Social Competence

Rubin and Rose-Krasnor (1992) state that the number of definitions of social competence is as many as the number of researchers studying this construct. Table 1 in Appendix A presents the most commonly used definitions of this construct. Common to all of these definitions are the quality of interaction with others (especially peers), attaining personal and social goals (e.g., initiating and maintaining interactions, having friends, peer popularity), social knowledge and understanding (e.g., knowledge of norms, customs of the group and understanding others' feelings and possible reactions), and social skills (e.g., social cognition skills, empathy, communication, prosocial behaviors) that enable children to approach their peers (Atkins-Burnett et al., 1997; Cavell et al., 2003; Katz & McClellan, 1997; Raver & Zigler, 1997; Rose-Krasnor, 1997).

A model proposed by Rose-Krasnor (1997) can be used as a framework to understand the variety in the definitions of social competence. Rose-Krasnor presents this model as the "social competence prism." At the top of the prism, there is a theoretical level in which social competence is defined as the effectiveness of interaction. Rose-Krasnor emphasizes that social competence not only involves the individual, but also the social environment in which the child gets different responses from different people depending on his or her behavior. Behavior that is effective for one task or situation may not be useful in other conditions. In the middle of the prism, there is the index level, which includes elements with a social basis, such as interaction sequences, relationships, group status and social self efficacy. Index level

is divided into two dimensions self and other, both of which are needed for good adjustment and should be in a balance. Indices at this level are divided into contexts, which emphasizes that they are situation-specific. Whether the child achieves efficacy varies according to group's activity and composition, tasks, or whether the group is composed of adults or peers. The last level of the prism at the bottom is the skills level involving social, emotional and cognitive abilities and motivations within the individual. Developmental changes are most apparent at this skills level, and theoretical level is the most age-independent level since definition of social competence does not change although tasks used to measure it may differ. Cultural variability also is most apparent in skills level (Rose-Krasnor, 1997). Different definitions of social competence touch different levels of the prism. This study examines social competence at skills level since the SCBE focuses on certain social and emotional abilities of children among their peers as well as developmental and cultural variability.

Correlates of Social Competence

There are correlates of social competence which include child, family, as well as teacher and classroom characteristics. Each of these factors will be briefly reviewed below.

Child Characteristics

Child Age

Social skills improve with age, and the importance given to specific skills also change with age (Rose-Krasnor, 1997; Rubin et al., 1998). Specifically, prosocial behavior, number of reciprocated friendships, quality of strategies and solutions for hypothetical problems, and positivity in peer interactions increase as children get older (Diener & Kim, 2004; Mayeux & Cillessen, 2003; National

Institute of Child Health and Human Development [NICHD] Early Child Care Research Network, 2001; Vaughn et al., 2000). Age-related changes in social competence has been found not only in the United States (LaFreniere & Dumas, 1996; LaFreniere et al., 2002; Eisenberg et al., 2003), but also in China (Chen & Jiang, 2002; La Freniere et al., 2002), Russia (Butovskaya & Demianovitsch, 2002; LaFreniere et al., 2002), Austria, Brazil, Canada, Italy, and Japan (LaFreniere et al., 2002).

Child Gender

Girls and boys have different subcultures and associated differences in activities and schemas, which in turn are reflected in their values, preferences, and social skills (Leaper & Friedman, 2006; Rose-Krasnor, 1997). Fathers and mothers also model different behaviors to boys and girls (Leaper & Friedman, 2006). Research shows that girls generally use collaborative and affiliative ways of resolving conflicts, whereas boys use more physical aggression and power assertion (Leaper & Friedman, 2006). In several studies, girls have been found to be more socially competent and skilled, have more reciprocated friends, and use more prosocial behavior compared to boys (Diener & Kim, 2004; Eisenberg et al., 2003; Fabes et al., 1999; LaFreniere & Dumas, 1996; LaFreniere et al., 2002; NICHD Early Child Care Research Network, 2003; Raver, Blackburn, Bancroft, & Torp, 1999; Vaughn et al., 2000; Zhou, Eisenberg, Wang, & Reiser, 2004). After reviewing the literature on the role of gender in peer popularity, Rubin et al. (1998) concluded that aggression constitutes a higher risk of peer rejecton for girls than for boys given that aggression is less acceptable for girls. The same pattern of gender difference in social competence has also been found in Brazil (Bigras & Dessen, 2002), China (Chen & Jiang, 2002), Russia (Butovskaya & Demianovitsch, 2002),

and Indonesia (Eisenberg, Pidada, & Liew, 2001). La Freniere and colleagues (LaFrenier et al., 2002) have reported similar gender differences in Austria, Canada, Italy, and Japan as well.

Effortful Control

Temperament refers to individual differences in reactivity and self-regulation (Rothbart & Bates, 1998). Various aspects of temperament such as sociability, inhibition, effortful-control, activity level, and negative emotionality act to influence social competence (Bohlin, Hagekull, & Andersson, 2005; Calkins, Gill, & Smith, 1999, Çorapçı, 2008; Diener & Kim, 2004; Fox & Calkins, 2003; Ladd, 1999; Lengua, Honorado, & Bush, 2007; Mendez et al., 2002; Rubin et al., 1998; Rubin & Rose-Krasnor, 1992; Spinrad et al., 2007; Zhou et al., 2004).

Effortful control is a temperamental self-regulatory mechanism defined as "the ability to inhibit a dominant response to perform a subdominant response" (Rothbart & Bates, 1998, p. 137). According to Eisenberg and colleagues, effortful control requires attention focusing (i.e., keeping attention focused on the relevant task), attention shifting (i.e., shifting attention when necessary) and inhibitory control for the relevant tasks (Eisenberg et al., 2005). Kochanska, Murray, and Harlan (2000) stated that effortful control by children is manifested by deliberately delaying or slowing down motor activity, suppressing or initiating activity according to a signal, and by focusing attention according to task demands. Effortful control emerges with the maturation of anterior executive attention network in the second half of the first year of life (Rothbart & Bates, 1998), and continues to develop during early childhood (Rothbart & Bates, 1998; Kochanska et al., 2000). With the changes in anterior attention, children gain more control over reactive behavior as they get older (Rothbart & Bates, 1998). In general, girls have been found to get

higher scores on effortful control tasks (Else-Quest, Hyde, Goldsmith, & Hulle, 2006; Fabes et al., 1999; Kochanska et al. 2000; Olson, Sameroff, Kerr, Lopez, & Wellman, 2005) not only in studies conducted with middle-class American families, but also among disadvantaged children (Li Grining, 2007) as well as in studies conducted in China (Zhou et al., 2004).

Several studies have also demonstrated that higher effortful control is related to higher levels of social competence (Lengua et al., 2007; Riggs, Jahromi, Razza, Dillworth-Bart, & Mueller, 2006; Spinrad et al., 2007). Most of the available studies documented concurrent relations between effortful control (measured by questionnaires completed by parents and/or teachers) and social competence during toddlerhood or preschool years (Fabes et al., 1999), while some documented this link during the middle childhood years (Eisenberg et al., 2005; Valiente et al., 2007; Zhou et al., 2004). Only a few used direct behavioral observations of effortful control in preschoolers and showed a link with social competence as measured by teacher/mother reports (Lengua et al., 2007; Spinrad et al., 2007). Finally, only one study to date examined the link between effortful control and social competence in a sample outside the U.S. Specifically, Zhou et al. (2004) have found that high effortful control related to high social functioning in a sample of Chinese children.

Emotion Regulation

Emotion regulation (ER) has been defined as "the process of initiating, maintaining, modulating, or changing the occurence, intensity, or duration of internal feeling states and emotion-related physiological processes, often in the service of accomplishing one's goals" (Eisenberg, Fabes, Guthrie & Reiser, 2000, p. 137). Fox and Calkins (2003) argue that intrinsic and extrinsic factors are influential in the development of ER. Intrinsic factors such as temperament, effortful control or

executive function interact with the extrinsic factors such as interaction with parents, siblings, peers, or cultural norms to shape ER.

Eisenberg and Fabes (1992) propose that the optimal regulation of emotions is related to social competence in children and adults. The existing empirical studies supported their argument. Studies consistently documented that the ER contributes to children's social competence and successful peer play interactions, adaptability to classroom situations and approach to social situations, not only in samples with middle SES white children, but also in samples with low-income, African-American minority children (Denham et al., 2003; Diener & Kim, 2004; Eisenberg et al., 2003; Eisenberg, Fabes et al., 2000; Gouley, Brotman, Huang, & Shrout, 2008; Mendez et al, 2002; Raver et al., 1999). Some of these studies used questionnaires completed by teachers and/or mothers to measure ER (Diener & Kim, 2004; Gouley et al., 2008; Mendez et al, 2002) while others used observational tasks or natural observations in addition to the questionnaires (Denham et al., 2003; Eisenberg et al., 2003; Eisenberg, Fabes et al., 2000; Eisenberg, Guthrie et al., 2000)

Given that most of the studies have been conducted with children from the United States or Western, industrialized countries, Eisenberg et al. (2001) have examined the effects of ER and effortful control on children's social competence with a sample from Indonesia. They found that higher ER was related to higher social skills and fewer behavior problems - a pattern of finding similar to the studies conducted in Western cultures.

When reviewing the literature on ER and social competence, caution with regard to methodological and conceptual issues must be taken into consideration. First, one problem in the ER literature concerns measurement issues. Although some studies use instruments that have subscales designed to measure ER (i.e., California

Child Q-sort or the Colorado Temperament Inventory), many of them use measures of effortful control and make conclusions with respect to ER. In other words, effortful control and ER terms are being used interchangably. However, recent studies (e.g. Eisenberg, Hofer, & Vaughan, 2007; as cited in Spinrad et al., 2007; Rothbart & Bates, 2006; as cited in Spinrad et al., 2007) see effortful control as a separate and broader construct than ER, including the regulation of both emotions and other less emotional behavior (i.e., attention).

Another issue relates to the fact that researchers tend to interpret ER in different ways and focus on different aspects of the construct. For example, Buss and Goldsmith (1998) state that although there are many studies focusing on the strategies of ER, only a few of them examined if the ER strategies really change children's emotional states. For example, Buss and Goldsmith (1998) found that the effects of the purposed ER strategies on the expression of emotions change with respect to emotion (whether it is anger or fear) and emotion-eliciting context. Therefore, they have criticized those researchers who examine ER for general negative affect instead of discrete emotions such as anger and fear. Goldsmith and Davidson (2004) also state that the concepts of emotion and ER should be seperated while studying the ER, and discrete emotions rather than general negative affect should be examined. Attempts to overcome these challenging issues in relation to ER, effortful control and child outcomes are warranted.

Child Adjustment

Internalizing and externalizing problems are the two broadband measures referring to problems of overcontrol and undercontrol, respectively. Externalizing problems involve behaviors such as aggression, disobedience or conduct problems, while internalizing problems refer to anxiety, withdrawal or depression.

Retrospective and prospective studies suggest that low social competence, problematic peer relationships, loneliness and peer rejection predict negative outcomes including externalizing and internalizing problems (Atkins-Burnett et al., 1997; Bierman, 2004; Burt, Obradovic, Long & Masten, 2008; Bush & Ladd, 2001; Ladd, 1999, 2006; Ladd & Troop-Gordon, 2003; Parker & Asher, 1987; Rubin et al., 1998; Synder, Prichard, Schrepferman, Patric, & Stoolmiller, 2004). The relation of effortful control and ER to adjustment problems have also been examined in the literature. Researchers found that ER and effortful control are negatively related to internalizing and externalizing problems (Eisenberg et al, 2004; 2005; Eisenberg, Guthrie, et al., 2000; Olson et al., 2005; Rubin et al., 1998; Spinrad et al., 2007; Valiente et al., 2006).

It is important to note that most of these studies are correlational; therefore, it is difficult to make certain conclusions on the direction of the relationship. Peer rejection can be both the cause and the result of the externalizing and internalizing problems (Ladd, 2006). Mental health symptoms may affect social information proccesssing and social skills, or social rejection may result in emotional, cognitive and behavioral problems. It is also possible that third factors such as parenting, socioeconomic status, or cognitive skills can influence both social competence and adjustment problems (Burt et al., 2008). Further research is warranted to conclude whether the peer problems lead to adjustment problems or whether the adjustment problems cause peer rejection and loneliness.

Other Child Characteristics

Social information processing that affects the strategies to solve social problems (Ladd, 1999; Rubin et al., 1998), cognitive and language development (Mendez et al., 2002; NICHD Early Child Care Research Network, 2001), and

quality of early attachment (Bohlin et al., 2005; Ladd, 1999; Rubin et al., 1998; Rubin & Rose-Krasnor, 1992) are some of the other factors that influence social competence of children.

Family Characteristics

Family characteristics that have been related to children's social competence include parenting quality and family demographic variables. First, there are a number of parenting characteristics that predict children's social competence. Maternal sensitivity, coherence, authoritativeness, responsiveness, and emotional expressiveness have been positively related to social competence, while negative parental affect and harsh parenting have been found to relate negatively to social competence (Bigras & Dessen, 2002; Bohlin et al., 2005; Diener & Kim, 2004; Eisenberg et al., 2003; Goldberg, 2000; Isley, O'Neil, Clatfelter, & Parke, 1999; Katz & McClellan, 1997; Ladd, 1999; Lengua et al., 2007; NICHD Early Child Care Research Network 2001, 2002, 2003; Rubin et al., 1998; Rubin & Rose-Krasnor, 1992; Spinrad et al., 2007). Furthermore, parents affect their children's social competence and popularity by shaping and socializing their children's peer relations like effective supervising and monitoring, coaching, and arranging peer relations (Rubin et al., 1998; Ladd, 1999).

Of particular relevance to the present study are demographic family characteristics. First, more educated mothers have children with better social skills (NICHD Early Child Care Research Network, 2003). Second, family income has also been found to be positively related to social competence and peer acceptance (Anthony, Anthony, Morrel, & Acosta, 2005; Bigras & Dessen, 2002; Brophy-Herb, Lee, Nievar, & Stollak, 2007; Ladd, Birch, & Bush, 1999; Lengua et al., 2007). These studies have shown that children in low income families where they

experience multiple contextual risk factors (e.g., minority status, single parent status, adolescent parent status, number of household moves in child's lifetime, negative life events, parental depression) displayed lower levels of social competence. It has been proposed that these risk factors are likely to interfere with sensitive and responsive parenting, which in turn might negatively influence children's social competence (Rubin et al., 1998).

Teacher and Classroom Characteristics

Positive classroom environment characterized by care providers' warmth, affection, good communication, shared leadership, and organization predict children's social competence (Brophy-Herb et al., 2007; Howes, 2000; NICHD Early Child Care Research Network, 2003). On-the-spot interventions to promote social knowledge and social skills, reflection of feelings, scaffolding, and conflict mediation also appear to improve social competence of children (Han & Kemple, 2006). Research also indicates that teachers' education and training in child development are positively associated with ratings of child social competence (Anthony et al., 2005; NICHD Early Child Care Research Network, 2002). For example, studies have found that teacher education is one of the most important components of the child-care quality, which is associated with increased child social competence, decreased number of problem behaviors, and more positive interactions with peers (Bradley & Lowe Vandell, 2007; NICHD Early Child Care Research Network, 2000, 2002). Experienced teachers who arrange the environment in a way that encourages small group play, who prepare well planned daily routines promoting self regulation, and who arrange informal free play times are more likely to support the initiation and maintenance of peer interaction compared to less experienced teachers (Han & Kemple, 2006).

Caregiver-child ratio is another indicator of nonparental child care quality and a predictor of children's social competence (Bradley & Lowe Vandell, 2007; NICHD Early Child Care Research Network, 2002). High adult-child ratio was related to high levels of social competence of children in day care (Bradley & Lowe Vandell, 2007; de Schipper, Riksen-Walraven, & Geurts, 2006; NICHD Early Child Care Research Network, 2000, 2002), possibly through increased levels of developmentally facilitating care provider-child interactions (NICHD Early Child Care Research Network, 2000).

Culture and Social Competence

Culture influences the nature of social interactions and the types of relationships. But most importantly, culture acts to influence how we interpret these relationships and certain behaviors such as shyness or aggression (Chen, French, & Schneider, 2006). Cultural differences may be more apparent at the social skills level such as communication with peers, or social problem solving strategies (Han & Kemple, 2006; Ladd, 1999; Rose-Krasnor, 1997; Rubin et al., 1998). A review by Goudena and Vermande (2002) indicate that there are cultural differences in social motives (ie., sharing, cooperation, competition) and characteristics of the social interaction (ie., verbal interaction) which can explain the differences in the meaning and expression of social competence among cultures.

Collectivistic cultures value group well-being more than the individual and show more sensitivity to the needs and feelings of others. Conflicts are avoided to keep group harmony. In contrast, western individualistic cultures give importance to the individual's own needs, desires and goals. Conflicts are part of the personal autonomy and relationship (Chen, French, & Schneider, 2006; Tietjen, 2006). Such cultural differences have implications for the definition of social competence and for

the meaning given to some social behaviors. For example, socially inhibited or withdrawn behaviors are generally seen as indicators of lack of self confidence in western countries. However, these behaviors have been regarded as indicators of maturity and understanding, and have been related to peer acceptance and competence in non-western countries like in China (Chen, Wang, & Desouza, 2006; Rubin et al., 1998).

Assessment of Social Competence

There are several ways of assessing children's social competence. Self and other-report questionnaires or interviews, observations, sociometric techniques, and hypothetical problem sets are used often (Atkins-Burnett et al., 1997; Cavell et al., 2003; Raver & Zigler, 1997; Rubin et al., 1998). Of particular relevance to the present proposal is teacher-report measures of social competence. While teacher-report measures are quick and simple ways of collecting data about children, they are more objective than the peer report. However, researchers should be careful about the biases that teachers could have about certain children (Rubin et al., 1998). Maturity demands should also be culturally and developmentally appropriate for adult evaluations of social competence (Raver & Zigler, 1997; Rubin et al., 1998).

Social Competence and Behavior Evaluation Scale (SCBE)

The Social Competence and Behavior Evaluation Scale (SCBE) is a teacher rating scale to assess young children's social competence, affective expression, and adjustment difficulties (La Freniére, Dumas, Capuano, & Dubeau, 1992). The original SCBE with 80 items was shortened into a 30-item scale to make it less time-consuming and easier to complete by preschool teachers. The short version, labeled the Social Competence Behavior Evaluation-Preschool Edition, Short Form (SCBE-30; LaFreniere & Dumas 1996), is often used as a screening instrument to select

high-risk children and to design preventive interventions for such children. The scale is also being used in research to explore important questions in young children's social and emotional development. The SCBE-30 consists of the following three subscales: social competence (SC), anger-aggression (AA), and anxiety-withdrawal (AW). The SC subscale items describe qualities that are related to the positive adaptation of the child, like emotional maturity, cooperation, and prosocial behavior (LaFreniere & Dumas, 1996). The AA subscale covers angry, aggressive, and oppositional behaviors. The AW subscale covers anxious, depressed, isolated and overly dependent behaviors. LaFreniere and Dumas (1996) have demonstrated that the scale has satisfactory reliability and validity. Specifically, each of the 10-item subscales had high interrater reliability as a result of the rating of the child by different teachers ranging from .78 to .91, and high test-retest reliability ranging from .78 to .86 for a two-week interval. Test-retest reliability over a 6-month interval ranged from .75 to .79. Internal consistency of the subscales was also high ranging from .80 to .92. (LaFreniere & Dumas, 1996). LaFreniere and Dumas (1996) have also found that boys had higher scores on anger-aggression and lower scores on SC scales compared to girls. No gender difference was found on the AW subscale. The study has also shown that SC improved with age supporting the construct validity of the scale.

Cross-Cultural Application of the SCBE-30

Cross-cultural validity and reliability of SCBE-30 have been examined in various countries which are Austria, Brazil, Canada, China, Italy, Japan, Russia, and the United States. The internal consistency of the scale ranged between .72 to .92 across different countries such as Austria, Brazil, Canada, China, Italy, Japan, and

Russia (LaFreniere et al., 2002). Two-week interval test-retest reliability of the three subscales ranged from .60 to .87 in Brazil (Bigras & Dessen, 2002).

Validation studies outside the U.S. have been conducted in Russia (Butovskaya & Demianovitsch, 2002), China (Chen & Jiang, 2002), and Brazil (Bigras & Dessen, 2002). Similar to the previous studies in the U.S. (e.g., LaFreniere & Dumas, 1996), a three-factor structure (i.e., SC, anger-aggression, anxiety-withdrawal) was documented in these studies. With the exception of the data from Brazil, gender as well as age-related differences in SC was also similar to those found in the U.S. sample. Bigras and Dessen (2002) argued the lack of age and gender differences may be due to the norrower age range (4 to 6 years) they used in the study in Brazil. Finally, LaFreniere et al. (2002) made cross-cultural comparisons of SCBE-30 with 4640 children from eight countries: Austria, Brazil, Canada, China, Italy, Japan, Russia, and the United States. In all countries, the SC scores were higher for older children. AA subscale scores decreased with age in samples from Austria, Italy and the U.S. Decreases in AW subscale scores with age were observed only in samples from Italy and the U.S. With regard to gender differences, girls were more socially competent and less aggressive compared to boys in all countries (La Freniere et al., 2002).

Finally, correlations of the SCBE-30 to parenting stress, family income and cognitive measurement were in the expected directions in Brazil, also supporting the construct validity of the scale (Bigras & Dessen, 2002).

Assessment of Social Competence in Turkey

There are only a few measures available in Turkey to measure social competence among young children and they have several limitations. Although the Turkish form of the Child Behavior Checklist (CBCL) measures competencies and

behavior problems of children, the primary focus of the scale is on problem behaviors rather than the competencies of children (Öner, 2006). The Denver Developmental Screening Test examines social development together with other domains of development. But its major aim is to identify children with developmental delays (Öner, 2006). The Vineland Adaptive Behavior Scale focuses on the socialization, communication skills, and adaptive behaviors. However, its norms are established only for children between 0 and 47 months of age (Öner, 2006). Similarly, the Sociometric Test examines peer popularity of children. Yet this measure has been designed for elementary school-aged children (Öner, 2006). To date, the assessment of social competence among young children has been a neglected area.

CHAPTER 3

PURPOSE

Given the dearth of screening measures to evaluate young children's social competence, externalizing and internalizing behaviors, the goal of this study was to translate the original scale into Turkish and investigate the psychometric properties of the Turkish version of the SCBE-30 using a sample of Turkish children aged 3 to 6 years. The reliability and validity of the SCBE-30 were addressed by examining the internal consistency, test-retest reliability, factor analytic structure, and construct validity.

The following hypotheses were tested:

Hypothesis 1: Similar to the previous studies, I expected to find a statistically significant test-retest correlation (over a 3-month period) of moderate strength.

Hypothesis 2: With respect to the construct validity of the scale, I expected to replicate the following findings:

a) replicate the three factor structure underlying the SCBE-30

b) replicate the gender differences as reported in the previous studies such that girls, compared to boys, would have significantly higher scores in the SC and lower scores in the AA.

c) replicate the age-related changes such that the SC scores would increase and the AA scores would decrease with age. I did not expect gender differences in AW scores based on previous research and have not made a specific prediction with regard to the age–related changes in AW scores given the inconsistent findings in early childhood.

Hypothesis 3: With respect to construct validity of the scale in relation to external measures, I expected that children whose teachers report high levels of social competence would get higher scores on the ER measure (based on teacher and mother report) and effortful control tasks (based on observational measures). I also anticipated that family variables such as maternal education and family income would positively relate to the SC scores of children. Finally, I expected that teacher education and experience would be positively correlated with the SC scores of children.

CHAPTER 4

METHOD

Participants

A total of 810 mothers were contacted for the study, and 463 accepted to participate and completed the questionnaires. Two children were not included in the study because they were observed to show developmental delays during the collection of observational data. Another child was excluded because he was too old (78 months) for the the upper age limit of the study. Since some students left the school before teacher questionnaires were delivered and some teachers did not fill in the questionnaire assessing children's social competence (n = 43), the final sample size with complete data from both mothers and teachers at the end of the study was 417. The sample included 221 boys and 196 girls. Child age ranged between 32.12 and 75.81 months (M = 59.82, SD = 8.28). 279 children were enrolled in public preschools and 138 children were enrolled in private preschools in various neighborhoods of Istanbul. The mean age of the mothers was 33.97 years (SD = 5.28) and the mean age of the fathers was 37.98 years (SD = 5.93). Demographic data showed that 30% of the mothers had a high school degree, 36.3% were university graduates (including two-year college degrees) and 7.7% of the mothers had graduate degrees. Data on fathers indicated that 27.8% of the fathers had high school degrees and 34.1% had university degrees including two-year college degrees. The majority (95.4%) of the families were intact. Fifty two percent of the mothers were employed part-time or full time at the time of the study. Most of the fathers (87%) were employed full-time. 59.4% of the families reported an income level of at least 1500 YTL per month. The average family size (i.e., the number of people

living in the household) was 4.01 (SD = 1.1) and the average number of children below 18 years old living in the house (not including the child) was .54 (SD = .64).

A total of twenty four preschools were invited to the study. Five public preschools, eleven private preschools, and two university-affiliated preschools agreed to participate in the study. Preschools were selected by convenience sampling. Fifty five teachers with different educational backgrounds (60.4% university degree, 32.1% vocational high school degree, 3.8% high school degree, 3.8% degrees from other types of schools) participated in the study. Twenty eight teachers were working at public preschools and 27 were working in private preschools. All teachers were female except for one. The experience level of the teachers ranged between 1 and 35 years (M = 11.89, SD = 8.01). Teacher experience and education level did not differ significantly between private preschools and in public preschools, $t(49) = -1.147$, $p = .26$, χ^2 (3, N = 53) = 7.45, $p = .06$, respectively. The number of children in the classrooms ranged from 6 to 26 (M = 18.35, SD = 4.68). Compared to public preschools, private preschools had significantly fewer children in the classrooms, $t(402) = 5.457$, $p < .001$, and more adults to supervise children, $t(404) = -13.919$, $p < .001$. Table 2 in Appendix B presents descriptive data on the participating children and their mothers according to the child's preschool type. Mean age of children attending public preschools was significantly higher than the mean age of children attending private preschools, $t(415) = 2.67$, $p = .008$. Gender distribution of the children did not change according to school type, χ^2 (1, N = 417) = .03, $p = .86$. Mean age of mothers was significantly higher for children attending private schools compared to the mothers of children attending public schools, $t(395) = -3.70$, $p < .001$. There was no significant difference between children attending public school and children attending private school in terms of

family size, $t(411) = .062$, $p = .95$. Children attending public preschools had mothers with significantly lower education level, $t(411) = -6.161$, $p < .001$, and their families had significantly lower income level, $t(412) = -9.315$, $p < .001$, compared to children attending private preschools. (The demographic forms used to collect the data reported here are provided in Appendix C and D)

Procedure

Data collection occured between October 2007 and June 2008. Data was collected cross-sectionally. Questionnaire data was collected from preschool teachers and mothers. Observational data from children were collected in private preschools in addition to the questionnaire data.

In order to collect data from public preschools, necessary permission was obtained from the Province and County National Educational Directorates and school administrations (See Appendix E for the consent form for private preschools). In the case of private preschools, directors of these schools were contacted by phone. Two children were recruited through personal contacts with their mothers.

After the school directors gave consent to participate in the study, parents were provided with consent forms (See Appendix F) and questionnaires. Mothers completed questionnaires to provide information on demographic information (e.g., age, education, job status, marital status of parents, income or home size), their children's ER and psychological as well behavioral adjustment. Questionnanire packages were delivered to schools where teachers sent them to parents. Completed questionnaires were collected from schools after mothers brought them to schools themselves or sent via their children.

Teachers completed questionnaires on the social competence and ER for those children whose mothers gave permission to participate in the study. They also

completed a form about their classroom characteristics and their own job qualifications. All teacher reports were self-administered and collected through personal contact. For retest data of the SCBE, teachers of 151 randomly selected children filled out this questionnaire aproximately three months after the first administration.

Observational data on effortful control came from 130 children who were attending private preschools. Two graduate developmental psychology students were trained on the administration of the six effortful control tasks. The eight-week training involved lectures, watching videos from previous studies, role play, a pilot study with two children, and ongoing supervision. After the training, observations were conducted in the schools. Graduate students introduced themselves as guest teachers who wanted to play games with children. Participant children were taken individually to a quiet room in the school for the effortful control assessment. One of the graduate students administered the tasks, while the other one videotaped. Coding of the effortful control data was done by two trained undergraduate psychology students.

Measures

Measure of Peer Social Competence in Preschool

Preschoolers' peer social competence was measured by the Social Competence Behavior Evaluation-Preschool Edition, Short Form (SCBE-30; LaFreniere & Dumas, 1996). For this study, the SCBE-30 was translated into Turkish and translated back into English by clinical child psychologists, graduate clinical psychology students and advanced undergraduate students (See Appendix G for Turkish form of the SCBE-30).

The SCBE-30 consists of three 10-item subscales: social competence (SC), anxiety withdrawal (AW), and anger aggression (AA). The SC subscale involves items related to the adaptation of the child such as being well-adjusted, flexible, emotionally mature, and prosocial (e.g., "*works easily in a group*" or "*attentive toward younger children*"). The AA subscale involves items assessing angry, aggressive, and oppositional behaviors (e.g., "*irritable, get mad easily*" or "*forces other children to do things they don't want to*"). The AW subscale involves items assessing anxious, depressed, isolated and overly dependent behaviors (e.g., "*sad, unhappy, or depressed*" or "*doesn't talk or interact during group activities*"). Preschool teachers rated the frequency of children's behavior in the preschool classroom using a 6-point Likert scale to indicate if the behavior occurred (1) *never,* (2-3) *sometimes,* (4-5) *often*, or (6) *always.*

Measures of Validity Criteria

Emotion Regulation Checklist

The Turkish version of the Emotion Regulation Checklist **(**ERC; Shields & Cicchetti, 1997) is a 24-item questionnaire to measure processes related to reactivity and regulation such as the intensity and lability of affect as well as appropriate expression of emotions (See Appendix H). Items are rated on a 4-point Likert scale (from *1 = rarely/never* to *4 = almost always*). The ERC consists of two subscales. The 15-item Lability/Negativity (L/N) subscale is designed to assess mood lability, lack of flexibility and dysregulated negative affect. Sample items include "*is prone to angry outbursts/tantrums easily;*" "*displyas negative emotions when attempting to engage others in play.*" The Emotion Regulation (ER) subscale includes 8 items to assess the display of situationally appropriate affect, empathy, and emotional self-

awareness. Sample items include "*is a cheerful child*" or "*is empathic towards others, shows concerns when others are upset or distressed*").

The scale has been shown to possess high internal consistency with Cronbach alphas of 0.83 to 0.96 for the Lability/Negativity (L/N) and the Emotion Regulation (ER) subscales, respectively. Internal consistency of the composite ERC score (an aggregated regulation and lability score) was .89 (Shields & Cicchetti, 1997). Recent studies using the ERC have also reported satisfactory internal reliabilities for the L/N subscale (Cronbach alphas between .77 and .92) and for the ER subscale (Cronbach alphas between .68 and .84) (Trentacosta & Izard, 2007; Leerkes, Paradise, O'Brien, Calkins, & Lange, 2008).

The validity of the scale was established by relating the ERC subscales to measures of internalizing and externalizing behavior problems, family emotion processes such as negative family expressiveness or mother's acceptance, and emotion processes like affective perspective taking or labeling emotions, and peer acceptance (Kelly, Schwartz, Hopmeyer Gordan & Nakamoto, 2008; Trentacosta & Izard, 2007; Kidwell & Barnett, 2007; Leerkes et al., 2008; Ramsden & Hubbard, 2002). Finally, in a recent study conducted in Turkey, Batum and Yagmurlu (2007) found that the Turkish form of the ERC predicted externalizing behaviors among seven-year-old children.

In the present study, the Cronbach's alphas of the L/N subscale were .79 and .85, for the mothers and teacher form respectively. Cronbach's alphas of the ER subscale were low to moderate, .55 for the mother form and .73 for the teacher form. Teacher and mother reports of ER subscale ($r = .24$, $p < .001$) and L/N subscale ($r = .21$, $p < .001$) were significantly correlated. As a result, mother and teacher ratings were averaged to obtain aggregated ER and L/N scores.

Effortful Control Battery

A total of six game-like structured tasks were used from the preschool-age effortful control battery developed by Kochanska and colleagues (Kochanska, Murray, Jacques, Koenig, & Vandegeest, 1996). These tasks were translated and adapted into Turkish and tested in a pilot study. Effortful control tasks used in the present study included Snack Delay, Day and Night, Bridge, Walk-A-Line Slowly, Bear-Dragon, and Gift Wrap. These tasks required children to modulate their behavior and emotions according to the task demands through attentional and inhibitory control mechanisms. Three independent raters coded 15% of the cases from the videotapes. Interrater reliability was computed by Cohen's kappa for tasks with categorical scores and by Intraclass Correlation Coefficient (ICC) for tasks with continuous scores.

Snack delay. After the experimenter put a piece of candy under a transparent glass, the child was required to wait until the experimenter rang a bell to retrieve the piece of candy. There were six trials (5 seconds, 10 seconds, no pause, 20 seconds, no pause, 40 seconds). Child's responses were coded with scores ranging from 0 to 4 (0 = e*ats snack before experimenter lifts the bell*, 1 = *the trial ends as the child is about to eat the candy before the bell rings,* 2 = *touches glass and/or bell before E lifts bell but does not eat the candy,* 3 = *waits for the bell but does not keep his hands as expected*, 4 = *waits until bell is rung as expected).* Latency was also recorded as the number of seconds elapsed before the child displayed fidgeting behaviors. Kappa for delay scores was .84 and ICC coefficient for latency to fidgeting was .89.

For a total Snack Delay score, the child's task score and the latency score of the last trial were standardized and summed since the inclusion of the previous trials lowered the overall alpha.

Day and night. This task included one card covered with stickers of the sun representing the day and a second card covered with stickers of the moon representing the night. The child was required to point to the card representing the day when the experimenter said "night", and point to the card representing the night when the experimenter said "day". There were ten trials, and the child's responses were coded with scores ranging from 0 to 3 (0 = *fails to point to*, 1 = *incorrect and never self-corrects,* 2 = *self-corrects,* 3 = *correct on first attempt and doesn't change mind.* Kappa for the trial scores was .92 and ICC for the total score was 1.00. For the Day/Night episode, a total score was obtained by summing the scores across ten trials.

Bridge. This task was a slightly adapted version of the Kochanska's Telephone Polls to assess the child's ability to slow down. At the baseline trial, the child was instructed to draw a straight line representing a bridge on a river. During the first trial, the child was instructed to draw a bridge as slowly as possible for a turtle to cross. During the second trial, the child was required to draw another bridge as fast as possible for a rabbit to cross. The duration of each trial was coded in seconds. ICC was .99. The total score for the Bridge task was computed by substracting the fast drawing score from the slow drawing score.

Walk-a-line-slowly. The child was required to walk on a 183 cm. long piece of ribbon as slowly as possible with his/her feet staying on the ribbon. There was one baseline and two slow trials. The duration of each trial was recoded in seconds. Errors, namely the number of times the child could not keep his/her feet on the ribbon, were also recorded. ICCs for the duration and errors were .92 and .96, respectively. For Walk-a-Line-Slowly episode, the times of the two slow trials were averaged.

Bear and dragon. This task included two hand puppets, a Bear and a Dragon. The child was required to perform the movements requested by the Bear and to ignore the commands given by the Dragon. There were six trials for each puppet. Coding ranged from 0 to 3 (0 = *fails to move, 1 = performs a partial movement aiming self-correction,* 2 = *performs a wrong movement,* 3 = p*erforms full, correct movement)* for the bear. The same coding scheme was reversed for the Dragon. Kappas for the activation and inhibition trial scores were .87 and .93, respectively. ICCs were .88 and .99 for the activation total score and for the inhibition total score, respectively. For the Bear/Dragon episode, a total score was obtained by summing the scores across six Dragon trials.

Gift wrap. In this task, the child was required to sit away from the experimenter and wait without peeking while the experimenter was noisily wrapping a surprise gift behind the child (Trial 1, 60 seconds). Then, the wrapped gift was placed near the child, who was asked to wait without leaving his seat or touching the gift until the experimenter found a bow for the gift (Trial 2, 3 minutes). Latency for fidgeting in phase 1 and 2, a peak score (1-5), latency to peek in phase 1, a seat score (0-1 and latency), a touch score (1-4) and latency to touch for phase 2 were coded. Kappas for fidgeting in phase 1 and 2, and for the seat score were .78 and .94, respectively. ICCs for latency to fidget (average of phase 1 and 2) and to leave the seat were .94 and .98, respectively. For the peek score, Kappa was .97, and ICC was .87 when the peek score and latency to peek were pooled. For the touch score, Kappa was .91 and ICC was .93 when the touch score and the latency to touch were pooled.

To obtain a total score for the Gift episode, all scores were standardized and averaged with a satisfactory internal reliability ($\alpha = .75$). However, three scores

(latency for "*Does not try to peek*" in trial 1 and latencies for "*Lifts/takes the gift*" and "*Does not touch the gift*" in trial 2) were not included in the total score since these scores did not show any variability. The coding sheet used for the tasks described above is presented in Appendix I.

Total effortful control score. The scores of these six tasks were standardized and averaged to obtain an overall Effortful Control score (α = .72).

Child Behavior Checklist

The Turkish version of the Child Behavior Checklist (CBCL; Dumenci, Erol, Achenbach, & Simsek, 2004) is a 100-item measure of children's emotional and behavioral problems (See Appendix J). The CBCL was translated into Turkish and translated back for language equivalence (Erol, Simsek, Oner, & Munir, 1995, as cited in Erol, Simsek, Oner & Munir, 2005). Items are coded on a 3-point Likert scale (0 = *not true*, 1 = *somewhat or sometimes true*, 2 = *very true or often true* (Dumenci et al., 2004). In the present study, externalizing and internalizing scores were computed based on the DSM-oriented rationale provided by Achenbach, Dumenci, and Rescorla (2003). The externalizing subscale consisted of 17 items and internal reliability of this subscale was .87 in the present study. The Internalizing subscale consisted of 29 items and internal reliability of this subscale was .81.

The validity of CBCL was established by an association between the externalizing and internalizing subscales and measures of ER, over-reactive parenting, marital conflict and negative parental emotionality (Leerkes et al., 2008; Kidwell & Barnett, 2007; Miller-Lewis et al., 2006; Cummings, Goeke-Morey & Papp, 2004). Cronbach alphas were .77 for the internalizing subscale, .76 for the externalizing subscale, and .82 for the total problem scale in the Turkish version of the CBCL 6/18. Test-retest reliability coefficients over a-week interval ranged from

.86 and .94 (Erol & Simsek, 1997; as cited in Erol et al., 2005). A validation study conducted by Dumenci et al. (2004) showed the generalizability of the eight-factor structure of the CBCL/6-18 to the Turkish population.

CHAPTER 5

RESULTS

The results section consists of four parts. The first part will present the factor analysis of the SCBE-30 items to evaluate whether the items loaded on the three subscales of the original SCBE-30 in this sample of Turkish preschoolers. Based on the factor analysis results, descriptives of the SCBE-30 subscales as well as the other study variables will be presented. Next, internal reliability of the SCBE subscales and test-retest reliability will be presented. Lastly, bivariate correlations among the study variables and regression analyses will be presented to evaluate the construct validity of the Turkish version of the SCBE-30.

Factor Analyses

To determine the factor structure of the Turkish version of the SCBE-30, a principle component analysis (PCA) with an orthogonal rotation (varimax) as well as an oblique rotation (promax) was conducted. Oblique and orthogonal rotations both yielded the same number of factors with comparable factor loadings. Only the results with the varimax rotation are presented in this study to facilitate the comparisons with previous studies. Results of the PCA with varimax rotation of the 30 SCBE items yielded a five factor solution with eigenvalues greater than 1. Based on the scree plot, only the first three factors in the rotated matrix were retained. These factors accounted for 48% of the variance and were the most theoretically meaningful and interpretable ones. The AA (eigenvalue = 8.33), SC (eigenvalue = 4.15), and AW (eigenvalue = 2.01) subscales accounted for the 17.08%, 16.03% and 15.17% percent of the variance, respectively. The items loaded on the factors similar to the original SCBE subscales. Item loadings are presented in Table 3 in Appendix

K. SCBE-30 subscale scores were computed based on the items in each subscale derived from the PCA.

Descriptive Statistics of the Study Variables

Assumptions for the normality of the study variables were checked, and there were no outliers. Means, standard deviations, and ranges of the SCBE-30, ERC and CBCL subscales, as well as the effortful control score are presented in Table 4 in Appendix L.

Internal Reliability and Stability of the SCBE

All of the SCBE-30 subscales had satisfactory internal reliability. Cronbach's alpha values were .88, .87, and .84 for the SC, AA and AW subscales, respectively. Corrected item-total correlations are presented in Table 5 in Appendix M. All of the correlations were .41 or above indicating that the items were consistent with the overall subscale and measure the same construct.

Test-retest reliability of the SCBE was evaluated with a subsample of randomly selected 151 children from the original sample approximately after three months of the first administration. Pearson Product Moment correlations indicated statistically significant and satisfactory test-retest reliability coefficients for the SC ($r = .71$, $p < .001$), AA ($r = .64$, $p < .001$), and AW ($r = .45$, $p < .001$) subscales. Paired sampled t-test analyses indicated that SC and AA scores of children increased significantly from first administration to second administration, $t(150) = -5.59$, $p < .001$, and $t(150) = -2.25$, $p < .05$. On the other hand, there were no significant differences between time one and time two in AW scores of children, $t(150) = -1.55$, $p = .12$. Test-retest reliabilities and t-test scores for the subscales are presented in Table 6 in Appendix N.

Bivariate Correlations Among Variables

Bivariate correlations among the study variables are presented in Table 7 in Appendix O. When the correlations among the external validity measures are examined, it was found that as children got older, the effortful control scores increased. Compared to boys, girls had significantly higher scores in the ER subscale and effortful control composite while they had lower scores in the L/N and Externalizing subscales. As the family size got larger, the ER subscale scores decreased and the L/N, Externalizing and Internalizing subscale scores increased. Family income related significantly and positively with the ER subscale scores and negatively with the L/N, Externalizing, and Internalizing subscale scores. Education level of the mother had a significant and negative relation with the L/N, Externalizing and Internalizing subscales and a positive correlation with the ER subscale. Children from private preschools had significantly higher scores on the ER subscales, while they had lower scores on the Internalizing and Externalizing subscales compared to children from public preschools. As the number of children in the classroom increased, the ER subscale scores decreased, and the Internalizing scores increased significantly. Teacher experience related significantly and negatively with the ER subscales.

When the correlation of the SCBE subscales to the external validity measures is examined, it was found that as children got older, the SC subscale scores increased. Compared to boys, girls had significantly higher scores in the SC subscale while they had lower scores in the AA subscale. Family size did not relate to any subscale of the SCBE-30. Family income related significantly and positively with the SC. Finally, education level of the mother had a significant and negative relation with the AW.

Compared to children from public preschools, children from the private preschools had significantly higher scores on the AA. As the number of children in the classroom increased, the SC subscale scores decreased. Teachers' education level had a significant and negative relationship only with the AA subscale of the SCBE. Finally, teacher experience related significantly and negatively with the SC subscale.

The ERC subscales correlated significantly with all of the three subscales of the SCBE-30 in the expected direction. Children with higher scores in the ER subscale had significantly higher scores in the SC and lower scores in the AA and AW subscales. As the scores of the L/N subscale increased, the SC scores decreased and the AA and AW scores increased significantly. As expected, both the Externalizing and the Internalizing subscales were significantly and negatively correlated with the SC subscale. Externalizing and Internalizing scores were related significantly and positively with the AA and AW subscale scores, respectively. Finally, the effortful control score had a significant and positive correlation with the SC and a negative correlation with the AA subscales.

Regression Analyses for the Construct Validity of the SCBE-30 Subscales

It was hypothesized that children's ER competence would be positively related to their SC. In order to evaluate this hypothesis, the SC subscale scores were regressed on the two ERC subscales. The first set of analyis without any covariates in the model revealed that both ER and L/N subscale were significant predictors of the SC subscale. Next, background variables that were significantly related to the SC subscale were controlled as covariates in the hierarchical regression analyses. These variables included child age, gender, family income, number of children in the class, and teacher experience. As presented in Table 8 in Appendix P, hierarchical

regression analyses indicated that the ER subscale (β = .32) and the L/N subscale (β = -.34) predicted the SC scores of children over and above all the covariates, accounting for the 24% of the variance, $\Delta F(2, 383) = 85.30$, $p < .001$. As hypothesized, children with higher levels of ER competence and lower levels of affect lability received higher SC scores from their teachers.

Next, the AA subscale was regressed on the two ERC subscales to examine the role of child ER characteristics on children's anger and aggression. Both the ER (β = .09, $p < .05$) and the L/N (β = .70, $p < .001$) scales predicted the AA scores of children, $F(2, 414) = 175.10$, $p < .001$. However, when the covariates, namely gender, school type and teacher education, were controlled, only the L/N subscale (β = .71) predicted the AA scores of children, accounting for 43% of the variance, $\Delta F(2, 398) = 168.63$, $p < .001$. Results are presented in Table 9 in Appendix Q. Children with higher L/N scores were rated as more angry-aggressive by their teachers. ER did not predict the AA scores over and above the covariates.

A final set of regression analyses were conducted to examine the relation between AW subscale and the two ERC subscales. Only the ER subscale (β = -.57, $p < .001$) predicted the AW scores of children, $F(2, 414) = 93.34$, $p < .001$. The L/N subscale did not predict the AW scores of children (β = -.05, $p = .30$). Similarly, when the family income and maternal education were controlled as covariates, only the ER subscale (β = -.57) was a predictor of children's anxiety symptoms over and above the covariates, accounting for 29% of the variance, $\Delta F(2, 405) = 85.59$, $p < .001$. Children who had higher scores in ER were rated by their teachers as less anxious and withdrawn. The L/N subscale did not predict the AW subscale scores when the covariates were controlled. These hierarchical regression results are presented in Table 10 in Appendix R.

Another hypothesis was that maternal ratings of externalizing and internalizing scores of children would predict the SC scores rated by teachers. The SC subscale was regressed on the two subscales of the CBCL. Only the externalizing scores predicted the SC, accounting for the 5% of the variance, $\beta = -.20$, $p < .01$, $F(2, 408) = 10.95$, $p < .001$. When the analyses were repeated with covariate control of child age, gender, family income, number of children in the class, and teacher experience; internalizing ($\beta = -.06$, $p = .32$) and externalizing ($\beta = -.08$, $p = .17$) scores of the children did not predict the SC over and above covariates. Results are presented in Table 11 in Appendix S.

Regarding the AA subscale, regression analysis indicated that the AA scores were significantly predicted by the externalizing subscale scores over and above covariates, accounting for 4% of the variance, $\beta = .19$, $\Delta F(1, 393) = 15.17$, $p < .001$. Children who had higher scores in externalizing subscale were rated by teacher as more angry and aggressive. Results are presented in Table 12 in Appendix T. Another regression analysis was conducted to examine if the internalizing scores of children were related to the AW scores over and above covariates, namely family income and mother's education. As it is presented in Table 13 in Appendix U, internalizing scores predicted the AW scores over and above the covariates accounting for the 4% of the variance, $\beta = .22$, $\Delta F(1, 400) = 18.45$, $p < .001$. Children who had higher scores in internalizing subscale were rated as more anxious and withdrawn by their teachers.

Another set of hierarchical regression analyses was conducted in order to evaluate whether the effortful control composite based on direct behavioral observation would also be related to the SC scores of children after controlling for the covariates. Results revealed that the effortful control composite significantly

predicted the SC subscale scores over and above age, gender, number of children in the classroom, teacher experience and family income, accounting for 9% of the variance. Children with higher effortful control were rated as more socially competent by their teachers, $\beta = .32$, $\Delta F(1, 112) = 16.82$, $p < .001$. Results are presented in Table 14 in Appendix V. The effortful control composite also predicted the AA scores of the children while controlling for child gender and teacher education and accounted for 5% of the variance. As presented in Table 15 in Appendix W, children with lower effortful control scored higher in the AA subscale of the SCBE, $\beta = -.23$, $\Delta F(1, 126) = 6.38$, $p < .05$. Given that the bivariate correlation between the AW subscale and the effortful control composite was non-significant, a further evaluation with a regression analysis was not conducted.

CHAPTER 6

DISCUSSION

This study aimed to investigate the reliability and validity of the Turkish version of the Social Competence and Behavior Evaluation Scale (SCBE-30) for the Turkish preschoolers. Internal reliability and test-retest reliability over a three-month period were examined. Factor analysis was conducted to compare the factor structure of the Turkish form with the original form. The validity of this scale was investigated by exploring age and sex differences in social competence as well as by investigating the relations of the subscales with ER, effortful control and adjustment problems.

Reliability

The results of the present study revealed that the internal reliabilities of the three SCBE-30 subscales were high and comparable to the original scale (La Freniere & Dumas, 1996) as well as to the adaptation studies conducted in Brazil (Bigras & Dessen, 2002), China (Chen & Jiang, 2002), Russia (Butovskaya & Demianovitsch, 2002), Austria, Canada, Italy, and Japan (La Freniere et al., 2002). This result suggests that the items in each subscale have been perceived as a homogeneous unit by our sample of Turkish teachers.

Test-retest reliability with a subset of randomly chosen 151 children from the entire sample of 417 children revealed that the scale shows adequate test-retest reliability, with the AW subscale showing a somewhat weaker stability over time for this subsample of children. Teachers' ratings on the SCBE were significantly correlated from Fall to Spring semester over a three-month period with test-retest reliability coefficients ranging from .45 (anxiety-withdrawal) to .71 (SC). With respect to the mean changes from Fall to Spring semester, significant changes were

found only for the SC and the AA scores. Specifically, the scores on these two subscales were significantly higher in Spring than they were in Fall. Increased peer experiences and internalization of rules of the classroom may underlie the increase in SC scores. At the same time, these intense peer relations may bring conflicts as well, which may end up in increases in AA scores of children. Given the rapid developmental changes even within short amounts of time, it is not very surprising that we found behavioral changes from Fall to Spring. This finding may also suggest that the SCBE-30 is sensitive to detect such changes in children's social functioning. Overall, the pattern of these findings indicates that this subsample of children showed increases in SC and anger-aggression yet they maintained their relative rank order over the three month period. Further research is warranted to evaluate whether the test-retest reliability of the SCBE-30 may indicate higher stability in scores over a shorter time period.

Construct Validity

Construct validity of a test or a questionnaire concerns whether the test measures the construct that it intends to measure (Anastasi, 1988). In the present study, factor analysis, developmental changes, gender differences and interrelations with theoretically related constructs were examined to explore the construct validity of the SCBE-30.

Factor Structure of the SCBE-30.

The principle components analysis indicated that the Turkish form of the SCBE-30 has three factors, namely the SC, AA, and AW subscales. This three-factor structure of the SCBE-30 was consistent with the studies conducted in the Brazil (Bigras & Dessen, 2002), China (Chen & Jiang, 2002), Russia (Butovskaya & Demianovitsch, 2002), the United States, Canada, Austria, Italy, and Japan (La

Freniere et al., 2002). Unlike the Chinese and Russian adaptations, each subscale in the Turkish form had ten items loading on excatly the same factor as in the original form (La Freniere & Dumas, 1996). This indicates that the sample of Turkish teachers has interpreted the same SCBE-30 items as three different units similar to the U.S sample.

The pattern of the interrelationships among the subscales revealed that children who had higher SC scores had lower scores in the AA and AW subscales. This finding is in line with the studies conducted in Brazil (Bigras & Dessen, 2002), China (Chen & Jiang, 2002), Russia (Butovskaya & Demianovitsch, 2002), Austria, Canada, Italy, Japan (La Freniere et al., 2002), and the U.S. (La Freniere & Dumas, 1996). These findings indicate that socially competent children are perceived as less angry-aggressive and less anxious-withdrawn in different countries accross world. In contrast to most other validation studies of the SCBE-30, Turkish children in our sample who were rated as more angry-aggressive by their teachers were also rated as more anxious-withdrawn in the present study. It is possible that anxious-withdrawn children, who lack social skills, may give angry-aggressive reactions when their peers want to interact with them. It is also possible that children who show aggressive behaviors are rejected by their peers and display anxious-withdrawn behaviors as a result of rejection (Rubin et al., 1998).

Gender Differences

Gender differences in SC, AA and AW subscales were also examined to evaluate the construct validity of the SCBE-30. In line with our expectations, girls were rated as more socially competent and less angry-aggressive than boys. This finding is consistent with the literature stating that girls are more socially competent and socially skilled and less aggressive compared to boys. (Diener & Kim, 2004;

Eisenberg et al., 2001, 2003; Fabes et al., 1999; LaFreniere & Dumas, 1996; LaFreniere et al., 2002; NICHD Early Child Care Research Network, 2003; Raver et al, 1999; Vaughn et al., 2000;). Validation studies of the SCBE-30 conducted in the U.S. (La Freniere & Dumas, 1996), Brazil (Bigras & Dessen, 2002), China (Chen & Jiang, 2002), Russia (Butovskaya & Demianovitsch, 2002), Austria, Canada, Italy, and Japan (La Freniere et al., 2002) have also shown that girls were rated as more socially competent and less angry aggressive than boys.

This gender difference in the SC and AA can stem from actual differences reflecting differential socialization styles or perceived differences due to the cultural expectations. With respect to actual differences, Chen and Jiang (2002) and LaFreniere et al. (2002) have stated that gender difference in behaviors may be due to the fact that boys and girls adopt different play styles. Boys prefer to play physically active, rough-and-tumble games in large groups rather than the dyadic play preferred by girls.

Differences stemming from perceived differences may be due to the different expectations from boys and girls. Chen and Jiang (2002) have stated that teachers may be more likely to accept aggressive and active behaviors among boys, which in turn makes them more tolerant towards boys' inappropriate behavior. On the other hand, aggressive behaviors of girls are evaluated more critically, which in turn elicit higher levels of teacher control. As a result, the socialization process emphasizes more controlled and regulated ways of behavior for girls. The gender difference in SC may also be due to the fact that female teachers tend to rate girls as more socially competent compared to boys (La Freniere & Dumas, 1996). In the present study, all but one teacher were female. It is possible that female teachers' ratings are influenced by the general gender stereotypes. Another factor that may create the

gender difference in SC scores may be the nature of the preschool environment. The play environment may be more suitable for girls, making them more socially competent. For example, a female teacher may design a preschool classroom in a way which enables girls to practice social roles and appropriate behaviors (such as more emphasis on make-believe materials and corners). On the other hand, that teacher may underestimate the different play style of boys and may provide them with less space to release their energy, which may end up in aggressive actions.

There was no gender difference in the AW subscale in the Turkish sample. This finding is consistent with the results found in the U. S. (La Freniere & Dumas, 1996), Brazil (Bigras & Dessen, 2002), Russia (Butovskaya & Demianovitsch, 2002), Austria, Canada, Italy, and Japan (La Freniere et al., 2002). It is possibe that the gender difference in anxiety-withdrawal tends to appear later in development. For example, in a study with participants between 5 and 17 years of age, Leve, Kim and Pears (2005) have found that internalizing behaviors increase with age only for girls whereas it was stable for boys. Based on these results and the previous research, Leve et al. (2005) have argued that girls are more vulnerable and reactive to stressors, especially in puberty when they experience biological changes and differential socialization processes compared to boys. Relationship problems are also experienced more intensely in puberty by girls compared to boys.

Age Differences

Age-related differences in SC were also examined for construct validity. As expected and similar to the previous validation studies of the SCBE-30 conducted in United States (LaFreniere & Dumas, 1996; LaFreniere et al., 2002), China (Chen & Jiang, 2002), Russia (Butovskaya & Demianovitsch, 2002), Austria, Brazil, Canada, Italy, and Japan (LaFreniere et al., 2002), the results of the present study revealed

increasing SC scores as children got older. This finding is consistent with the literature stating that social skills and processes required for healthy relationships improve with age (Diener & Kim, 2004; Eisenberg et al., 2003; Mayeux & Cillessen, 2003; NICHD Early Child Care Research Network, 2001; Rose-Krasnor, 1997; Rubin et al., 1998; Vaughn et al., 2000). Chen and Jiang (2002) have stated that this increase in SC with age is due to the increased peer interaction experiences of children. Peer interactions and complex play may provide children with opportunities to practice necessary skills for responsive interaction and relationships, including resolving conflicts, helping, sharing, collaboration, and communicating ideas (NICHD Early Child Care Research Network, 2008; Howes & Phillipsen, 1998). LaFreniere et al. (2002) have pointed out that this change in SC is also related to advances in the domains of emotional and cognitive development which provide a basis for children's SC. This argument is supported by the literature stating that ER and effortful control, which are important self-regulatory capacities necessary for social competence, also increase with age (Kochanska et al., 2000; Rothbart & Bates, 1998). Executive function involving high level controlled and purposeful cognitive processes, and theory of mind, which is defined as the ability to understand the mental states of others, are also cognitive aspects that develop with age and contribute to the social competence of children (Riggs et al., 2006).

In the present study, it was hypothesized that there would be a decrease in the AA scores of children with age. However, similar to the validation studies conducted in Brazil (Bigras & Dessen, 2002) and China (Chen & Jiang, 2002), there was not a significant age difference in the AA and AW subscales in the Turkish form of the SCBE-30. Age differences in the AA and AW subscales were also not deteced in the validation study of the Quebec sample (LaFreniere & Dumas, 1996). With

respect to such a different pattern of results about age related changes in anger-aggression, LaFreniere et al. (2002) have stated that the decreases in the AA subscale with age may not be a universal tendency, but may be more specific to the Western communities. Chen, French et al. (2006) have argued that culture influences social interaction, types of relationships and interpretation of these relations and behaviors, such as aggressiveness or shyness. Based on their review, Chen, French et al. stated that in individualistic cultures like in the U.S., individuals are exposed to conflicts more often and the resolution of such conflicts contributes to the development of the autonomous self. However, in collectivistic cultures, keeping harmony in relationships is important; therefore, conflicts are avoided to maintain interpersonal harmony. In collectivist cultures, the expression of anger is also discouraged (Cole, Walker & Lama-Tamang, 2006). It is possible that a relatively collectivistic culture of Turkey may affect how the aggressive behaviors of children are interpreted. While conflicts are accepted and valued in western cultures, these conflicts may be interpreted as aggressive acts in non-western cultures, which can be an explanation for the insignificant relation between age and the AA. Conflicts that are considered as part of relationship in the West may be more salient in these non-western cultures.

Another explanation may be related to measures. In their article examining the growth curves of externalizing behaviors accross preschool years, Owens and Shaw (2003) state that for externalizing behaviors, an approach measuring the same construct with the same tool in different ages is not appropriate. Externalizing behaviors may show variation with age due to the norms that change with development, which is called *heterotypic continuity* (Owens & Shaw, 2003). That is why they use different age versions of the same tool to measure the externalizing behaviors of children between 2 and 6 years of age. So, it is possible that using

different tools that have the same meaning, instead of the same anger-aggression subscale for all ages, could have resulted in the expected decrease in the AA scores of children as the age increases. Gilliom and Shaw (2004) have found that children who did not show a decrease in externalizing problems in their study were the ones who had low fearfulness and high negative maternal control. It is also possible that such third variables may have played a role in the insignificant relation between age and the AA scores in this study.

In this cross-sectional study, our findings revealed no age-related differences in anxiety-withdrawal, which suggests stability in these symptoms during the early childhood years. To date, there is paucity of longitudinal studies of internalizing symptoms over the early childhood years. Therefore, we know little about the developmental course of internalizing symptoms. Leve and colleagues (Leve et al.,2005) have argued that increases in internalizing symptoms may emerge later with the onset of early adolescence due to a multitude of stressors such as problems with respect to relationships with peers or family members, body image concerns, or gender-specific socialization pressures, especially for girls.

Construct Validity Based on External Measures

In the present study, children's ER competence, adjustment problems, and effortful control were used as external measures validating the the subscales of the SCBE-30.

First, the relations among the ER constructs and the SC, AA, and AW subscales of the SCBE-30 were examined. Negative affect measured with the emotion regulation measure was general negative affect instead of discrete emotions such as fear or anger. In line with the hypotheses of the present study, children with greater ER competence were rated as more socially competent by their teachers.

This relationship remained significant even after controlling for the effects of child age, gender, family income, number of children in the class, and teacher experience. The link between ER competence and social competence has also been noted by a number of other researchers (Denham et al., 2003; Diener & Kim, 2004; Eisenberg et al., 2001; 2003; Eisenberg & Fabes,1992; Eisenberg, Fabes et al., 2000; Eisenberg, Zhou, Liew, Champion, Pidada, 2006; Gouley et al., 2008; Mendez et al, 2002; Raver, et al., 1999). It can be speculated that children who are able to modulate their emotions, especially their negative emotions, according to the situational demands, can deal with the peer conflicts in a more constructive way, which in turn makes them preferred playmates and teachers perceive them as more socially competent. It is also known that children with low negative emotionality are better at exploring the environment and engage in social relations compared to the ones high in negative emotionality (Fox & Calkins, 2003). However, it is important to keep in mind that this is a correlational finding. Bidirectional interpretation is also possible, meaning that socially competent children may be better in ER since they are prefferred playmates who have lots of opportunities to develop their regulatory skills.

ER competence also predicted the AW and AA scores of the children in the expected direction before covariate adjustment. Specifically, children who had higher scores in ER were rated as less anxious and withdrawn and more angry-aggressive by their teachers. After controlling for covariates, the relationship between the ER and AW scores remained significant. On the other hand, when child gender, school type and teacher education were entered as control variables, only gender, school type and teacher education were the significant predictors of children's AA scores. Boys, compared to girls, and children attending private preschools compared to public preschool, were at risk for elevations in AA. Also

children who had teachers with lower degrees of education were more angry-aggressive compared to children who had more educated teachers.

Lability/Negativity refers to the lack of flexibility, mood lability and dysregulated negative affect (Shields & Cicchetti, 1997). An aggregated score was obtained from the mother and teacher reports of L/N subscale of the ERC. In the present study, children who were rated as more labile by their teachers and mothers were rated as less socially competent by their teachers. Denham and colleagues (Denham et al., 2003) have shown that negative emotions such as anger and sadness, especially if they are unmodulated, make children difficult play-mates. On the other hand, having positive emotions or having the negative emotions under control according to the situational demands makes it easier for children to enter the peer group and maintain the ongoing peer interactions (Raver et al., 1999). A bidirectional interpretation is also possible. Peer acceptance may make children have positive emotions whereas rejected children may be more likely to have negative emotions (Daugherty, 1999).

Lability-negativity also predicted the AA scores over and above the predictors. The relation between negative emotionality and adjustment problems have been examined by other researchers as well. Hubbard (2001) has found that aggressive children did not differ from nonaggressive peers in terms of expression of negative emotions such as anger or sadness. On the other hand, several researchers have found that negative emotionality is related to externalizing problems (Calkins et al., 1999; Eisenberg et al., 2005; Eisenberg, Guthrie et al., 2000; Gilliom & Shaw, 2004). Relation of the negative emotionality to externalizing behaviors was also found with an Indonesian sample (Eisenberg et al., 2001). It can be concluded that

the relation between lability-negativity and anger-aggression found in the present study is consistent with the previous literature.

In the present study, lability-negativity failed to predict the AW scores over and above the covariates such as family income and maternal education emerged as predictive variables rather than the lability negativity subscale. The literature with respect to the relation between negative emotionality and anxiety-withdrawal is not consistent. In the study conducted by Eisenberg et al. (2001), negative emotionality was related to shyness only in teacher reports, and not in parent reports. On the other hand, in a more recent study Eisenberg et al. (2005) have found that negative emotionality is related to both internalizing and externalizing behaviors in children between 6 and 9 years of age. There can be several reasons behind the lack of the relationship between lability negativity and the AW symptoms in the present study. Goldsmith and Davidson (2004) state that research on emotions should focus on discrete emotions such as anger, sadness or fear instead of a general negativity. However, the L/N subscale of the ERC did not distinguish between negative affects. It is possible that children high in negative emotionality in this sample were high in anger rather than sadness or fear, which explains the relation of negative emotionality to AA, but not to AW. It is also possible that negative emotions such as sadness, fear or anxiety may make it difficult to deal with the social demands and peer rejection, and this situation may evoke anger and aggression instead of anxiety-withdrawal (Eisenberg et al., 2005).

Another variable against which we validated the SCBE scale was children's effortful control. Effortful control is defined as "the ability to inhibit a dominant response to perform a subdominant response" (Rothbart & Bates, 1998, p. 137). Direct behavioral observations with a subsample of children were conducted to

measure effortful control of children. Measurement was conducted in the preschool setting in a seperate room individually. As hypothesized, effortful control predicted children's SC scores. Even when the effect of age, gender, number of children in the classroom, teacher experience and family income was controlled, the relationship between effortful control based on observational ratings and SC based on teacher ratings remained significant. The link between effortful control and SC detected in the present study is in line with the previous research conducted in the United States. There is consistent evidence from those studies that effortful control is an important predictor of social competence in children (Fabes et al., 1999; Lengua et al., 2006; Spinrad et al., 2007; Zhou et al., 2004). All these studies except for the last one were conducted with preschool-aged children. Lengua et al. (2006) and Spinrad et al. (2007) used social competence scales completed by mothers or caregivers (the Social Skills Rating Scale and Infant/Toddler Social and Emotional assessment, respectively) whereas Fabes et al. (1999) measured social competence with observations of free play and the Perceived Social Competence Scale for children completed by teachers. Eisenberg et al. (2006) also found that Chinese children who had higher effortful control scores were more socially competent. Raver et al. (1999) have found that a delay task and attentional control, which are important indicators of effortful control, are related to social competence of preschool-aged-children. Raver et al. (1999) have speculated that attentional processes required for the effortful control help children to engage in long conversations and process social cues appropriately. It may be difficult for children who have low effortful control to shift their attention easily from the aggression-evoking situations or negative emotional states (Eisenberg et al., 2004; Raver et al., 1999).

In the present study, efforful control also predicted the AA scores, before and after covariate control. The growing body of literature also reveales that effortful control is negatively related to externalizing problems and supports the pattern of finding in the present study (Eisenberg et al., 2001, 2003, 2004, 2005; Olson et al., 2005; Spinrad et al., 2007; Valiente et al., 2006).

Finally, maternal ratings of internalizing and externalizing problems from the CBCL were also used as criterion variables in validating the SCBE-30 subscales. Most of the existing studies to date have reported that social competence is negatively related to externalizing and internalizing problems (Atkins-Burnett et al., 1997; Bierman, 2004; Gouley et al., 2008; Ladd, 1999; 2006; Ladd & Trop-Gordon, 2003). Externalizing scores predicted children's SC before the covariate control such that children who had lower externalizing scores had higher SC as we expected. Covariates, namely child age, gender, family income, number of children in the class, and teacher experience accounted for 21 % of the variance in children's SC. The relation between the externalizing problems and SC did not remain significant when the variance associated with the covariates was partialled out. Similarly, although the bivariate correlations revealed a statistically significant and negative relationship between internalizing problems and SC as we expected, internalizing scores did not predict the SC scores after covariate control. In this study, the SCBE-30 scales were completed by teachers whereas the CBCL was completed by the mothers. It is possible that children may display different behaviors in different contexts (Wachs, 2000). For example, a child who shows some externalizing or internalizing symptoms at home may be socially competent at school due to the different expectations at school under the guidance of an effective teacher.

As expected, maternal ratings of externalizing problems predicted the teacher ratings of anger-aggression. Since the AA and externalizing subscales are completed by teachers and mothers, respectively, this is a cross-informant finding that increases the strength of the inference concerning the association. Furthermore, maternal ratings of internalizing scores predicted the teachers' ratings of anxiety-withdrawal over and above covariates. This is not surprising considering the similar nature of the items that externalizing and AA subscales have as well as the nature of items that internalizing and anxiety-withdrawal subscales have. A meta-analyses study conducted by Achenbach, Krukowski, Dumenci, and Ivanova (2005) makes it clear that there are variations accross the scores obtained from different informants on externalizing behaviors of adults and children. So, obtaining data from multiple inforrmants in addition to self ratings instead of relying on a single source, which is called 360^{o} feedback, gains importance (Achenbach et al., 2005). Use of mother and teacher scores on the same constructs and the correlations between them are among the basic strengths of this study.

Teacher, School and Family Characteristics

Drawing on recent research, teacher and preschool characteristics have also been considered as additional criterion variables in relation to children's SC. School type, number of children in class, teacher education and teacher experience were examined as school and teacher characteristics in the study.

The only SCBE-30 subscale that was significantly related to the school type (public versus private) was the anger-aggression subscale. Children who attended private preschools had significantly higher scores in the AA subscale compared to children from public preschools. Considering the lower child-adult ratio in the private schools, this was a surprising result. However, another finding was that

private schools had teachers who had lower education levels compared to public preschools. It was also found that more educated teachers rated children as less angry-aggressive. It is possible that children in private preschools may be rated as more angry-aggressive given that their teachers had lower education level and they were most likely not equipped to deal with the behavior problems displayed by these children.

Child-caregiver ratio is known as one of the most important components of the high-quality child care (NICHD Early Child Care Research Network, 2002; Bradley & Lowe Vandell, 2007). A recent review has revealed that crowding in child care is associated with hostile and aggressive behavior, aimless wandering in the classroom and fewer positive social behaviors even after controlling for family characteristics (Corapci, 2009). Drawing on research, the number of children in the classroom was examined as a school characteristic. We found that the number of children in classroom was significantly and negatively correlated with the SC subscale. As expected, as the number of the children in the classroom increased, children were rated as less socially competent. This finding is consistent with previous studies and makes sense in light of the principles of child-centered preschool programs. Such programs emphasize individualized instruction in small groups and encouragment of each child to practice social skills, to initiate and maintain peer interactions, to make thoughtful decisions as important strategies to increase social competence, (Han & Kemple, 2006; Donohue, Perry, & Weinstein, 2003). Previous studies also indicate that when the child-adult ratio is lower, caregivers are more stimulating, responsive, supportive, sensitive, positive, and able to support autonomy, provide higher quality instruction and frequent care (de Schipper et al., 2006; NICHD Early Child Care Research Network, 2000; 2002;

Bradley & Lowe Vandell, 2007). Research shows that teachers who encourage small group plays, prepare well planned daily routines and arrange informal free play times, and those who provide a positive classroom environment act to support the initiation and maintenance of peer interaction, which in turn contributes to children's social competence *(*Brophy-Herb et al., 2007, Han & Kemple, 2006; Howes, 2000). All these strategies are easier to apply when the classrooms are not crowded and the adult-child ratio is higher.

Teacher experience and teacher education were examined as teacher characteristics in the present study, resulting in an unexpected finding. As the years of teachers' experience increased, children were rated as less socially competent. A similar result about caregiver experience was found in the study conducted by the NICHD Early Child Care Research Network (2000) as well. Those researchers have pointed out the inconsistent findings in the literature regarding the relationship between these two variables. The negative relation between teacher experience and SC detected in the present study may have several explanations. First of all, experienced teachers who completed their professional training earlier may be more focused on the teacher-centered approach which primarily emphasizes child discipline rather than the development of children's social competence (Donohue et al., 2003). It is possible that these teachers may have different perception of children's social competence. Another issue may be related to the locus of responsibility. New teachers may attribute the less socially appropriate behaviors to their lack of experience in the classroom, whereas experienced teachers may have more self-esteem and attribute these behaviors to the lack of child's social skills. These attributions may affect the ratings of the child such that inexperienced teachers

may be more likely to rate the child as more socially competent than the experienced teachers do.

Teacher education was another teacher characteristic that was associated with one of the child outcomes in the present study. Specifically, children who had highly educated teachers were rated as less-angry-aggressive compared to children with less educated teachers. Anthony et al. (2005) have found that there are interrater disagreements in measures of social competence and externalizing behaviors between Head Start preschool teachers and teacher assistants who vary in their degree of training. Specifcally, teachers who have more experience and higher education may know what behaviors to expect from children of that age, whereas less experienced teachers may be overwhelmed and may report more children as having behavior problems (Anthony et al., 2005). Highly educated teachers may also be better equipped with effective resources to handle child misbehavior in the classroom. Previous research also indicates that teacher education is one of the important components of the child-care quality, and high child care quality is associated with increased social competence, decreased number of problem behaviors, and more positive interactions with peers (NICHD Early Child Care Research Network, 2002, 2000; Bradley & Lowe Vandell, 2007).

Family income and mother education were examined as the major family characteristics in the study. As expected, as the family income increased, children were rated as more socially competent and less anxious-withdrawn. This finding was similar to the validation study conducted in Brazil (Bigrass & Dessen, 2002). Brophy-Herb et al. (2007) have also found that family income was positively related to social competence. Brophy-Herb and colleagues (Brophy-Herb et al., 2007) have stated that families with higher SES may use more authoritative style of parenting,

which is an important contributor to social competence. They also have less stres and more resources compared to families with less income. Finally, contrary to the expectations and the literature (NICHD Early Child Care Research Network, 2001, 2003), there was not a significant relation between SC as well as AA and mother education. However, children who had more educated mothers were rated as less anxious-withdrawn by their teachers than children with less educated mothers.

Strengths and Limitations

An important strength of the present study was the use of multi-method, multi-reporter approach to measure the constructs of the study. LaFreniere (2002) states that the comparability of a scale accross cultures is more reliable when the validity of the scale is evaluated with other instruments that measure the same construct which is called triangulation. In the present study, we have used the CBCL to validate the anger-agression and anxiety-withdrawal subscales against the externalizing and internalizing subscales, respectively. We have also collected data from multiple reporters (i.e., mother, observers, and teacher) for the other constructs that are theoretically and empirically related to social competence. Therefore, we were able to avoid the shared method/rated variance. For example, externalizing and internalizing scores provided by the mothers correlated with the anger-aggression and anxiety-withdrawal scores provided by the teachers. Also L/N scores provided by the mothers and teachers were highly correlated with the direct behavioral observations of effortful control.

The study results should also be interpreted within the context of its weaknesses. First of all, due to the bureaucratic procedures and time limitation on data collection, observational data were collected only from private high SES preschools, which may make the effortful control data biased. Future research is

warranted with more heterogeneous samples of children from different regions and SES to collect data on effortful control. Social competence was only assessed through teacher ratings. It is important to incorporate other reporters (e.g., parent reports) as well as other methods (e.g., observational data on peer relations) to obtain more accurate measures of social competence in addition to teacher reports. Although teachers have a chance to observe children all day in different activities, a systematic observation by an objective researcher in the natural environment may also provide invaluable data on children's peer interactions.

In conclusion, this study fills in an important gap in the Turkish literature by validating a screening tool to identify preschool-aged children at risk for social problems and externalizing as well as internalizing problems. The SCBE-30 proves to be a reliable and valid measure to be used in future research and in clinical practice to identify at-risk children.

Appendix A

Table 1

Definitions of Social Competence

Author	How social competence is defined
Rubin and Rose-Krasnor (1999)	"the ability to achieve personal goals in social interaction while simultaenously maintaining positive relationships with others over time and accross situations" (p. 285)
Rubin et al. (1998)	Emphasis on the goals of both the individual and the group, balancing personal needs/desires and their social consequences for others.
Cavell et al. (2003)	a construct which includes social adjustment, social performance, and social skills.
Atkins-Burnett et al. (1997)	"those skills and behaviors of a child that lead to positive social outcomes with the individuals residing in a given seting and that avoid socially unacceptable responses" (p. 150)
LaFreiere and Dumas (1999)	behaviors which stem from "well-adjusted, flexible, emotionally mature, and generally prosocial pattern of social adaptation" (p. 373)
Raver and Zigler (1997)	"capability to feel positively about oneself and to fit in well within a network of positive relationships with family and peers" (p. 364)
Fabes et al. (1999)	"the ability to be effective in realizing constructive

	social goals (having friends, maintaining interactions, being liked, and so forth)" (p. 433)
Vaughn et al. (2000)	"the flexible regulation of affect, cognition and behavior in the service of attaining social goals without unduly constraining opportunities for social partners to attain their goals, and without entering onto a developmental trajectory that would constrain opportunities for attaining future goals not yet anticipated" (p. 328)

Appendix B

Table 2

Child and Family Characteristics by School Type

	Public (n = 279)		Private (n = 138)	
	M	*SD*	*M*	*SD*
Child age (months)	60.58	8.57	58.29	7.45***
Maternal age (years)	33.30	5.53	35.35	4.45***
Number of family members	4.01	1.16	4.01	.97
Number of children in family (other than the child)	.57	.66	.50	.60
	Percent		Percent	
Child sex (male)	52.7		53.6	
Maternal education (% with at least high school degree)	66.9		87***	
Maternal employement (part- or full-time)	50.2		55.9	
Intact family	97.5		92.6	

Note: Tests of statistical significance of the differences between the public and private school groups are based on Student t-test or Chi-square test.

** $p < .01$, *** $p < .001$

Appendix C

Demographic Form for the Family Characteristics

Genel Bilgi Formu

Çalışmaya Katılan Çocuk ile İlgili Sorular:

1. Çocuğun adı ve soyadı: _____

2. Anketi doldurduğunuz tarih: Gün____ Ay_____ Yıl_____

3. Çocuğun doğum tarihi: Gün____ Ay_____ Yıl_____

4. Çocuğun cinsiyeti (lütfen işaretleyiniz): Erkek____ Kız____

5 a. Çocuk Bakımının Cinsi ve Her Hafta Orada Geçirdiği Saat Sayısı: (lütfen her seçeneği "evet" veya "hayır" şeklinde cevaplayınız ve "evet" diye yanıtladıklarınız için saat sayısını yazınız):

Çocuk Bakımının Cinsi		**Yanıtınız Evetse**: **Her Hafta Orada Geçirdiği Saat Sayısı**
Anaokulu – kreş	**Evet / Hayır**	
Akraba/ arkadaş/ bakıcı	**Evet / Hayır**	

5 b. Çocuğunuz ne zaman anaokuluna/ kreşe başladı? Ay_____ Yıl_____

6. Çocuğun evde sürekli beraber yaşadığı tüm bireyleri lütfen sıralayınız:

İsim	Çocukla olan yakınlığı	Yaş

Çocuğun Annesi ve Babası ile İlgili Sorular

1. Annenin doğum tarihi: Gün_____ Ay_____ Yıl_____

2. Annenin mesleği: _____(işsiz ise, lütfen her zamanki mesleğini yazınız)

3. Anne şu anda çalışıyor mu? (uygun olan seçeneğin altındaki rakamı daire içine alınız)

Evet (Yarı-zamanlı, haftada 45 saatten az)	Evet (Tam zamanlı, haftada 45 saat)	Hayır
1	2	3

4. Annenin şu anki medeni hali (uygun olan seçeneğin altındaki rakamı daire içine alınız)

Evli	Bekar, Ayrılmış veya boşanmış	Yeniden evlenmiş	Dul
1	2	3	4

5. Babasının doğum tarihi: Gün_____ Ay_____ Yıl_____

6. Babanın mesleği: _____(işsiz ise, lütfen her zamanki mesleğini yazınız)

7. Baba şu anda çalışıyor mu? (uygun olan seçeneğin altındaki rakamı daire içine alınız)

Evet (Yarı-zamanlı, haftada 45 saatten az)	Evet (Tam zamanlı, haftada 45 saat)	Hayır
1	2	3

8. Babanın şu anki medeni hali (uygun olan seçeneğin altındaki rakamı daire içine alınız)

Evli	Bekar, Ayrılmış veya boşanmış	Yeniden evlenmiş	Dul
1	2	3	4

9. Anne ve babanın eğitimi
(geldiği en yüksek düzey; lütfen hem anne hem de baba için işaretleyiniz.)

	Anne	**Baba**
İlkokuldan terk	1	1
İlkokul mezunu	2	2
Ortaokuldan terk	3	3
Ortaokul mezunu	4	4
Liseden terk	5	5
Lise mezunu	6	6
Yüksek okul mezunu (2 yıllık)	7	7
Üniversiteden terk	8	8
Üniversite mezunu (4 yıllık)	9	9
Uzmanlik derecesi var (Master, doktora gibi)	10	10

10. Hane halkının toplam geliri (lütfen birini işaretleyiniz)

Ayda 250 YTL'nin altında	1	
Ayda 250 – 449 YTL	2	
Ayda 450 – 749 YTL	3	
Ayda 750 – 1499 YTL	4	
Ayda 1500– 3000 YTL	5	
Ayda 3000 YTL'nin üzerinde	6	

Appendix D

Form for the Teacher and Classroom Characteristics

Sınıf ve Öğretmen Bilgileri

Anaokulunun Adı: _____

Öğretmenin Adı: _____

Sınıfınızda toplam kaç çocuk var? _____

Sınıfınızda siz dahil olmak üzere gün içerisindeki etkinlikler esnasında kaç yetişkin vardır? (Toplam öğretmen ve yardımcı öğretmen sayısı) _____

Eğitim Dereceniz:

- ☐ Lise mezunu
- ☐ Usta öğretici
- ☐ Üniversite mezunu
- ☐ Diğer: _____

Kaç yıldır öğretmen olarak çalışıyorsunuz? _____

Sınıfınız:

- ☐ Tam gün
- ☐ Yarım gün

Sınıftaki çocuk sayısı göz önüne alındığında sınıfınızın büyüklüğü yeterli geliyor mu?

Evet ____ Hayır ____

Gün içerisinde sınıfa girip çıkan pek çok yetişkin (hizmetliler, diğer öğretmenler, veliler) oluyor mu?

(1) HAYIR (2) BAZEN (3) SIK SIK (4) HER ZAMAN

Gün içerisindeki faaliyetleri uygularken kendinizi sanki bir telaş, koşuşturma içinde buluyor musunuz?

(1) HAYIR (2) BAZEN (3) SIK SIK (4) HER ZAMAN

İhtiyacınız olduğunda size gereken araç gereçleri (oyuncak, kitap, legolar) sınıftaki yerlerinde rahatlıkla bulabiliyor musunuz?

(1) HAYIR (2) BAZEN (3) SIK SIK (4) HER ZAMAN

Çocuklar sınıfta yaygara yapar mı?

(1) HAYIR (2) BAZEN (3) SIK SIK (4) HER ZAMAN

Gün içerisinde ders planı ve günlük programınızı rahatlıkla takip edip, planladığınız gibi bitirebiliyor musunuz?

(1) HAYIR (2) BAZEN (3) SIK SIK (4) HER ZAMAN

Sınıf çocuklar için rahatlatıcı bir ortam mıdır?

(1) HAYIR (2) BAZEN (3) SIK SIK (4) HER ZAMAN

Appendix E

Consent Form for Private Preschools

Koç Üniversitesi **Boğaziçi Üniversitesi**

CEVAP KAĞIDI

Çocukların sosyal ve duygusal gelişimiyle ilgili olan bu çalışmaya katılmak istiyorum ☐ / istemiyorum ☐

Yuvanın ismi: _____

Adresi: _____

_____

Telefon numarası: _____

Faks numarası: _____

Yuvadaki 4-6 yaş gruplarındaki çocuk sayısı: _____

Yöneticinin ismi: _____

İmza: _____

Teşekkür ederiz! ☺

Appendix F

Consent Form for Parents

VELİNİN İZİN FORMU

Çocukların sosyal gelişimiyle ilgili olan bu çalışmaya katılmak istiyorum ☐ / istemiyorum ☐

Araştırma sona erdiğinde, çocuğuma ait video kaydının e-posta adresime yollanmasını

☐ istiyorum, e-posta adresim: _____

☐ istemiyorum

(Birden çok çocuğunuz varsa, bu bölümü lütfen yuvanın 4-6 yaş gruplarına devam etmekte olan çocuğunuzu düşünerek doldurunuz. Bu gruplarda birden çok çocuğunuz varsa lütfen ikisi için ayrı ayrı bilgi yazınız):

Çocuğumun İsmi:_____Cinsiyeti:_____

Ve Doğum Tarihi:_____

Velinin İsmi:_____

Telefon numarası: _____

Ve İmzası: _____

Tarih: _____

Bu kağıdı doldurarak en kısa zamanda lütfen çocuğunuzun kreşine/anaokuluna geri gönderiniz.

Teşekkür ederiz! ☺

Appendix G

Turkish Form of the SCBE-30

Sosyal Yetkinlik ve Davranış Değerlendirmesi Ölçeği

Aşağıdaki listede bir çocuğun duygusal durumu ve davranışları ile ilgili ifadeler yer almaktadır. Verilen numaralandırma sistemini göz önünde bulundurarak ifadelerdeki davranışları anketi doldurduğunuz çocukta ne kadar sıklıkla gözlemlediğinizi işaretleyiniz:

Bu davranışı
(1) HİÇBİR ZAMAN (2 veya 3) BAZEN (4 veya 5) SIK SIK (6) HER ZAMAN gözlemliyorum.

1. Yüz ifadesi duygularını belli etmez.	1	2	3	4	5	6
2. Zorda olan bir çocuğu teselli eder ya da ona yardımcı olur.	1	2	3	4	5	6
3. Kolaylıkla hayal kırıklığına uğrayıp sinirlenir.	1	2	3	4	5	6
4. Faaliyeti kesintiye uğradığında kızar.	1	2	3	4	5	6
5. Huysuzdur, çabuk kızıp öfkelenir.	1	2	3	4	5	6
6. Gündelik işlerde yardım eder (örneğin sınıf toplanırken ya da beslenme dağıtılırken yardımcı olur).	1	2	3	4	5	6
7. Çekingen, ürkektir; yeni ortamlardan ve durumlardan kaçınır.	1	2	3	4	5	6
8. Üzgün, mutsuz ya da depresiftir.	1	2	3	4	5	6
9. Grup içinde içe dönük ya da grupta olmaktan huzursuz görünür.	1	2	3	4	5	6
10. En ufak bir şeyde bağırır ya da çığlık atar.	1	2	3	4	5	6
11. Grup içinde kolaylıkla çalışır.	1	2	3	4	5	6
12. Hareketsizdir, oynayan çocukları uzaktan seyreder.	1	2	3	4	5	6
13. Anlaşmazlıklara çözüm yolları arar.	1	2	3	4	5	6

Bu davranışı
(1) HİÇBİR ZAMAN (2 veya 3) BAZEN (4 veya 5) SIK SIK (6) HER ZAMAN gözlemliyorum.

14. Gruptan ayrı, kendi başına kalır.	1	2	3	4	5	6
15. Diğer çocukların görüşlerini dikkate alır.	1	2	3	4	5	6
16. Diğer çocuklara vurur, onları ısırır ya da tekmeler.	1	2	3	4	5	6
17. Grup faaliyetlerinde diğer çocuklarla birlikte çalışır, onlarla iş birliği yapar.	1	2	3	4	5	6
18. Diğer çocuklarla anlaşmazlığa düşer.	1	2	3	4	5	6
19. Yorgundur.	1	2	3	4	5	6
20. Oyuncaklara iyi bakar, oyuncakların kıymetini bilir.	1	2	3	4	5	6
21. Grup faaliyetleri sırasında konuşmaz ya da faaliyetlere katılmaz.	1	2	3	4	5	6
22. Kendinden küçük çocuklara karşı dikkatlidir.	1	2	3	4	5	6
23. Grup içinde fark edilmez.	1	2	3	4	5	6
24. Diğer çocukları istemedikleri şeyleri yapmaya zorlar.	1	2	3	4	5	6
25. Öğretmene kızdığı zaman ona vurur ya da çevresindeki eşyalara zarar verir.	1	2	3	4	5	6
26. Endişeye kapılır.	1	2	3	4	5	6
27. Akla yatan açıklamalar yapıldığında uzlaşmaya varır.	1	2	3	4	5	6
28. Öğretmenin önerilerine karşı çıkar.	1	2	3	4	5	6
29. Cezalandırıldığında (örneğin herhangi bir şeyden yoksun bırakıldığında) başkaldırır, karşı koyar.	1	2	3	4	5	6
30. Kendi başarılarından memnuniyet duyar.	1	2	3	4	5	6

Appendix H

Turkish Form of the Emotion Regulation Checklist

DUYGU DÜZENLEME ÖLÇEĞİ

Aşağıdaki listede bir çocuğun duygusal durumu ile ilgili ifadeler yer almaktadır. Verilen numaralandırma sistemini göz önünde bulundurarak aşağıdaki davranışları öğrencinizde ne kadar sıklıkla gözlemlediğinizi işaretleyiniz:

Bu davranışı:

(1) HİÇBİR ZAMAN/NADİREN
(2) BAZEN
(3) SIK SIK
(4) NERDEYSE HER ZAMAN gözlemliyorum.

	HİÇBİR ZAMAN	BAZEN	SIK SIK	HER ZAMAN
1. Neşeli bir çocuktur.	1	2	3	4
2. Duygu hali çok değişkendir (Çocuğun duygu durumunu tahmin etmek zordur çünkü neşeli ve mutluyken kolayca üzgünleşebilir).	1	2	3	4
3. Yetişkinlerin arkadaşça ya da sıradan (nötr) yaklaşımlarına olumlu karşılık verir.	1	2	3	4
4. Bir faaliyetten diğerine kolayca geçer; kızıp sinirlenmez, endişelenmez (kaygılanmaz), sıkıntı duymaz veya aşırı derecede heyecanlanmaz.	1	2	3	4
5. Üzüntüsünü veya sıkıntısını kolayca atlatabilir (örneğin, canını sıkan bir olay sonrasında uzun süre surat asmaz, endişeli veya üzgün durmaz).	1	2	3	4
6. Kolaylıkla hayal kırıklığına uğrayıp sinirlenir (huysuzlaşır, öfkelenir).	1	2	3	4
7. Yaşıtlarının arkadaşça ya da sıradan (nötr) yaklaşımlarına olumlu karşılık verir.	1	2	3	4

	HİÇBİR ZAMAN	BAZEN	SIK SIK	HER ZAMAN
8. Öfke patlamalarına, huysuzluk nöbetlerine eğilimlidir.	1	2	3	4
9. Hoşuna giden bir şeye ulaşmak için bekleyebilir. (örneğin, şeker almak için sırasını beklemesi gerektiğinde keyfi kaçmaz veya heyecanını kontrol edebilir).	1	2	3	4
10. Başkalarının sıkıntı hissetmesinden keyif duyar (örneğin, biri incindiğinde veya ceza aldığında güler; başkalarıyla alay etmekten zevk alır).	1	2	3	4
11. Heyecanını kontrol edebilir (örneğin, çok hareketli oyunlarda kontrolünü kaybetmez veya uygun olmayan ortamlarda aşırı derecede heyecanlanmaz).	1	2	3	4
12. Mızmızdır ve yetişkinlerin eteğinin dibinden ayrılmaz.	1	2	3	4
13. Ortalığı karıştırarak çevresine zarar verebilecek enerji patlamaları ve taşkınlıklara eğilimlidir.	1	2	3	4
14. Yetişkinlerin sınır koymalarına sinirlenir.	1	2	3	4
15. Üzüldüğünü, kızıp öfkelendiğini, veya korktuğunu söyleyebilir.	1	2	3	4
16. Üzgün veya halsiz görünür.	1	2	3	4
17. Oyuna başkalarını katmaya çalışırken aşırı enerjik ve hareketlidir.	1	2	3	4
18. Yüzü ifadesizdir; yüz ifadesinden duyguları anlaşılmaz.	1	2	3	4
19. Yaşıtlarının arkadaşça ya da sıradan (nötr) yaklaşımlarına olumsuz karşılık verir (örneğin kızgın bir ses tonuyla konuşabilir ya da ürkek davranabilir).	1	2	3	4

	HİÇBİR ZAMAN	BAZEN	SIK SIK	HER ZAMAN
20. Düşünmeden, ani tepkiler verir.	1	2	3	4
21. Kendini başkalarının yerine koyarak onların duygularını anlar; başkaları üzgün ya da sıkıntılı olduğunda onlara ilgi gösterir.	1	2	3	4
22. Başkalarını rahatsız edecek veya etrafa zarar verebilecek kadar aşırı enerjik, hareketli davranır.	1	2	3	4
23. Yaşıtları ona saldırgan davranır ya da zorla işine karışırsa yerinde olumsuz duygular gösterir (örneğin kızgınlık, korku, öfke, sıkıntı).	1	2	3	4
24. Oyuna başkalarını katmaya çalışırken olumsuz duygular gösterir (örneğin, aşırı heyecan, kızgınlık, üzüntü).	1	2	3	4

Appendix I

Effortful Control Coding Sheet

Bridge

	Total Time
Baseline	_____
Fast	_____
Slow	_____

Walk-a-line

	Total Time	Errors (stepping out of the line)
Baseline	_____	_____
Slow #1	_____	_____
Slow #2	_____	_____

Gift Wrap

Peeking: Global Code _____

Strategies:	C turns around, doesn't return fully forward	1
	C turns around but turns back forward	2
	C peeks over shoulder far enough to see wrapping	3
	C turns head to the side but less than 90 degrees	4
	C does not try to peek	5

Peek Score _____

Latencies: Start Time _____	End Time	Seconds	
Latency to peek over shoulder	_____	_____	(=60 sec if C doesn't peek)
Latency to turn body around	_____	_____	

Touching: Global Code _____

Touch Score:	C opens gift	1
	C lifts/ picks up gift	2
	C touches but doesn't lift gift up	3
	C never touches gift	4

Touch Score _____

Seat Score:	C is in seat for a total time of less than 30 sec	1
	C is in seat 30 sec or more but less than 1 min	2
	C is in seat 1 min or more but less than 2 min	3
	C is in seat more than 2 min	4

If C does not remain in seat but stays within arms reach of the table, add:
½ point for each minute C is out of seat but in arms reach of the table (only if C is given a seat score of 1 or 2)..

Seat score _____

Latencies: Start Time _____	End Time	Seconds	
Latency to touch gift	_____	_____	(=180 sec if never)
Latency to lift gift	_____	_____	
Latency to open gift	_____	_____	
Latency to leave seat	_____	_____	

Snack Delay

Trial scores:

C eats snack before E lifts the bell	0	Trial 1 _____
C eats the snack after E lifts bell but before E rings bell	1	Trial 2 _____
C touches glass and/or bell before E lifts bell	2	Trial 3 _____
C touches glass and/or bell after E lifts bell	3	Trial 4 _____
C waits until bell is rung	4	

Day/ Night

Codes for each trial:
(0) Fails to point ; (1) Incorrect and never self-corrects (or starts correct but changes mind);
(2) Self-corrects; (3) Correct on first attempt and doesn't change mind

Trial 1 (day) _____ Trial 6 (night) _____
Trial 2 (night) _____ Trial 7 (day) _____
Trial 3 (night) _____ Trial 8 (day) _____
Trial 4 (night) _____ Trial 9 (night) _____
Trial 5 (day) _____ Trial 10 (day) _____
# of 3's: _____ ; # of 2's _____ ; # of 1's _____; # of 0's _____ Total # of trials _____

Bear/Dragon

For each bird command: (Represents activation score)

C fails to move	0
C performs a partial movement	1
C performs the wrong movement	2
C performs full, correct movement	3

For each dragon command: (Represents inhibitory score)

C performs full, commanded movement	0
C performs the wrong movement	1
C performs a partial movement	2
C fails to move	3

	Bird Commands				Dragon Commands			
	Full	Wrong	Partial	None	Full	Wrong	Partial	None
1.	3	2	1	0	0	1	2	3
2.	3	2	1	0	0	1	2	3
3.	3	2	1	0	0	1	2	3
4.	3	2	1	0	0	1	2	3
5.	3	2	1	0	0	1	2	3
6.	3	2	1	0	0	1	2	3

Bird activation totals:
simple sum score across all trials _____
# of 3's: _____ ; # of 2's _____ ; # of 1's _____; # of 0's _____ Total # of trials _____

Dragon inhibition totals:
simple sum score across all trials _____
# of 3's: _____ ; # of 2's _____ ; # of 1's _____; # of 0's _____ Total # of trials _____

Appendix J

Turkish Form of the Child Behavior Checklist

1 ½ - 5 YAŞ ÇOCUKLARI İÇİN DAVRANIŞ DEĞERLENDİRME ÖLÇEĞİ

Aşağıda çocukların özelliklerini tanımlayan bir dizi madde bulunmaktadır. Her bir madde **çocuğunuzun şu andaki ya da son 6 ay** içindeki durumunu belirtmektedir. Bir madde çocuğunuz için **çok ya da sıklıkla doğru ise 2, bazen ya da biraz doğru ise 1, hiç doğru değilse 0** sayılarını yuvarlak içine alınız.

LÜTFEN TÜM MADDELERİ YANITLAYINIZ.

SİZİ KAYGILANDIRAN MADDELERİN ALTINI ÇİZİNİZ.

0: Doğru Değil (Bildiğiniz kadarıyla) 1: Bazen ya da Biraz Doğru
2: Çok ya da Sıklıkla Doğru

---

0 1 2 1. Ağrı ve sızıları vardır (tıbbi nedeni olmayan).

0 1 2 2. Yaşından daha küçük gibi davranır.

0 1 2 3. Yeni şeyleri denemekten korkar.

0 1 2 4. Başkalarıyla gözgöze gelmekten kaçınır.

0 1 2 5. Dikkatini uzun süre toplamakta ya da sürdürmekte güçlük çeker.

0 1 2 6. Yerinde rahat oturamaz, huzursuz ve çok hareketlidir.

0 1 2 7. Eşyalarının yerinin değiştirilmesine katlanamaz.

0 1 2 8. Beklemeye tahammülü yoktur, herşeyin anında olmasını ister.

0 1 2 9. Yenmeyecek şeyleri ağzına alıp çiğner.

0 1 2 10. Yetişkinlerin dizinin dibinden ayrılmaz, onlara çok bağımlıdır.

0 1 2 11. Sürekli yardım ister.

0 1 2 12. Kabızdır, kakasını kolay yapamaz (hasta değilken bile).

0 1 2 13. Çok ağlar.

0 1 2 14. Hayvanlara eziyet eder .

0 1 2 15. Karşı gelir.

0 1 2 16. İstekleri anında karşılanmalıdır.

0 1 2 17. Eşyalarına zarar verir.

0 1 2 18. Ailesine ait eşyalara zarar verir.

0 1 2 19. Hasta değilken bile ishal olur, kakası yumuşaktır.

0 1 2 20. Söz dinlemez, kurallara uymaz.

0 1 2 21. Yaşam düzenindeki en ufak bir değişiklikten rahatsız olur.

0 1 2 22. Tek başına uyumak istemez.

0 1 2 23. Kendisiyle konuşulduğunda yanıt vermez.

0 1 2 24. İştahsızdır (açıklayınız)

…….

0: Doğru Değil (Bildiğiniz kadarıyla) 1: Bazen ya da Biraz Doğru
2: Çok ya da Sıklıkla Doğru

0 1 2 25. Diğer çocuklarla anlaşamaz

0 1 2 26. Nasıl eğleneceğini bilmez, büyümüş de küçülmüş gibi davranır.

0 1 2 27. Hatalı davranışından dolayı suçluluk duymaz.

0 1 2 28. Evden dışarı çıkmak istemez

0 1 2 29. Güçlükle karşılaştığında çabuk vazgeçer.

0 1 2 30. Kolay kıskanır.

0 1 2 31. Yenilip içilmeyecek şeyleri yer ya da içer-(kum, kil, kalem, silgi gibi) (açıklayınız)…….....
.....
.....

0 1 2 32. Bazı hayvanlardan, ortamlardan ya da yerlerden korkar (açıklayınız).....
…….....
.....

0 1 2 33. Duyguları kolayca incinir.

0 1 2 34. Çok sık bir yerlerini incitir, başı kazadan kurtulmaz.

0 1 2 35. Çok kavga dövüş eder.

0 1 2 36. Her şeye burnunu sokar.

0 1 2 37. Anne-babasından ayrıldığında çok tedirgin olur.

0 1 2 38. Uykuya dalmada güçlük çeker.

0 1 2 39. Baş ağrıları vardır (tıbbi nedeni olmayan).

0 1 2 40. Başkalarına vurur.

0 1 2 41. Nefesini tutar.

0 1 2 42. Düşünmeden, insanlara ya da hayvanlara zarar verir.

0 1 2 43. Hiç bir neden yokken mutsuz görünür.

0 1 2 44. Öfkelidir.

0 1 2 45. Midesi bulanır, kendini hasta hisseder (tıbbi nedeni olmayan).

0 1 2 46. Bir yerleri seyirir, tikleri vardır (açıklayınız).....
.....
.....

0 1 2 47. Sinirli ve gergindir.

0 1 2 48. Gece kabusları vardır, korkulu rüyalar görür.

0 1 2 49. Aşırı yemek yer.

0 1 2 50. Aşırı yorgundur

0 1 2 51. Hiç bir neden yokken panik yaşar.

0 1 2 52. Kakasını yaparken ağrısı acısı olur.

0 1 2 53. Fiziksel olarak insanlara saldırır, onlara vurur.

0 1 2 54. Burnunu karıştırır, cildini ya da vücudunun diğer taraflarını yolar (açıklayınız)…
…….....
.....
.....

0 1 2 55. Cinsel organlarıyla çok fazla oynar.

0: Doğru Değil (Bildiğiniz kadarıyla) 1: Bazen ya da Biraz Doğru
2: Çok ya da Sıklıkla Doğru

0 1 2 56. Hareketlerinde tam kontrollü değildir, sakardır.

0 1 2 57. Tıbbi nedeni olmayan, görme bozukluğu dışında göz ile ilgili sorunları vardır (açıklayınız) …….

……

0 1 2 58. Cezadan anlamaz, ceza, davranışını değiştirmez.

0 1 2 59. Bir uğraş ya da faaliyetten diğerine çabuk geçer.

0 1 2 60. Döküntüleri ya da başka cilt sorunları vardır (tıbbi nedeni olmayan).

0 1 2 61. Yemek yemeyi reddeder.

0 1 2 62. Hareketli, canlı oyunlar oynamayı reddeder.

0 1 2 63. Başını ve bedenini tekrar tekrar sallar.

0 1 2 64. Gece yatağına gitmemek için direnir.

0 1 2 65. Tuvalet eğitimine karşı direnir (açıklayınız) …….

……

……

0 1 2 66. Çok bağırır, çağırır, çığlık atar.

0 1 2 67.Sevgiye, şefkate tepkisiz görünür.

0 1 2 68. Sıkılgan ve utangaçtır.

0 1 2 69. Bencildir, paylaşmaz.

0 1 2 70. İnsanlara karşı çok az sevgi, şefkat gösterir.

0 1 2 71. Çevresindeki şeylere çok az ilgi gösterir.

0 1 2 72. Canının yanmasından, incinmekten pek az korkar.

0 1 2 73. Çekingen ve ürkektir.

0 1 2 74. Gece ve gündüz çocukların çoğundan daha az uyur.

0 1 2 75. Kakasıyla oynar ve onu etrafa bulaştırır.

0 1 2 76. Konuşma sorunu vardır (açıklayınız)

.....

.....

.....

0 1 2 77. Bir yere boş gözlerle uzun süre bakar ve dalgın görünür.

0 1 2 78. Mide-karın ağrısı ve krampları vardır(tıbbi nedeni olmayan). (açıklayınız)…….....

.....

.....

0 1 2 79. Üzgünken birden neşeli, neşeli iken birden üzgün olabilir.

0 1 2 80. Yadırganan, tuhaf davranışları vardır (açıklayınız)……

……

……

0 1 2 81. İnatçı, somurtkan ve rahatsız edicidir.

0: Doğru Değil (Bildiğiniz kadarıyla) 1: Bazen ya da Biraz Doğru
2: Çok ya da Sıklıkla Doğru

0 1 2 82. Duyguları değişkendir, bir anı bir anını tutmaz.

0 1 2 83. Çok sık küser, surat asar, somurtur.

0 1 2 84. Uykusunda konuşur, ağlar, bağırır.

0 1 2 85. Öfke nöbetleri vardır, çok çabuk öfkelenir korkar (açıklayınız)
……
……..

0 1 2 86. Temiz, titiz ve düzenlidir.

0 1 2 87. Çok korkak ve kaygılıdır.

0 1 2 88. İşbirliği yapmaz.

0 1 2 89. Hareketsiz ve yavaştır, enerjik değildir.

0 1 2 90. Mutsuz, üzgün, çökkün ve keyifsizdir (açıklayınız) ……
……
……..

0 1 2 91. Çok gürültücüdür.

0 1 2 92. Yeni tanıdığı insanlardan ve durumlardan çok tedirgin olur.

0 1 2 93. Kusmaları vardır (tıbbi nedeni olmayan).

0 1 2 94. Geceleri sık sık uyanır.

0 1 2 95. Alıp başını gider.

0 1 2 96. Çok ilgi ve dikkat ister.

0 1 2 97. Sızlanır, mızırdanır.

0 1 2 98. İçe kapanıktır, başkalarıyla birlikte olmak istemez.

0 1 2 99. Evhamlıdır.

0 1 2 100. Çocuğunuzun burada değinilmeyen başka sorunu varsa lütfen yazınız.

……
……
……
……

Çocuğunuzun herhangi bir fiziksel hastalığı ya da zihinsel bir engeli var mıdır?

☐ Hayır ☐ Evet- Lütfen açıklayınız.

Çocuğunuzun sizi en çok üzen, kaygılandıran özellikleri nelerdir?

Çocuğunuzun en beğendiğiniz özelliklerini lütfen belirtiniz:

Katkılarınız için çok teşekkür ederiz!

Appendix K

Table 3

Factor Loadings of the SCBE-30 Items

Item	AA	SC	AW
1. Maintains neutral facial expression	.16	-.07	**.50**
2. Comforts or assists another child in difficulty	-.14	**.65**	-.31
3. Easily frustrated	**.67**	-.19	.19
4. Gets angry when interrupted	**.65**	-.01	.02
5. Irritable, gets mad easily	**.74**	-.25	.06
6. Helps with everyday tasks (distribute snacks)	-.16	**.63**	-.16
7. Timid, afraid (avoids new situations)	-.13	-.06	**.69**
8. Sad, unhappy, or depressed	.29	-.20	**.67**
9. Inhibited or uneasy in group	-.02	-.20	**.72**
10. Screams or yells easily	**.68**	-.32	-.02
11. Works easily in a group	-.19	**.64**	-.26
12. Inactive, watches the other children play	-.12	-.10	**.67**
13. Negotiates solutions to conflicts	-.10	**.66**	-.27
14. Remains apart, isolated from the group	.05	-.09	**.62**
15. Takes other children's point into account	-.29	**.71**	-.14
16. Hits, bites, or kicks other children	**.61**	-.31	-.03
17. Cooperates with other children in group activities	-.28	**.72**	-.24
18. Gets into conflict with other children	**.71**	-.21	.05

Table 3. Continued

Item	AA	SC	AW
19. Tired	.07	-.07	**.68**
20. Takes care of toys	-.30	**.57**	.06
21. Doesn't talk or interact during group activities	.01	-.15	**.57**
22. Attentive toward younger children	-.23	**.60**	-.01
23. Goes unnoticed in a group	-.09	-.19	**.72**
24. Forces other children to do things they don't want to	**.65**	-.23	-.03
25. Hits teacher or destroys things when angry with teacher	**.61**	-.14	.03
26. Worries	.13	-.08	**.51**
27. Accepts compromises when reasons are given	-.30	**.66**	-.01
28. Opposes teacher's suggestions	**.66**	-.17	.05
29. Defiant when reprimanded	**.70**	-.01	.03
30. Takes pleasure in own accomplishments	.07	**.63**	-.25

Note. AA = Anger Aggression, SC = Social Competence, AW = Anxiety Withdrawal.

Appendix L

Table 4

Descriptives for the Social Competence and Behavior Evaluation Scale (SCBE), the Emotion Regulation Checklist (the ERC) and the Child Behavior Checklist (CBCL) Subscales, Effortful Control Composite

Variable	Mean	*SD*	Min.	Max.
SCBE				
SC Subscale	46.35	9.24	13	60
AA Subscale	19.25	8.18	10	55
AW Subscale	19.01	7.73	10	50
Emotion Regulation Checklist				
ER (Mother)	25.57	3.11	16	32
ER (Teacher)	24.84	3.89	10	32
L/N (Mother)	30.22	6.13	16	54
L/N (Teacher)	26.89	7.10	15	58
Effortful Control Score	-.0042	.45	-1.58	.76
The Child Behavior Checklist				
Externalizing	6.01	5.13	.00	24
Internalizing	10.19	6.16	.00	33

Note. AA = Anger Aggression, SC = Social Competence, AW = Anxiety Withdrawal, ER = Emotion Regulation, L/N = Lability / Negativity.

Appendix M

Table 5

Corrected item total correlations for the SCBE subscales.

Item	Corrected item total correlation
SC subscale	
2. Comforts or assists another child in difficulty	.64
6. Helps with everyday tasks (distribute snacks)	.59
11. Works easily in a group	.62
13. Negotiates solutions to conflicts	.63
15. Takes other children's point into account	.70
17. Cooperates with other children in group activities	.73
20. Takes care of toys	.50
22. Attentive toward younger children	.54
27. Accepts compromises when reasons are given	.61
30. Takes pleasure in own accomplishments	.52
AA Subscale	
3. Easily frustrated	.63
4. Gets angry when interrupted	.54
5. Irritable, get mad easily	.71
10. Screams or yells easily	.67
16. Hits, bites, or kicks other children	.58
18. Gets into conflict with other children	.65
24. Forces other children to do things they don't want to	.59

Table 5. Continued

Item	Corrected item total correlation
25. Hits teacher or destroys things when angry with teacher	.53
28. Opposes teacher's suggestions	.60
29. Defiant when reprimanded	.56
AW Subscale	
1. Maintains neutral facial expression	.41
7. Timid, afraid (avoids new situations)	.57
8. Sad, unhappy, or depressed	.62
9. Inhibited or uneasy in group	.65
12. Inactive, watches the other children play	.56
14. Remains apart, isolated from the group	.50
19. Tired	.58
21. Doesn't talk or interact during group activities	.49
23. Goes unnoticed in a group	.66
26. Worries	.42

Note. AA = Anger Aggression, SC = Social Competence, AW = Anxiety Withdrawal.

Appendix N

Table 6

Means, Standard Deviations, Stability Coefficients and Paired-Sampled T test Results of the Two Administrations of the SCBE

	Original test		Retest				
	M	*SD*	*M*	*SD*	*r*	*t*	*df*
The SC Subscale	47.56	8.05	50.28	7.57	.71***	-5.59***	150
The AA Subscale	19.59	8.01	19.95	9.27	.64***	-2.25*	150
The AW Subscale	18.37	6.62	19.32	7.59	.45***	-1.55	150

* $p < .05$ *** $p < .001$.

Appendix O

Table 7

Correlations of Child, School, Teacher and Family Characteristics to the SCBE, the ERC, the CBCL Subscales and Effortful Control.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1. Child age	--	.03	-.13**	.12*	.17***	.15**	.10*	-.24***	-.28***	.20***	-.07	.03	-.07	-.05	-.10	-.01	.30***
2. Child sex		--	-.01	.05	.05	-.04	-.08	-.01	-.06	.21***	-.18***	-.02	.11*	-.32***	-.23***	-.05	.21*
3. School type			--	-.26***	-.21***	.24***	-.01	.42***	.29***	-.01	.12*	.02	.13**	-.06	-.12*	-.20***	---
4. # of ch in class				--	.26***	.23***	.01	-.31***	-.24***	-.14**	-.02	.08	-.11*	-.01	.03	.10*	-.07
5. Teacher education					--	-.35***	.05	-.29***	-.22***	.08	-.19***	.09	-.01	-.06	.04	.01	.15
6. Teacher experience						--	-.03	.04	.00	-.19***	.07	.03	-.11*	.01	-.06	-.08	.01
7. Family size							--	-.10*	-.23***	-.08	.03	.07	-.19***	.14**	.16**	.19***	.04
8. Income								--	.71***	.16**	.08	-.15**	.26***	-.15**	-.20***	-.30***	-.09
9. Mother education									--	.09	.03	-.10*	.26***	-.19***	-.18***	-.27***	-.04
SCBE																	
10. SC subscale										--	-.52***	-.40***	.48***	-.50***	-.22***	-.15**	.23**

Table 7. Continued

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
11. AA subscale											--	.14**	-.14**	.67***	.21***	.02	-.23**
12. AW subscale												--	-.56***	.14**	.09	.25***	-.06
ERC																	
13. Aggregated ER													--	-.32***	-.29***	-.41***	.05
14. Aggregated LN														--	.61***	.35***	-.25**
CBCL																	
15. Externalizing															--	.54***	-.10
16. Internalizing																--	-.03
17. Effortful control																	--

Note. Child age and school type are coded as 0 = boy, 1 = girl; and 0 = public preschool, 1 = private preschool, respectively.

AA = Anger Aggression, SC = Social Competence, AW = Anxiety Withdrawal, ER = Emotion regulation, LN = Lability/Negativity

* $p < .05$, ** $p < .01$, *** $p < .001$

Appendix P

Table 8

Results of Hierarchical Regression Analyses Testing the Relation Between Emotion Regulation and the Social Competence Subscale

Dependent Variable: SCBE-30 Social Competence Subscale, Overall $F(7, 383) = 45.55$, $p < .001$

Predictor variable	R^2	ΔR^2	ΔF	B	SEB	β
Step 1	.21	.21	20.62***			
Age				.30	.04	.28***
Gender				1.35	.74	.07
# of children in class				-.25	.08	-.12**
Teacher experience				-.17	.04	-.16***
Family income				.53	.38	.06
Step 2	.45	.24	85.30***			
Aggregated ER				1.08	.14	.32***
Aggregated L/N				-.62	.08	-34***

* $p < .05$, ** $p < .01$, *** $p < .001$

Appendix Q

Table 9

Results of Hierarchical Regression Analyses Testing the Relation Between Emotion Regulation and the Anger Aggression Subscale

Dependent Variable: SCBE-30 Anger Aggression Subscale, Overall $F(5, 398) = 78.98$, $p < .001$

Predictor variable	R^2	ΔR^2	ΔF	*B*	*SEB*	β
Step 1	.07	.07	10.46***			
Gender				.76	.62	.05
School type				2.21	.64	.13**
Teacher education				-1.82	.57	-.12**
Step 2	.50	.43	168.63***			
Aggregated ER				.21	.11	.07
Aggregated L/N				1.15	.06	.71***

* $p < .05$, ** $p < .01$, *** $p < .001$

Appendix R

Table 10

Results of Hierarchical Regression Analyses Testing the Relation Between Emotion Regulation and the Anxiety Withdrawal Subscale

Dependent Variable: SCBE-30 Anxiety Withdrawal Subscale, Overall $F(4, 405) = 46.01$, $p < .001$

Predictor variable	R^2	ΔR^2	ΔF	B	SEB	β
Step 1	.02	.02	4.54*			
Income				-.47	.43	-.06
Maternal education				.24	.18	.08
Step 2	.31	.29	85.59***			
Aggregated ER				-1.63	.13	-.57***
Aggregated L/N				-.07	.07	-.05

* $p < .05$, ** $p < .01$, *** $p < .001$

Appendix S

Table 11

Results of Hierarchical Regression Analyses Testing the Relation Between Externalizing and Internalizing Problems and the Social Competence Subscale

Dependent Variable: SCBE-30 Social Competence Subscale, Overall $F(7, 377) = 15.40$, $p < .001$

Predictor variable	R^2	ΔR^2	ΔF	B	SEB	β
Step 1	.21	.21	20.19***			
Age				.31	.05	.28***
Gender				3.76	.86	.21***
# of children in class				-.29	.10	-.14**
Teacher experience				-.22	.05	-.21***
Family income				1.30	.46	.15**
Step 2	.22	.01	2.91			
Externalizing				-.14	.10	-.08
Internalizing				-.08	.08	-.06

* $p < .05$, ** $p < .01$, *** $p < .001$

Appendix T

Table 12

Results of Hierarchical Regression Analyses Testing the Relation Between Externalizing Problems and the Anger Aggression Subscale

Dependent Variable: SCBE-30 Anger Aggression Subscale, Overall $F(4, 393) = 11.54$, $p < .001$

Predictor variable	R^2	ΔR^2	ΔF	B	SEB	β
Step 1	.07	.07	9.98^{***}			
Gender				-2.20	.81	$-.13^{**}$
School type				1.89	.85	$.11^{*}$
Teacher education				-2.44	.76	$-.16^{**}$
Step 2	.11	.04	15.17^{***}			
Externalizing				.31	.08	$.19^{***}$

* $p < .05$, ** $p < .01$, *** $p < .001$

Appendix U

Table 13

Results of Hierarchical Regression Analyses Testing the Relation Between Internalizing Problems and the Anxiety Withdrawal Subscale

Dependent Variable: SCBE-30 Anxiety Withdrawal Subscale, Overall $F(3, 400) = 9.38$, $p < .001$

Predictor variable	R^2	ΔR^2	ΔF	*B*	*SEB*	β
Step 1	.02	.02	4.64*			
Income				-.75	.51	-.10
Maternal education				.08	.21	.03
Step 2	.07	.04	18.45***			
Internalizing				.28	.06	.22***

* $p < .05$, ** $p < .01$, *** $p < .001$

Appendix V

Table 14

Results of Hierarchical Regression Analyses Testing the Relation Between Effortful Control and the Social Competence Subscale

Dependent Variable: SCBE-30 Social Competence Subscale, Overall $F(6, 112) = 13.76$, $p < .001$

Predictor variable	R^2	ΔR^2	ΔF	B	SEB	β
Step 1	.34	.34	11.53***			
Age				.07	.11	.06
Gender				.10	1.43	.01
# of children at class				-.14	.16	-.08
Teacher experience				-.33	.11	-.29**
Family income				3.61	.97	.34***
Step 2	.42	.09	16.82***			
Effortful Control				6.81	1.66	.32***

* $p < .05$, ** $p < .01$, *** $p < .001$

Appendix W

Table 15

Results of Hierarchical Regression Analyses Testing the Relation Between Effortful Control and the Anger Aggression Subscale

Dependent Variable: SCBE-30 Anger Aggression Subscale, Overall $F(3, 126) = 2.30$, $p = .08$

Predictor variable	R^2	ΔR^2	ΔF	B	SEB	β
Step 1	.004	.004	.25			
Gender				-.24	1.51	-.01
Teacher education				.28	1.10	.02
Step 2	.05	.05	6.38*			
Effortful Control				- 4.29	1.70	-.23*

* $p < .05$, ** $p < .01$, *** $p < .001$

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