INVESTIGATING THE ASSOCIATION BETWEEN PLAYFULNESS, ENVIRONMENT AND SOCIAL SKILLS OF PRESCHOOL CHILDREN

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I hereby declare that all information in this document has been obtained and presented in accordance with academic rules and ethical conduct. I also declare that, as required by these rules and conduct, I have fully cited and referenced all material and results that are not original to this work.

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ABSTRACT

INVESTIGATING THE ASSOCIATION BETWEEN PLAYFULNESS, ENVIRONMENT AND SOCIAL SKILLS OF PRESCHOOL CHILDREN

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The purpose of this study is to investigate the associations between playfulness and social skills of preschool children and preschools' environment supportiveness for playfulness. The participants of the study were 212 5-year-old preschool children (94 boys, 118 girls). The data were collected in 16 private (n=6) and public (n=10) preschools. After grouping preschool settings into low, moderate and high levels of environmental supports for play by using The Test of Environmental Supportiveness, the Test of Playfulness provided scores on children's playfulness. Then the Social Skills Rating System Scale, preschool version which was completed by the children's preschool teachers (n=30), gave information about children's social skills and behavioral problems. The results of the study demonstrated that the playfulness level of children in Turkey was relatively high. By using Rasch analysis, it was found that children have difficulty manifesting the constraints of reality in their free play interactions when compared to other subscales

of playfulness. ANOVA and Correlation analyses revealed that there was a significant difference between levels of environmental support for children's playfulness and significant correlation between children's playfulness and their social skills. The findings of this study may help to understand what is supporting or hindering children's playfulness.

Keywords: Playfulness, Social skills, Environmental supportiveness for playfulness, early childhood education, Rasch analysis

ÖZ

OKUL ÖNCESİ DÖNEMİ ÇOCUKLARININ OYUN SEVERLİKLERİNİN ÇEVRE VE SOSYAL BECERİLERİ İLE İLİŞKİLERİNİN ARAŞTIRILMASI

Sicim Sevim, Berna
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Bu çalışmanın amacı okul öncesi kurumlarında öğrenim gören çocukların oyun severlik ve sosyal becerileri ve çevrenin oyun severliğe desteği arasındaki ilişkiyi araştırmaktır. Çalışmanın katılımcıları okul öncesi kurumlarında 5 yaş grubunda öğrenim gören 212 çocuktan (94 erkek, 118 kız) oluşmaktadır. Toplamda 16 özel (n=6) ve resmi (n=10) okul öncesi kurumundan veri toplanmıştır. Okul öncesi kurumları Çevrenin Desteği testi kullanılarak yüksek, ortalama ve düşük düzeyli çevreye sahip okullar olarak sınıflandırıldıktan sonra Oyun severlik testi kullanılarak çocukların oyun severlik değerlerini ölçülmüştür. Çocukların sosyal beceri ve problem davranışları hakkında bilgi veren Sosyal Beceri Değerlendirme ölçeği, okul öncesi versiyonu çocukların öğretmenleri (n=30) tarafından doldurulmuştur. Çalışmanın sonucunda Türkiyedeki çocukların oyun severlik düzeyleri göreceli olarak yüksek bulunmuştur. Rasch analizi sonuçlarına göre çocukların gerçekliğin dışına çıkma özgürlüğü alt boyutu becerilerinde diğer oyun

severlik alt boyutlara göre daha çok zorlandıkları bulunmuştur. ANOVA ve Korelasyon analizleri sonuçlarında çevrenin desteği düzeyleri ile çocukların oyun severlikleri arasında anlamlı farklılıklar ve çocukların oyun severlikleri ile sosyal becerileri arasında anlamlı ilişki olduğunu ortaya koymuştur. Bu çalışma bulguları çocukların oyun severliklerini nelerin destekleyip, kısıtladığını anlaşılmasında yardımcı olabilecektir.

Anahtar Kelimeler: Oyun severlik, Sosyal beceriler, Çevrenin oyun severliğe desteği, okul öncesi eğitimi, Rasch analizi

To Memories of my playful dog, REX

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CHAPTER 1

INTRODUCTION

Play refers to what children prefer to do independently without extrinsic motivation, product orientation or rewards (Rubin, Fein, & Vandenberg, 1983; Bundy, 1997). Play has an important role in children's lives. it is well known that children`s cognitive, physical, social, emotional and language development are promoted through play (e.g. Bredekamp & Copple, 1997, Fisher. 1992). Therefore, play is the essential activity for children. While defining play operationally, five aspects have been considered by recent researchers: approach to play (playfulness), play preferences, player`s skills, player`s origins of motivation and environment support for play (Bundy, 2005). Playfulness is regarded as one of the key factors among these aspects of play (Bundy, 2005, 2012). Research has demonstrated that children's playfulness can be seen as a window into their mind (Neuman, 1971; Frost, Wortham & Reifel, 2012; Bjorklund & Pellegrini, 2000).

According to Bundy (1993) "without playfulness, all activities become work" (p. 217). Playfulness is considered more than just a behavior but rather a reflection of disposition, cognitive skills and psychological well-being (Lieberman, 1965, 1966, 1977; Barnett & Kleiber, 1982). Previous researchers have studied playfulness with the broad goal of investigating associations between several personality attributes such as adaptive behaviors and coping skills. Barnett (1991b) studied preschool children in order to find the linkage to individual characteristics. She reported that playfulness is correlated with certain personality characteristics: confidence, imagination, mischievousness, intensity, cheerfulness, curiosity, activeness, and impulsiveness. According to her studies, absence of playfulness makes children dependent, disobedient, less expressive, and less spontaneous. Overall, Barnett's works shed light on understanding the effects of playfulness on children's problem-solving abilities and capabilities to overcome stress. In addition, several researchers

found that children's playfulness increased the extent of emotional regulations, self-reliance and receptive vocabulary development (Fantuzzo, Sekino & Cohen, 2004; Zeman, Shipman, & Suveg, 2002; Cole, et al., 1994).

One of the dimensions of playfulness is humor; the development of humor can help children handle negative situations by creating fun and games (Christian, 2012). The development of playfulness is regarded as having an important role in fostering these behaviors. Therefore, in their practice, educators have a responsibility to take notice of playfulness as a disposition (Katz, 1993). Though it is not possible to "teach" a disposition, one of the ways that children learn is by observation of their teacher (Katz, 1993). Lives of children can be enhanced by observing adults' playfulness since playfulness could be determinative for their view of life (Erikson, 1972 as cited in Taylor & Rogers, 2001)). The level of playfulness needs to be measured to ensure quality of children`s life, therefore, researchers have created several assessments to measure children's play in terms of play skills (i.e., Knox Preschool Play Scale; Knox, 1997), experiences (i.e., Play History; Takata, 1974), peer interactive play and play types (i.e., Peer Play Scale; Howes, 1980). However, it has been difficult to find reliable and valid measures for assessing playfulness.

Studies on play have revealed that children's social interactions occur mostly through play experiences (Saracho & Spodek, 1998; Singer, Golinkoff & Hirsh-Pasek, 2006). The relationships are not explicitly one-directional or causative, but instead the development of play behaviors and of social skills occurs concurrently throughout childhood (Fisher, 1992; Rogers & Ziviani, 2006; Renthozu, 2012, 2014). Gresham and Elliot (1987) divided social competence into the interrelated dimensions of social skills and adaptive behaviors. Social skills fall into the categories of "interpersonal, self-related, academic related, communication, assentation and peer acceptance" and adaptive behaviors included "independent functioning, physical development, self-direction, personal responsibility, economic-vocational activity and functional academic skills." Social skills are described as "socially acceptable learned behaviors that enable a person to interact effectively with others and to avoid socially unacceptable responses" (Gresham & Elliot, 1990,

p. 1). These skills consist of responses that are both verbal and non-verbal; these affect other people's impressions and reactions throughout social interactions. Adjusting non-verbal responses, which can include eye-contact, gestures, attitude and social distance, is highly important for successfully possessing these skills (Spence, 2003). Spence (2003) suggested that young people face many social tasks, from the micro to macro level: requesting/suggesting help, answering "no," asking for information, starting conversations or waiting for an appropriate time to start communication. Developing these skills is one of the most crucial accomplishments for sustaining interaction with others; when a child does not possess these skills, an acquisition deficit can occur. In addition, other factors—cognitive, emotional or environmental—could interfere with a child's ability to show these skills (Gresham, 1997; Spence, 2003; Rogers & Ziviani, 2006). These factors lead to variations of these skills among children in terms of different settings, people or cultures. Hence, it is crucial that information regarding the social skills of children be obtained in different settings and connect different variables. After five years of research on children's social skills and problem behaviors, Gresham and Elliot (1990) developed The Social Skills Rating System (SSRS) for assessing children's social behaviors by expanding the "Teacher Ratings of Social Skills" instrument, which was developed in 1984. After completing standardization studies with 1027 parents, 259 teachers and 4180 children, the SSRS was found to be useful in providing information on children's levels of social skills and problem behaviors (according to teachers and parents reports). The SSRS has been used widely for children aged 3 to 18. Over the years, the SSRS has been utilized, revised and adapted by researchers to identify and classify social problems in children, and to guidie researchers, teachers and parents in how to take precautions to avoid social deficits in children. Some of these studies focused on preschool children's demographic characteristics, such as gender, socioeconomic status, special needs and parenting styles, and their relation to social skills and problem behaviors (e.g. Elliott, Barnard, & Gresham, 1989; Powless & Elliot, 1993; Oprea, 1998; Cessna, 2000).

Theorists Piaget (1951) and Vygotsky (1976) indicated that play is not only tied to development, it is an important factor in children's social and emotional development; much of the research in the field also supported this connection between play and growth (as cited in McInnes, 2010). For instance, children's cooperation, self-control and assertiveness of social skills are connected with their pretend play skills (Li, Hestenes &Wang, 2014); children become aware of social roles and develop emphatic interpersonal skills by means of make-believe play and taking someone else's perspective during play (Fisher, 1992). Children's social roles, skills and safe and proper interactions are formed by way of play and their environment. While playing they use a script and show interactive behaviors like pretending to take on different roles in the community or their environment, for example as a cook feeding a toy or as fire fighters. Within these playful activities, they have the opportunity to discover new behaviors or meanings (Rogers & Ziviani, 2006).

The level to which playfulness can change has been a topic of contention in modern research. O'Brien, Shirley and Josselson (2001) investigated children's playfulness by using the Test of Playfulness in different time periods. They found that children's playfulness did not change significantly after four years. However, in studies using playfulness as a state model, playfulness is adaptable to changes over time; some studies have suggested that playfulness can be changed over time by intervention. Indeed, Reed, Dunbar and Bundy (1999) found that children's playfulness scores increased after one year of enrollment in a Head Start program. Further, Saunders, Sayer and Goodale (1998) administered the Test of Playfulness (TOP) to 19 randomly selected preschool children. The TOP results demonstrated that girls' ratings were higher than boys', and older children's playfulness ratings were higher than those of the younger children. The "personality trait of playfulness" school of thought hypothesized that different environments\activities would not change the state of playfulness. On the contrary, Bundy's proposal indicated that people's level of playfulness is affected by interactions between inherent personality traits and environment. Modifying an environment is easier than changing a person.

According to Letts et. al (1994), assessing people and their environments is helpful in developing positive, harmonious relationships between that person and environment. If a person is exposed to an inadequate reaction from the environment, physical and sensory development can be affected negatively; in turn, caregivers or parents cannot build interaction successfully (Jennings & MacTurk, 1995). Like the effects of individual factors on play, the environment's role needs to be explored (Bundy, 1999).

In interventions in particular environment becomes key. Changes in an environment are expected to make a person more playful by supporting caregivers, teachers or playmates' understanding of their cues (Jennings & MacTurk, 1995). Branson and Bundy (2001) and Bundy (1999) emphasizes that motivation can be influenced by environment. Therefore, environment can affect children's participation in play. Children's social environment (their playmates and caregivers), physical environment accessibility and usefulness of their environment's features and materials could encourage or limit their participation (Rigby & Gaik, 2007). Social environmental influences on children's play experiences and social development were found to be significant. Further, preschool children who have good relationships with their peers showed better engagement in play and higher social-emotional development (Gagnon & Nagle, 2001). Adults can influence children's play by facilitating the environment, but it is more important that the caregiver can play along with participating children (Fisher et al., 2011; Lilard et al., 2013). Regarding physical environment, Barbour's (1999) study showed that children's play types varied according to features of the environment and the level of challenges. Indeed, children's engagement in sensory, social or dramatic play is influenced by the opportunities available from the environment. To date, many assessment tools have been designed for ensuring quality of environment and exploring the relationship between other variables. For instance, Knox (2008) developed an assessment based on the "whole child" within a natural environment. For assessing the quality of a child's environment, the *Early Childhood Environment Rating Scale* (Third Version) was developed (Harms, Clifford, & Cryer, 2015).

Focused on assessing environment specifically for children's playfulness, Bundy (1997) designed the Test of Environmental Supportiveness with regards to children's playfulness and a focus on evaluating whether environment—in terms of caregivers, playmates, objects and space— hinders or supports play in children. Moreover, related studies revealed that there are significant relationships between playfulness and a supportive environment (Boyer, 1997; Branson & Bundy, 2001; Rigby & Gaik, 2007).

There has been a recent increase in the rate of studies related to playfulness. Playfulness which is defined playfulness as traits has been studied for investigating relation between personal characteristics such as gender, creativity and divergent thinking (e.g Taylor & Rogers, 2001; Trevlas, Matsouka & Zachopolou, 2003; Zachopoulou, Trevlas, & Tsikriki, 2004), However, in terms of children`s environment and playfulness, studies by Bundy and colleagues (Bundy, 1997, 1999, Bronson & Bundy, 2001; Bundy, Waugh & Brentnall, 2009, Skard & Bundy, 2008) were a major inspiration for the current study. In the light of these studies` findings, environment could be a distinct factor in limiting or supporting children`s playfulness. Therefore, more research is needed on the effects of environment factors on preschool children`s playfulness. Previous studies were concerned with children with special needs and investigated the relationships between a child`s home, hospital, laboratory and\or school outdoor environments. Because of the lack of studies related to typically developing 5-years old children in their regular preschool classroom environment, the current study could provide new and important information connecting these children`s level of playfulness with preschool environment`s level of supportiveness. In addition, findings from studies by Bundy et al., (2008) suggested that typically developing children with high or low level social skills can be evaluated for their level of playfulness. In particular, Bundy et al., (2008), posit that typically developing social, creative and resilient children between 5 to 7 years of age could be assisted by increasing their playfulness via a playful environment. The current study might give evidence to prove this association in order so that teachers could plan, schedule activities and organize the environment

taking account of these variables' importance in children`s lives. With respect to this study's findings, children's social and problem behaviors can be represented and understood by their playfulness. By understanding the importance of playfulness, schools, communities and parents could avoid restricting children's play and limiting their environment to manipulated play materials, limited space and un-playful or interfering adults.

1.1 The Purpose of the Study

Play has been recognized as the most valuable way to enhance children's cognitive, social, emotional, and physical development (e.g Hughes, 2010; Bredekamp & Copple, 1997; Fisher, 1992). However, an important question remains unknown; `which aspects of play affect children`s developmental skills` and `what makes them more crucial? ` (Bundy et.al., 2008). To answer these questions and understand children`s playfulness, researchers use two important models which are playfulness as a state and playfulness as a trait. While the definition of playfulness in a disposition sense (e.g., Lieberman,1965; Barnett, 1990) is based on physical and social skills, cognitive spontaneity, manifest joy and sense of humor. Bundy (1993) and Skard and Bundy (2008) suggested that playfulness could be defined as children's approach to play is comprised of intrinsic motivation, internal control, freedom to suspend reality and framing (i.e. the ability to give and read cues successfully). This model was based on studying various activities engaged in by children. In the present study, the researcher used Bundy's (1997) playfulness as a state model. There are several arguments for the applicability of this model. First of all, in the light of studies using the 'playfulness as state model', interventions have a significant on children's playfulness (e.g., Bundy, 2008, 2011, 2016; Rigby & Gaik, 2007) and children's social and emotional, coping skills might also be correlated. One way of increasing children's playfulness could be found by investigating relations with their social skills. With respect to this study, this dimension might be taken into account for developing interventions for lack of playfulness. In the present

study, similar to previous studies, the researcher intended to investigate children's playfulness within different preschool classrooms in Turkey. Bundy's model suggested two observational tools (Test of Playfulness and Test of Environmental Supportiveness). These instruments have yielded valid and reliable findings for children (e.g., Bundy, Nelson, Metzger & Bingaman, 2001). Finally, all components of playfulness were addressed in this study, since children's playfulness could be better expressed by the findings of multiple components. The researcher tried to fill the gap in the literature enable researchers, teacher and parents to develop strategies to better support children's playfulness considering key elements of playfulness that were well documented within the `playfulness as a state model`.

Gathering information about children's playfulness profiles helps researchers find out children's needs and deficiencies, particularly in the preschool context. For this reason, there is a need to investigate children's playfulness, specifically their engagement in play. In this study, the researcher used three tools to obtain the data: The Social Skills Rating System preschool teacher form (SRSS), the Test of Playfulness (TOP) and the Test of Environment Supportiveness (TOES). These instruments allowed the researcher to assess children's playfulness and social skills within the preschool environment. The researcher observed children during their free play sessions to evaluate their playfulness and environment by using TOP and TOES. In the current study, the intended contextual model of playfulness is based on Cooper's (2000) theory that play environment and children's social environment could be indicators for playfulness— the concept that play environment (preschool classroom environment) and social skills could play crucial role in children's transtions through play activities (Figure 1.1).

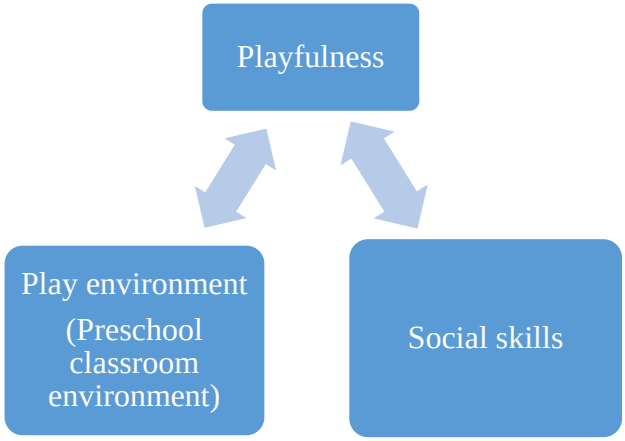

Figure 1.1 Contextual Model of The Current Study

The goal of the present study is to clarify the association between playfulness, environment and social skills, and to examine potential moderators of the relationship between social skills and playfulness and environment by conducting a quantitative study considering the preschool environment's supportiveness for playfulness.

The main research questions of this study are as follows:

1) What are the preschool children's levels of playfulness, social skills and environmental support?
2) Is there a difference between preschool children's playfulness within different levels of environmental support for play in their preschool settings?
3) Is there a correlation between preschool children's playfulness and social skills?

1.2 Significance of the Study

In the current study, playfulness is defined as a state that is affected by individual differences stemming from genetic background and various environmental experiences; however, playfulness is determined by one's personal interaction with these variations (Taylor, Rogers, & Kaiser, 1999). Interconnections with the environment and cultural and familiar variations can restrict or allow children's playfulness (Bundy, 1999). For this reason, this study aims to explore the expression of playfulness in children and their environment, which includes their teachers, playmates, objects and space. The present study also examined teacher ratings of children's social skills from the observation of their behaviors within the preschool setting. In order to find out children's states of playfulness, the researcher completed the Test of Playfulness and the Test of Environmental Supportiveness Observation Environment Scale (TOES) and by direct observation. These ratings were expected todemonstrate children's activeness and play forms. Throughout observation, children's continuum process of three primary elements (which are intrinsic motivation, internal control, the freedom of suspended reality and framing) was measured, further, children's player profiles—how they have interactions with peers in cooperative or competitive games—were determined within this research. Regarding their environment, children's exploration and manipulation of materials helps us to understand the role of their environment in developing playfulness (Bundy, Waugh, & Brentnall, 2009; Boyer, 1997).

Measuring children's playfulness can be useful for increasing quality of play behavior within their environment and various contexts (Barnett, 1990). Playfulness is regarded as having traits such as "cheerful, joyous, humorous and playful attitude, witty, energetic, being good natured, laughing readily, liking to participate with other people, imaginativeness, emotional expressiveness, curiosity, openness, novelty seeking and communicativeness" (Barnett, 1998, p. 99). Playfulness of environment includes the play materials and the equipment available, the environmental arrangements and the social elements of the environment. Consequently, children's

play and their interactions with each other can be influenced (Cooper, 2000; Saunders, Sayer, & Goodale, 1999; Wolery, 2005). Based on measures from current research, it is possible to determine the level of children's playfulness, their social skills and problem behaviors in their preschool environment. By examining these dimensions, caregivers can intervene when they encounter a lack of playfulness ability and/or social competencies stemming from learning barriers, which could come from their caregivers, playmates, materials or space. Therefore, there is a need to have knowledge about each of these factors in order to organize the environment of the classroom.

These parameters could provide information about how this playfulness trait is demonstrated in Turkish preschool classes. The Test of Playfulness and Test of Environmental Supportiveness were administered for the first time in Turkish children. In addition, children's playfulness affects the classroom environment, and thus the creative potential of young children offers the groundwork for teachers' self-examination and consideration. Therefore, there is a pedagogical need to explore the inner dispositions of children to play. Reliable and valid evaluations of children's playfulness are highly important for comprehending child behaviors and investigating the sources of expected behaviors. Engaging free play activities make children's play transformative, so that they can learn novel concepts and gain emotional and self-regulation skills. For that reason, studying playfulness traits (intrinsic motivation, internal control and freedom to suspend reality) helps in understanding how they affect transformative play for children. Using the proposed measures of playfulness would allow future researchers to investigate the relationship between the extent to children's internal motivation and self control and positive social skills outcomes. It will be crucial to find ways to support children's playfulness across multiple settings. To understand children's hidden motivations and extent of play, evaluations of playfulness must consider cultural backgrounds and environments that affect children's play; however, there is a lack of studies evaluating children's playfulness in Turkey. Lastly, among the reviewed literature, there has been a scarcity of studies related to playfulness in children who are

developing typically, particularly related to their social skills and their environmental support for playfulness. Therefore, there is a need to explore these dimensions with different sources and multiple contexts used at the same time.

Therefore, in the current study, evaluating playfulness also helped to discover how physical and social environment initiate children's playfulness in Turkey specifically. This study also tested the nature of the playfulness quality by exploring the relationship between children's social development and playfulness, by means of comparing multiple sources (direct observation of free play, teacher reports and evaluation of environment).

In order to provide accurate and reliable results for fulfilling the aim of the current study, the Rasch Analysis was used as the primary means of analysis. The Test of Playfulness and Test of Environmental Supportiveness were developed by utilizing the Rasch analysis, which is grounded in item response theory (Wright & Stone, 1979). The Rasch Analysis also finds differences in the social skills of children with perceptive to small changes through the Social Skills Rating System scale. Rasch analysis has been used for assessment of knowledge test data in many studies, such as the Programme for International Student Assessment (PISA) (Teksöz, Boone, Yılmaz-Tüzün, Öztekin, 2013). The Rasch model has also been used for personality, affect and behavior assessments. It enables a researcher to calculate the person's level of ability and the difficulty of the items. As Bond and Fox (2001, p.7) stated, it "is the only one that provides the necessary objectivity for the construction of a scale that is separable from the distribution of the attribute in the persons it measures." The reason behind utilizing Rasch analysis in the current study is that it transforms ordinal-level raw data to interval-level data or "measures" based on difficulties and level of playfulness and social skills of children. These measure scores allow us to calculate descriptive and inferential statistics. All item and person measures are located on the same hierarchy (Bond & Fox, 2001; Linacre, 2005). For this study, Rasch analysis also helps to illuminate the processes of certain items or why persons behave in a singular manner. Furthermore, another benefit of the Rasch model is that raters or respondents can choose not to respond to an item;

they can leave it blank because Rasch analysis can accommodate missing data (Bond & Fox, 2001).

1.3 Definitions of Important Terms

The operationally definitions of following terms could serve as a guide for better understanding of the present study;

Playfulness: Bundy (1997) described playfulness as "within any transaction by evaluating for the presence of three elements: intrinsic motivation, internal control, and the freedom to suspend reality" (p.53).

Intrinsic motivation: It refers to player's involvement in play without any external rewards, social demands or reinforcements, process of play is more significant than product or outcome (Rubin, Fein, & Vandenberg, 1983: Bundy, 1991;1997).

Internal control: it refers to players decide their actions independently while they initiate an activity, set rules, choose materials, direct and end the activity (Neumann, 1971: Bundy, 2012).

Freedom to suspend reality: It refers to the player decide to being close to objective reality. The activity is expected to be free from to unnecessary constraints of reality (Bundy, 2012). In other words, while transactions occur, the player is able to pretend somebody or somethings and make or use objects by unusual ways (Connor, Williamson & Seipp, 1978: Rubin, Fein, & Vandenberg, 1983: Bundy, 1991;1997).

Framing: It refers to how players give or receive cues according to how they intend to act (Bateson, 1971)

Environment: It refers to preschool teachers, peer playmates, objects and play spaces.

Environment supportiveness for playfulness: "The extent to which elements of a particular environment support a player's motivations for play" (Skard & Bundy, 2008)

Social skills: Gresham & Elliot (1990) described as “socially acceptable learned behaviors that enable a person to interact effectively with others and to avoid socially unacceptable responses” (p. 1).

CHAPTER 2

LITERATURE REVIEW

This chapter presents a review of the definition of play and playfulness as well as a description of playfulness, which has been composed of four main components in this study based on the model of playfulness as a state. In light of the literature review, children's playfulness and associations between their social development and underlying social and physical environment will be presented. Lastly, a summary of evidence is provided.

2.1 Play and Playfulness

The term "play" has been used in various areas: using a musical instrument, a theater play, playing a CD, or in terms of visual-auditory senses like shadow-play. Understanding what play is can be very difficult; however, people assume that when they see it, they know it (Kuhaneck, Spitzer & Miller, 2010). Froebel (1895) defined play as the work of the child (as cited in Neuman, 1971). Other theorists, such as Dewey, Montessori, and Rogers, used Frobel's ideas about play as base. The modern definition of play used in studying child behavior is an activity that is enjoyable, enthusiastic and chosen (Burghard, 2005). Kuhaneck, Spitzer and Miller (2010) defined play as having fun at one's appropriate level of challenge. Play is also defined for children as "almost anything enjoyable" (Scarlett et al., 2005, p. 4). Lieberman's (1977) research showed that important elements of play can be determined and measured by age level to study progressive creativity. She then focused on the personality trait in young children for play after having observed preschoolers in nurseries, preschools and day-care centers for two years. In fact, she used the example of one of her participant's way of acting in play to categorize play into stages, which are a child's physical, social and cognitive motilities and their

teasing, joyfulness and fun. These components of the quality and style of play were specified as "playfulness" for the first time by Lieberman (1976). Many other researchers also studied describing and measuring playfulness (Barnett, 1990; Rogers, 1998). Play is seen as an integral part of the experience, not just a way to develop other skills. Diverging from Piaget's (1951) categorization of play (practice play, symbolic play and games with rules), Neuman (1971) was interested in the criteria and stated continuum for play. Neuman (1971) defines play as a transaction between the child and environment characterized by intrinsic motivation, internal control and freedom to suspend reality. Extrinsic motivation, external reality and external locus of control are the descriptions for non-play. She indicated that if child is not free, play cannot occur. Bateson (1972) indicated that framing is also required (as cited in Bundy, 2004). In order to measure a child's skills for playing, new models of playfulness emerged. Based on these ideas, one of the new definitions was proposed by Bundy (1997). She suggested that focusing on what a child can do or may intend to do while playing is more important than measuring play types, categories or developmental play age. Playfulness was described as a style or approach to play that is a continuum of skills and transcends activity and environment (Bundy, 1992; Bundy, 1997). This model sees playfulness as a state; therefore, it not only focuses on enhancing play and play environment, but also helping make individuals more playful. Instead of concerning herself with the traits of playfulness, she used these criteria for measuring the abilities of individuals. The criteria of play proposed by Neuman (1971) could be considered a continuum since it is impossible for a child to have full intrinsic motivation or internal control. This continuum from non-playfulness to playfulness is labeled as the "zone of concern" (Bundy, 2010, p. 1). Morrison, Bundy and Fisher (1991) illustrated elements of a playfulness model that represented the basis of their playfulness evaluations (see Figure 2.1).

2.2 Models of Playfulness

Playfulness as a personality trait comprises humor, divergent thinking ability and creativity, which are known as higher-order process skills (Lieberman, 1965). This paradigm is the first requirement of playfulness with respect to personality. Therefore, playfulness can be defined as the manifest instinctive capacity for play, regardless of environmental effects (Barnett, 1990, 1991). Playfulness is both a psychological construct (Rubin et al., 1983 as cited in McInnes, 2010) and an observable trait.

Lieberman (1965) was the first researcher to indicate young children's playfulness as a trait. She defined playfulness as a player characteristic. She claimed that playfulness appeared when a player gets used to other players and has fun with objects instead of examining them. According to Lieberman (1965, 1966, and 1977), playfulness has five dimensions: cognitive, social and physical spontaneity, sense of humor and manifest joy. Each dimension is described as a personality trait. Lieberman (1965, 1966, and 1977) built her playfulness dimensions after asking teachers about children's classroom behaviors. In detail, physical spontaneity includes children's coordination and level of physical activity while playing. Social spontaneity is related to children's social behaviors and interactions with each other and their ability to take things upon themselves. For cognitive spontaneity, she included children's imagination, creativity in taking roles, organization of games and manipulation of unusual toys during play. Manifest joy is concerned with children displaying the quality of play in terms of their enjoyment, interest or freedom during play. At last, sense of humor is identified as joking, kidding or having fun. Using this definition, playfulness can be assessed based on cognitive levels of creativity, imagination and divergent thinking, and factors of intellectual flow, adaptability and imaginativeness.

Studies by Singer and Rummo (1973) and Singer and Singer (1980) also demonstrated that playfulness as a trait exists, in this case by studying four-year-old children. The researchers used three dimensions: joy, interest and positive affect.

They analyzed kindergarten children's classroom behaviors and found that the characteristic of playfulness included "imagination, humor, emotion expression, taking the initiative exploring new things, curiosity, and openness and communicating ability," which are in accordance with Lieberman's dimensions. However, more recent research has worked to adjust the measures Lieberman created. Lieberman constructed a questionnaire including 10 main questions and two sub-questions for measuring playfulness. Owing to the fact that questions are limited, raters faced problems linking two or more behaviors into one question. For that reason, Barnett (1990) attempted to revise the playfulness scale. In order to enhance the content and face validity of the measure, she worked with 26 experts in the area of child development and seven child development researchers. In her 1990 study, two teachers rated 388 preschool children over different time periods for reliability. As a result, Barnett (1992) developed the Children Playfulness Scale (CPS), which includes 23 items. Other studies support the validity and reliability of the CPS. For instance, Zachopoulou (2002) used the CPS with Greek preschool children. After exploratory factor analysis was applied, five factors were confirmed and high correlations between them were found. In addition, Trevlas, Tsigilis, and Zachopoulou (2003) evaluated the CPS validity and reliability by administering it to 323 children from 4 to 6 years old. According to the researchers, because their findings supported the scale's validity and reliability, they indicated that the scale can be applied for assessing preschool/kindergarten children's playfulness. Several researchers used the CPS for understanding children's playfulness and exploring intervention effects on children. For example, Boyer (1997) administered the CPS as a pre– and post-test to 105 preschool children to investigate the effects of an intervention program. According to Boyer (1997), children's playfulness was positively affected after intervention related to sensory stimulation. In addition, a study by Trevlas, Matsouka, and Zachopoulou (2003) found a relationship between motor creativity and playfulness. Tegono (1990) found that creativity and playfulness carried on into adolescence and adulthood; she worked with early childhood teachers and explored the creativity and playfulness correlations. Though

playfulness and the CPS are relevant across a wide range of ages, some studies have shown that certain items do not work for children with physical disabilities or are not culturally appropriate (e.g. Bundy & Clifton, 1998). Lastly, Rogers et al., (1998) developed the Child Behaviors Inventory of Playfulness scale. It is based on the definition by Rubin et al. (1983) and Krasnor and Pepler (1980). However, it does not distinguish between play and playfulness. In fact, the same items are used for both playfulness and the disposition of play. Another weakness is the absence of theoretical background. Furthermore, validity and reliability have not yet been sufficiently proven (Bundy, 2005).

Another alternative to the "playfulness as a trait" theory, Neuman's (1971) study laid the groundwork for the development of Bundy's (1993, 1997) model of playfulness. Bundy has studied playfulness from the perspective of occupational therapy. Occupational therapy practices deal with supporting children's and adults' play; they consider play a serious occupation. Bundy (1993) stated that "playfulness is intimately related to play as a transaction and as a medium for intervention" (p. 217). She indicates that when playfulness has no place in activities, these are defined as work (Bundy, 1993,1997). Bundy (1993; 1997) described the meaning of playfulness as a style of approaching problems in flexible ways so that problems can be solved easily and feasibly. The approach to the activity is much more significant than the choice of play or leisure activity. In fact, just playing a game, such as basketball or computer games, is less important than having a playful manner in one's whole life (Bundy, 1993). This model consists of three main factors: intrinsic motivation, internal locus of control and suspension of reality. According to Bundy (1997), these components can be directly related to play but these are also traits: the ability to be "intrinsic motivation," to be "internal control" and to "suspension of reality." (p.55) She defines that the continuum of each component could be exist, this continuum can demonstarate the existence of component during distinct transactions of play. Bundy (1997) developed the fourth factor, "framing," based on the study of Bateson (1972). A playful player gives and receives verbal and non-verbal cues that indicate how the players need to play in a determined frame. As opposed to the

personality trait approach, this model deals with supporting play and helping the individual to be more playful while considering the environmental effect. From this approach, the Test of Playfulness or TOP (Bundy, 1997) was developed with dimensions of intrinsic motivation, internal locus of control and suspension of reality, plus Bateson's (1972) notion of framing. In the test, 24 observable behaviors are assessed according to three factors: the extent to which the behavior occurs, the intensity with which it occurs and the skill involved. Four-point scales are used for each dimension; however, not every statement can be assessed with all dimensions. This assessment was tested by the Children's Playfulness Scale and found to have a correlation with the Children's Playfulness Scale and to be methodologically strong (Reed, Dunbar & Bundy, 2000; Harkness & Bundy, 2001; Bundy, Nelson, Metzger, & Bingaman, 2001; Hamm, 2006; Muys, Rodger, & Bundy, 2006).

According to Bundy, playfulness can be operationally defined and measured based on these elements. The elements are not narrowed, so they constitute a uni-dimensional construct with elements that are interrelated with each other. Her studies on the development of measurements for play started with observing play, then interviewing children and caregivers about play elements. These initial questions formed the basis of the instrument which is called the Test of Playfulness (Bundy,1993). These elements will be discussed in detail in the following sections.

2.2.1 Perception of control

Perception of control, also known as internal control has been defined as follows: "players are largely in charge of their actions and at least some aspects of the activity's outcome" (Skard & Bundy, 2008, p. 72). That means players need to be self-determined in the process of the play. However, Parten (1933) points out that "cooperative control," sharing control with other players or adults, is required for play to occur (as cited in Neuman, 1971). Internal control is the feature of play comprising players' choices about what to play, whom to play with and when to start

or end play. This actually deals with players feeling free to engage in activities just as they choose.

2.2.2 Intrinsic Motivation

Intrinsic motivation to play, according to the theory of process, is more a crucial factor rather than a product (Rubin, Fein & Vanderberg, 1983). According to Gross (1916), the player is self-motivated to take part in an activity and focuses on the process and aims innate in the game Conversely, if a player is playing for external reasons, this is not strictly playing. So intrinsic motivation must happen during play; even if a player enjoys winning a game, the player's major purpose is not winning (as cited in Neuman, 1971). Actually, not knowing the winner before the game enhances the motivation and fun, whereas knowing the winner in advance hinders the motivation (Skard & Buny, 2008). As an example, children`s motivation could decrease in games such as running or memory games if they play with very skilled players. However, in games where the chance plays a significant role, their motivation could increase. The wellspring of the inspiration—the reasons a specific action is characteristically inspiring—shift broadly; this can be explained by the existence of individual inspirations. Some children are propelled by exercises giving them the opportunity for social collaboration, but others look for sensation or superiority (Skard & Buny, 2008).

2.2.3 Freedom to Suspend Reality

Schiller (1954) wrote that with the freedom to suspend reality a player decides the rules, process and structure of his or her play according to his or her wishes. If a child plays for a requirement and sticks to the rules, this cannot be called play. Children's egocentric and logical thinking skills are associated with the internal reality of play. Children can alter realty, demonstrate their wishes or shape their wishes. Early or excessive (then expected) exposure to objective reality constrains

children's fantasy play (as cited in Neuman, 1971). According to Skard and Bundy (2008), the means of freedom to suspend reality is affected by the players' preference of how close to objective reality they want to play. The player is free to pretend to do or be things they are not, or even to be someone or objects that do not exist. When they are pretending, even if it seems real, the verbal or physical cues expressed by them are unreal. Suspending reality is also seen in making up game rules or joking. For example, a child can pretend to be a bossy teacher. However, a child is not allowed to behave like this in real life, outside of playing.

2.2.4 Framing

The three elements of playfulness discussed above and a fourth element, "skills of framing" are needed for evaluating playfulness. Bateson (1971,1972) used framing in the scope of play. He used two metaphors, the frame and the map. Apart from its surroundings, the material can be perceived within its frame. The frame metaphor refers to how players give or receive cues according to how they intend to act. It is challenging to construct a play frame, receiving and giving social cues in spite of necessary breaks for communication or needs. To be a good player, giving and receiving social cues are equally required. Bretherton (1984), however, argued that exaggerated pretend play could turn out to be more "real," so a player may feel forced to be outside the play frame or denied to enter it (p. 23).

These four elements of playfulness stem from the player interactions during play. In addition to these, environmental supportiveness is an important element for play. It will also be discussed in depth in this chapter.

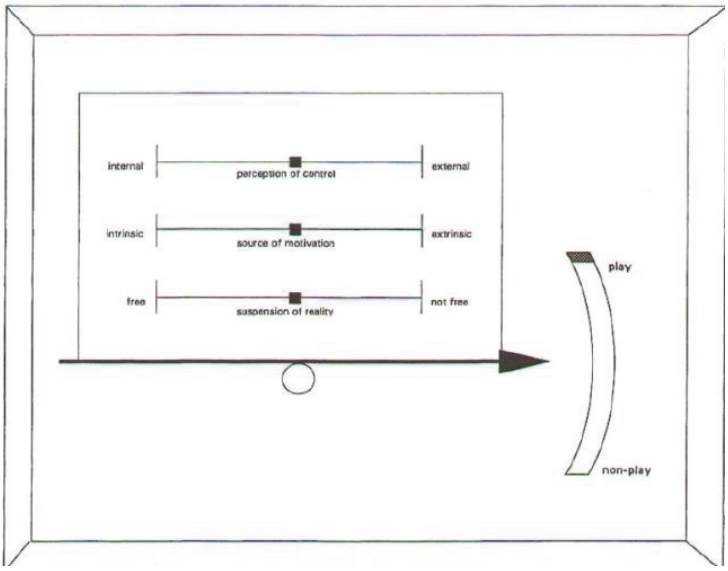

Figure 2.1 Balance Between The Elements Of Playfulness (Bundy, 2010, p.2)

2.3 Assessment of Playfulness

In the reviewed literature there are two accepted definitions for measuring playfulness—one that it is a personality trait of the individual (Barnett & Kleiber, 1982, 1984; Lieberman, 1965, 1966, 1977; Singer & Rummo, 1973; Singer & Singer, 1980; Barnett 1990,1991a,1991b) and the other that it is a style or approach to an activity (Neumann, 1971; Bundy, 1991, 1993, 1997; Morrison, Bundy & Fisher, 1991; Skard & Bundy, 2008). Two well-known measures of children's playfulness based on these approaches and published and tested by several researchers over the years are the Test of Playfulness (TOP), investigating playfulness as a state (Bundy, 1997, 2001, 2006) and the Children Playfulness Scale (CPS) (Barnett, 1990; 1991), investigating playfulness as a personality trait.

2.3.1 The Test of Playfulness (TOP) and the Children Playfulness Scale (CPS)

There are many differences between TOP and CPS with respect to format and respondents; however, they are correlated because they assess parallel parameters. There are many studies comparing the TOP and the CPS for evaluating playfulness. Porter and Bundy (2000) compared these two tests and evaluated 47 African-American children on their playfulness level. The authors found that a relationship between the two tests does not exist, with TOP scores and parents' response of CPS (r=-.01). Moreover, Bundy et al. (2001) studied 89 children (9 with special needs, 80 with no developmental concerns). TOP was rated by an occupational therapist and CPS was completed by a parent, a teacher, or a daycare provider. Although they found a significant correlation between them, the magnitude of correlation was not high as assumed (r = .46; p < .0001). Furthermore, Muys, Rodger and Bundy (2006) evaluated the playfulness of children with autism using both CPS and TOP instruments. In addition, they compared these tools in both structured and unstructured play environments for the children. After analyzing the results, they pointed to a strong correlation between them, despite the previous studies. As aforementioned, the TOP is a therapist-rated assessment whereas CPS is an observation-based teacher-rated assessment. For that reason, CPS often produced higher scores than TOP results for the same child, because that child is assessed by parent and therapist during unstructured play session. Therefore, both assessments are appropriate for studying autistic children, but the TOP produces more valid and reliable results. On the one hand, Muys, Rodger and Bundy (2006) assumed that the difference comes from a discrepancy between the therapist, teacher and parent; on the other hand, both assessments rate playfulness in different ways. Furthermore, these assessments are utilized for different purposes, whereas Test of Playfulness was developed by Bundy (1997) for guiding therapists, teachers or parents developing goals for approach and attitude toward play.

2.4 Children's Playfulness, Social Skills and Environment Support Factors

It has been widely accepted that initial and instinctive activity is regarded as play. The framework of play includes internal control, intrinsic motivation, freedom to suspend reality and primary developmental skills (social, play and developmental skills). Consecutively, a child's physical and social factors have important effects on these components (Rodger & Ziviani, 1999). To date, there has been plenty of research related to the factors that impact children's play and developmental skills. In essence this review attempts to investigate these elements and how they are interrelated.

2.4.1 The Role of Social Skills in Children's Playfulness

Several researchers have emphasized that play promotes social skills, social competence and social relationships (Singer, Golinkoff,& Hirsh-Pasek, 2006; Fisher, 1992; Creasey, Jarvis & Berk; Rubin & Coplan, 1998). Parten (1932) studied relations between children's sociability and play for more than 50 years (Rubin & Coplan, 1992). Theoretically, Parten (1932) categorized six modes of social participation during children's activities: parallel play, unoccupied behavior, solitary play, onlooker behavior, cooperative play and associative play. Parten (1933) found that children were more social while playing "house" than during parallel play or constructive play. Parten (1932) indicated that there is a linear continuity from solitary play to social play. However, it can be seen that children at different ages can show all types of play (Barnes, 1981). Additionally, studies show rough-and-tumble play effects children's primary social skills, even in very early years of their lives (Gordon, 2014).

Furthermore, to understand with the relationship between play type and social participation, Rubin (2001) investigated children's free-play behaviors, which were evaluated using the Play Observation Scale (POS). That study found that social participation categories (solitary, cooperative or parallel) were enclosed with their

play types (dramatic, constructive, etc.) (as cited in Rubin, Bukowski & Parker, 2007). In addition, Aureli and Colecchia (1996) studied three-year-old children's play behaviors and found that attending daycare centers and playing with infant peers at an early age affects children's type, level and interaction of play activities positively. Moreover, a study by Newton and Jenvey (2011) demonstrated that children's social interactive play is highly related to their social competence. The meta-analytic study of play's role on whole child development reviewed 46 studies from 1974 to 1992. The recognizable evidences found that children's pro-social development or behavioral problems can be either diminished or promoted during play (Fisher, 1992). In particular, the importance of perspective-taking, which plays a role in socially competent behaviors (such as cooperation, socialization), is indicated by Fisher (1992). In turn, starting social play at the beginning of life helps to develop explanatory play in adulthood (Gordon, 2014). While social play is recognized for its development of social competent behavior, pretend play is also seen as a significant experience for developing social competence. The key point here is that social skills, including cooperation, adaptation and sharing, are required for children to sustain social play (Creasey et al., 1998). Although plenty of research indicated a relationship between social competence and social play, there is little research on the construct of playfulness and social skills. One of the studies related to playfulness and social development aimed to explore the relationship between children's playfulness, play behaviors and behavioral problems (Rentzou, 2014). The researcher indicated that playfulness predicts children's play and nonsocial play behaviors during children's engagement in play; also children who seemed worried or anxious were engaged in solitary, inactive and silent play (Rentzou, 2014). Meanwhile children's social deficits, problem behaviors and future problems could be predicted by their playfulness. Fantuzoo, Coolahan, Mendez, McDermott and Sutton-Smith (1998) examined urban Head Start preschool children's peer-play behaviors and social skills using direct observation and the Peer Interactive Peer Play and Social Skills Rating System scales. Their study revealed that children who displayed "interactive play" behaviors such as

setting rules with other children have greater scores on social skills, whereas solitary play or lower self -control skills stem from children's disruptive behaviors during play (Fantuzzo et al., 1998). Another study conducted by Fantuzzo, Sekino and Cohen (2004) investigated children's peer play competence, self-regulation, autonomy, emotional and behavioral adjustment, receptive vocabulary and classroom learning competency. Firstly, the researchers extended their previous studies by using different sources (i.e., tester, observer) and methods (observing, testing by individual) in assessing children's peer play, self-regulation and receptive vocabulary skills. Secondly, they reevaluated children at the end of the year in order to make comparisons with their early assessments. These assessments were applied to a large group of children who enrolled in an urban Head Start program; the study comprised two phases of 242 and 746 children, respectively. Results revealed that children's self-regulation skills and language development were significantly correlated with their interactive peer play behaviors and classroom competencies. The researchers indicated that interactive peer play interactions helped them to overcome barriers during play—they showed taking turns and sharing. Meanwhile problem behaviors (i.e, temperament, aggression) were unlikely to be seen in their classroom behaviors. The concurrent phase of the study at the end of the year demonstrated that peer play behaviors that were disruptive and incoherent predicted later school adjustment problems and emotional deficiencies.

Similarly, some studies investigated relations between characteristics related to social skills and pretend play types. Li, Hestenes and Wang (2014) observed twenty-eight children during outdoor free play in one of the high quality childcare centers. They observed children play for 45 minutes to an hour over two weeks. They collected data from teachers by using the Social Skills Rating System scale to evaluate children's cooperation, self-control and assertiveness skills. Afterwards, their results showed that pretend play had a significant relationship with children's assertiveness, abstract and advanced social skills, whereas concrete play was not associated with other social skill components. Apart from children's social skills,

social competence was also investigated related to play. Lindsey and Colwell (2013) examined children's pretend play skills and their correlations with their social competencies with respect to emotional expressiveness, emotion knowledge and emotion regulation skills as a longitudinal study. They observed 116 preschool children's involvement in pretend play and physical play with their peers and evaluated their social competence. Their findings displayed that children's social competencies were predicted by pretend play, particularly socio-dramatic play instead of fantasy play. The distinction between these types was defined such that fantasy play includes children's "as if" activities for pretending an object or movement, while children engaged with acting a social role or transforming activities with their peers were considered to be engaging in socio-dramatic play. Children are able to look from someone else's point of view or feelings throughout socio-dramatic play (Lindsey & Colwell, 2013). Further, Bodrova and Leong (2003) explained that mature play constitutes imagination, diverse roles, clearly defined rules, flexible themes, language and communications skills and an appropriate length of time. Children's social competence and self-regulation skills are developed as long as mature play exists. Furthermore, children in peer play show cooperation, problem solving and determining their actions (Schulz & Bonawitz, 2007). The correlation between play and socio-emotional behaviors was investigated through further study. Ashiabi's study (2007) was concerned with the role of play on socio-emotional behaviors. The researcher discussed that play required mixed skills. While playing, children sympathize, respond to reactions and become aware of other children's needs. Therefore, children are expected to demonstrate and learn emotional expression, meaning and regulation.

The aforementioned studies used correlation methodologies to investigate relationships between play and social development. However, Walker, Chang, Powell, Simonoff and Grantham-McGregor (2006) conducted a longitudinal, randomized controlled trial study with 129 children initially aged 9-24 months and followed these same participants at 17-18 years. Walker et al. (2007) developed play sessions for supporting mother-child relations, presenting play methods and

homemade toys. They evaluated the 17-year-old children's self-esteem, anxiety, depression and antisocial behaviors through questionnaires. Their results revealed that participants, when compared to children who did not receive intervention, had fewer depression symptoms, less anxiety and higher levels of self-esteem and concentration. They also indicated that at school children were less likely to be suspended or expelled, therefore it can be inferred that they seem to have fewer antisocial behaviors.

To date most of the research has used the play concept rather than playfulness. Even though playfulness was not identified as a construct in the scope of these studies, a few of them have investigated the effects of playful approaches or attitudes on children's cooperation skills and problem-solving abilities. Ramani (2012) investigated preschool children's joint behavior and cooperation skills by comparing playful and child-centered contexts with structured and adult-centered contexts. Even if children were not directed to complete the tasks together, in a playful context they worked on tasks together and communicated positively with their peers. They also constructed more complicated and accurate tasks (Ramani, 2012). In addition, another work by Ramani (2005) used cues for constructing a playful context. The findings of that study showed that children's cooperative behaviors—sharing and communication with each other during the activity—were significantly higher during playful conditions. Similarly, Thomas, Howard and Miles (2006) found that children's problem solving performance was positively affected when they used a playful attitude while approaching the task. Therefore, it can be interpreted that children's social skills might be developed more effectively when they engage in tasks or solve problems in playful conditions.

Sanderson (2010) developed a teacher-report measure, "Project Joy Playfulness Scale" (PJPS), for the "Project Joy" study in order to evaluate preschool children's playfulness. The PJPS scale included four components: active engagement, internal control, joyfulness and social connection. Social connection was defined as when children play cooperatively, become a team member, play collectively, try to get along with their peers, participate in play effortlessly, help

and take actions intended by peers for playing. The findings revealed that these components were independent and correlated with each other. However, strong correlations were not found between social connection and joyfulness. Sanderson emphasized that children's social connection behaviors were assessed by preschool teachers, and that some kinds of social play could not be observed in that environment. This might affect the results.

In terms of the development of the construct of playfulness, various factors are considered by investigating relationships between pretend play, playfulness and social behaviors. Moore's research (1985) was one of the oldest studies investigating relations between playfulness, childrearing practices and Type A behaviors. Type A behaviors were defined as need to excel, efforts to control, hostility, aggression and impatience (Moore, 1985, p. 35). Moore developed the Child Behaviors Inventory measure for assessing children's playfulness, and utilized questionnaires, including The Child Rearing Practices Report for Parenting Childrearing Practices and Matthews Youth Test for Health for Type A behaviors. Participants of the study were 83 children who enrolled in kindergarten, first and second grade. The results of the study showed that children's Type A behaviors were positively correlated to their level of playfulness. In particular, Type A students actively engaged in their play, showing more pretending than unimaginative behaviors. On the other side, impatience and aggressive behaviors, which are considered Type A behaviors, were seen in extrinsically motivated children. They were also resistant to explore.

One such study (Christian, 2012) compared children's playfulness, adaptive behaviors, humor and temperament. The longitudinal study was employed with the participation of 43 school-aged children throughout their fourth grade to sixth grade years. The researcher used scales for evaluating coping, emotion regulation, emotion expression, sense of humor and temperament, and Child Behaviors Inventory of playfulness. According to the results, playfulness was significantly correlated with active coping strategies, emotion regulation, intentness of expressing emotions and the affiliation (i.e intensity for affection, showing

intimacy) component of temperament. However, the researcher could not find any association between early pretend play skills and children's playfulness. Two main reasons indicated were that children's playfulness was rated by teachers and that the behavior inventory of playfulness was not appropriate for assessing school-aged children (Christian, 2012). Another point supporting the findings of the study is that one of the characteristics of playfulness is an adaptive personality trait, so managing emotions can be predicted by children's playfulness.

Bundy et al., (2008) investigated the effects of an intervention plan on Australian children's playfulness. Participants were 20 typically developing children whose ages ranged from 5 to 7. The researcher exchanged the play materials of the playground with loose-part materials. The Test of Playfulness was used during 11 weeks of children's fifteen-minute free play in their school playground to understand differences in playfulness. According to the results of the study, children's playfulness levels were increased significantly after intervention. Researcher-conducted interviews with children's teachers indicated that children demonstrated more social, divergent and tolerant behaviors after intervention (Bundy et al., 2008). Later Bundy et al., (2011) enlarged their study on using play for improving children's social and physical developmental skills. They conducted 3-year Sydney playground projects with 12 schools and 226 students, selected by clustering. Researchers randomly selected 18 children from each school who were 5-7 years old. They employed a cluster randomized controlled trial methodology to utilize play-based adult– and child-based interventions. The study included a baseline and a post-test after 13 weeks. Children's social skills and problem behaviors were assessed through Social Skills Improvement System Rating Scales (SSIS-RS) (Gresham & Elliot, 2008), and the Pictorial Scale of Perceived Competence and Social Acceptance for Young Children (PSPCSAYC) (Harter and Pike, 1984) was utilized to measure social competence and acceptance. They suggested that interventions promoted children's social skills and social competence.

Some of the experimental studies in this area of research have carried out different interventions for children with special needs for improving their social skills and playfulness. In an attempt to add to that field, Cordier, Bundy, Hocking and Einfeld (2009, 2010) focused on play and social skills of children with attention deficit hyperactivity disorder (ADHD). They compared ADHD children with their playmates, who were developing typically with respect to their social play skills, by using Test of Playfulness. Interestingly, they found that the absence of empathy caused play deficits. These deficits can be seen in issues supporting other children's play, responding to playmate's cues, communicating and affecting each other. Meanwhile, children with these deficits face difficulties in sustaining transactions and creating expressive relationships with their friends (Cordier et al., 2010).

There was further development by Wilkes, Cordier, Bundy, Docking and Munro (2011). The researchers developed a play-based intervention plan for children with ADHD to improve play and social skills during free play sessions with their peer playmates. They used Test of Playfulness to test improvement of social play before and after intervention. The Child Behavior checklist and Conners' Parent Rating scales were also employed. They found significant improvement of social play and social skills with a large effect size. Furthermore, they saw development in peer playmates' social play skills after intervention. Especially the "persist" ability—to push through tough conditions and continue play transactions— progressed; this helps to establish friendships between the students. Improvement of prosocial behaviors was also exhibited through interpersonal empathy items of playfulness (Wilkes et al., 2011). In addition to investigating children's playfulness and social play skills, researchers examined children's coping skills with playfulness. Saunders, Sayer and Goodale (1998) conducted a study with 19 preschool children. The researcher utilized the Test of Playfulness and the Coping inventory to evaluate the playfulness and coping skills of children. Coping skills were categorized under self and environment. Productivity, activeness and flexibility dimensions were assessed. According to

results of the study, children's levels of playfulness and their coping skills were highly positive and related to each other. Interestingly, girls had higher scores than boys considering the results of all of the measures. The researcher explained these differences through the fact that girls experienced more pretend play, such as modeling dressing up and housekeeping, thus sustaining their coping skills by promoting social skills during pretend play.

Hess and Bundy (2003) investigated the links between playfulness and coping skills in adults. They also used observation-based tools, the Test of Playfulness and the Coping Inventory Tests, with typically developing adolescents and those with and emotional disturbance. They found a high significant correlation between coping skills and playfulness scores. Internal control was the component of playfulness linked to coping skills in terms of feeling in control. Their findings suggested that children's coping skills could be developed by promoting playfulness. The importance of promoting playfulness and its connection to children's lifetime adaptability, coping and wellbeing could be seen as a starting point for researchers, so some studies deal with increasing playfulness of children by developing interventions. To explore the effectiveness of one intervention program, Boyer (1997) used sensory stimulation for affecting preschool children's playfulness, social-emotional, manifest joy and sense of humor. The researcher designed the intervention to include the five physical senses in playful and imaginative activities. The Children Playfulness Scale (Barnett, 1990) with five components (physical, socio-emotional, cognitive, manifest joy and sense of humor) was utilized for this study. The findings showed that children who participated in the intervention plans had higher scores on the playfulness scale. In particular, socio-emotional, manifest joy and sense of humor were significantly different between the control and experimental groups.

2.4.2 The Role of Environment in Children's Playfulness

Extensive literature addresses the importance of playfulness and sustaining playfulness by encouraging and preparing playful opportunities during childhood and even adulthood. Therefore, the following section will review research showing the crucial role of environment for children's playfulness. Personal characteristics and genetic inheritance might influence a person's interactions with the environment. However, it is important to consider whether an environment is rich, safe or supportive (Bundy, 1999). Social and physical environment could have an impact on children's playfulness by means of supporting or hindering (Branson & Bundy, 2001). If an environment does not meet the player's needs and offer challenges, it causes boredom. Conversely, if the environment exceeds the player's capacity, it leads to pressure on the individual, and anxiety could occur (Branson & Bundy, 2001). Environment has become a first factor to be focused on when playfulness is concerned. For that reason, playfulness needs to be observed and followed across different environmental settings (Bundy, 1999). Rogers and Ziviani (2006) indicated that connections between the skills and interests of a child, obstacles, supportiveness of environment and provoking challenges of the activity type affected children's play performance and playfulness. They suggested that play settings should enable children to learn rules and expected behaviors, feel safe and approved, be active explorers and be engaged in interactive play. According to the literature review by Fisher, Hirsch-Pasek, Golinkoff, Singer and Berk (2010), environment pushed children's skills and abilities into higher levels by use of teaching. In addition, many studies proved that a playful environment and playful teaching methods contribute to children's literacy and math skills, social competence and emotional development.

One of the prominent studies is Vandenberg's (1981) study, which investigated the effects of various environments and social and cognitive egocentrism on the social play of preschool children. Fifteen boys and thirteen girls aged 55 months (4 and a half years of age) participated in the study. Two different

conditions of environment were provided to children during free play. The two environments included either big muscle or small muscle activities and materials. The results showed that play environments have an important role in children's social play and play groups scopes. In particularly, the study found that children who engaged in the big muscle–designed room consisting of climbing, running, etc. demonstrated more social play behavior. On the contrary, children were more engaged in solitary and parallel play in the room that supported fine motor skills, which was mostly focused on art activities.

Bundy (1997) views playfulness as a state and is concerned with the role of environment for enhancing playfulness. Cooper (2000) also supported this view, as Cooper`s model described how physical and social components can diminish or encourage playfulness. The physical environment is regarded as space, objects and place, while the social environment consists of caregiver, parents, peers, younger and older children and adults. In addition to these, the role of cultural and socioeconomic factors, as well as gender, was recognized. However, these factors' influences are seen as too complex to fully find out.

Reed, Dunbar and Bundy (2000) conducted a study with typically developing children and preschool children with autism for investigating an inclusive program on children's playfulness. One of the aims of the inclusive program was promoting and giving an opportunity to children to engage in social and play behaviors with their peers. The instrument of the study is the Test of Playfulness; it was used during children's 15-minute free play sessions. Children were observed in the classroom setting and playground. During outdoor time, they engaged in three types of activities: cooperative social play, gross motor play and construction play. As children were playing in the classroom setting, they did block building, finger painting, dramatic or imaginative play, art with a drawing board and turn-taking games with various manipulative toys. According to the results of the study, the inclusive program did not affect the level of playfulness of children when compared to non-inclusive classrooms; on the other hand, researchers discussed that the non-inclusive program helped overall scores of children's playfulness

because they used a less structured environment, giving value to free play and playful manner in teachers.

A more supportive or less supportive environment can determine children's behavior. They might show less playful behaviors in an unsupportive environment, even if they have been regarded as playful (Bronson & Bundy, 2001). Therefore, Bronson and Bundy (2001) studied the reliability and validity of The Environmental Supportiveness test (TOES) and its correlation with the Test of Playfulness (TOP) across different settings to fulfill the need for an assessment of playfulness and supportiveness of environment. They observed 109 children with special needs and 51 children who were developing typically in numerous locations in Canada and the United States. The children in the study ranged from 15 to 180 months, with a mean age of 70 months, or just under 6 years. They found that TOES was reliable regarding raters, however, the instrument did not give sufficient evidence for distinguishing between supportive or unsupportive environments. On the other hand, their results showed that playfulness and environment are significantly related each other. Another study related to assessing environmental supportiveness and its effect on playfulness was conducted with 265 children aged between 15 months to 12 years (Bundy, Waugh & Brentnall, 2009). Researchers adapted TOES and TOP assessments to create the T-TUM. T-TUM scores were defined as playfulness; scores were adjusted according to supportiveness of environment. Their findings revealed that more supportive environments can influence playfulness more significantly than the less supportive environment, which hinders children's playfulness.

Hindmarsh-Hook (2005) conducted a case study to identify play skills in children with individualized education plans. The researcher examined a ten-year-old child with special needs by utilizing the Test of Playfulness, Test of Environmental Supportiveness and Preschool Play Scales and Play History. The implementation plan aimed to show parents, therapist and teachers how to promote children's playful behaviors. The study emphasized that parents' and teachers' safety concerns inhibit participant's playful behaviors. Children begin to be

motivated to learn some play and play safely with their peers with slight assistance after six months, but the findings of study indicated that the participant was unable to be an active player because of her sensory and physical difficulties.

Hamm's (2006) study also supported the previous study's findings. Hamm investigated the reliability and validity of the TOP and TOES and the correlations between them in children with developmental disabilities and typically developing children. The participants of the study included 40 children whose age ranges were 6 to 36 months. The results of the study supported that both TOP and TOES are valid and reliable instruments. Children with developmental disabilities were found to be less playful compared with typically developing children, however they could not find any difference between them regarding their environmental supportiveness. Regarding the relationship between playfulness and environmental supportiveness they found a high correlation between them, in particular for children with developmental delays. Therefore, findings of the study suggest that environmental supportiveness has a more significant role in playfulness of children with special needs.

Rigby and Gaik (2007) conducted a study with children with cerebral palsy between the ages of 4 and 8 to investigate the stability of their playfulness based on three different environment settings: home, community and school. The Test of Playfulness was utilized for the study. The findings showed that children's playfulness was higher at home than the other settings. It is interesting to note that all of the children involved were seen as playful in at least one setting, so researchers indicated that all children can be playful with a well-prepared and appropriate environment. However, most environmental conditions do not support children's playfulness.

With respect to the physical environment, the features of a playground or classroom need to be supportive and give opportunity for children's playfulness. Rogers and Ziviani (2006) indicated that ideal play settings are arranged according to children with respect to accessibility and materials. A study by Barbour (1999) demonstrated that various types of play behaviors occurred in different features of

environment. The researcher compared two settings, with one setting including various equipment and materials, and children there showed more diverse forms of play. Especially, the playground that included loose parts gave the opportunity for children to play cooperatively.

Fabrizi (2014) explored the influences of community playgroup interventions on children's playfulness. The researcher employed a quasi-experimental study with special needs children who were 15 months to 3 years old. While children were at their free play session with their caregivers, the Test of Playfulness was used in measuring children's playfulness before and after community playgroup intervention. Community playgroup sessions included increasing participation in playgroups, being a playful model, adjusting the environment and giving opportunities for social play with peers in the community. The results of the study showed that community play groups have a significant positive effect on playfulness of children with special needs.

On the other hand, a study by Moore and Lynch (2015) reviewed research related to accessibility and usability of playground environments for children. The study showed that children's playground environments do not meet the needs of all children, including appropriate social, physical and political levels of obstacles; they are inaccessible, disadvantageous, and not an inclusive setting for special needs children.

Regarding children's playground interactions in terms of types of play, Nabors and Badawi (1997) conducted research with children aged 3 and 5 years to identify which types of play they observed in the school playground. During free play, 45 typically developing children and 19 children with special needs were observed with their teachers, alone and with peers in two childcare settings using the "snap shout" technique. The study found that children with special needs used less comparative play with their peers, even if their playgrounds were defined as "creative-adventure" types. The researcher indicated that teachers have an important role in facilitating disabled children's cooperative play with their peers. It can be inferred that adults' role needs to be considered as environmental factors.

In terms of factors influencing children's preference during their free play, Harper and Huie (1998) worked with 244 children aged 3-5 years. The researchers selected the participating children from 6 different preschool settings and observed them during free play time. The results showed that children's engagement and openness of activities were affected by physical and social characteristics. While children are engaging in free play, more social play behaviors are seen among them.

With regard to adults' role in children's playfulness, Dodd and Wilson (1998) also investigated the adult interactions conditions, which are either "adult directed" or "adult assisted," via exploratory play and the differences in their effects on children's playfulness. The researcher conducted a qualitative study by observing 40 toddlers aged between 18 to 24 months while playing with their teachers, and utilized the Child Behaviors Inventory by asking parents to rate their children's playfulness. The findings of the study showed that in adult-assisted conditions, children were able to reach the expected aims by various ways, created different usages of objects and engaged in play longer than during adult-directed play. In addition, their persistence for reaching the aims was sustained much longer in that adult-assisted condition. Children were less engaged in pretend play during adult directed play. Dodd and Wilson (1988) suggest that participants were seen as more playful during adult-directed play conditions. However, there was an important note from the researchers: the conditions' affects were not to be extrapolated to all age groups because at 16-24 months children are more dependent on their adults and they need more direction and modeling behaviors.

Lobman (2001) investigated how playful environments and interactions between children and adults could be created in childcare centers. Preschool children were observed over a four-month period by means of field notes, videotapes and journals. Results showed that preschool teachers for the most part did not use improvisation while playing with children. Another important finding is that teachers can be playful while teaching new skills and knowledge and continue to be a leader in the activities. But it is important that teachers be aware of the

importance of children's participation in creation, rather than following a planned script. Lobman (2006) continued to study teachers' preparation in a play-based preschool classroom by creating an intervention plan using improvisational theatre workshops. The results demonstrated that teachers` skills were developed for reacting to children's play and creating new activities collectively. Teachers became aware of their weakness in terms of not listening or controlling the activity (Lobman, 2006).

Kendrick (2013) also studied teachers' influence on preschool children's play behaviors in the playground. Both children's and teachers' behaviors were examined after a teaching training intervention; children's play behaviors with their teachers served as a control group and experimental group and were assessed by observation in three phases (baseline, intervention and post). Teachers were trained in sustaining children's more complex play and preventing children from engaging onlooker or un-purposeful play types. The Playfulness Assessment Profile (Preschool Edition) (Sanderson, 2010) and Social Competence and Behavior Evaluation scales were utilized. In addition, teachers' behaviors while playing with children as observed from the videotapes were coded by means of "global teacher playground styles," (i.e., negative, director, or rule enforcer). However, when comparing control groups, teachers in experimental groups demonstrated more negative influences on children's play. The findings of the study also showed that teachers were not willingly participating in children's play; instead they preferred to supervise children in the playground.

Farver and Lee-Shin (2000) investigated Korean mothers' parenting, play attitudes and their children's social and play behaviors by comparing their acculturation. The researchers conducted research with 108 Korean-American and 52 European-American mothers by administrating the Parent as Teacher Inventory and Play Questionnaire and observing free play activities of children. The findings showed that there was a significant relationship between mothers' encouragement and endorsing the importance of play and children's self-expressions and play and social behaviors. Indeed, separated and assimilated mothers of children were less

interested in pretend play. In addition, children's mothers did not endorse play as an important part of learning. Therefore, they used play as an academic activity for their children. It is interesting to note that 54% of Korean-American and 96% of European- American mothers thought that children and parents should play together. Nevertheless, they felt difficulty in sustaining their interest during play with their children (Farver & Lee-Shin, 2000).

Sandseter (2009) conducted qualitative research by exploring a natural and ordinary preschool outdoor environment with respect to children's risky play. "Risky play" is formed by including physical risk in activities that is sensational and appealing (Sandseter, 2008). Children's play was videotaped, and interview methods and observation of the collected data were used to understand their possible affordance for risky play. Most of the children stated that teachers did not allow them to do what they wanted in the playground. The researcher indicated that both types of playground settings contained risky play. In fact, children's level of risky play was found to be higher in the natural environment features because they are more challenging, however these risks were not seen by children (Sandseter, 2009).

Although most of the study findings supported the idea that playfulness could be changeable across settings, Ryan (2011) revealed that children's personal elements can be more effective than the environment. The researcher studied differences between the home and hospital environments in terms of children's playfulness. The researcher intended to assess playfulness of hospitalized children during the time they were in the hospital and then in their home using the Test of Playfulness and the Test of Environmental Supportiveness. Finding of the study showed that their playfulness mean scores were around .20 on Test of Playfulness (SD=.69). Compared to Skard and Bundy's (2008) study findings (M=.43:M=-.43), their scores fell just between children with special needs' and typical children's playfulness scores. On the other hand, children's level of playfulness was not changed between home and hospital. Moreover, negative or positive elements of the environment were not related to children's playfulness.

Shim, Herwing and Shelley (2001) conducted a study with children aged 2 to 5 years to identify connections between children's play behaviors with their peers across different settings in three childcare centers located in the United States. Although researchers did not use the Test of Environmental supportiveness for playfulness, they focused on the quality of the indoor and outdoor environment with respect to children's play behaviors with their peers. The Assessment Profile for Early Childhood Programs and the Parten-Smilansky Play Scale were utilized for describing the environment and categorizing play behaviors. Children's interactions with peers were observed for five minutes during their free play by means of videotaping with a wireless microphone. The results showed that all centers had low quality environments for children. The results also showed that there was a significant relationship between settings and children's parallel functional play. Indeed, 4 to 5 year-old children mostly used parallel functional play in outdoor environments. Children also exhibited social behaviors during the pretend play in the outdoors. However, classroom settings did not support child-centered dramatic play with their objects and settings.

Chang, Hsu and Chen (2013) investigated the classroom playfulness climate and its relationship with high school students' creativity. They developed a class playfulness climate scale by adapting the Adult Playfulness Scale for the study. According to the results of the study, the student classroom atmosphere met the expectations for playfulness. Their environment was described as "relaxed, casual, humorous and happy." A free atmosphere helps to sustain playfulness and positive occurrences. Furthermore, there was a significant positive correlation between level of playfulness of the atmosphere and students' graphic and linguistic creativity.

2.4.3 Summary of Evidences

The previous sections have examined definitions of play and playfulness and their importance to children. They highlighted the four elements of playfulness behind Bundy's theory of playfulness in order to provide a framework for

understanding the results of Test of Playfulness and Test of Environmental Supportiveness.

In the second half of literature review, the social and environmental factors affecting playfulness were explored. Firstly, the examination of studies on relationships between social skills and play behaviors showed that children demonstrated more social play skills and fewer problem behaviors during play with their peers and pretend play (Li, Hestenes & Wang, 2014; Lindsey & Colwell,2013). Further, children's play behaviors were shown to be predictive for future social developmental deficits and problems (Walker et al., 2007). Likewise, playground studies and play interventions make significant changes in children's social skills (Bundy et al., 2008, 2011). However, there is limited research on investigating relations of playfulness and social skills. Playfulness is a state because it can be differentiated across different environmental features; each factor enriches or hinders playfulness (Bundy, 1997) Environment is divided into two categories, which are social environment and physical environment. Children's social environment is encompassed by playmates, caregivers and community. The role of adults in children's play was found to significant because they can hinder them by bounding rules, attitudes towards risky play, use of materials and directing children's play (e.g Hindmarsh-Hook, 2005). On the other hand, researchers found positive changes through adults' role in children's play by developing intervention programs (Nabors & Badawi, 1997; Dodd & Wilson, 1998; Lobman, 2006; Kendrick, 2013). Some researchers also investigated physical environment effects on children with special needs and typically developed children. Specifically, effects of sensory materials and loose parts of the environment enhance playfulness of children with special needs (Barbour, 1999; Bundy et al., 2008).

Finally, a few studies discussed the current issue of preschool children's playfulness levels and the role of environmental supportiveness in terms of social skills and problem behaviors, yet most of them studied small samples or children with special needs. Although children's play behaviors can be understood by

observation, teacher and parent reports are based on their analyses. Therefore, an important gap could be filled by the present research.

CHAPTER 3

METHOD

This chapter provides the method of the study. Specifically, it documents how the study was conducted in terms of the data collection, participants, instruments, procedure and data analysis.

3.1 Design of the study

This study employed a correlational design within the quantitative research approach. Correlation design is also called associational design. It is a form of descriptive design. Fraenkell and Wallen (2006) defined correlation research as when "the relationships among two or more variables are studied without any attempt to influence them" (p.328). Correlational research has two main purposes. The first purpose of this research type is exploring relations between variables for explaining crucial phenomena. The second is predicting a variable's expected values by identifying the degree of relationships between other variables (Fraenkell & Wallen, 2006). For these reasons, the nature of correlational research was found to be most appropriate for the purposes of the current study. Children's playfulness could be understood more fully by clarifying its relationships with and among other variables like social skills and environment. The present study aimed to explore preschool children's playfulness levels, social skills and their school environment supportiveness for their playfulness. This study also investigates whether a correlation exists between children's playfulness in different levels of environmentally supportive schools. This study tried to discover whether there is a connection between two or more variables, and to what extent. The design was chosen because these variables are measured by scales and a correlational exploration will help find significant relationships between them.

3.2 Research Questions

The following questions guided this research.

1) What are preschool children's levels of playfulness, social skills and environmental supportiveness?
2) Is there a difference between preschool children's playfulness within different levels of environmental support for play in their preschool settings?

3) Is there a correlation between preschool children's playfulness and social skills?

3.3 Participants of the Study

In the current study, the target population was all five-year-old children attending preschools of the Çankaya, Yenimahalle, Keçiören and Sincan districts of Ankara. An accessible population was defined as five-year-old children in the 16 private and public preschools in these districts of Ankara. Selection of the sample was based on the convenience sampling method. As Frankel and Wallen (2005) point out, individuals cannot be selected based on implementation or circumstances. Therefore, it would be more feasible to reach preschools who agree to participate in the study. Some schools were not included in the study because the researcher used video recording during data collection and some of the schools did not agree to be taped. Therefore, the data was collected in 16 private (n=6) and public (n=10) preschools.

The Test of Environmental Supportiveness (TOES) (Bundy & Skard, 2008) was applied to classify the extent to which each preschool environment was supportive of play. After grouping preschool settings into low, moderate and high levels of environmental supports for play, the Test of Playfulness provided scores on children's playfulness. Then the Social Skills Rating System Scale, preschool version (Gresham & Elliott, 1990), gave information for screening and classifying

children's social behaviors and behavioral problems. The SSRS scale was completed by the children's preschool teachers. Children's preschool teachers (n=30) had a certification for teaching and worked as full-time early childhood education teachers in the private and public preschools. In this study, a Turkish Translation of the SSRS Preschool Teacher form was administered.

Two phases of sampling procedures were performed in the data analysis. Firstly, during data collection procedures, 221 children were observed in their classroom in order to use the Test of Playfulness and Test of Environmental Supportiveness. Some of the children could not observed because of their absences during videotaping. However, teachers completed a Social Skills Rating System for all children in their classroom (n=243). Secondly, each scale of data were analyzed for confirming adequately to the Rasch analysis. Some of the children with the worst fit were removed when conducting the Rasch analysis. Ultimately, a total of 212 children (94 boys, 118 girls) participated in this study.

3.4 Data Collection Instruments

The data for the present study were collected from teachers' reports and by direct observation by the researcher. Therefore, the instruments of the study are two-dimensional: the first is teachers' assessments of children's social skills and the second is observational assessment of playfulness. The first set was used to assess children's social skills using teacher ratings of the SSRS, preschool version (Gresham & Elliot, 1990). The second set of instruments assessed children's playfulness using the Test of Playfulness (Bundy, 2004) and the Test of Environmental Supportiveness (Skard & Bundy, 2008). Further, construct validity and reliability per child and items for each instrument have been analyzed via Rasch Analysis in the result section.

In the first set, preschool teachers filled out a demographic questionnaire that included items asking for their basic information, such as children`s age and gender,

SSRS was employed for gaining information about children's social skills. The following sub-section describes the instruments in detail.

3.4.1 The Test of Playfulness-TOP

According to an extensive systematic review of research related to play and playfulness assessment tools, the Test of Playfulness (TOP) was found the most reliable and valid (Okimoto, Bundy & Hanzlik, 2000; Branson & Bundy, 2007; Feldt, 2009); thus TOP was selected for the present study. The Test of Playfulness was developed and standardized by Bundy (2004) to assess children's playfulness. The TOP was designed to be scored from videotapes of children engaged in free play. It is a 29-item observational assessment scale and administered after free play time of children for approximately 15 minutes. Each item is rated on a 4-point scale (0 to 3) of extent, intensity, and skill, assessing various operationalized features of the play (Bundy, 1997). Some items, such as "is actively engaged," are scored on all three areas. In contrast, the item "decides what to do" is scored only under extent Using the proposed measure of playfulness allowed an investigation of the relationship between the children's intrinsic motivation, internal control and suspension of reality. The TOP was implemented by making direct observation. Each score points out the extent, the intensity (degree) or the skillfulness observed. These ratings demonstrate children's activeness, joyfulness, physical spontaneity and play forms. Moreover, gathering information about children's playfulness profiles helps to find out children's needs and deficiencies, particularly in the preschool context. Playfulness is determined by evaluating for the presence of intrinsic motivation, internal control, freedom to suspend reality and skills related to framing (Bundy, 1997). The TOP has high inter-rater reliability (data from 96% of raters fit the expectations of the Rasch model); acceptable test-retest reliability (e.g., intra-class correlation 0.67 at P <.01; Brentnall, Bundy & Kay, 2008) and provided construct validity (e.g., 93% of the items and 98% of children and %100 raters met Rasch assumptions; Bundy, Nelson, Metzger & Bingaman, 2001, Gaik & Rigby,

1994; Harkness & Bundy, 2001). In the current study, the reliability of the TOP as calculated by Cronbach alpha was .93.

3.4.2 Test of Environmental Supportiveness –TOES

The Test of Environmental Supportiveness (TOES) was developed to investigate features of environment which are caregivers, playmates, objects and space whether meet player motivations (Bundy, 1997). It has 17 observational items and is administered to children aged 15 months to 12 years. The TOES tool was developed to address the ways in which the environment influences play. It assesses the extent to which elements of a feautures of environment support players; it was developed to be used simultaneously with the ToP. The TOES examines caregivers, playmates, objects, play space and the sensory environment as players seek to meet their motivations through play. It helps educators and therapists to comprehend children's play behavior and the environmental impact on play, and to observe manipulation's effects on children's expressions of playfulness. Items are evaluated according to the extent of support for children's interest. TOES items are scored on a 4-point scale (-2, -1, +1, +2). The test considers four elements of environment: caregivers, playmates, space and objects According to studies by Bronson and Bundy (2001) and Harding (1997), the TOES has sufficient reliability and validity for children with a range of disabilities and for typically developing children. Bronson and Bundy examined three aspects of reliability: inter-rater reliability, estimated item model error and ability of the items to separate environments into levels of relative supportiveness. Goodness of fit statistics revealed that data from 100% of raters conformed to the expectations of the Rasch model. Further, estimated item model errors were low (<.25) for all but one item ("younger playmates read player's cues"; error =.26).

After getting necessary permissions from developers of TOP and TOES (A. Bundy, Personal communication, October 2, 2013), instruments were translated into Turkish by researcher. Further, the researcher consulted two experts who are early

childhood education researcher with a doctoral degree and one English translator's opinion for translation and appropriateness of items. After modifications, final versions of instruments were used for this study.

3.4.3 Social Skills Rating System-SSRS

The Social Skills Rating System (Gresham & Stephen, 1990) is used for screening and classifying preschool, elementary and secondary school children's social skills. It helps to develop intervention programs for social skills deficits. In this study, a Turkish Translation of the SSRS (3-5 years old children) preschool teacher form was administered to children's preschool teachers. The instrument was translated and adapted by Elibol-Gültekin & Dinçer (2008). The test takes 15 to 20 minutes and is filled out individually for each child. The SSRS-teacher version has 40 items (30 items for social skills with three subscales and 10 items with two subscales for problem behavior) and uses a 3-point Likert-type scale (never, sometimes and very often). It is divided into two subscales: social skills (cooperation, assertion and self-control) and problem behaviors (externalizing and internalizing). Elibol-Gültekin and Dinçer (2008) conducted a study with 341 preschoolers. The authors reported high internal consistency reliability scores for the SRSS social skills. The reliability of the cooperation, assertion and self-control subscales were .88, .90 and .85, respectively. Also, within the problem behaviors the externalizing subscale was found to be .83, and internalizing behaviors was found to be .86. The authors reported a Kaiser-Meyer-Olkin value of .941 and the Barlett test results as being statistically significant at the level of .000. The three sub-scales together explained 52.42% of the variance. In the present study, the total Cronbach's alpha coefficient value was .94. The sub-scales of social skills, which are the cooperation, assertion and self-control subscales, values were .93, .91 and .99, respectively

3.5 Data Collection Procedure

In this study, data collection was carried out during the 2015-2016 Spring-Summer-Fall-Summer semesters. Data collected procedures were carried for one year. Permission from the Research Center for Applied Ethics of METU and the Ministry of National Education was obtained in order to conduct research in the preschools in Ankara in 2014. Prior to each data collection process, the researcher contacted different preschool settings depending on their size, materials and children's ratio. In this study, the two waves of data were collected from 16 preschools. The first wave was observing children in their classroom by videotaping. The second wave required teachers to fill out forms on the children in their classrooms. Because of the two phases of data collection, the approval included permissions from schools, teachers and parents. In summer of 2014, permissions for collection of data were gathered from the preschools' directors. Then, preschool teachers were asked to complete consent forms to confirm their voluntary participation in the study. Parents of all children were asked to give permission for their children's participation in the study. The collection of the consent forms and explanation of the aims and study were done before the administration of scale was implemented. Before data collection started, the researcher visited each school and gained necessary information about the schools. The school required that observation occur during a specific time of day without interruptions. Therefore, their time schedules, official holidays, field trips and special days were taken into consideration before starting to collect data. Each school was visited approximately five times over one year, usually in the fall and spring semesters and all final visits were completed during the summer semester. The SSRS was filled out by teachers in an empty room in their schools. Hence, before implementation the researcher informed teachers of the protocols of the instruments and the classroom observation process/video recording. Teachers who completed the forms needed to be familiar to the children over a 6-month period. Forms were completed in less than 30 minutes on average The TOP and TOES are designed to be used in a familiar setting with familiar toys

and playmates, thus making them practical for this setting. Teachers were free to choose a time of day that was appropriate for children's free play routine. Most of a preschool`s morning routine is free play. Children were mostly observed in the morning during their unstructured free play time on different days of the week. Before implementation, the researcher introduced herself and briefly explained her purpose to the children. Children in their 30-minute free play sessions were then observed and videotaped by the researcher. In addition to observation of the designated play space, the researcher collected the data herself in school settings by using cameras Each play session was videotaped using three cameras with a zoom lens and tripods- plus- a hand camera as well. Three of the cameras with their tripods were placed into three sides of the classroom for recording each child`s activities and their conversations with their playmates and teacher. In order to look at their cues, gestures and body language closely, a hand camera was used by the researcher. During videotaping, children sometimes had to stop playing because of parent`s visits or changes in the schedule of the classroom; in this case observations were rescheduled to another day. Teachers were free to choose their materials except table toys or a single-player games. Sometimes children moved to different areas of the classroom; the researcher followed them by camera without disturbing them The researcher did not provide or give any materials to children. All of the video-recording of the children and caregivers was conducted in children's primary free play areas. During the data collection process, the researcher tried to minimize the effect of the camera on children's and teacher's behaviors and concentration. Due to their ages and eagerness to play, videotaping attracted their attention only for the first three to five minutes, then they then continued to play as if they were unaware of the camera. Therefore, the first five minuteswere skipped in the administration of the instruments. Some teachers showed unwillingness to be seen by the camera. To increase the chances of observing playful behaviors, children's needs were considered; the researcher ensured that they were not hungry, sick or tired before videotaping.

After all the data recordings were taken, separate DVD formats were prepared for each classroom and each child so that the researcher could watch them and complete instruments. While videos were playing, the researcher took notes and filled out the tests for 15 minutes of each child's free play sessions. After videos of the children at free play were scored assessing their playfulness and their environment supportiveness for play, raw scores were entered into an Excel file and subjected to Rasch Analysis.

3.6 Setting

Playfulness can be observed more easily when players are engaged in free play (Bundy, 2010), so the researcher observed children during their free play sessions in their preschool centers. After receiving a consent form for video, the researcher started to videotape children's free play sessions in their classroom based the TOP (Bundy, 2010) and TOES (Bundy,1999) manuals. As suggested in the TOP manual, children's free play needs to be observed in the settings in which children play safely both physically and emotionally. Children's play environments were not changed or interfered with by the researcher. It is recommended that young children can be observed playing with their playmates in the presence of their caregivers. Caregivers in the classroom were informed to behave as they would during a typical day in their free play hours. Caregivers were expected to behave like a playmate rather than giving directions to children's play or interrupting. In order to give detailed information about the setting, the following part will summarize preschool classrooms supportiveness profiles through considering related items; caregivers, peer playmates, objects and play space.

The Test of Environment Supportiveness was utilized for assessing children's classroom environmental support for playfulness. After observations and videotaping each school classroom environment while children were at free play sessions, each environment was classified as one of three level of supportiveness. The grouping method was used to analyze the environments into three different groups (discussed

in detail in the Result section). According to this grouping procedure, 3 schools were labelled low supportive, 10 were seen to be moderately supportive and 3 were defined as highly supportive based on scores from TOES. Each level of school support will be described with respect to each of the elements in the following sections.

3.6.1 Low Supportive Classrooms

3.6.1.1 Caregivers:

In this study, caregivers were the most unsupportive element of the environment for many children. Most of the caregivers were present to observe and supervise the children instead of assuming the role of playmates. They would sometimes stop children's play because of safety concerns. They gave strict directions when children could not come to an agreement for using an object. In addition, they did not help children to increase their responsibility by engaging in risky play. Teachers did not maintain children's flow of play; instead they gave suggestions about play or following the rules of the classroom.

3.6.1.2 Playmates:

Classroom playmates in schools F, D and H provided limited support in the classroom environment. While they were playing, they behaved illogically toward their playmates and failed to maintain play. One of the negative issues rising from poor peer playmates was that failures to give and read cues appropriately meant players could miss cues or fail to understand; this could make players passive or unaccountable (Jennings & MacTurk, 1995).

3.6.1.3 Objects:

The environment can lower the capability of players by providing inappropriate toys and materials for their age and developmental level (Skard & Bundy, 2008). These have negative effects on their behavior; students feel bored or anxious when their materials are below or far beyond their abilities (Skard & Bundy, 2008). Compared to high supportive classrooms, these environmental properties were less responsive to individual motivations. Similar to moderate-level supportive

classrooms, players had limited choices and numbers of playthings. In the present study, most schools included similar types of materials, such as LEGOs, wooden blocks, puppets, puzzles, dolls and stuffed animals and housekeeping materials (kitchen, tables, spoon etc.). None of the low supportive schools had sufficient sensory materials; they did not provide materials for water play or objects from nature. However, sensory materials, loose parts and risk taking-manipulative materials have important positive effects on children`s playfulness (Boyer, 1997; Barbour, 1999; Bundy et al, 2008, 2011).

3.6.1.4 Play Space:

Spaces were sufficiently safe in low support classroom; all schools in this study followed the usual precautions for young children. However, like moderate level of support classrooms, there was not adequate space for gross motor activities. Classroom size was over 15 children and accessibility of objects was limited; not all toys were available during free time.

3.6.2 Moderately Supportive Classrooms

3.6.2.1 Caregivers:

More supportive caregivers were seen for moderately supportive classrooms; nevertheless, they could not assume a playmate role instead of setting rules for play. They mostly supervised and planned group activities for the children and offered materials to play with. They rarely showed directive behaviors through child-initiated activities, but they had the tendency to initiate activities with one or two children if they were seen alone or did not get along with other players.

3.6.2.2 Playmates:

Playmates sometimes made an effort to continue other players' activities, but their messages to players were sometimes unrelated to the activity or easily misunderstood. Similarly, to low support classrooms, some of the children were too bossy or directive while they were playing. In addition, they were not able to engage fully in the activity.

3.6.2.3 Objects:

In moderate play support classrooms, it was clearly seen that children were very motivated with classroom materials that were not intended for play, such as carpets, pillows or cushion. Especially when sliding or jumping on cushions and pillows, they showed real enjoyment and interest to play. These were signs of desire for sensory materials. On the other hand, the number of objects and toys allowed for the whole group of children to play.

3.6.2.4 Play space:

Teachers arranged some corners for children to engage in LEGOs, housekeeping and kitchen materials, and riding toy activities. Space was adequately accessible but the sizes of the classrooms were not suitable for motor activities or playing with large groups of children. Moreover, some of the classrooms were too much noisy and colorful, thus overly stimulating the children.

3.6.3 Highly supportive classrooms

3.6.3.1 Caregivers:

Caregivers were skilled in following children's directions and accepting children's leadership throughout activities. Teachers were at least occasionally consistent with children's game rules and non-disruptive to the flow of activities. It was clearly seen that they showed respect to child-initiated activities and gave importance to children's ideas, suggestions and plans for play. Instead of interrupting for unnecessary reasons, teachers tried to respond to children's cues and continue their pretend play. They rarely interrupted children's activities to make children play safely if they were beginning to hurt each other physically. They let children in their classroom be free to decide the type, location, materials for and duration of play.

3.6.3.2 Playmates:

Peer playmates enjoyed each other and seemed happy and joyful. Their reactions to a player's activities were more likely to be supportive. They engaged their roles intentionally but were not seen as equals while teachers were sharing roles or giving directions.

3.6.2.3 Objects:

Objects seemed to consider the exact motivations of children and offer support in terms of allowing changes and offering challenges. Classrooms had various kinds of objects, such as a child parachute or huge LEGOs and shapes. Children were very engaged in constructing different patterns with big geometric shapes and playing cooperatively with parachutes. Also small figures, folding screens, and costumes gave them opportunities to pretend play and caught their attention.

3.6.2.4 Play space:

Space was sufficient to safely play with whole groups of children. In addition, the large space supported children in creating big structures and playing cooperatively. Temperature, noise, cleanliness and color of the classroom adequately met children's needs. Loose parts and natural objects that were not designed as toys—such as bins, stones, wood and sand—were offered in classrooms deemed highly supportive of play.

3.7 Pilot study

Before data collection for the current study, the researcher collected data from two different preschool centers for a pilot study during the 2013 summer semester. She watched videos of the children's free play several times to use instruments and ensure appropriateness of videos. Prof. Dr. Anita Bundy also watched and confirmed a sample of the videos (personal communication, November, 15, 2014). The researcher had substantial experience observing children and utilizing cameras without disrupting; she participated in a project called "Levelling the Playing Field: Starting with the School Playground" (Bundy et. al., 2014-2017) for six months during the 2014-2015 spring and summer semesters at the Faculty of Health Sciences at the University of Sydney, Australia. The researcher had received training about the Test of Playfulness (TOP) manual and scored 10 video tapes for

calibration and assured rater reliability. Raw scores were subjected to Rasch analysis. The calibration process for rater reliability was completed by Prof. Dr. Anita Bundy, who is the developer of the Test of Playfulness (TOP) and Test of Environmental Supportiveness (TOES). Issues of interrater reliability were addressed by the calibration process for using TOP fairly and rightly.

3.8 Data Analysis

The TOP and the TOES, which are observational assessments, are required to be administered by trained raters. After the researcher received training and practices from Prof. Dr. Anita Bundy, who is the developer of the TOP and TOES, records of children's play were observed while administering the instruments. Even though the researcher was close enough to see and hear the child, she took videotapes of each encounter. In order to rate each child specifically, the researcher watched videotapes of each child numerous times and each item of the instruments was rated according to descriptions of items and scoring guidelines of the manuals. After items were scored, the Rasch analysis computer program Winsteps (Linacre, 2016) was used for the data analysis. Since the data collected uses different instruments (TOP, TOES and SSRS), the researcher gathered raw data from multiple sources (child, items and environmental supportiveness). Using Rasch analysis, it is possible to determine simultaneously (a) whether or not the items define a single unidimensional construct, (b) the relative difficulty of each test item, (c) the relative ability of each person taking the test and (d) the degree of severity of each rater administering the test (Wright & Stone, 1979). While large sample sizes (n = 2000) improve the stability of the test model developed through Rasch analysis, it is possible to examine and monitor the test model even with small sample sizes (n = 30). Rasch analysis yielded two statistics. Firstly, Rasch analysis was used to estimate items' and persons' goodness-of-fit statistics. Secondly, measure (raw) scores, which are calibrated from ordinal to interval data, were yielded through statistical analyses. These measure scores represented the playfulness, environment and social skills of the children. In

this study, all test scores were subjected to the Rasch Analysis and the calibrated scores were used for data analysis. All item scores were entered into SPSS a statistical analysis program (Version 23 of IBM SPSS Statistics). Correlation between social skills and problem behaviors and the playfulness variable was conducted using this program. Furthermore, analysis of variance (ANOVA) was applied to examine the extent to which environment related to playfulness and to note any differences among participants enrolled in different preschool centers.

3.8 Assumptions of the Study

The following assumptions were made for the study; all the participants were expected to fill out the instruments accurately and honestly and all the participants were expected to answer the questionnaire to the best of their ability regarding their knowledge and judgements about children.

3.9 Limitation of the Study

The main limitation of the study may be the design, because it would not be possible to continue to assess children throughout their schooling in this study context without following children until the end of elementary school. This study would not provide information about whether children who scored higher in the domains of playfulness were actually more academically successful or well behaved in school. The next limitation concerning the data collection is that it was confined to a small sample from districts of Ankara. Thus the instrument findings in the study may differ from studies in Canada and the United States; a comparison with existing findings of the study outside Turkey could not be undertaken in any great detail. On the other hand, it calls for further investigation using other samples from Turkey to allow for inclusion of socioeconomic and cultural variables.

3.9 Threats to Internal and External Validity

External validity refers to the generalizability of the findings in studies by a transition from a sample to a population (Fraenkel & Wallen, 2012). The selected sample size is considered to be large enough for strong external validity in this study. The researcher tried to control external validity by selecting a representative sample according to the study and the population. Different preschools in Ankara were included in the sample. However, considering that preschool is not compulsory in Turkey, a significant number of children who do not attend preschool will not be represented in the sample. Regarding internal validity, a subject characteristic threat—the chance that the children may differ in unexpected or unintended ways—may exist. The researcher tried to control for it by selecting a representative sample according to the study and the population. In order to reduce data collector bias, all participants filled in instruments in their own classes and all data were collected directly by the researcher. Instrumentation decay threat can exist because there are some concerns about indirect measures of children in terms of checklists and rating scales. However, this instruments have high inter-rater reliability (e.g. Bundy, Nelson, Metzger, & Bingaman, 2001 for TOP; Bülbül, 2008; Dinçer, 2011; Tutkun, 2012 for SSRS). With regard to implementation threat, teachers' perception or bias into children's development could be an important issue for this study. Teachers' bias can be raised because of the long time taken to complete forms for each child. Using standardized measures can help teachers ignore their bias.

CHAPTER 4

RESULTS

This chapter provides the results of the present study regarding the research questions. In the first section descriptive information about the data set is presented. The second section deals with the Rasch analysis for Test of Playfulness (TOP), Social Skills Rating System (SSRS) and Test of Environmental Supportiveness (TOES). Third, analysis of variance (ANOVA) and Correlation analysis is presented.

Research Questions

Results were evaluated based on the following research questions:

1) What are preschool children's levels of playfulness, social skills and environmental supportiveness?
2) Is there a difference between preschool children's playfulness within different levels of environmental support for play in their preschool settings?
3) Is there a correlation between preschool children's playfulness and social skills?

4.1 Descriptive Statistics

Descriptive statistics for the Social Skills Rating System preschool teacher form (SSRS) and Test of Playfulness (TOP) are presented here (see Table 4.1). In the current study there were 212 preschool children. SSRS were administered to 30 early childhood teachers in order to rate each of the children. The children had a mean score of 1. 50 (*SD* =. 35) on the social skills test and their mean score in the test of playfulness was 1.68 (*SD* =.45). Furthermore, Table 4.1 demonstrates that the total mean score of SSRS ranged from .67 to 2.00. The total mean scores of the TOP ranged from .45 to 2.76. However, Table 4.1 also shows the skewness and kurtosis

values for the whole group. Those values, which are around (-1; +1), indicate that the distributions of the SSRS and TOP scores are normal.

Table 4.1 Descriptive Statistics for the Data Set

	N	*Min.*	*Max.*	*Mean*	*Std. D.*	*Skewness*		*Kurtosis*	
SSRS	212	.67	2.00	1.50	.35528	-.367	.167	-.817	.333
TOP	212	.45	2.76	1.68	.45869	-.267	.167	-.159	.333

4.2 Infit and Outfit Results of Test of Playfulness

In the current study, the Test of Playfulness (TOP) scores were analyzed using the Winsteps Rasch analysis statistical program (Linacre, 2016). The Measure scores of the Test of Playfulness and standard error were produced through this analysis. The measure scores represent converted raw scores from ordinal to interval. According to Skard and Bundy (2008), Rasch analyses help to interpret children's playfulness by discussing distance between the scores. Easy items should be easy for all children. Difficult items represent the skills and abilities we expect from the most playful children and under the most optimal conditions. If children gain higher scores from difficult items can be more playful. Therefore, not only were values focused but the distance between them is also interpreted for understanding children's playfulness. In the current study, the TOP scores were ranged from 4.52 to -2.84 and the mean measure score is .68 with a standard error .31.

Table 4.2 displays 8 lines representing the worst-fitting children. A few children in the study (approximately 3.6%) were getting infit scores higher than 2.00. Notice large mean-squares, and that problematically large mean-squares are indicated as significant. Rasch model is sensitive to unexpected responses to easy or difficult items. After examining children's responses, unexpectedly these children had higher scores for difficult items, even if they did not get low ratings from easy items. So, the problem may be that outlying observations could change these

observations to allow for missing data. The remaining data set, 221 children, will be included in the final analysis.

Table 4.2 Test of Playfulness Person Statistics Misfit Order for Full Sample

		Infit		*Outfit*		*Pt.Corr.*		
Measure	*Model SE*	*MNSQ*	*ZSTD*	*MNSQ*	*ZSTD*	*CORR.*	*EXP.*	*Person*
-.48	.31	2.65	4.4	2.58	4.3	.61	.56	265
2.85	.36	2.08	3.2	2.58	2.9	.08	.43	217
-.52	.29	2.16	3.6	2.19	3.7	.34	.57	77
1.09	.30	1.85	2.8	2.16	3.3	.40	.53	94
2.14	.32	1.07	.4	2.15	2.9	.45	.47	53
1.36	.31	2.09	3.4	1.98	2.9	.63	.52	51
1.02	.31	2.05	3.2	2.03	3.2	.44	.57	100
.39	.33	2.01	2.9	1.96	2.7	.69	.53	15

Table 4.3 presents the mean square (MNSQ) and the statistics and standardized values (ZStd) for Rasch model assumption analysis. These vales indicate that the data fit to the assumptions of Rasch model analysis (Linacre, 2002). Table 4.3 shows the item statistics based on misfit order. Infit values range from 1.84 to .60. and outfit values range from 1.80 to .61. According to Bond and Fox (2007), MNSQ values ≤1.5 related to ZStd≤2 account for 95% of items within the acceptable fit statistic values.

Table 4.3 Test of Playfulness Misfit Order for Full Sample

Measure	*Infit*		*Outfit*		*Items*	
	MNSQ	*ZSTD*	*MNSQ*	*ZSTD*	*Corr.*	*Items*
1.64	1.84	7.2	1.80	6.9	.50	pretends(e)
1.50	1.74	6.3	1.71	6.1	.58	pretends (s)
.10	1.54	5.2	1.52	5.0	.48	shares (s)
-3.73	1.39	2.4	1.34	1.2	.29	safety (e)
-.94	1.15	1.6	1.23	2.3	.48	interact with objects(i)
-.23	1.15	1.6	1.16	1.7	.54	transitions (s)
.10	1.11	1.2	1.11	1.2	.59	supports(s)
-1.08	1.07	.8	1.02	.2	.63	engaged(e)
-1.09	.97	-.3	1.07	.7	.58	interact with objects(s)
-1.50	1.03	.4	1.06	.6	.56	decides(e)
1.26	1.06	.7	1.06	.7	.61	unconventional (s)
.35	1.01	.1	1.01	.1	.64	engaged (s)
1.66	.98	-.2	1.00	.1	.56	unconventional (e)
.04	.96	-.5	.95	-.5	.68	enters (s)
.06	.92	-.9	.92	-.9	.71	Social Play (e)
-.98	.88	-1.4	.91	-.9	.54	process (e)
.28	.90	-1.1	.90	-1.1	.68	modifies(s)
.22	.90	-1.2	.90	-1.2	.67	negotiates (s)
.45	.90	-1.2	.89	-1.2	.73	initiates (s)
.08	.86	-1.6	.86	-1.6	.69	social play (i)
-.06	.83	-2.0	.83	-2.0	.66	gives cues(e)
-.22	.81	-2.2	.80	-2.3	.68	engaged (i)
-.49	.78	-2.7	.79	-2.5	.61	affect (i)
-.31	.73	-3.3	.74	-3.1	.67	responds (s)
.49	.72	-1.7	.72	-1.8	.52	persist(i)
1.34	.67	-3.5	.72	-2.9	.51	mischief/teasing (s)
.05	.63	-4.7	.66	-4.3	.72	social play (s)
-.52	.64	-4.5	.64	-4.5	.71	gives (s)
1.54	.60	-4.2	.61	-4.0	.63	clowns/jokes(s)

As can be seen from the infit and outfit values, the “pretends” (e), “pretends” (s) and “share” (s) infit and outfit values are higher than 1.5. However, if MNSQ values items higher than 1.5 but lower than 2, they can be kept for the analysis but their productivity will be lower. Approximately 90% (26 items) of values are within the acceptable range. Also, the point measure correlations (shown in Table 4.3) of most of items were positive and highly significant. They range from .29 to .73.

Table 4.4 summarizes the person distribution. The mean (average) person measure is .68 logits. The (observed) Person S.D. is 1.25 logits. So the observed variance is 1.25^2=1.56. The square-root of the average error variance is the RMSE= "root-mean-square-error." There is one RMSE for the "Real SE"=.34. The "true" RMSE is somewhere between. So the "model" error variance is $.32^2$=0.10. A person reliability of >.8 indicates that scores of persons are differentiated between high to low scoring consistently (Bond & Fox, 2007). The person reliability for Test of Playfulness (TOP) is high, 0.94. Person separation is expected to be divided by at least two units (Bond & Fox, 2007). For this study the person measure classified into 3 and half distinct groups (3.84). The person separation indicates that measure classified as more to less playful children. Person sample reliability was high. These results have acceptable ranges.

Table 4.4 Summary of 221 Measured Person

	Total Score	*Measure*	*Model SE*	*Infit*		*Outfit*	
				MNSQ	*ZSTD*	*MNSQ*	*ZSTD*
Mean	*48.8*	*.68*	*.31*	*.99*	*-.1*	*1.01*	*-.1*
P.Sd	*13.2*	*1.25*	*.03*	*.38*	*1.4*	*.40*	*1.4*
S.Sd	*13.3*	*1.25*	*.03*	*.38*	*1.4*	*.40*	*1.4*
Max.	*80.0*	*4.52*	*.55*	*2.65*	*4.4*	*2.58*	*4.3*
Min.	*13.0*	*-2.84*	*.29*	*.33*	*-3.6*	*.33*	*-3.2*
Real Rmse	*.34*	*True Sd*	*1.20*	*Separation*	*3.50*	*Person Reliability*	*.93*
Model Rmse	*.32*	*True Sd*	*1.21*	*Separation*	*3.84*	*Person Reliability*	*.94*

Table 4.5 presents a summary of the fit statistics for the TOP items. Item reliability was found to be .99, which was high. The value of item separation was calculated to be 9.24. The average error of items (.12 logits) was low. Therefore, in this study, 29 measured items' values are within acceptable ranges.

Table 4.5 Summary of 29 Measured Items

	Total score	Measure	S.E	Infit		Outfit	
				MNSQ	ZSTD	MNSQ	ZSTD
Mean	371.8	.00	.12	.99	-.3	1.00	-.3
P.Sd	108.3	1.10	.02	.30	2.9	.29	2.8
S.Sd	110.3	1.12	.02	.31	2.9	.29	2.8
Max.	624.0	1.66	.21	1.84	7.2	1.80	6.9
Min.	91.0	-3.73	.11	.60	-4.7	.61	-4.5
Real RSME .13		True SD	1.10	Separation 8.74		ItemReliability .99	
Model RSME .12		True SD	1.10	Separation 9.24		Item Reliability .99	

4.3 Rasch Analyses of the Each of the Subscales

Tables 4.6 and 4.7 show fit statistics that are a good fit to the model. Item reliability and item separation estimates indicates that number of items and persons for calculating person ability and item difficulty are sufficient. Each of the subscales (item reliability is equal to or greater than .70 and item separation value greater than 2) (Table 4.7). Only the "freedom to suspend reality" subscale`s reliability value is less than the recommended value; however, infit and outfit values (.99, .99) meet the criteria. The person reliability values range from .75 to .86. The infit and outfit MNSQ values are within acceptable ranges. Fit statistics for each subscale of the SSRS scale will be presented individually below.

Table 4.6 Summary Fit Statistics for Measurement of Total Sample of Children: Subscales

Name of subscale	Person Separation	Person Reliability	Infit MNSQ	Outfit MNSQ
Perception of Control	2.73	.86	.99	1.02
Source of Motivation	1.74	.75	1.0	.98
Freedom to Suspend Reality	1.94	.79	.99	.99
Framing	2.19	.83	.98	.97

Table 4.7 Summary Fit Statistics for Items: Subscales

Name of subscale	Item Separation	Item Reliability	Infit MNSQ	Outfit MNSQ
Perception of Control	9.59	.99	1.02	1.02
Source of Motivation	4.72	.96	.99	.97
Freedom to Suspend Reality	1.13	.56	.99	.99
Framing	3.91	.94	.99	.97

Each of the subscale item results was expressed using the Rasch software. The analysis results of each TOP subscale have been presented on a linear logarithmic scale (Wright map). Each Wright map will be discussed in terms of summarizing test responses, ordering and spacing items. Items are distributed from hardest to easiest. Difficulty order is visualized by the left side of the map, and the right side illustrates the placements of the items.

4.3.1 Perception of Control

Figure 4.1 shows the linear logit scale (the person item map). Examination of item scores showed that the items' hierarchy was arranged logically. This figure demonstrates that the items "skill of initiating new activities" and "skill of modifying maintain challenge or fun" fall relatively far toward the internal side of the item map. The next internal item is "extent of engaging social play." Children's social skills have significant effects on expanding social play skills and their interactions. Therefore, if children's "social play" item falls to the internal side that means their scores are not strong in social play.

Conversely, the item concerning the extent of playing safely is located at the bottom of the hierarchy by far. With the exception of Item 2, which is "feeling sufficiently safe to keep playing," all other items were closely clustered. This item measures that reflections of their feelings of safety in their environment. That is, even with a small sample size, it is possible to find out that this item is the easiest in the hierarchy of items. This is logical because individuals who do not feel safe find it difficult to play; play requires internal control (Neumann, 1971). The results suggest

that “decides” is also a very easy item. One interpretation is that children in preschool settings decided the activities in which they want to take part, so while free time activities, preschool teachers allow children`s active choices. In addition, there is a gap between the measure scores of “skill of transitioning between activities” and “intensity of interacting with objects.” One possible explanation is that children perform activities one at a time because of limited time given for free time activities. Therefore, because they focus all their attention on one toy or game, they cannot move between activities simultaneously.

	Item #	Measure (Logits)	Error (Logits)	Selected Items
Internal	12	.97	.11	Skill of initiating new activities
	3	.80	.11	Skill of modifying maintain challenge
	8	.56	.11	Extent of engaging social play
	6	.27	.11	Skill of transitioning between activities
	4	-.48	.12	Intensity of Interacting with objects
	5	-.64	.12	Skill of interacting with objects
		*		
External	2	-3.41	.19	Extent of playing safely

*Indicates that there is a huge gap between the item measures

Figure 4.1 Perception of Control Element Items Displayed on the Linear Logit Scale

4.3.2 Source of Motivation

Figure 4.2 presents five items related to sources of motivation on the linear logit scale. Among these five items, item 4 “intensity of persistence” is highly intrinsic. That is, most of the motivation to persist in playing comes from teachers or other adults. Therefore, this behavior is more difficult for teachers to endorse than the other items. The following item, “intensity of being engaged” is widely spaced from item 4. The majority of children display engagement during play but they do not persist in their play. They focus on enjoying the activities rather than focusing on the challenges of the activities. Moreover, “intensity of demonstrating positive affect” falls into the approximate middle of the five items. These results suggest that some of the children were intensely and positively engaged in activities. Items “extent of being involved in the process” and “extent of being engaged” are the easiest items. According to children`s ratings on these items, the issue of playing is not concerned with a product or price, they preferred to being engaged in process of play. This item indicates that while children are playing a game, winning the game is not to the primary reason they are playing. Generally, not knowing the winner of the game makes children motivated, players` fun can decrease if they know the winner (Skard & Bundy, 2008). So these two items are close to each other because they are relatively interrelated. Extent of engagement is significantly easier than the intensity of engagement. While the length of time spent playing is considered for the “extent” item, the degree of children’s concentration on the activity is also accounted for. More playful children demonstrate a high degree of involvement with the activity without distractions. Therefore, item measure scores suggest that intense active engagement is much more intrinsic for playful children.

	Item #	Measure (Logits)	Error (Logits)	Selected Items
Intrinsic	4	1.32 *	.26	Intensity of persistence
	2	.40	.14	Intensity of being engaged
	5	-.02 *	.14	Intensity of demonstrating positive affect
	3	-.78	.14	Extent of being involved in the process
	1	-.92	.14	Extent of being engaged
Extrinsic				

*Indicates that there is a huge gap between the item measures

Figure 4.2 Source of Motivation Element Items Displayed on the Linear Logit Scale

4.3.3 Freedom to Suspend Reality

The calibrated "freedom to suspend reality" subscale items are summarized in Figure 4.3. This subscale contains the most difficult items among the scales. These results show that objective reality bordered on these items. These items are also affected by children's age and engagement in the type of activities (Bundy, 2010). It is expected that this age group can use objects or toys in a number of variable ways, that is, different from the way the manufacturer intended them to be used or using objects for play that are not regarded as toys. This did not happen frequently in this study. In addition, teachers' attitudes or risk aversion may hinder children's suspension of reality. The results of these five items suggest that children are more free scores higher in "extent of using people or objects unconventionally" and "skill of using clowning/joking" when compared to other items. The "skill of pretending" item is at the relative middle of the scale. However, "skill of using mischief/teasing" and "skill of using people or objects unconventionally" are quite far toward the bottom of the arrangement of the other items of this subscale. Namely as can be seen in the scores of the freedom to suspend reality subscale, most of the children are not free from the unnecessary constraints of reality.

More Free	Item #	Measure (Logits)	Error (Logits)	Selected Items
	5	.15	.12	Extent of using people or objects unconventionally
	4	.13	.14	Skill of using clowning/joking
	3	.06	.13	Skill of pretending
	1	-.17	.13	Skill of using mischief/teasing
	6	-.35	.12	Skill of using people or objects unconventionally
Less Free				

Figure 4.3 Freedom to Suspend Reality Element Items Displayed on the Linear Logit Scale

4.3.4 Framing

Figure 4.4 presents four items on the linear logit scale. The framing subscale was more difficult to operationalize than the others (Bundy, 2010), which is why measure scores are lower than those of the other subscales. Among these four items, item 3, "skill of being engaged" is very difficult to show in children. The ability to maintain a play frame or the extent of giving\receiving social cues are hard-to-understand skills. "Extent of giving cues" means allowing proportionate time for giving out explicit messages related to how others should interact with him\her. These messages can be given by verbal and non-verbal cues. For this item, Bundy (2009) explained that giving cues is connected to cultural expectations, so cues can be nonverbal or hidden. If only these abilities are absent or obviously immature, these behaviors can be noticed and described. The remaining framing items of this scale suggest that, contrary to this difficult to see item, item 4 "responding to cues" and item 2 "give readily understandable cues (facial, verbal, body) that say 'this is how you should act toward me'" are easier to endorse. This means that these items address how children interact with each other in expected ways.

More Skillfully	Item #	Measure (Logits)	Error (Logits)	Selected Items
	3	.87	.14	Skill of being engaged
	1	.13	.14	Extent of giving cues
	4	.-32	.14	Skill of responding to cues
Less Skillfully	2	-.69	.15	Skill of giving cues

Figure 4.4 Framing Element Items Displayed on the Linear Logit Scale

4.4 Infit and outfit results of Social Skills Rating System Scale(SRSS)

Table 4.8 shows 9 lines representing the worst-fitting children. Approximately 3.7% of the participants, 9 children, had infit scores higher than 2.00. Notice large mean-squares, and that obviously problematic large mean-squares are indicated as significant. After examining children's responses, unexpectedly these children had higher scores on difficult items regardless of their scores on easy items. So, the problem may be missing data. The remaining data set, 40 items and 234 children, will be included for the final analysis.

Table 4.8 Person Statistics Misfit Order for Full Sample

		Infit		*Outfit*		*Ptmeasur-*	*Child id*
Measure	*S.E*	*MNSQ*	*ZSTD*	*MNSQ*	*ZSTD*	*Al Corr.*	
.29	.72	2.11	1.5	4.16	2.7	.19	81
-2.32	.31	2.46	5.7	2.95	6.8	.42	217
-2.22	.31	2.18	4.7	2.61	5.7	.27	218
-3.76	.28	2.59	5.5	2.60	5.5	.15	25
-3.25	.28	2.45	5.5	2.53	5.8	.16	220
-3.25	.28	2.26	4.9	2.34	5.2	.13	219
-3.70	.27	2.28	4.7	2.30	4.8	.34	209
-3.09	.28	2.17	4.7	2.19	4.9	.10	212
-4.45	.27	2.13	4.2	2.13	4.2	.13	216

Table 4.9 presents mean square (MNSQ) and statistics and standardized values (ZStd) for Rasch model assumption analysis. The point measure correlations (shown in Table 4.6) of most items were positive and moderately significant. They range from .38 to .61. According to Bond and Fox (2007), MNSQ values ≤1.5 related to ZStd≤2 for 75% of items within the acceptable fit statistic values. It can be seen from the infit and outfit values that 95% (38 items) of values are within the acceptable range. Item 31 and Item 32 infit and outfit MNSQ values are higher than 1.5. According to Linacre (2016), if an item outfit MNSQ is valued higher than 1.5 but lower than 2, it can be kept in the analysis because "it can be unproductive for construction of measurement, but not degrading" (p. 601).

Table 4.9 Item Statistics Misfit Order for Full Sample

		Infit		*Outfit*		*Ptmeasure-*	*Items*
Measure	*S.E*	*MNSQ*	*ZSTD*	*MNSQ*	*ZSTD*	*Al.Corr.*	
-.64	.15	1.42	3.8	1.83	2.9	.38	item31
.64	.13	1.81	7.5	1.65	2.7	.44	item32
-.89	.15	1.36	3.1	.97	.0	.42	item37
-.87	.15	1.32	2.9	1.01	.1	.39	item39
.69	.12	1.23	2.5	1.30	1.4	.50	item33
-.75	.15	1.25	2.3	.99	.0	.42	item35
.44	.13	1.21	2.2	1.05	.3	.51	item3
1.12	.12	1.21	2.3	1.10	.6	.53	item12
-.24	.14	1.19	2.0	.95	-.1	.49	item36
.19	.13	1.18	2.0	1.01	.1	.52	item38

Table 4.9 (Continued)

		Infit		*Outfit*		*Ptmeasure-*	*Items*
Measure	*S.E*	*MNSQ*	*ZSTD*	*MNSQ*	*ZSTD*	*Al.Corr*	
.74	.12	1.15	1.7	1.05	.3	.50	item24
-.56	.14	1.14	1.4	.82	-.7	.49	item34
-.44	.14	1.14	1.4	.93	-.2	.48	item40
.44	.13	1.11	1.2	1.01	.1	.50	item5
.05	.13	1.07	.8	1.00	.1	.48	item2
.49	.13	1.03	.3	.98	.0	.50	item20
-.64	.15	.85	-1.6	1.02	.2	.46	item10
.34	.13	.99	.0	.88	-.5	.51	item17
.22	.13	.99	.0	.88	-.5	.53	item25
-.15	.14	.97	-.3	.87	-.5	.52	item7
.95	.12	.93	-.8	.84	-.8	.61	item8
.66	.13	.92	-.9	.86	-.6	.57	item26
-.64	.15	.87	-1.3	.91	-.3	.46	item6
.77	.12	.91	-1.0	.83	-.8	.58	item23
.42	.13	.90	-1.2	.87	-.5	.55	item4
.15	.13	.89	-1.2	.88	-.4	.54	item29
-.80	.15	.87	-1.3	.84	-.6	.46	item9
-.38	.14	.86	-1.5	.74	1.1	.52	item27
-.50	.14	.85	-1.6	.79	-.8	.48	item19
-.28	.14	.85	-1.6	.82	-.7	.50	item22
.40	.13	.85	-1.8	.82	-.8	.56	item28
-.42	.14	.82	-1.9	.72	1.2	.52	item15
.15	.13	.81	-2.2	.70	1.4	.56	item11
.12	.13	.79	-2.4	.70	1.4	.56	item16
-.52	.14	.78	-2.5	.66	1.5	.50	item1
.00	.13	.77	-2.8	.68	1.5	.57	item14
.49	.13	.76	-2.9	.74	1.2	.57	item13
-.25	.14	.74	-3.0	.61	1.8	.55	item18
-.22	.14	.74	-3.0	.61	1.8	.57	item30
-.24	.14	.72	-3.3	.60	1.9	.56	item21

Table 4.10 summarizes the person distribution. The mean (average) person measure is -1.98 logits. The (observed) person S.D. is .38 logits. So the observed variance is $.38^2$=.14. The square-root of the average error variance is the RMSE= "root-mean-square-error." There is one RMSE for the "Real SE"=.61. The "true" RMSE is somewhere between. So the "model" error variance is $.46^2$=0.21.

This table shows how reducible the item difficulty order is for this set of items for this sample of persons. A person reliability >.8 indicates that scores of persons are differentiated between high and low scoring in many cases (Bond & Fox, 2007). The person reliability for SRSS is high at .90. Person separation is expected to be divided into at least two units (Bond & Fox, 2007). For this study, person separation estimation suggests to classify by 3 and half district groups (2.98). The person separation indicates that the measure is classified as more to less social children. Person sample reliability was high. These results are within acceptable ranges.

Table 4.10 Summary of 243 Measured Person

	Total Score	*Measure*	*Model SE*	*Infit*		*Outfit*	
				MNSQ	ZSTD	MNSQ	ZSTD
Mean	61.4	-1.98	.46	.92	-.2	.91	-.2
P.Sd	13.2	1.88	.38	.44	1.6	.51	1.6
S.Sd	13.3	1.88	.38	.44	1.6	.51	1.6
Max.	80.0	2.76	1.68	2.59	5.7	4.16	6.8
Min.	23.0	-5.46	.27	.00	-3.8	.00	-3.8
Real	RMSE .61	True Sd	1.78	Separation	2.93	Person Reliability	.90
Model	RMSE .60	True Sd	1.78	Separation	2.98	Person Reliability	.90

Table 4.11 demonstrates summary of the fit statistics for the items. A good fit to the model is seen in the fit statistics analysis. Item reliability is high for the items. (.94). Item separation is 3.87.

Table 4.11 Summary of 40 Measured Items

	Total Score	*Measure*	*Model SE*	*Infit*		*Outfit*	
				MNSQ	ZSTD	MNSQ	ZSTD
Mean	372.8	.00	.14	1.01	-.1	.91	-.4
P.Sd	30.4	.54	.01	.23	2.3	.24	1.0
S.Sd	30.8	.55	.01	.23	2.3	.24	1.0
Max.	419.0	1.12	.15	1.81	7.5	1.83	2.9
Min.	305.0	-.89	.12	.72	-3.3	.60	-1.9
Real	RMSE .14	True Sd .52		Separation 3.68		Item Reliability .93	
Model	RMSE .14	True Sd .52		Separation 3.87		Item Reliability .94	

4.5. Rasch Analyses of the Each of the Subscales

Each of the SSRS subscale items have been displayed on a linear logarithmic scale (Wright map). Each Wright map will be discussed in terms of ordering of item difficulties, spacing and distribution of items. Items were distributed to hardest to easiest. Difficulty order is visualized on the left side of the map, and the right side illustrates the placements of the items. Each of the subscales was calibrated using the Rasch rating scale model.

Tables 4.12 and 4.13 display fit statistics, which are a good fit to the model. Item reliability and item separation are good for each of the subscales (item reliability is equal to or greater than .87 and item separation is greater than 2) except for the cooperation subscale (Table 13). The infit and outfit mean scores, MNSQ (1.01) and MNSQ (.99) are within acceptable values. Fit statistics for each subscale of the SSRS will be presented as follows. The person reliability values range from .61 to .85. “Problem behavior” subscales reliability values are less than the recommended value; infit and outfit values (.63, .97) meet the criteria.

Table 4.12 Summary Fit Statistics for Measurement of Total Sample of Students: Subscales

Name of subscale	Person Separation	Person Reliability	Infit MNSQ	Outfit MNSQ
Assertation	2.34	.85	1.00	.99
Cooperation	2.07	.81	.98	1.01
Self -Control	1.79	.76	.96	.95
External Problem Behaviour	2.80	.61	.63	.61
Internal Problem Behaviour	1.35	.64	.97	.98

Table 4.13 Summary Fit Statistics for Items: Subscales

Name of subscale	Item Separation	Item Reliability	Infit MNSQ	Outfit MNSQ
Cooperation	1.89	.78	.99	1.01
Assertation	3.60	.93	1.00	.99
Self-Control	2.64	.87	1.00	.95
External Problem Behaviour	6.02	.97	.98	1.29
Internal Problem Behaviour	2.33	.85	.99	.98

4.5.1 Cooperation Subscale

The eight cooperation subscale items are shown on the Wright map in Figure 4.5. Items at the top of the scale are easier for teachers to observe children. Among these items, the "appropriately waiting for help" item is rarely seen in comparison to the other items. Appropriately waiting for help is hard for preschoolers because they are eager to satisfy their demands—they are impatient and dislike waiting for their turn. "Taking responsibility to part of group activity" and "using free time appropriately" are other items that are very hard to see in children. This may be because preschool activities rarely support group work, therefore, teachers may not endorse these skills in children. The amount of free time given to children also may vary throughout the schools, so teachers may not see sufficient unscheduled times. In comparison to these difficult-to-see items, "follow your directions," "completing classwork appropriately" and "participates games or activities" are easier to be endorsed for children. Among these items, participation in games or activities is the

easiest. Most of the preschoolers are willing to participate in games. Based on the results of the Test of Playfulness, the children in this study had a moderate playfulness level, meaning they generally participate in games and that therefore teachers may see these skills more frequently.

More Cooperate	Item #	Measure (Logits)	Error (Logits)	Selected Items
	16	.79	.17	Appropriately waiting for help
	30	.25	.17	Take responsibility to part of a group activity
	18	.19	.17	Using free time appropriately
	22	.16	.17	Completing class work within time limits
	15	-.05	.17	Takes turns in games or group activities
	1	-.20	.18	Follow your directions
	10	-.39	.18	Completing classwork appropriately
	9	-.62	.18	Participates games or activities
Less Cooperate				

Figure 4. 5 Cooperation Scale Items Displayed on the Linear Logit Scale

4.5.2 Assertion Subscale

There are 11 assertion subscale items shown on the linear logarithmic scale (Wright map) (see Figure 4.6). The most difficult items required introducing him/herself to peers, complimenting peers and initiating peer activities. Teachers report that children are unlikely to introduce themselves or initiate activities without teachers' directions, so these items and levels of assertiveness are viewed as more

difficult for children. Complimenting peers is also unlikely to be seen in children. On the other hand, the "accepting friends' compliments item" is by far the easiest measure in the subscale. It is likely that teachers do not encounter children ignoring or having negative reactions to compliments from peers. "Appropriately telling when unfairly treated" and "appropriately questioning unfair rules" are located on the same line at approximately the middle of the map. They are also meaningfully similar and related. These results suggest that children in preschool settings are unlikely to perceive unfairness from their teachers, so they may not need to handle these situations. Teacher may also be susceptible to bias in rating these items about their fairness in the classroom. As can be seen in Figure 4.6, "volunteering help," "inviting others" and "easily making friends" were items children found significantly easier to endorse. It is likely that these items may be more observable than the others, so teachers could correctly identify children's skills in the classroom.

More Assertive	Item #	Measure (Logits)	Error (Logits)	Selected Items
	12	1.03	.14	Introducing him/herself to others
	8	.80	.14	Complimenting peers
	24	.52	.14	Initiating peer conversations
	3	*.12*	*.15*	Appropriately telling when unfairly treated
	5	*.12*	*.15*	Appropriately questioning unfair rules
	17	-0.1	.15	Saying complimentary things about self
	11	-0.26	.15	Volunteering help
	25	-0.16	.15	Inviting others
	2	-0.38	.15	Easily making friends
	14	-0.45	.15	Joining ongoing activities without teacher direction
Less Assertive	19	-1.09	.16	Accepts friends complements

Figure 4. 6 Assertion Scale Items Displayed on the Linear Logit Scale

4.5.3 Self-Control Subscale

The self-control subscale consists of 5 items, which are displayed on the Wright map (see Figure 4.7). The most easily endorsed item is "controlling temper when in conflict with adults." Results suggest that this item is by far easier than the others. This item is related to children's relationship with their teachers, so the only adult in question is their teacher. The reason this item is the easiest could be that it

may be easy for a child to redirect upset feelings but difficult for a teacher to notice because they are so adept at calming down quickly. Item 28, "controlling temper when in conflict with peers," on the other hand, falls more in the middle of the subscale items. This item can be observed frequently in some of children`s behaviors, especially while playing with their peers. However, while sharing an object or waiting one`s turn, this is very difficult to show their requests in nonaggressive ways. This skill is also rarely seen in this age group. "Accepting ideas of peers during group activities" is relatively close to center as well. Some children may not easily accept other children's ideas, especially young children. Teachers may think that children are acting more creatively by following their own path and therefore not have many opportunities to observe this behavior. The most difficult items are "compromising by changing ideas when in conflict" and "accepting criticism." The remaining items are all related to acting appropriately when facing teasing, aggression, conflicts, criticism or peer pressure. Results for these items illustrate that some children can be challenged by these situations but still be part of the group activities. Teachers may think of criticism as correction or giving suggestion, while others assume this item refers to more negative criticism.

More Selfcontrol	Item #	Measure (Logits)	Error (Logits)	Selected Items
↓	23	.52	.16	Compromising by changing ideas when in conflict
	26	.34	.16	Accepting criticism
	28	-.06	.16	Controlling temper when in conflict with peers
		*		
Selfcontrol	7	-.92	.16	Controlling temper when in conflict with adults

*indicates that there is a huge gap between the items measures

Figure 4. 7 Self-Control Scale Items Displayed on the Linear Logit Scale

4.5.4 Problem Behaviors

On the problem behavior items, two factors were elicited for Rasch analyses. Four items were included for the internal problem behaviors and external problem behaviors were comprised of six items.

4.5.4.1 Internal problem behaviors

The responses of the internalizing problem behaviors are presented in the Wright map (Figure 4.8). The results revealed that children showed "appears lonely" behavior least frequently. The following item, 40, "acts sad or depressed" is relatively close to item 36. On the other hand, there is a large difference between measures 40, 35 and 39. These items require the teachers to decide on whole behavior rather than frequency of internalizing behavior. Namely, item 35 and 39 relate to behaviors during group activities while 36 and 40 concern their individual state. Teachers can easily rate with these items the frequency of a specific behavior. Explicitly, preschoolers show fewer internal behaviors concerning anxiety about being with a group.

More Internal	Item #	Measure (Logits)	Error (Logits)	Selected Items
	36	.75	.21	Appears Lonely
	40	.32	.22	Acts sad or depressed
	35	-.41	.22	Has low self-esteem
Internal	39	-.66	.23	Shows anxiety about groups

Figure 4. 8 Internalizing Problem Behavior Scale Items Displayed on the Linear Logit Scale

4.5.4.2 External problem Behaviors

"Temper tantrums" and "temper to objects or people" were the most easily endorsed behaviors for children. "Fidgets or moves excessively" and "fights with others" were the least easily endorsed behaviors. Item difficulties showed a difference occurs in the item about fighting to disobey the rules. This suggests that fighting is rarely defined for preschoolers' arguments, so disobeying the rules is more definite classroom behavior. They can easily show this behavior. However, as can be seen in Figure 4.10, another big difference was between "disobeying rules" and "disturbs ongoing activities." Teachers may identify "rules" as teacher- oriented rules or general classroom rules. Children less frequently show problems related to group activities. These results suggest that identifying children's misbehaviors concerning rules is much more difficult for teachers because children have a tendency to participate in the group activities but to follow their own rules instead of teacher's rules individually. Temper problems fall below the item difficulties of disturbing group activities. These results show that many of the items have an appropriate difficulty level.

More External	Item #	Measure (Logits)	Error (Logits)	Selected Items
	32	1.32	.17	Fidgets or moves excessively
	33	1.41	.17	Fights with others
	38	.49	.17	Disobey rules or requests
	34	-.83	.19	Disturbs ongoing activities
	31	-.98	.19	Has temper tantrums
Less External	37	-1.41	.20	Has temper to objects or people

Figure 4. 9 Externalizing Problem Behavior Scale Items Displayed on The Linear Logit

4.6 Descriptive Statistics for Test of Environmental Supportiveness

Table 4.9 shows that the lowest score that can be gathered from the questionnaire is -22 while the highest score that can be gathered is 22. Children's total scores ranged from -5 to 22 with a mean of 8.1 (S.D=7.9). Rasch analysis yielded a separation value of 2.64 for school environments (Table 4.14). In order to define the levels of environment, this separation value was entered into a calculation ([4Gp + 1]/3) used in a study by Branson and Bundy (2001). *Gp* represents separation value. The findings showed that environments can be separated by approximately 3 levels. The average point was taken as the reference point and through adding and subtracting one standard deviation (≈8) from the average score of school environment supportiveness levels categorized under three groups. The unsupportive group, which gathered a total score between -5 and 0, was grouped as *low supportive*. Schools that gathered a total score between 0 and 16 were grouped as *moderately supportive*; schools that gathered a total score between 16 and 22 were grouped as *highly supportive (see Table 4.15)*.

Table 4.14 Descriptive Statistics of Test of Environment Supportiveness

	N	*Min.*	*Max.*	*M*	*SD*	*Skewness*	*Kurtosis*
TOES	16	-5	22	8.125	7.906	.285	.612
N	16						

Table 4.15 Scores of Schools to Each Item in the Test of Environment Supportiveness(TOES)

Name of the Schools	*Raw Toes Scores*	*Level of Toes*
School A	5	Moderately
School B	19	Highly
School C	15	Moderately
School D	7	Moderately
School E	4	Moderately
School F	-2	Low
School D	-5	Low
School H	-1	Low
School I	20	Highly
School J	7	Moderately
School K	22	Highly
School L	13	Moderately
School M	6	Moderately
School N	5	Moderately
School R	10	Moderately
School O	5	Moderately

4.7 Infit and Outfit Results of Test of Environmental Supportiveness

Table 4.16 displays 16 lines. Of those, 14 had infit scores lower than 1.55. Only twoschool had a Large Outfit mean-square (1.98;1.89). After examining school environment scores, the School D and the School B had higher scores for difficult items, even if they did not get low ratings on easy items. So, the problem may be outlying observations or missing data. they remained because scores were lower than 2.00 The remaining data set, 14 schools, will be included for the final analysis.

Table 4.16 School Statistics Misfit Order

		Infit		*Outfit*		*Ptmeasur-Al*		*School id*
Measure	*S.E*	*MNSQ*	*ZSTD*	*MNSQ*	*ZSTD*	*Corr.*	*Exp.*	
6.55	.85	1.89	3.6	1.98	1.9	.30	.46	d
2.34	.57	1.55	3.4	1.89	3.2	.30	.45	b
3.87	.70	1.14	.5	1.75	1.2	.05	.34	m
.40	.49	1.70	1.5	1.65	1.4	.80	.48	n
-.70	.46	1.62	1.5	1.52	1.3	.32	.53	k
1.43	.53	1.40	1.0	1.36	.9	.20	.46	p
-.28	.47	.92	-.1	1.00	.2	.01	.51	l
4.43	.80	.97	.1	.80	.0	.30	.29	i
.40	.49	.86	-.2	.80	-.4	.67	.48	e
2.34	.57	.76	-.5	.81	-.3	.35	.45	a
.89	.51	.67	-.7	.67	-.7	.73	.47	g
-.28	.47	.51	1.4	.60	-1.0	.74	.51	c
.40	.49	.53	1.2	.49	-1.3	.38	.48	j
.64	.50	.50	1.3	.50	-1.3	.67	.47	o
.64	.50	.39	1.8	.36	-1.9	.44	.47	f
-.92	.46	.32	2.3	.33	-2.3	.91	.54	h

The point measure correlations of all items (as presented in Table 4.17) were positive, ranging from .35 to .78. All of these items are within the acceptable ranges except for three. These are “peer playmate gives clear cues that support transaction” (1.99), “amount and configuration of space supports activity of player” (1.64) and “caregiver adheres to consistent boundaries/rules” (1.59) based on MNSQ values ≤1.5 and acceptable fit statistic values. However, according to Linacre (2016), the data can be noisy over 1.4, but not excessively if outfit scores (MNSQ<2.0) are lower than 2. Lastly, item fit was acceptable because outfit MNSQ values for items ranged from 0.44 to 1.99.

Table 4.17 Measures. Outfit Mean Squares, z-Standard, and Point Measure "Correlations for Toes Items

Measure	*S.E*	*Infit*		*Outfit*		*Ptmeasur-Al*		*Item*
		MNSQ	*ZSTD*	*MNSQ*	*ZSTD*	*CORR*	*EXP*	
-1.36	.50	1.43	1.1	1.99	1.7	.35	.57	give clear
1.04	.41	1.63	1.7	1.64	1.7	.65	.72	space
1.04	.41	1.42	1.2	1.59	1.6	.63	.72	consistent
1.04	.41	1.06	.3	1.04	.2	.72	.72	sensory
.17	.43	.75	-.6	.96	.0	.70	.67	accessible
.17	.43	.89	-.2	.87	-.2	.72	.67	promote
.53	.42	.83	-.4	.87	-.2	.74	.69	natural
-1.36	.50	.73	-.6	.65	-.6	.66	.57	participate
.71	.41	.70	-.8	.67	-.9	.78	.70	reasonable
-1.11	.49	.69	-.7	.65	-.7	.66	.59	response
-.88	.48	.47	-1.5	.44	1.4	.75	.61	safe

The item reliability estimate was .78 (see Table 4.18), and the school reliability estimate was .87 (see Table 4.19). Although the school reliability level was above .80, item reliability considers sample size to estimate item difficulty levels effectively. Lower reliability scores indicated that the number of schools was not large enough to construct item difficulty (Linacre, 2016). Smith (2002) noted that scores over .70 for reliability analysis are acceptable for tests with fewer than 20 items.

Table 4.18 Infit and Outfit Results of Test of Environmental Supportiveness for Items

	Measure	S.E	Infit		Outfit	
			MNSQ	ZSTD	MNSQ	ZSTD
Mean	.00	.45	.96	-.1	-.1	.1
P.Sd	.94	.04	.36	1.0	1.0	1.0
S.Sd	.99	.04	.37	1.0	1.0	1.1
Max.	1.04	.50	1.63	1.7	1.7	1.7
Min.	-1.36	.41	.47	-1.5	-1.5	-1.4
Real RSME	True SD	.81	Separation	1.71	Reliability	.75
Model RSME	True SD	.83	Separation	1.86	Reliability	.78

Table 4.19 Summary of School Statistics

	Measure	S.E	Infit		Outfit	
			MNSQ	ZSTD	MNSQ	ZSTD
Mean	1.04	.53	1.03	-.1	1.03	-.1
P.Sd	1.53	.09	.70	1.4	.67	1.4
S.Sd	1.58	.10	.73	1.5	.69	1.5
Max.	4.43	.80	3.15	3.4	2.89	3.2
Min.	-.92	.46	.32	-2.3	.33	2.3
Real RSME	True SD	1.40	Separation	2.30	Reliability	.84
Model RSME	True SD	1.43	Separation	2.64	Reliability	.87

Rasch analysis indicated a logical difficulty order in the TOES items. First of all, like Branson and Bundy (2001), this study found that "space is physically safe" is one of the easiest items. One of the prerequisites of the TOP test application is that the children's play environment be familiar for children so that the school environments do not threaten them or make them feel anxious. Items "peer playmate's response to player's cues supports transaction" and "peer playmate gives clear cues that support transaction" are easier than items relating to caregivers or the play environment. This also seems logical because all players are peers and they show similar abilities and flexibility while playing. They are all similar developmental levels and age groups. During their free play sessions, they are enthusiastic and used to playing with each other, therefore they find it easy to respond and give clear cues. The most difficult items on the scale are related to the caregiver: "caregiver adheres to consistent boundaries/rules" and "caregiver adheres to reasonable boundaries/rules" (see Figure 4.10). This could be predicted because generally caregivers are unwilling to participate in the children's play; they mostly set the rules concerning their safety or discipline their classroom behavior, neither of which supports their play or makes them more playful. In addition, the period of interaction between children and their caregivers was very short; their response to children's cues did not support the transaction. Amount and configuration of space and natural/fabric objects, by comparison, highly increased their supportiveness. The researcher administered the test in kindergarten settings. Considering the sensory

environment (color, surface, noise, degree of modification they allow) and space (wideness, objects' accessibility) supports children playfulness, affects their motivation to play and changes their play types. these items fell within the high-range of difficulty, due the fact that the children's classrooms had a lack of sensory objects and inappropriate space arrangements in crowded classrooms.

More Supportive	Item #	Measure (Logits)	Error (Logits)	Selected Items
	2	1.04	.41	Caregiver adheres to consistent boundaries/rules
	3	.71	.41	Caregiver adheres to reasonable boundaries/rules
	7	.53	.42	Natural/fabricated object(s) support activity
	8	.17	.43	Space is accessible
	10	-.88	.48	Space is physically safe
	4	-1.11	.49	Peer playmate's response to player's cues supports transaction
Less Supportive	5	-1.36	.50	Peer playmate gives clear cues that support transaction

Figure 4.10 Test of Environment Supportiveness Test Items Displayed on the Linear Logit Scale

4.8 Analysis of Variance (ANOVA)

The second research question was "*Is there a difference between preschool children's playfulness and social skills within different levels of environmental support for play in their preschool settings?*" To answer this question, analysis of variance (ANOVA) was conducted in this study. The Test of Environmental Supportiveness and Test of Playfulness were administered at each of the 16 different

preschools and analysis of variance (ANOVA) was conducted to compare the results of the groups (Table 4.20). Preschools were divided into three groups based on their environmental supportiveness (low, -5 to 0; moderate, 0-16 and high, 16-22). These results indicated that there was a significant difference between levels of environmental support for children's playfulness F (2,211) =7.49, p=.001. The effect size (.066) was calculated using the eta squared formula. This showed that there was medium effect according to Cohen's (1988) terms. Post-hoc comparisons carried out using the Tukey HSD (Honestly Significant Difference) demonstrated that the mean score for the low group (M=1.06, SD=.38) and moderate group (M=1.72, SD=.44) were significantly different from the high group (M=1.93, SD=.49); however low and moderately group were not significantly different from each other (see Table 4.21). In addition, the TOES and Social Skills Rating System scale were administered to each of the 16 different preschools and analysis of variance (ANOVA) was conducted to compare results of the groups. There was no significant difference among the groups at the $p < .05$. The SSRS scores for TOES were F (2, 238) = .180, p=.836.

Table 4.20 Descriptive Statistics on Test of Playfulness between levels of Environmental Supportiveness

Level of Supportiveness	N	Mean	Std. D.	Min.	Max.
low	37	1.6057	.38	.68	2.27
moderately	110	1.7229	.44	.52	2.54
highly	67	1.9355	.49	.52	2.86
Total	214	1.7692	.46	.52	2.86

Table 4.21Multiple Comparison for Levels of Environmental Supportiveness

	SchoolEnvironment		Mean D.	Sig.
Tukey HSD	low	moderately	-.11	.363
		highly	-.32	.001
	moderately	low	.11	.363
		highly	-.21	.008
	highly	low	.32	.001
		moderately	.21	.008

4.9 Correlation Analysis

To answer the third question, data regarding the correlation between the TOP and SSRS were analyzed using bivariate correlations. In Table 4.22 the correlations among the TOP and SRSS tests are presented. As shown in the table, there are significant positive correlations among the tests (r=.146. p=.031) There is a small correlation between the two variables (below .3). These results suggest that playfulness is related to children's social skills; so if children are playful, their level of social skills could be higher. Bivariate correlations were also computed between the four elements of the Test of Playfulness (control, motivation, freedom and framing) and Social Skills Rating System (cooperation, assertion, self-control and problem behaviors). The framing and perception of control elements of TOP were associated with the self-control dimension of SSRS. The other dimensions were not found to be related to each other (see Table 4.23).

Table 4.22 Correlation Analysis

		SSRS	*TOP*
SSRS	Pearson Correlation	1	.149
	Sig. (2-tailed)		.031
	N	212	212
TOP	Pearson Correlation	.149	1
	Sig. (2-tailed)	.031	
	N	212	212

Table 4.23 Correlations Between Elements of Playfulness and Dimensions of the Social Skills

		Cooperation	*Assertion*	*Selfcontrol*	*Motivation*	*Control*	*Freedom*	*Framing*
Cooperation	r	1	.606	.752	.076	.123	.079	.122
	p		.000*	.000*	.270	.074	.254	.077
Assertion	r	.606	1	.588	.103	.132	.055	.080
	p	.000*		.000*	.136	.055	.429	.247
Self-control	r	.752	.588	1	.111	.163	.087	.171
	p	.000*	.000*		.107	.018*	.207	.013*
Motivation	r	.076	.103	.111	1	.756	.626	.663
	p	.270	.136	.107		.000*	.000	.000
Control	r	.123	.132	.163	.756	1	.672	.819
	p	.074	.055	.018*	.000*		.000*	.000*
Freedom	r	.079	.055	.087	.626	.672	1	.572
	p	.254	.429	.207	.000*	.000*		.000*
Framing	r	.122	.080	.171	.663	.819	.572	1
	p	.077	.247	.013*	.000*	.000*	.000*	

*p<0.05

CHAPTER 5

DISCUSSION, IMPLICATIONS, AND RECOMMENDATIONS

In this part the major findings of the present study will be discussed. An in depth discussion of children's playfulness in terms of internal control, intrinsic motivation, suspension of reality and framing will be provided. The discussion will continue to look at the relations between children's social skills, playfulness and environmental supportiveness in more detail. The implications of the findings from the current research will be presented. In the final section, suggestions for future research will be given.

5.1 Preschool Children's Playfulness

Rasch analysis was performed for all of the items and participants. The findings of the goodness of fit Rasch analysis showed that items and participant scores met the assumptions. After examining Rasch analysis outputs, MNSQ values were found to be within acceptable ranges, so the Test of Playfulness was determined to be productive. Another benefit of Rasch analysis is that the location of items and their level of difficulty was compared according to playfulness as a state theory and the essence of other studies' findings.

To address the question of preschool children's playfulness in Turkey, the overall playfulness scores from the TOP showed that after Rasch analysis, mean of measure scores are .68, with a standard error of .31. In other study findings, total raw mean scores of playfulness for typically developing children were .90, measure scores were .43 through using same instruments (Skard & Bundy, 2008). In addition, according to Saunders, Sayer and Goodale`s study (1998), the mean of 19 randomly selected preschool children`s playfulness scores were -.093. Bundy et al. (2008) investigated playfulness of 5-7 year-old 20 children who were typically developing

after an intervention in their school playground. Their results showed that children`s mean playfulness scores were .58 and after intervention 1.09. according to these stuies findings, current study findings were within the acceptable ranges. The children`s scores were seen higher but they videotaped children during outdoor and indoor environment. Children could perform better in playground environment than indoor. Therefore, it can be seen that the playfulness level of children in Turkey was relatively high. The scores were located in between typical and atypical children's playfulness scores. There could be several explanations for the increased playfulness score in this study. In the first place, participants in the study were typically developing children, and most of them had received at least two years of early childhood education. Other findings suggested that children with special needs get lower scores in playfulness than their typically developing peers (Reed, Dunbar & Bundy, 2000; Skaines, Rodger & Bundy, 2006). Another reason could be the time and location of the observations. They were observed in free time sessions. Children were assessed during unstructured play, in their naturalistic environments and mostly after breakfast time or at the beginning of the day. These factors could have positive effects on increasing their playfulness scores. According to Bundy (1993) and Skard and Bundy (2008), playfulness can be influenced by several interrelated factors which are regarded as a frame of play. Therefore, each dimension's findings need to be discussed separately. In order to understand the logic of the items' hierarchy, it is important to note that within the scope of playfulness literature higher values of items indicate observed difficultly.

5.1.1 Perception of Control

Perception of control has been identified as the most important dimension of playfulness (Neuman, 1971; Bundy, 2012). If players have the ability to control play internally, they can choose the scope of play, players, and how they begin and end their play time (Bundy, 2012). Skard and Bundy (2008) reported that the absence of certain characteristics inhibits feelings of control over play. In Figure 4.1 (the person

item map), items were placed in a relatively logical hierarchy. Despite the fact that the items were placed logically, there was a huge gap between the item "skill of initiating new activities" (located on the top of the hierarchy) and the item "extent of playing safely" (at the bottom). Developing new items for bridging the gap could be suggested (Smith et al., 2002). To begin with, items such as "skill of initiating new activities" and "skills of modifying maintain challenge or fun" were observed to be most difficult. Each of these items were tied to children's own desire and feelings of accomplishment (Bundy, 1993). The current research showed that preschool children in Turkey demonstrated difficulty in internally controlled skills such as initiating activities, sharing control with their playmates and engaging in social play. Therefore, these results suggest that children face difficulty in creating new activities on their own. According to the relevant literature, children's level of engagement to play, cognitive development, learning behaviors or an unsupportive environment might hinder the creation of new activities. These results might be explained by means of a study by Mischel, Zeissand Zeiss (1974) which found that children's active engagement to play is related to their belief in their chances of accomplishing a task or ending successfully. Therefore, their internal control is connected to their positive outcome of active engagement. Alternatively, Sanderson (2010) viewed internal control as part of children's perceptions of self-efficacy. Indeed, children's concentration on the activity and ability to maintain their engagement might be connected to their self-regulation levels during their play. Internal control means that as children are playing, they take initiative with other players, continue to play even if it is challenging, and change roles between leader and follower willingly (Sanderson, 2010). These skills might be supported by social interactions with others. Control over play is not the only requirement of internal control; they also need to share control with other children. Nevertheless, this can be explained by the fact that they are in crowded classrooms with adult supervision; they have more opportunity to share control over play with other children. On the contrary, they easily choose to interact with objects. As mentioned in the results section, feeling safe during play is not difficult for preschool children without special needs. Safety

is the one of the first important requirements for children to play (Skard & Bundy, 2008). As the literature suggests, fear while playing might decrease children's' playfulnesstherefore, children need to feel trust in their environment in order to be engaged in independent play (Mitchell, Cavanagh & Eager, 2006; Bundy, Tranter, Naughton, Wyver & Luckett, 2008; Brussoni, Olsen & Sleet, 2012). Furthermore, TOP was also used in familiar environments. It could be the reason for high playfulness scores of the children in the present study.

5.1.2 Source of Motivation

Source of motivation asks about the various motivations when children are engaged in a particular activity (Bundy, 2012). Intrinsic motivation is regarded as one of the most critical and independent characteristics of play (Rigby & Rodger, 2006). Children's occupation is separated from leisure or work and described as play when intrinsic motivation activity is seen (Bundy, 1991). Children could be motivated by individual motivations in activities that enable social interaction, sensation or accomplishment (Bundy, 2012). Children's internal control basically depends on their own desire to play; children can be motivated even in adult-directed play environments or manipulated environment (Sanderson, 2010).

Examination of the items in the light of the linear logit scale as demonstrated in Figure 4.5 revealed that "intensity of persistence" appeared as the most difficult item when compared to other items. Specifically, "intensity of being engaged," "intensity of demonstrating positive affect during play," "extent of being involved in the process" and "extent of being engaged" followed in the difficulty level. The hierarchy of items-person overlapped partially; the items related to persistence and engagement though harder were easier to endorse. These results meet the expectations that these items have appropriate levels except for the item regarding intensity of persistence. It is located a long distance from the other items. Findings suggest that children struggle to find ways to persist in an activity if they encounter challenging situations or barriers within the activity. Alternatively, they did not seek

challenge during free play in their classrooms. One reason intensity of persistence was rarely seen during children's activities in the present study is that the children who participated did not have any physical or mental disabilities. Considering the studies' findings, children who have special needs encounter difficulties because of their inabilities and barriers from their social and physical environment (Reed, Dunbar & Bundy, 2000). It is evident that scores of children in this study on intrinsic motivation dimensions were relatively high; on the other hand we cannot be sure about the source of their motivation based solely on observation (Bundy, 2012). It could simply be a sign of becoming attracted to the activity without reward or reinforcements, only freedom and creativity (Grolnick, Gurland, Jacob & Decorcey, 2002). Even the free play activity itself may have been a source for their motivation; the pressures of academic success in schools lead to decreased free play times in their schedule. Children might be motivated by the opportunity for free play time. It is clear that signs of children's intrinsic motivation are observed during their free play times when they explored by themselves without directions (Bundy, 1991). On the contrary, some of the children in the current study failed to engage in activities with intensity; one possible reason could be that structured, teacher-oriented activities were conducted in the daily program of the preschool centers so external motivations, directions and warnings could diminish the persistence of internal engagement of activity (Poulsen & Ziviani, 2006). In addition, according to meta-analytic review of Deci, Koestner and Ryan (1999), extrinsic, tangible rewards have serious negative effects on developing intrinsic motivations of children. It is worth noting that the meaning of intrinsic motivation should be understood considering their autonomy, skill of persistence, wellbeing and success, as well as their social and cognitive development (Ryan, 1995; Ryan & Deci, 2000).

5.1.3 Freedom to Suspend Reality

Freedom from unnecessary constraints of reality is described as "players . . . can choose how closely their play will reflect objective reality" (Bundy, 2012, p. 32). Indeed, a child can choose to play with an object as intended or create different ways to use it. For instance, a child might decide to play with puzzle pieces as if they are cookies. Freedom to suspend reality can be seen in many conventional—pretending, teasing, joking and clowning— and unconventional forms (Bundy, 2012). In the present study, the line of "freedom to suspend reality items" was described by Rasch analyses. It allowed the researcher to differentiate children's pretending, joking, clowning and teasing behaviors on the item-person-maps (see Figure 4.6). The results show that children have difficulty manifesting the constraints of reality in their free play interactions. It found that the usage of objects in unconventional ways occurred very rarely. Similar to the study of Bundy, Nelson, Metzger & Bingaman (2001), "engages in mischief," "pretends" and "use play things in imaginative ways" seemed the most difficult items. These difficult items would be expected to be observed in most playful children with optimum supportive conditions (Bundy, Nelson, Metzger & Bingaman, 2001). However, while giving ratings for "using unconventional objects in play," it is difficult to agree on a definition of "unconventional" (Bundy, 2008).

One of the apparent characteristics of playfulness is pretending among others (Bundy, 2012). Based on "skill of pretending" item scores, children occasionally engage in pretending. Two reasonable explanations might be suggested: their ages and their engaging types of activities could have roles in the extent of pretend behaviors during observations (Bundy, 2008). Their ages may affect the results of the current study because children start to pretend play at the edge of two years of age, but pretend play is most frequently seen in three to five year-old children (Fein, 1981; Pellegrini & Smith, 1998). Further, children's creativity and divergent thinking skills are also found to be related to pretend play abilities (Boyer, 1997; Barnett & Kleiber, 1982; Trevlas et al., 2003). Hence their creativity and divergent

thinking skills could be a factor for the use of their imagination in creating their roles in pretend play. Using clowning and joking are other ways of suspending reality. Children exhibited these behaviors occasionally in the current study. Joking and clowning factors are bound to children's activeness and implications of energetic behavior (Zachopolulou, Trevlas & Tsikriki, 2007). Therefore, physical activeness or inactiveness may lead to increase or decrease in children's joking and clowning scores on the TOP. Mischief and teasing behaviors are expected to bring joy and fun, however, they are difficult to accept and differentiate from obtrusive behaviors if they are not skillful (Bundy, 2012). From observations, children were more likely to show misbehaviors when they intended to be joking, teasing or engaging in mischief. As noted in Tyler's (1996) study, one of the reasons could be that these behaviors are significantly affected by children's cognitive and language development. As anticipated, most of the preschool children were not able to tell jokes or tease without disturbing easily.

5.1.4 Play Framing

Play framing constitutes giving and receiving cues and a continuum of engaging play. The meaning of cues is explained as players expressing how they are expected to behave\treat one another (Bundy, 2012). For example, while a child is pretending in the role of a doctor, she gives cues to treat her like a doctor or other players are expected to act as patient. To continue to play, children need to give understandable cues and receive the other players' cues. Results of ratings in the framing component suggested that preschool children were more skillfully engaged in framing than in the other items. Although this item had less proportion of time observed among children, it is seen as the most difficult item and children were skillful in responding. Interestingly, while the *extent* of giving cues was hard to observe, *skill* of giving cues was commonly seen. However, it is more important to obtain a skill. Considering the intent of the items, a child was expected to be able to give cues for turning a situation into play. It appears that children might sometimes

respond to cues inappropriately because of their observant personality. In other words, children have high skills for receiving and giving cues even if they do not read or cues are not suited to their wishes (Bundy, 2010). Therefore, some children appeared to apply these skills incorrectly, but they were observed frequently.

Children's participation in other players' play and ability to make sense of norms and expectations which enable them to be socially appropriate (i.e., follow rules, share, be aware of people`s emotions and be honest and confidential) is constructed by reading and giving social cues clearly (Rigby & Roger, 2006). In growing, children show progress in trying to understand the cues of others. Children are able to receive nonverbal cues from their playmates by improving communication. Children also develop the ability to identify clues from their environment, gestures and facial expressions as they age (Hoff, 2001). Thus, considering these children's ages, the results of the analyses meets expectations regarding receiving and giving cues. Specific behaviors such as eye contact, smiling and physical contact have been taken into account during observation; however, these behaviors sometimes cannot be caught on camera. Furthermore, some of children chose to play alone, therefore, rating these behaviors became impossible for the observer.

5.2 Preschool Children's Social Skills and Problem Behaviors with their Playfulness

Analysis of the data demonstrated that many of the Turkish preschool children were more cooperative in waiting for help appropriately, taking responsibility and using free time appropriately, however these skills were the least seen among the cooperation subscale items. Children have a tendency to seek guidance and immediate instructions. Similar to Atkins-Burnet's (2001) findings, these behaviors were less observed among kindergarteners in the Rasch analysis. Taking a different angle, other studies in Turkey investigated the influence of demographic factors on preschool children's cooperative skills. Studies of Elibol

Gultekin (2008) and Mavi Dervişoğlu (2007) found that children's gender, mother's education and schooling age correlated with a significant difference in their cooperation skills. For instance, girls had significantly higher scores on cooperation, self-control and assertive scales, whereas external problem behaviors were rated higher for boys. Ratings of social skills might be influenced by many factors.

Regarding the assertion scale, the most difficult items assess the frequency of introducing oneself to others, complimenting peers and initiating peer activities. These three items were observed to be more difficult for preschool children when comparing across the first and second grades (Atkins-Burnet, 2001). As a result of adjusting school environments, older children show more assertive skills in school. Further, teachers are moreable to see these behaviors throughout the school years, which allows them to increase their scores (Atkins-Burnet, 2001).

"Appropriately telling when unfairly treated" and "appropriately questioning unfair rules" were expected to be the most difficult behaviors for the children. Other researchers found that children need to have social problem-solving skills and communication skills for dealing with unfair situations appropriately.

Results of the self-control subscale suggested that preschool children were less likely to exhibit "compromising by changing ideas when in conflict" and "accepting criticism" than they were to control their temper with adults. It is possible that in some crowded classrooms, teachers might have limited opportunities to observe these skills for each child. In addition, it is possible that children consent frequently so there are no situations in conflict.

The items on the internalizing behavior problems scale were more sensitive to subjectivity of teachers (Atkins-Burnet, 2001). If some of the items were observed for the individual child, teachers could have decided more easily. Otherwise they are difficult to decide in crowded classrooms. In addition, teachers' ratings can be influenced by cultural expectations because expectations for children's behaviors regarding their ages may be changeable across various cultures (Lynch & Hanson, 1992).

The externalizing problem behavior subscale items revealed that fighting is rarely defined for preschooler`s arguments, so disobeying the rules is the more definite classroom behavior. Preschool children's external problem behaviors were mostly temper to objects and people. It is likely that preschool children showed tempering and disturbing ongoing activities. They face difficulty in controlling their anger. When a child is able to control their frustrations, their personal conflict might have a role in showing externalizing behaviors (Atkins-Burnet, 2001). One of the important factors in problem behaviors is friendships. The need for friends can be seen to make a significant difference in their well-being and the stability of their behaviors. Good friendships might support them to overcome difficulties in communicating with their social environment (Petersen, 2002).

External behavioral problems, which are threatening or bullying others, is less typically seen in preschool children. However, if these behaviors are observed in preschool children, it is urgent to take precautions through interventions because these behaviors are considered important clues for their future aggressiveness.

5.3 Associations between children's playfulness and social skills and within different levels of environmental supportive

This study focused on understanding how a supportive environment influences children's playfulness. An ANOVA analysis revealed that there was a significant difference between levels of environmental support for children's playfulness. In this study, low and moderately supportive preschool environments significantly differed from highly supportive environments in terms of children's playfulness. These findings suggest that when preschool children have more appropriate conditions in their schools, their playfulness levels could be increased. The reason for having higher playfulness scores in highly supportive environments may be understood by the extent of environmental supportiveness. Children were observed in classrooms that had unstructured toys such as LEGO sets and sensory motor materials like musical instruments; even if all the schools did not have those

items, the majority of the preschool classrooms had kitchen and household materials. These are important for supporting children's pretend behaviors. The findings of the study have, in accordance with similar studies, demonstrated that supplying the children's environment with developmentally appropriate materials could promote children's level of playfulness significantly (Ryan, 2011; Gariepy & Howe, 2003; Haiat et al., 2003).

According to the results of the Rasch analysis on the Test of Environmental Supportiveness, peer playmates positively supported other children's playfulness, whereas the item assessing caregivers' roles in play were seen as the most difficult item. According to Gagnon and Nagle (2001), good communication between peer playmates has important effects on children's playfulness. Gagnon & Nagle (2004) investigated how peer play was related to children's social and emotional development. While preschool children were playing with their peers, they showed positive social relationships and fewer problem behaviors. However, results showed that the teacher's role in children's playfulness was very limited. Similarly, a study by Lobman (2001) showed that preschool teachers mostly did not use playful methods of engagement while children were playing except to teach new things. In addition, Kendrick (2013) supported the finding that teachers were not willingly participating in children's play; instead they prefer to be an observer during children's play in the playground. This is highly important because for shy children, a caregiver or teacher could help them to activate in play with other children (Skaines, Rodger & Bundy, 2006).

Results of the correlation analyses for this study demonstrated that there was a significant correlation between children's playfulness and their social skills. However, the magnitude of this correlation was not found to be large. Similarly, Sanderson (2010) found that there were not strong correlations between social connection and joyfulness. Specifically, the framing and perception of control dimensions of TOP were associated with the self-control dimension of SSRS. These results suggest that increasing children's playfulness might develop their self-

control. Similarly, Ramani (2005) found that preschool children's cooperation skills were connected to their playfulness climate.

As was expected, the findings of this study could not show any relationship between environment and children's social skills. These results are expected because all participants' social skills were rated by teachers within the preschool environment. However, the findings of previous studies showed that parents and teachers gave significantly different scores on children's social skills in the home and school environment (Gresham & Elliot, 1990). These differences may be explained by environmental characteristics: materials, teacher and playmates. Plus, children face difficulties paying attention in highly structured classroom environments.

5.4 Implications

Since the primary purpose of the Test of Playfulness (TOP) and Test of Environmental Supportiveness (TOES) is to help consult occupational therapists, parents and teachers, the findings of this study may support their implementations and design of the children's environment, and help to understand what is supporting or hindering their playfulness.

This study aimed to investigate children's playfulness levels and social skills, as well as their associations within their environmental support level. The results indicated that participants of the study have relatively high levels of playfulness, except in their abilities to suspend reality and frame. Their playfulness is affected by environmental supportiveness; they get higher TOP scores in highly supportive Turkish preschool environments. Moreover, the current study found that their social skills are related to their playfulness.

Firstly, with respect to the results of the study, we can learn about Turkish children's approach to play and how well their preschool environment supports their play. One of the important benefits of the TOES is help to learn the strengths and weaknesses of preschool classrooms in supporting children's playfulness. By

gathering information about the peers, caregivers, space and materials' supportiveness, teachers might notice deficiencies. This helps them to take precautions and plan accordingly.

Owing to the study findings, there could be several interventions in their physical environment for enhancing children's playfulness. First of all, increasing the variety of sensory materials in the classrooms could be helpful. Likewise, three important study findings supported that sensory-motor materials have the greatest effects in supporting children's playfulness (Barbour, 1994; Boyer, 1997; Bundy et al., 2008). Sensory-motor materials could be water/sand play, loose materials, pillows, riding toys, etc. (Bundy, 2012).

With respect to internal control, children had lower scores on items which reflect the ability to initiate new activities, share control with their peers and engage in social play. In accordance with social skills ratings, they have the tendency to seek guidance from their teachers and difficulty in controlling their temper. Their cooperation and communication skills need to be supported to increase their internal control. While children must feel safe to keep playing, they need chances to overcome difficulties. To foster their decision-making process, teachers might increase the level of challenges of the activities by means of mastery motivations from objects or classroom activities.

Participants in the study received high scores on motivation. One possible explanation is that their motivation could be regarded as relatively intrinsic because they were observed while active and intensely engaged. The important point is finding out the exact source of motivation, with results of the TOES showing that children could be motivated by the environment in terms of their peers. It is indicated that peers are the most supportive element in their environment. Children's social environment is one of the important indicators for their intrinsic motivation to play. Another plausible explanation—White (1959) indicated that children's source of motivation stems from the mastery of the environment, and according to Caillois (1979), activities become their exact drive for their motivation (as cited in Bundy, 2012). Hence, their engaged activities could be their sole source of motivation,

owing to the fact that children's free time activities are mostly created by themselves because they really do what they intended to do. For this reason, in order to increase playfulness, it is important to give children more free time in their daily classroom routines. In spite of the fact that children's playfulness shows known linkages to social-emotional growth, divergent thinking and coping skills, creativity and psychological well-being, degrees of free time and child-centered activities are often lowered (Elkind, 2007; Pellegrini & Bohn, 2005).

It is clearly seen that children's transactions mostly suspend objective reality instead of being free of it completely. These results argue that children's age can be a factor decreasing the extent of joking and clowning during free time; however, they *are* expected to use objects in more variable and unconventional ways than was observed in this study. To overcome these deficiencies, teachers should not interrupt children while using objects out of purpose or acting different roles. During observations, teachers were seen to mostly take precautions for children's safety and interrupt children's play or time spent creating different ways of using objects in the classroom. One other aspect of suspension of reality is pretending. Teachers could be pursuing children's imaginative roles by getting involved in their play. This study showed that there is a need for teachers' participation in children's play, but not as a director or observer. Moreover, one of the important roles of parents and teachers is evaluating and responding appropriately to children's cues (Jennings & MacTurk, 1995). Therefore, while playing with children, teachers are expected to provide more challenges, help and respond and give more cues as playmates.

This study suggests that pre-service teachers need to have knowledge regarding children`s playfulness and factors which limit and encourage children`s playfulness. Early childhood teacher education programs have strong effect on pre-service teachers` views in terms of instructional instruments, contents and methods (Sicim, 2011). Therefore, it is essential that their awareness for importance of children`s playfulness and its relations with their social skills in classrooms need to be increased. Teachers could have confusion about interpretation of children`s play behaviors. Hence, there is a requirement to determine children whether they are

playful or not. It is possible to assess children`s playfulness by using Top and Toes instruments. In order to prevent this gap, these assessment tools could be taught and practiced in college and university courses of pre-service early childhood teachers.

Preparation of teacher education program needs to consider that teachers can be informed about allowing children more free time, appreciating their playful ideas, respecting to their rules of play and their choices, and preparing playful environment. According to study of Tegano, Groves and Catron (1999), teachers` playfulness and ambiguity tolerance characteristics are related each other so playful teachers are also more tolerant, changeable and open. This study indicates that it is more important that teachers need to be joyful, motivated, mischievous, teased, joking and imaginative. This could be achieved by allowing pre-service teachers to gain experience in observing and participating children`s activities without directing and interrupting them.

The TOP and TOES provide valuable information to understand the extent, intensity and skillfulness of children's playful behaviors and how supportive their surrounding social and physical environment is. Using these instruments, difficulties and limitations of playfulness can be understood to design better interventions. For generalizability of this study, using these instruments allows researchers to control environmental variables without developing strict laboratory conditions and be aware of differences in features of the environment and their effects on children's playfulness. Another benefit of the current study is its exploring the associations between children's social skills and playfulness; these explorations may have implications on theory and practice. Although playful children might be labeled as mischievous, active or problematic, playful children have better social skills. With this information, instead of limiting their jokes, mischief behaviors or pretending, teachers and parents can support these behaviors. Lastly, in support of the reliability and goodness of fit of these items, the findings of the study suggest that therapists, researchers and teachers who received training could administer the Test of Playfulness and Test of Environmental Supportiveness to Turkish preschool children.

In conclusion, play is a medium for understanding children's behavior and promoting the improvement of their lives. Therefore, playfulness should be taken seriously into consideration. As Bundy (1993) indicated, playfulness needs to be examined systematically by means of measures. In accordance with this study`s findings, playfulness may not be stable and just a trait of children; it can be changeable within different environments and conditions. This information could change and develop our interactions with children and our ability to look at children's play behaviors through their own window. This study highlighted the need to be aware of the social and physical environment for children's play. Teachers also have an important role providing opportunities by means of creating ways to integrate playfulness into their daily programs and implementations. This study found that there is a relationship between children's social skills and playfulness. Specifically, preschool children's framing and internal control elements are associated with their self-control dimensions of social skills. Therefore, occupational therapists, teachers and parents could act as facilitators for controlling and sharing responsibilities. Supporting connections and initiating conversations by modeling and being playmates could support children's playfulness. There is a need to train teachers about how to be good playmates for children without interrupting. Lastly, the value of play should be understood by society and families. The community and government have an important responsibility to give equal opportunities to different backgrounds, needs and skills of children in terms of giving motivations, encouragement, time and safe environments for child-centered play. According to experimental, correlational and longitudinal studies, playfulness is highly important throughout a person's entire life

5.5 Recommendations for further studies

Further studies could examine associations between different variables (e.g., mastery motivation skills, academic skills, school readiness) and children`s playfulness. By investigating these links could be beneficial for understanding of potential barriers and supportiveness for children`s playfulness. In addition,

empirical studies empower to the meaning of playfulness in preschool children`s development and wellbeing. Playfulness is also not limited to children, there are also limited studies done for investigating adults` playfulness, in the reviewed literature, related to parents` playfulness has not found any research.

Another recommendation could be creating intervention plans for children, parents, teacher and schools for increasing children`s playfulness. In terms of the present study findings, the teacher`s role in children`s play was found to be limited. An experimental study could be useful for finding out an intervention effects on teacher`s playfulness. Besides, for community and school need to be arranged for sustain children`s playfulness, therefore, future research might benefit from the views of school administrator and policy makers for creating necessary changes on the preschool curriculum.

In the current study, observations were conducted in the indoor settings of the preschool centers. Synthesis of empirical studies related to playfulness showed that children`s playfulness can be differentiated depend on home, school, laboratory, indoor and outdoor environment. Therefore, children need to observed while playing with their parents and siblings in their home to understand these effects on their play. In addition, playfulness could be higher in different types of landscapes such as natural areas, water settings.

Lastly, it was known from the literature review that parent`s, teacher`s and therapist`s ratings were differentiated from each other while assessing children`s playfulness. Because of the use of tests based on observation, have specific limited time and location, it is strongly recommended that extensive research need to gather information from multiple sources and instruments. Further research would investigate differences between them and reliability and validity of these assessments within different cultures.

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APPENDICES

Appendix A Curriculum Vitae

PERSONAL INFORMATION

Surname, Name: Sicim Sevim, Berna
Nationality: Turkish (TC)
Date and Place of Birth: 16 july 1984, Ankara
Marital Status: Married
Phone: 0372) 323-38-70
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EDUCATION

Degree	Institution	Year of Graduation
MS	METU Early Childhood Education	2011
BS	Hacettepe Unv. Child Development and Education	2007
High School	Anıttepe High School, Ankara	2002

WORK EXPERIENCE

Year	Place	Enrollment
2016-Present	Bülent Ecevit University, Department of Early Childhood Education	Research Assistant
2007-2016	METU, Department of Early Childhood Education	Research Assistant

PUBLICATIONS

Dilli Rukiye, Bapoglu Dümenci Seda, Sicim Berna (2017). Bilim Insanin Temsilinde Ebeveynlerin ve Okul Öncesi Dönem Çocuklarının Çizimlerinin Karsılastırılması. Usak Üniversitesi Egitim Arastırmaları Dergisi, 2(1), 56-70.

PRESENTATIONS

Sicim, B.,& Olgan, R. (2010). Pre-service early childhood teachers' perception about the confidence in teaching young children. Paper presented at The European Conference on Educational Research, Finland

Yılmaz, S., Sicim, B.,& Olgan, R. (2011). The investigation of the relationship between pre-service early childhood teachers' attitudes towards science and competencies in the science activities. Paper presented at The European Conference on Educational Research, Berlin.

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Yılmaz, S., Sicim, B.,& Kirazcı, S. (2013, July). *Comparing Motor Skills of 5 Year-Old Female Gymnasts with Their Peers.* Paper presented at OMEP 65th World Congress, Shangai, China.

Ünlü-Çetin, Ş., Sicim, B. (2013, July). "*Toy Library": Its Contributions on Volunteer Pre-Service Early Childhood Educators Understanding of Community Involvement.* Paper presented at OMEP 65th World Congress, Shangai, China.

Sicim, B. & Ünlü-Çetin, Ş. (2013, September). *Early Childhood Teachers' View About Factors Influencing Father Involvement in Early Childhood Education*. Paper presented at The European Conference on Educational Research, İstanbul, Turkey.

Sicim, B., & Erden Tantekin, F. (2015, July). *Assessment of playfulness in preschool children: Test of Playfulness.* Paper presented at 2015 OMEP World Assembly and Congress, Washington, America.

Çetinkaya Aydın, Gamze & Sicim, B. (2015, September). *Preservice Elementary Teachers' Self-Perceptions of TPACK and Intentions of Technology Use: Is There A Correlation?.* Paper presented at The European Conference on Educational Research (ECER), Budapest, Hungary.

Yılmaz, Simge, Sicim Sevim, B & Çetinkaya Aydın, Gamze. (2017, May). Pre-service Teachers' Environmental Literacy in terms of Knowledge, Attitude, Concern and Responsibility. Paper presented at ERPA International Congresses on Education, Budapest, Hungary

Workshop

Summer School on Academic Writing: Writing for Dissemination Workshop, European Educational Research Association, Sweden, 12.06.2011-17.06.2011

Hobbies

Cinema, Animals, Documentary Channels, Travel.

Appendix B. Turkish Summary-Türkçe Özet

OKUL ÖNCESİ DÖNEMİ ÇOCUKLARININ OYUN SEVERLİKLERİNİN ÇEVRE VE SOSYAL BECERİLERİ İLE İLİŞKİLERİNİN ARAŞTIRILMASI

1. GİRİŞ

Çocukların yaptıkları ve tercih ettikleri asıl işleri ve temel aktiviteleri oyundur. Çocukların hayatında bilişsel, fiziksel, sosyal, duygusal ve dil gelişimine oyunun önemli bir katkısı bulunmaktadır (Bredekamp & Copple, 1997, Fisher. 1992). Oyun çocuğun oyuna yaklaşımı, (oyun severlik), oyun tercihleri, oyun becerileri, motivasyon kaynakları ve çevreleri açılarından değerlendirilmektedir (Bundy, 2005). Oyun severlik(çocuğun oyuna yaklaşımı) bu değerlendirme boyutları arasında en önemli faktörlerden biridir (Bundy, 2005, 2012). Bundy (1993) oyun severlik olmadan bütün aktivitelerin iş olarak görüleceğini belirterek özel olarak oyun severlikle ilgilenilmesi gerektiğine dikkat çekmiştir. Birçok çalışma çocukların oyunseverliklerinin zihinleri hakkında bilgi edinmek için yeni bir pencere açtığını göstermektedir (i.e Bjorklund & Pellegrini, 2000, Diamond et al., 2007). Oyunseverlik sadece bir davranış biçimi olmak dışında eğilimlerinin, bilişsel becerilenin, psikososyal sağlıklarının da bir göstergesidir (Lieberman, 1965, 1966, 1977; Barnett & Kleiber, 1982).

Önceki araştırmalarda geniş bir perspektifle bakıldığında oyunseverliğin problemlerle başa çıkma becerileri, uyum davranışları gibi kişisel nitelikleri ile ilişkili bulunmuştur (Lieberman, 1977; Barnett, 1991). Barnett (1991) okul öncesi dönemdeki çocuklarla yaptığı çalışmalarda güven, hayal gücü, yaramazlık, şiddet, neşelilik merak, aktiflik gibi karakteristik özellikleriyle oyunseverlilik arasında ilişki bulmuştur. Çalışmasının sonucunda, oyunseverlik özelliği taşımayan çocukların bağımlı, kendi kendini ifade edemeyen, spontan olmayan kişilik özellikleri taşıdığı bulunmuştur. Okul öncesi eğitimde çocuklarda bu davranışların değiştirilmesinin erken müdahale ile mümkün olduğu bilinmektedir. Bu nedenle çocukların

oyunseverlik davranışlarının ölçülmesi okul öncesi eğitimide kalitenin sağlanması açısından gereklilik gösterir. Bu açıdan çocukların oyunları sırasında oyun becerilerini ölçen birçok değerlendirme ölçeği bulunmaktadır. En bilinen ölçekler arasında Knox Preschool Play Scale, Knox (1997), Play History; Takata (1974), Peer Play Scale; Howes (1980)'dır. Fakat kullanılan ölçeklerin arasından en güvenilir ve geçerli olarak test edilen Children Playfulness Scale (CPS) (Barnett, 1990; 1991) ve the Test of Playfulness (ToP) (Bundy, 1997, 2001, 2006) ve Environmental Supportiveness (Bundy ve Skard, 2007) kullanılmaktadır.

İlgili literatürde oyun severliğin iki kabul gören tanımı bulunmaktadır. Birincisi kişisel karakteristik özelliği olmasıdır (playfulness as trait) (Barnett & Kleiber, 1982, 1984; Lieberman, 1965, 1966, 1977; Rubin ve ark.,1983; Singer & Rummo, 1973; Singer & Singer, 1980). Oyun severlik bir karakter özelliğidir şeklinde yapılan tanımlamalarda espirili olma, ıraksal düşünme ve yaratıcılıkla ilgili özellikleri kapsadığı görülmektedir. Bu değişkenler oyunsever bireylerin ilk beklenen karakter özellikleri olmaktadır. Bu tanımlamalar ile oyunseverlik tanımlanırken içsel oyun oynama kapasitesi ortamın etkisi göz önüne alınmadan oyunseverlik psikolojik yapı ve gözlenlenebilen karakter özelliği olarak görülmektedir (Rubin ve ark.,1983).

İkinci yaklaşım ise oyun severliği eğilim, durum (Playfulness as state) olarak değerlendiren bakış açısı olmaktadır (Bundy, 1993, 1997). Bu yaklaşımda çocukların oyunseverliğinin eğitim ve çevrenin düzenlenmesi ile geliştirilebileceği savunulur. Oyunseverlik üç faktörle açıklanır; içsel motivasyon, içsel kontrol, gerçekliğin dışına çıkma özgürlüğü. Bundy (2007) çerçeve ismini verdiği dördüncü faktörü de ekleyerek tanımlamasını geliştirmiştir. Oyun sever bir çocuk sözel ve sözel olmayan ipuçlarını verir ve alır ve çocuk bu çerçevede oynar. Oyun davranışlarının sıklığı, yoğunluğu ve beceriye dayalı olması olarak tanımlanarak çocuğun oyun severliği değerlendirilir. Bireysel farklılıkların oyun ortamında etkisi olduğu bilinmekle birlikte ortamın, diğer oyuncular ve öğretmenleri açısından araştırılması gerektiği savunulur (Bundy, 2009). Çevrede yapılan uygun değişikliklerle çocukların daha oyun sever olduğu, öğretmenleri ve akranlarıyla daha etkili iletişim kurduğu

gözlenmiştir (Jennings & Macturk, 1995). Bu çalışmada Cooper (2000)'ın oyun severliğin çocuğun kendi sosyal çevresi ve fiziksel çevresi ile şekillendiğini savunan yaklaşımı baz alınmıştır.

1.1 Çalışmanın Önemi

Geçmiş çalışmalarda oyun severliğin çocukların duygusal öz düzenleme, özgüven ve alıcı dile gelişimleri ile ilgili olduğunu bulmuşlardır (Fantuzzo, Sekino & Cohen, 2004; Zeman, Shipman, & Suveg, 2002; Cole, et al., 1994). Sosyal gelişimleri içerisinde sosyal becerilerinin birçoğunu oyun deneyimleri sırasında öğrenirler (Saracho & Spidek, 1998; Singer, Golinkoff & Hirsh-Pasek, 2006). Bu etkileşimi nedensel veya tek yönlü olarak değerlendirmek yerine sosyal becerilerinin ve oyun davranışlarının çocukluk boyunca birlikte geliştikleri bulunmuştur (Fisher, 1992; Rogers & Ziviani, 2006; Renthozu, 2012, 2014). Çocuklar oyun içersinde doğru yardım istemek/önermek, konuşmayı başlatma ve doğru zamanı bekleme gibi birçok sosyal becerileri geliştirmeleri beklenir (Spence, 2003). Bu sosyal becerilerin gelişimi hayatlarındaki en önemli gelişmelerden biridir dolayısyla bu becerilere sahip olmadıkları zaman dezavantaj olurlar. Buna neden olan faktörler arasında bilişsel, duygusal ve çevresel birçok etmen gözönüne alınabilir (Gresham, 1997; Spence, 2003; Rogers & Ziviani, 2006). Bu nedenle çocukların sosyal becerilerinin değerlendirilerek ve ilgili değişkenleri hakkında araştırma yapılarak bilgi edinilmesi önemlidir. Gresham ve Elliot (1990) bu amaçla "Sosyal Beceri Değerlendirme Sistemini (The Social Skills Rating System, SSRS)" geliştirmişlerdir. Standardizasyon çalışmalarından sonra çocukların sosyal becerilerini ve problem davranışlarını ölçemede geçerli ve güvenilir bir ölçek olduğunu bulmuşlardır. Çocukların sosyal becerileri ile cinsiyet, sosyo ekonomik statüleri, aile yapıları gibi demografik özellikleri ile ilişkilerini ortaya koyan çalışmalar yapılmıştır (Elliott, Barnard, & Gresham, 1989; Powless & Elliot, 1993; Oprea, 1998; Cessna, 2000). Ayrıca Piaget (1951) ve Vygotsky (1976), oyunun çocukların sosyal ve duygusal gelişimlerinde çok önemli olduğunu vurgulamıştır. Dolayısıyla oyun ve sosyal beceriler arasında ilişki olduğu ile ilgili araştırmaların temeli atılmıştır. Örneğin

bununla ilgili olarak çocukların kooperatif, öz denetim ve girişkenlik sosyal becerileri ile sembolik oyun becerileri arasında ilişki bulunmuştur (Li, Hestenes, Wang, 2014). Çocuklar sosyal rolleri ve empati becerilerini miş gibi davranarak oynadıkları oyunlar aracılığıyla kendilerini başkaları yerine koyarak fark ederler (Fisher, 1992). Oyun aktiviteleri aracılığı ile yeni davranışlar ve anlamlar kazanırlar (Rogers & Ziviani, 2006).

Oyun becerileri ile sosyal becerileri yanısıra bulundukları çevre faktörlerinin ilişkili olabileceğini bazı çalışmalar göstermektedir. Bu çalışmaların temelinde oyun severliğin karakter özelliği olarak kabul edilmesinin yanı sıra çevrenin değişimi ile zaman içerisinde farklılık göstereceği ile ilgili teoriler bulunmaktadır. Örneğin Reed, Dunbar ve Bundy (1999) bir yıllık Head Start programı sonrasında çocukların oyun severlik puanlarında artış bulmuştur. Öte yandan oyun severliği karakter özelliği olarak gören teoriye karşı olarak Bundy kişinin karakter özelliklerinin ve çevrenin etkisinin oyun severlik düzeyini belirlediğini savunmaktadır. Ayrıca kişinin karakterini değiştirmek çevreyi değiştirmekten çok daha zordur ve çetrefilli bir süreçtir. Bireysel farklılıkarın oyun severlikle ilişkisinin araştırılması gibi çevreninde rolünün araştırılması gerekmektedir (Bundy, 1999). Deneysel araştırma sonuçları; çocukların oyun oynarken içinde bulundukları oyun arkadaşları, öğretmenleri, ailesi ve bakıcısından oluşan sosyal çevreleri ile oyun materyallerinin ulaşılabilirliği ve fiziksel çevresinin kullanılabilirliğinin çocukların oyun severliklerini engelleyebileceğini veya destekleyici rol oynayabileceğini göstermiştir (Rigby & Gaik, 2007). Çocuğun sosyal çevresi ve oyun severliği ile ilgili yapılan araştırmalar akranları ile iyi ilişki kuran çocukların oyun ile daha çok meşgul oldukları ve sosyal duygusal gelişimlerinin iyi düzeyde olduğunu göstermektedir (Gagnon & Nagle, 2001). Ayrıca yetişkinin çocuğun oyun severliğinin gelişiminde sadece çevreyi düzenleyici rolü ile değil oyununa katılış şekli ile de önemli bir etkisinin olduğu bilinmektedir (Fisher et al., 2011; Lilard et al., 2013). Çocukların duyusal, sosyal ya da dramatik oyunlara katılımı, çevreden sağlanan olanaklarla şekillenir. Bugüne kadar birçok değerlendirme araçları çevre kalitesinin sağlanması ve diğer değişkenler arasındaki ilişkiyi keşfetmek için tasarlanmıştır. Örneğin, Knox

(2008)'un bütün olarak çocuğun doğal ortamına dayalı geliştirdiği çevre ölçeği ve çocuğun çevresinin kalitesini ölçen "Okul öncesi Eğitim Ortamı Değerlendirme Ölçeği (the *Early Childhood Environment Rating Scale-Thırd version* (Harms, Clifford, Cryer, 2014) gibi ölçekler kullanılmaktadır. Bundy (1997), oyunun çevrenin yetişkin, oyun arkadaşı, materyal ve alan açısından nasıl etkilediğini değerlendirmek amacıyla "Çevrenin oyun severliğe desteği testi (Test of Environmental Supportiness for Playfulness) geliştirmiştir. Ayrıca ilgili çalışmalarda çevre ile oyunun ilişkili olduğunu bulmuştur (Boyer, 1997; Branson & Bundy, 2001; Rigby & Gaik, 2007). Oyun severliği kişilik özelliği olarak gören bir çok çalışma yapılmıştır (örn. Barnett, 1990,1991a,1998, 2007;Taylor & Rogers, 2001; Trevlas, Matsouka & Zachopolou, 2003; Zachopoulou, Trevlas, & Tsikriki, 2004; Ramani, 2012; Chang, 2013; Rentzou, 2014) ama bu çalışmada çevre ve oyun severlikle ilgili oyun severliği davranış olarak gören Bundy ve arkadaşlarının çalışmaları baz alınmıştır (Bundy, 1997, 1999, Bronson & Bundy, 2001; Bundy, Waugh & Brentnall, 2009, Skard & Bundy, 2008). Bu çalışmaların sonuçları ışığında çevrenin çocukların oyun severliğini kısıtlayabilecek ya da destekleyebilecek belirgin bir etkisi olmuş olabileceğini görülmektedir. Ancak önceki araştırmacılar 5-7 yaş grubu çocukların ev, laboratuvar, hastane ve okul bahçelerindeki çevre değişkenlerine ve yoğunluklu olarak özel gereksinimli çocuklarla farklarını karşılaştırdıkları araştırmalar yürütmüşlerdir. Bu nedenle, okul çevresinin okul öncesi dönem çocuklarını nasıl etkilediği ile ilgili daha çok çalışma yapılması gerekir. Beş yaş grubu okul öncesi eğitim alan çocukların sınıflarının oyun severliklerine etkisini araştırılmasının önemli bilgiler edindireceği düşünülmektedir. Ayrıca Bundy ve arkadaşlarının (2008) yürüttüğü proje sonuçları dikkate alındığında çocukların sosyal beceri düzeyleri ile oyun severliklerinin açıklanabileceğini, 5 ile 7 yaş arasındaki sosyal, yaratıcı ve esnek çocukları geliştirmek için oyun sever bir çevre sağlanması gerektiğini görülmüştür. Bu çalışma ile değişkenlerin çocukların hayatındaki önemi göz önüne alınarak aktivitelerinin planlanması ve çevreyi organize etmek için bu ilişkiyi kanıtlamak adına katkı sağlanacağı düşülmektedir. Okulöncesi dönem için oyun severliğin önemini anladıkça, okullar, topluluklar ve aileler çocukların serbest

oyun oynamalarını kısıtlamaktan ve çevrelerini manipüle edilmiş oyun malzemeleri, sınırlı alan ile sınırlandırmaktan kaçınan uygulamalar yapmaya başlayabilir.

1.2 Çalışmanın amacı

Yapılan çalışmalarla, oyunun çocukların gelişim alanlarınuın tümü için öneminin anlaşılmasına rağmen, "oyunun hangi yönü çocukların gelişimlerini daha çok destekler?" ve "oyunu önemli kılan özellikler nelerdir?" soruları hala tam olarak cevaplanamamıştır (Bundy et.al., 2008). Bu çalışma çocukların oyun severlik düzeylerinin sosyal becerileri ile ilişkisinin hangi yönlerden bulunduğunu araştırmayı amaçlamaktadır. Bu çalışma sayesinde çocukların oyunseverlilik profilleri hakkında bilgi alınarak okul öncesi dönemdeki çocukların ihtiyaçları ve eksikliklerinin ortaya çıkarılmasında yardımcı olunması hedeflenmektedir. Araştırmacı tarafından çocukların oyun severlik düzeyleri, sosyal becerileri ve çevreleriyle ilişkilerinin ne yönde olacağını ve olası değişkenleri ortaya çıkarmak amacıyla nicel bir araştırma yapılması amaçlanmıştır.

Bu amaç ışığında aşağıdaki araştırma sorularını cevaplanması amaçlanmaktadır;

1. Okul öncesi dönem çocuklarının oyun severlik, sosyal beceri seviyeleri ve çevrelerinin desteği nedir?
2. Okul öncesi dönem çocuklarının oyun severlik düzeyi farklı destek seviyelerindeki okul öncesi sınıf ortamları ile farklılık gösterir mi?
3. Okul öncesi dönem çocuklarının oyun severlik düzeyleri ile sosyal becerileri arasında ilişki var mıdır?

2. YÖNTEM

2.1 Çalışmanın Deseni

Bu araştırma nicel yöntem aracılığıyla ilişkisel araştırma olarak desenlenmiştir. İlişkisel desen iki veya daha çok değişkenin herhangi bir müdahale olmadan aralarındaki ilişkinin araştırılması olarak tanımlanmıştır (Fraenkell & Wallen, 2006). Bu çalışmada nicel ilişkisel araştırma deseni kullanılarak 5 yaşındaki

212 çocuğun oyun severlik, sosyal beceri değerlendirme ve çevrenin oyun severliğe desteği testlerinden elde edilen nicel veriler kullanılarak aralarındaki ilişkiye bakılmıştır.

2.2 Örneklem

Bu çalışma 5 yaş grubundan 16 farklı okul öncesi eğitim kurumuna devam eden 212 (94 erkek ve 118 kız) çocuk katılmıştır. Katılımcı çocuklar Ankara'nın Çankaya, Yenimahalle, Keçiören ve Sincan ilçelerinden 16 farklı özel ve resmi okul öncesi kurumundan seçiilmiştir. Araştırmada ayrıca katılımcı çocukların sosyal becerileri okul öncesi öğretmenleri (n=30) tarafından "Sosyal Beceri Değerlendirme Sistemi" testi kullanılarak değerlendirilmiştir.

2.3 Veri Toplama Araçları

Veri toplama yöntemi olarak araştırmacının doğrudan gözlemi ve okul öncesi öğretmenlerinin çocukları hakkında doldurdukları ölçek uygulanmıştır. Araştırma kapsamında üç adet ölçek uygulanmıştır. Aşağıda ölçekler detaylı bir şekilde açıklanmaktadır.

2.3.1 Oyun Severlik Testi (OST)

Bundy (2004) tarafından geliştirilen Oyun severlik Testi (OST) (Test of Playfulness-TOP) (Dördüncü versiyon) 29 maddeye sahip test dört boyuttan oluşmaktadır. Gözleme dayalı olan test, çocukların okul öncesin ortamında serbest oyun oynamaları sırasında uzman kişinin puanlamasıyla uygulanmaktadır. "Oyuna devam edecek kadar kendisini güvende hisseder" ve "Oyuna devam edebilmek için önüne çıkan engelleri aşmaya çalışır" gibi maddelerden oluşan ölçek sıklık, yoğunluk ve beceri boyutlarına göre değerlendirilerek puanlanır.

2.3.2 Çevrenin Oyunseverliğe Desteği Testi (ÇODT)

Çevrenin Oyunseverliğe Desteği Testi (Environmental Supportiveness Assessment) (Skard & Bundy, 2008) 17 gözleme dayalı maddeden oluşmaktadır. Test, çocukların okul öncesi sınıf ortamında serbest oyunları sırasında 15 dakika boyunca ve oyun severlik testi ile eşlenik zamanda uygulanmaktadır. 4 lü likert tipte yetişkin, oyun arkadaşı, materyal ve oyun alanı olmak üzere dört faktörden oluşur. Örnek olarak "Akran oyun arkadaşının oyuncunun yönlendirmelerine tepkisi oyunun işleyişini bozar." ve "Doğal/ fabrika yapımı objeler aktiviteyi yada oyuncuyu desteklemez" gibi maddelerden oluşur.

Oyun Severlik ve Çevrenin Oyunseverliğe Desteği Ölçekleri araştırmacı tarafından Türkçe'ye çevrildikten sonra okul öncesi alanından iki uzman ve ingilizce alanında uzman görüşleri alınarak Türkçe'ye adapte edilmiştir. Testlerin geçerlilik ve güvenilirlik analizleri Rasch analiz programından yararlanılarak yapılmış olup, sonuçlar kısmında ayrıntılı açıklanmıştır.

2.3.3 Sosyal Beceri Değerlendirme Sistemi (SBDS)

Gresham ve Stephen (1990) tarafından geliştirilen Sosyal Beceri Değerlendirme Sistemi (Social Skills Rating System – SSRS): okul öncesi, ilköğretim ve lise dönemi çocukların sosyal becerilerini tarama ve sınıflama amaçlı kullanılmaktadır. Öğretmen, öğrenci ve aile formu olarak üç versiyonu bulunan testlerden bu araştırmada okul öncesi dönem çocuklar (öğretmen-3-5 yaş) için geliştirilen versiyonu kullanılmıştır. Türkçeye çevirimi ve adaptasyon çalışmasını Elibol-Gültekin ve Dinçer (2008) tarafından yapılmıştır. 40 madde ve 3'lü likert tipten oluşan formun 30 maddesi sosyal beceriler ölçeği işbirliği, kendini ifade etme/atılganlık ve öz denetim olmak üzere 3 alt boyuttan oluşur. Ayrıca 10 maddesi problem davranış ölçeğinin dışsal ve içsel problemler olarak iki alt boyutla değerlendirilir. Örnek olarak "Oyunlara ya da grup etkinliklerine katılır" "Sınıf işlerinde akranlarına gönüllü olarak yardım eder" maddelerden oluşmaktadır.

2.4 Ortamlar

Oyun severlik en kolay çocukların serbest oyun zamanlarında gözlemlenebilmektedir (Bundy, 2010). OST ve ÇODT testleri uygulanırken çocukların fiziksel ve duygusal olarak güvende hissettikleri, bildikleri bir ortamda gözlemlenerek değerlendirilmesi gerekmektedir. Bu nedenle gözleme geçmeden önce kameraya alışmaları için süre verilerek, öğretmenlerinin sınıflarında bulunması sağlanmıştır. Ortamı oyun severlik açısından daha detaylı değerlendirebilmek için ÇODT testi kullanılarak yüksek, ortalama ve düşük düzeyli çevreye sahip okullar olarak sınıflandırılmıştır. Ayrıca okulların özellikleri öğretmen, oyun arkadaşı, materyal ve oyun alanı açısından betimsel olarak açıklanmıştır.

2.5 Veri Toplama ve Veri Analiz Süreci

Veri toplama süreci 2015-2016 bahar, yaz ve sonbahar dönemini sürecinde gerçekleştirilmiştir. Çalışmanın ilk aşamasında Elibol-Gültekin, Dinçer (2008) ve Bundy (2003, 2008)' den gerekli izinler alınmış olup, testlerin okul öncesi kurumlarında pilot ve asıl uygulamalarının yapılabilmesi için Üniversite etik kurulundan ve Milli Eğitim Bakanlığından gerekli izinler alınmıştır.

Araştırmacı çalışmaya başlamadan önce iletişime geçtiği okulların müdüründen ve öğretmenlerinden izin aldıktan sonra, velilerden gönüllü katılım formunu doldurmalarını isteyerek, ölçeklerin uygulanması ile ilgili olarak çalışmanın amacı ve işleyişi hakkında okulları ziyaret etmiştir. Oyunseverlik ve çevrenin oyunseverliğe desteğinin ölçüldüğü testlerin uygulanabilmesi için öncelikle çocukların yabancı olmadıkları okul öncesi sınıf ortamında ve serbest oyunları sırasında gözlemlenmesi esas alınmıştır. Araştırmacın dört farklı kamera kullanarak, 30 dakikayı geçmeyen video çekimi ile gözlem yapmıştır. Sınıf ortamlarında çekilen video görüntüleri her sınıf için sınıflandırıldıktan sonra oyun severlik (OST) ve çevrenin oyun severliğe desteği (ÇOSD) testlerinin her bir çocuk için doldurularak araştırmacı tarafından testlerin manuelleri kullanılarak değerlendirilmiştir. Ayrıca

çocukların sosyal beceri değerlendirme sistemi formlarıda okul öncesi öğretmenleri tarafından doldurularak uygulanmıştır. Her çocuk için ayrı doldurulan testlerden elde edilen veriler excel dosyasına kaydedilerek ilgili analizlerin yapılabilmesine hazır hale getirilmiştir.

Araştırmacı OST ve ÇOST testleri için Prof. Dr. Anita Bundy'den eğitim almış olup, 10 farklı çocuktan oluşan videoları testler için değerlendirerek geçerli ve güvenilir bulunmuştur. Ayrıca Avustralya Sidney Üniversitesinde gerçekleştirilen proje çercevesinde çocukların oyun ortamında gözlem yapma ve video çekimi tecrübesi edinilmiştir. Çalışma başlamadan önce iki farklı okulda yapılan pilot çalışma ile çocukların serbest oyun ortamı hakkında bilgi edinilerek testler uygulanmış olup, kameraların kullanılabilirliği denenmiştir.

Veri analiz yöntemi olarak Rasch analizi programından yararlanılmıştır. Analiz programı üç farklı testin birbiri içerisinde değerlendirilebilmesini sağlaması ve verinin sonucunda çocukların test maddelerinin kolay ya da zorluk derecesine bağlı olarak oyun severlik, sosyal becerileri ve çevrelerinin desteği profillerini ortaya çıkarmasından dolayı tercih edilmiştir. Test maddelerinin puanları excel dosyasına girildikten sonra Winsteps bilgisayar programı ile uygulanarak Rasch analizi yapılmıştır. Rasch analizi yönteminin sayıltılarını verilerin karşılayıp karşılamadığı uyum iyiliği değerlerine (goodness of fit statistics) bakılarak incelenmiştir. Uyumu bozan madde ve çocuklar sonraki analizlerden çıkarılmıştır. Ham sonuçlara uygulanan Rasch analizinden elde edilen Rasch değerlerinden ileriki Anova ve Korelasyon analiz yöntemlerinde yararlanılmıştır. Anova ve Korelasyon analiz yöntemleri kullanılarak değişkenler arasındaki ilişki ortaya konmuştur.

3. BULGULAR VE TARTIŞMA

Maddelerin hiyerarşisini şekiller açısından anlamak için, maddelere arasındaki boşluklar ve logit değerlerine bakılarak yorumlanması gerekir. Örneğin, maddelerin zorluk seviyesinin artması, o becerilerin çocuklarda az görülmesine sebep olurken, o maddelerin diğer maddelere göre daha zor olduğu anlamına gelmektedir. Diğer

durumda ise maddelerin zorluk seviyesinin azalması, daha çok çocuk tarafından o becerilerin gösterildiğine işaret etmektedir ve o madde daha kolay bir madde olarak değerlendirilmektedir. Bazı maddeler daha çok beceri gerektirmesi nedeniyle ölçek içerisinde diğer maddelere göre eşit uzaklıkta değillerdir. Bu nedenle sadece puanları baz alınarak değil maddelerin birbirlerine uzaklıkları dikkate alınarak yorumlanmalıdır. İleride verilecek olan şekillerde maddlerin birbirleri ile olan mesafeleri gösterilecektir.

3.1 Oyun Severlik Testi Uygunluk Değerleri

Rasch analiz modeli için çocukların ve maddelerin değerlerinin analizin yapılabilmesi için uyum göstermesi test edilmiştir.. Maddelerin arasındaki zorluk derecelerine göre kişinin becerisi ile arasındaki farklar uyum test sonuçlarına (Infit ve Outfit) bakılarak belirlenir. Uygunluk içi (Infit) ve Uygunluk dışı (Outfit) aralıkları için MNSQ değerleri ≤ 1.5 ve $ZStd \leq 2$ olması gerekmektedir (Bond and Fox , 2007), Rasch analizi sonucunda elde edilen iç uygunluk (Infit) ve dış uygunluk (Outfit) değerleri incelendiğinde sekiz kişiden elde edilen veriler uygunluk değerlerine uymadığı için analizden çıkarılmıştır. Madde analizleri sonucunda teste ait bütün maddelerin uygunluk değerleri arasında olduğu bulunmuştur. Rasch analizinden sonra (measure score) testin ortalama değeri .68 standard sapma .31 bulunmuştur Oyun severlik testi çocuklar için .94, maddeler için .99 değerleri oldukça yüksek güvenirlik değeri elde edildiğini göstermektedir.

3.2 Oyun Severlik Testi Alt Boyutları Sonuçları

Dört farklı alt boyuttan oluşan test sonuçlarının her biri Rasch yazılımı kullanılarak ifade edilmiştir. Her alt boyutun analiz sonuçları doğrusal bir logaritmik ölçekte Wright haritasında sunulmuştur. Her Wright haritası, test yanıtlarını özetleme, maddeleri sıralamak ve aralıklandırmak açısından tartışılacaktır. Test

maddeleri en zordan en kolaya kadar dağılmaktadır. Zorluk sırası haritanın sol tarafından görselleştirilir ve sağ taraf öğelerin yerleşimlerini gösterir.

3.2.1 Kontrol algısı

Maddelerin puanlarının incelenmesi, maddenin hiyerarşisinin mantıksal olarak düzenlendiğini göstermektedir. Şekil 1 incelendiğinde genel olarak çocukların konrol algısı ile ilgili maddelerden "yeni aktivte başlatma" ve "aktiviteyi zorlaştırma ve eğlenceli hale getirme becerisi" en çok zorlandıkları davranışlar olduğu görülmektedir. "Güvenle oynama becerisi" davranışını daha sıklıkla ve kolay olarak gösterdikleri görülmektedir.

İçsel

Madde	Logit değeri	Hata	Seçili maddeler
12	.97	.11	Diğer çocukların bıraktığı bir oyunu başlatır.
3	.80	.11	Oyunu daha zor veya daha eğlenceli hale getirmek için değişiklik yapar.
8	.56	.11	Sosyal oyun içerisine dahil olur.
6	.27	.11	Bir oyundan diğer oyuna geçer.
	*		
4	-.48	.12	Nesnelerle yoğun etkileşime geçer.
5	-.64	.12	Nesnelerle beceri olarak etkileşime geçer.
2	-3.41	.19	Oyuna devam edecek sıklıkta kadar kendisini güvende hisseder.

Dışsal

* Madde ölçüleri arasında büyük bir boşluk olduğunu belirtir.

Şekil 1 Kontrol algısı boyutu maddelerinin logaritmik ölçekte dağılımı

3.2.2 Motivasyon Kaynağı

Şekil 2 de çocukların motivasyon kaynağı alt boyutu ile ilgili maddelerin zorluk düzeyi ve dağılımları görülmektedir. Şekil 2 incelendiğinde elde edilen sonuca göre çocuklarda oyun sırasında en zor gözlemlenen madde “Oyuna devam edebilmek için önüne çıkan engelleri aşmaya çalışır” aralarında büyük bir açık bulunan “Sıklıkla etkin bir şekilde katılır” maddeside en kolay gösterdikleri davranış olmaktadır. Çoğu çocuğun, oyun sırasında etkin bir şekilde katıldığı ama oyunlarda çıkan engelleri aşmakta ısrar etmedikleri görülmektedir. Etkinliklerin zorluklarına odaklanmak yerine eğlenmeye odaklanırlar. Ayrıca "Oyun sırasında olumlu duygular gösterir." beş madde arasında yaklaşık olarak ortasında görülmektedir.

İçsel	Madde	Logit değeri	Hata	Seçili maddeler
	4	1.32 *	.26	Oyuna devam edebilmek için önüne çıkan engelleri aşmaya çalışır.
	2	.40	.14	Etkin bir şekilde yoğunlukta katılır.
	5	-.02 *	.14	Oyun sırasında olumlu duygular gösterir.
	3	-.78	.14	Aktivitenin sonucundan daha çok sürecine odaklıdır
	1	-.92	.14	Etkin bir şekilde sıklıkla katılır

Extrinsic

* Madde ölçüleri arasında büyük bir boşluk olduğunu belirtir.

Şekil 2. Motivasyon kaynağı alt boyutu maddelerinin logaritmik ölçekte dağılımı

3.2.3 Gerçekliğin Dışına Çıkma Özgürlüğü

Bu alt boyut, diğer alt boyutlar arasında en zor maddeleri içermektedir. Bu beş maddenin sonuçları arasından, çocukların "Nesneleri veya diğer insanları alışılmadık biçimde veya farklı yollarla oyuna dahil eder." ve " Soytarılık ya da şaka yapar." Maddelerinin zorluk bakımından daha yüksek puanlar aldığını göstermektedir. Özetle; gerçekliğin dışına çıkma özgürlüğü alt boyutunun

puanlarından görülebileceği gibi, çoğu çocuğun gerçekliğin kısıtlamalarından bağımsız davranışlar göstermediği anlaşılmaktadır.

Daha çok özgür

Madde	Logit değeri	Hata	Seçili maddeler
5	.15	.12	Nesneleri veya diğer insanları alışılmadık biçimde veya farklı yollarla sıklıkla oyuna dahil eder
4	.13	.14	Soytarılık ya da şaka yapar
3	.06	.13	Oyun sırasında başka birisi ya da başka birşeymiş gibi davranır, nesneyi başka bir nesne gibi ya da aktiviteyi başka bir aktivite gibi görür
1	-.17	.13	Oyunda yaramazlık yapar ve arkadaşlarına şaka yollu konuşur.
6	-.35	.12	Nesneleri veya diğer insanları alışılmadık biçimde veya farklı yollarla becerikli oyuna dahil eder

Daha az özgür

Şekil 3. Gerçekliğin dışına çıkma özgürlüğü alt boyutu maddelerinin logaritmik ölçekte dağılımı

3.2.4 Oyun Çerçevesi

Dört madde ile karşılaştırıldığında Etkin bir şekilde katılır (beceri düzeyi yüksek)'ın en zor görülen davranış olduğu görülmektedir (Şekil 4). Bir oyun çerçevesi içinde "sosyal ipuçlarını vermenin ve almanın"anlaşılması güç becerilerdir. İpuçları vermenin sıklığı başkalarının kendisiyle nasıl etkileşim kurması gerektiğine ilişkin açık mesajlar vermek için orantılı bir zamana izin vermek demektir. Bu mesajlar sözlü ve sözsüz işaretlerle verilebilir. "Bana karşı nasıl davranmanız gerektiğini" söyleyen anlaşılabilir ipuçları (yüz, sözlü, vücut) verilmesi daha kolay

olduğu görülmektedir. Bu maddeler çocukların birbirleriyle nasıl beklenen şekillerde etkileşime girdiklerini gösterir.

Beceri düzeyi yüksek	Madde	Logit değeri	Hata	Seçili maddeler
	3	.87	.14	Etkin bir şekilde katılır
	1	.13	.14	Yüz ifadeleriyle, sözlü olarak ya da vücut diliyle "kendisine nasıl davranılması gerektiğini" anlaşılır şekilde sıklıkla belirtir.
	4	.-32	.14	Başkalarının isteklerine cevap verir.
	2	-.69	.15	Yüz ifadeleriyle, sözlü olarak ya da vücut diliyle "kendisine nasıl davranılması gerektiğini" anlaşılır şekilde belirtir.
Beceri düzeyi düşük				

Şekil 4. Oyun çerçevesi alt boyutu maddelerinin logaritmik ölçekte dağılımı

3.3 Sosyal Beceri Değerlendirme Testi İçin Maddelerin Rasch Analiz Modeline Uyumu

Analizde kullanılan verilerin Rasch analiz modeli ile uyumulu olabilmesi için Uygunluk içi (Infit) ve Uygunluk dışı (Outfit) aralıkları için MNSQ değerleri ≤ 1.5 ve ZStd≤ 2 (Bond and Fox, 2007) değerlerine bakılarak incelenmiştir. Çocuk verilerine bakıldığında dokuz kişinin verisinin uygunluk değerleri dışında kaldığı için analizden çıkarılmıştır. Uygunluk değerleri için maddeler incelendiğinde %95 verinin kabul edilen değerler aralığında olduğu bulunmuştur. Rasch analizinde testin ortalama değeri -1.98 standard sapma .38 bulunmuştur. Sosyal Beceri

Değerlendirme testi çocuklar için güvenirlik değeri .90, maddeler için .94 değerleri oldukça yüksek değerler saptanmıştır.

3.4 Sosyal Beceri Değerlendirme Testi Alt Boyutları Sonuçları

3.4.1 İşbirliği Altboyutu

İşbirliği alt boyutu altındaki sekiz madde Şekil 5'de görülmektedir. Şeklin en üstündeki maddeler, öğretmenlerin çocuklarını gözlemlerken daha kolay değerlendirebildiği davranışlardır. Bu maddeler arasında, "uygun bir şekilde yardım bekler" maddesinin, diğer maddelerle karşılaştırıldığında çocuklar arasında nadiren görüldüğü dolayısıyla daha zor bir madde olduğu bulunmuştur. "Grup etkinliğinin bir bölümünde sorumluluk alıyor" ve "boş zamanlarını uygun bir biçimde kullanma" çocuklarda görülmesi çok zor olan maddeler olarak bulunmuştur. "Yönergelerinize uyar", "sınıfı çalışmasını uygun bir şekilde tamamlaması" ve"oyunlara veya etkinliklere katılma" çocuklara daha sık görülmektedir. Bu maddeler arasında, oyunlara veya etkinliklere katılım en kolay madde olarak bulunmuştur.

Daha işbirlikçi	Maddeler	Logit değeri	Hata	Seçili Maddeler
	16	.79	.17	Yardımınızı beklerken zamanı uygun biçimde değerlendirir.
	30	.25	.17	Oyunlara ya da grup etkinliklerine katılır.
	18	.19	.17	Serbest zamanlarını uygun bir şekilde değerlendirir.
	22	.16	.17	Sınıfla ilgili görevlerini belirlenen zamanda bitirir.
	15	-.05	.17	Oyunlarda ya da diğer etkinliklerde sırasını bekler.
	1	-.20	.18	Yönergelerinize uyar.
	10	-.39	.18	Okuldaki etkinlikleri istenilen şekilde yerine getirir.
Daha az işbirlikçi	9	-.62	.18	Oyunlara ya da grup etkinliklerine katılır.

Şekil 5 İşbirliği alt boyutu maddelerinin logaritmik ölçekte dağılımı

3.4.2 Kendini İfade Etme/Atılganlık (Assertation)Altboyutu

"Kendisine söylenmeksizin, kendini yeni bir kişiye tanıtır" ve"Akranlarına iltifat eder /güzel sözler söyler" davranışlarının çocuklarda görülme olasılığı düşüktür. Bu nedenle şekilde görüldüğü üzere en zor maddelerden biridir. Öte yandan, "Akranlarından gelen övgü ya da iltifatları kabul eder" kendini ifade etme altboyutundaki en kolay maddedir. Şekil 6'da görüldüğü gibi, "gönüllü yardım", "diğerlerini davet etme" ve "arkadaş edinmek" maddeleri daha kolay sahip olunan beceriler arasında yer almaktadır.

Daha çok atılgan	Madde	Logit değeri	Hata	Seçili Maddeler
	12	1.03	.14	Kendisine söylenmeksizin, kendini yeni bir kişiye tanıtır
	8	.80	.14	Akranlarına iltifat eder /güzel sözler söyler
	24	.52	.14	Başkalarıyla konuşmak için girişimde bulunma,
	3	*.12*	*.15*	Ona haksız şekilde davrandığınızı düşündüğü zaman bunu size uygun bir şekilde söyler.
	5	*.12*	*.15*	Adil olmadığını düşündüğü kuralları uygun bir şekilde sorgular.
	17	-0.1	.15	Kendisi için güzel şeyler yapma ve söyleme,
	11	-0.26	.15	Sınıf işlerinde akranlarına gönüllü olarak yardım eder.
	25	-0.16	.15	Diğerlerini etkinliklere katılmaya davet eder.
	2	-0.38	.15	Kolaylıkla arkadaş edinir
	14	-0.45	.15	Devam eden bir etkinliğe ya da önceden oluşturulmuş bir gruba kendisine
	*			söylenmeksizin katılır.
Daha Az Atılgan	19	-1.09	.16	Akranlarından gelen övgü ya da iltifatları kabul eder

* Madde ölçüleri arasında büyük bir boşluk olduğunu belirtir.

Şekil 6 Atılganlık alt boyutunun maddelerinin logaritmik ölçekte dağılımı

3.4.3 Öz Denetim Altboyutu

Şekil 7 görülen Öz Denetim Alt Boyutu 5 maddeden oluşur. En kolay görülen madde "yetişkinlerle çatışma halinde öfke kontrolü" şeklindedir. Sonuçlar, bu maddenin diğerlerinden çok daha kolay olduğunu ortaya koymaktadır. Öte yandan, "akranlarla çatışma halindeyken öfke kontrolü", alt ölçek madde sıralamasında ortada görülmektedir. Bu madde bazı çocukların davranışlarında, özellikle akranları ile oynarken daha zor görülen beceriler arasındadır.

Daha çok özdenetim	Madde	Logit Değeri	Hata	Seçili Maddeler
	23	.52	.16	Anlaşmazlık durumlarında kendi fikirlerini değiştirerek uzlaşma sağlar.
	26	.34	.16	Eleştirilere olumlu biçimde yaklaşır
	28	-.06	.16	Akranlarıyla anlaşmazlık durumlarında öfkesini kontrol eder.
		*		
Daha az özdenetim	7	-.92	.16	Yetişkinlerle anlaşmazlık durumlarında öfkesini kontrol eder.

* Madde ölçüleri arasında büyük bir boşluk olduğunu belirtir.

Şekil 7 Öz denetim alt boyutunun maddelerinin logaritmik ölçekte dağılımı

3.4.4 Problem Davranışlar Alt Boyutu

3.4.4.1 İçsel Problem Davranışlar

İçsel problem davranışlarının madde değerleri Şekil 8'de sunulmaktadır. Sonuçlarda çocukların "yalnız görünür" davranışını en az sıklıkla gösterdiklerini görülmektedir. İncelendiğinde okul öncesi dönem çocuklarının "Bir çocuk grubuyla birlikte olmaktan kaygı duyar" maddesi ile ilgili daha az içsel davranış sergiledikleri söylenebilir

	Madde	Logit Değeri	Hata	Seçili Maddeler
Daha çok içsel	36	.75	.21	Yalnız görünür
	40	.32	.22	Üzgün ya da depresif davranır.
	35	-.41	.22	Hiç kimsenin onu sevmediğini söyler.
Daha az içsel	39	-.66	.23	Bir çocuk grubuyla birlikte olmaktan kaygı duyar

Şekil 8 İçsel problem davranuşlar alt boyutunun maddelerinin logaritmik ölçekte dağılımı

3.4.4.2 Dışsal Problem Davranışlar

“Öfke nöbetleri vardır."ve "İnsanlara ve nesnelere karşı saldırgandır." İfadelerinin çocuklar için en kolay kabul edilen davranışlar arasında yer aldığı Şekil 9’da görülmektedir. "Yerinde duramaz ya da aşırı hareketlidir" ve "Diğerleriyle tartışır" problem davranışları daha zor ve ayırt edici özellik taşır. Bu nedenle bu davranış biçimine sahip olmayan çocuk sayısının daha az olduğu söylenebilir.

	Madde	Logit Değeri	Hata	Seçili Maddeler
Daha çok dışsal	32	1.32	.17	Yerinde duramaz ya da aşırı hareketlidir
	33	1.41	.17	Diğerleriyle tartışır
	38	.49	.17	Kurallara ya da isteklere uymaz.
	34	-.83	.19	Devam eden etkinlikleri bozar.
	31	-.98	.19	Öfke nöbetleri vardır
Daha az dışsal	37	-1.41	.20	İnsanlara ve nesnelere karşı saldırgandır.

Şekil 9 Dışsal problem davranuşlar alt boyutunun maddelerinin logaritmik ölçekte dağılımı

3.5 Çevrenin Oyun Severliğe Desteği Testi İçin Maddelerin Rasch Analiz Modeline Uyumu

Üç madde haricinde bütün madde uygunluk değerleri referans aralığı içerisinde bulunmuştur. “Akran oyun arkadaşı net yönlendirmeler verir”, oyunun işleyişini destekler (1.99)”, “Alanın genişliği ve biçimi oyunun çeşidini destekler(1.64) ” ve ” Yetişkin kuralların-sınırların sürekliliğine bağlıdır (1.59)” maddelerinin MNSQ<2.0 değerinin altında ama MNSQ ≤1.5 dan yukarıda olduğu için verimliliği düşmesine rağmen analize dahil edilmesi uygun bulunmaktadır (Linacre, 2016).

3.6 Çevrenin Oyun Severliğe Desteği Testi Sonuçları

Şekil 10 Rasch analizi sonucunda, TOES maddeleri arasında anlamlı bir zorluk sıralaması olduğunu göstermektedir. Analiz sonucunda bu çalışma "Alan

fiziksel olarak güvenli" en kolay madde olduğu saptanmıştır. "Akran oyun arkadaşının oyuncunun yönlendirmelerine tepkisi oyunun işleyişini destekler" ve "Akran oyun arkadaşı net yönlendirmeler verir, oyunun işleyişini destekler" maddeleri diğer maddelere oranla daha sık rastlanan ve çevre ve yetişkin boyutlarına göre daha kolay görülen maddeler olmuştur dolayısıyla ayırt edici özellikleri azaldığı için daha az destekler.

	Madde	Logit değeri	Hata	Seçili Maddeler
Daha destekler	2	1.04	.41	Öğretmen kuralların-sınırların sürekliliğine bağlıdır.
	3	.71	.41	Öğretmenvmantıklı sınırlara / kurallara bağlıdır.
	7	.53	.42	Doğal/ fabrika yapımı objeler aktiviteyi yada oyuncuyu, ve oyuncunun belirgin bir motivasyonu destekler.
	8	.17	.43	Alan ulaşılabilir.
	10	-.88	.48	Alan güvenli.
	4	-1.11	.49	Akran oyun arkadaşının oyuncunun yönlendirmelerine tepkisi oyunun işleyişini destekler.
Daha az destekler	5	-1.36	.50	Akran oyun arkadaşı net yönlendirmeler verir, oyunun işleyişini destekler.

Şekil 10 Çevrenin oyun severliğe desteği test maddelerinin logaritmik ölçekte dağılımı

3.7 Anova Testi Sonuçları

İkinci araştırma sorusu olan "Okul öncesi dönem çocuklarının oyun severlik düzeyi farklı destek seviyelerindeki okul öncesi sınıf ortamları ile farklılık gösterir

mi? Sorusunu yanıtlamak amacıyla ANOVA testi uygulanmıştır. Çevrenin oyun severliğe desteği test sonuçlarından elde edilen bulgular okul öncesi sınıf ortamlarının yaklaşık 3 seviyeye ayrılabileceğini göstermiştir. Ortalama puan, referans noktası alınarak ve üç grupta sınıflandırılan okul ortamı destekleyicilik düzeylerinin ortalama puanından bir standart sapmanın (≈8) eklenmesi ve çıkartılması yoluyla hesaplamıştır. -5 ile 0 arasında toplam puanı toplayan az destekleyen grup, düşük destekleyici olarak gruplandırılmıştır. Toplam skoru 0 ile 16 arasında bulan okullar orta derecede destekleyici olarak; 16-22 arasında toplam puan toplayan okullar yüksek destekleyici olarak gruplandırılmıştır. ÇODT ve OST 16 farklı okul öncesi kurumundaki sınıf ortamında uygulanarak 3 seviyeye ayrılan gruplar arasında oyun severlik düzeyleri arasında fark Anova test sonucunda istatiksel olarak anlamlı bulunmuştur (F (2,211) =7.49, p=.001). Eta Square formülü ile etki büyüklüğü .066 olarak hesaplanmıştır. Cohen (1988) sınıflandırmasına göre ortalama etki düzeyindedir. Düşük ve ortalama çevre desteği düzeyindeki gruplar yüksek gruba göre anlamlı derecede farklı bulunmuştur (Post Hoc karşılaştırması) (Bkz. Tablo 1).

Table 1 Okul öncesi sınıf çevrenin desteği ile Oyun severlik arasındaki çoklu karşılaştırma

	Sınıf çevresi		Ortalama	Sig.
Tukey HSD	düşük	orta	-.11	.363
		yüksek	-.32	.001
	orta	düşük	.11	.363
		yüksek	-.21	.008
	yüksek	düşük	.32	.001
		orta	.21	.008

3.8 Korelasyon Analiz Sonuçları

Üçüncü araştırma sorusunu "Okul öncesi dönem çocuklarının oyun severlik düzeyleri ile sosyal becerileri arasında ilişki var mıdır? yanıtlamak için Oyun Severlik Testi (OST)ve Sosyal Beceri Değerlendirme Testi (SBDS) arasındaki korelasyona ilişkin veriler iki değişkenli korelasyon kullanılarak analiz edilmiştir. Tablo 2 de görüldüğü üzere testler arasında pozitif anlamlı bir ilişki bulunmuştur (r=.146. p=.031). Altboyutlar arasındaki ilişkilere bakıldığında oyun severliğin alt boyutlarından oyun çerçevesi ve kontrol algısı ile Sosyal beceri testindeki öz denetim alt boyutu ile anlamlı bir ilişki bulunmuştur.

Tablo 2. Korelasyon Analizi

		SSRS	*TOP*
SBDS	Pearson Correlation	1	.149
	Sig. (2-tailed)		.031
	N	212	212
OST	Pearson Correlation	.149	1
	Sig. (2-tailed)	.031	
	N	212	212

4. Tartışma ve Öneriler

4.1 Okul öncesi Öğrencilerinin Oyun Severlik Düzeyleri

Türkiye'de okul öncesi dönemdeki çocukların oyun severlik eğilimini belirlemek için OST genel ortalama puanı .68 ve standart sapma olarak .31 olarak bulunmuştur. Bu değerler diğer araştırmalar sonucunda elde edilen puanlarla karşılaştırıldığında yaklaşık olarak ortalamanın üstünde olduğu söylenebilir. Örneğin, Saunders, Sayer ve Goodale (1998)' in çalışmasında okul öncesi 3-5 yaş aralığındaki çocukların oyun severlik ortalama değeri -.093. olarak belirtilmiştir. Ayrıca, Bundy ve arkadaşlarının (2008) de proje kapsamında yaptığı araştırmada 5-7

yaş aralığındaki çocuklar için .58 ve deneysel çalışma sonunda 1.09 olarak bulunmuştur.

Bundy'ye (1993) ve Skard ve Bundy'ye (2008) göre oyun severlik bir oyun çerçevesi içerisinde birçok birbiriyle ilişkili faktörden etkilenebilir. Bu nedenle, her boyutun bulguları ayrı ayrı tartışılmaktadır.

4.2 Kontrol Algısı

Bu araştırma ile Türkiye'de okul öncesi çocukların, etkinlik başlatma, oyun arkadaşlarıyla kontrol paylaşımı yapma ve sosyal oyuna girme gibi içsel olarak kontrol edilen becerilerde güçlük çektikleri bulunmuştur. İlgili literatüre göre, çocukların oyuna giriş, bilişsel gelişim, öğrenme davranışları ya da destekleyici bir ortam yeni etkinliklerin oluşturulmasını engelleyebildiğini göstermektedir (Bundy, 1993; Skard & Bundy, 2008). Bununla birlikte, diğer bir nedenide yetişkin denetimi ile kalabalık sınıflarda oldukları için kontrolü sıklıkla yetişkinin alma durumu ile açıklanabilir. Kalabalık sınıflarda olan çocuklar, oyun kontrolünü başka çocuklarla daha çok paylaşabildikleri için içsel kontrollerini daha kolay sağlama eğiliminde olurlar.

4.3 Motivasyon Kaynağı

Elde edilen bulgular doğrultusunda, çocukların serbest oyun sırasında etkinliklerini zorlaştırmadıkları veya eğlenceli hale getirmek için fazla çaba göstermedikleri bulgusuna ulaşılmıştır. Özellikle etkinliğin sürekliliğini az çocuğun başarabildiği görülmüştür. Ayrıca oyuna başlama ve katılma davranışlarının daha sık başarıldığı görülmüştür. Bunun nedeni de serbest oynama etkinliğinin çocukların motivasyonu için bir kaynak olabilmesidir. Okullarda akademik başarı baskısı, programlarındaki serbest oyun sürelerinin azalmasına neden olmaktadır. Çocukların kendine özgü motivasyonunun işaretleri, serbest oyun zamanlarında kendileri

tarafından dışardan müdahale olmadan görülebilmektedir (Bundy, 1991) (Bundy, 1991). Dolayısıyla, çocuklar, serbest oyun vakti için daha motive görünebilirler.

4.4 Gerçekliğin dışına çıkma özgürlüğü

Sonuçlar, çocukların serbest oyun etkileşimlerinde gerçeklik kısıtlamalarını ortaya koymada güçlük çektiğini göstermektedir. Nesnelerin alışılmamış şekillerde kullanımının çok nadir olduğu görülmektedir. Bundy, Nelson, Metzger ve Bingaman (2001)'ın çalışma sonuçlarına benzer olarak, taklit etme, objeleri yaratıcı şekilde kullanma ve dalga geçme becerilerinin daha az görüldüğü bulunmuştur. Bu davranışlar doğası gereği zor ve nadir gözlemlendiği için en destekleyici ortamda ve en oyun sever çocukların başarması beklenebilir.

4.5 Oyun Çerçevesi

Çerçeveleme, ipuçları vermek ve almak ve oyun oynamak için bir süreklilik oluşturur. İpuçları çocuğa, karşısındaki oyuncunun ona nasıl davranması gerektiği ve oyunun nasıl şekilleneceğini gösteren bir çerçeve çizer (Bundy, 2012). Çocukların oynamaya devam etmeleri için anlaşılır ipuçları vermeleri ve diğer oyuncuların ipuçlarını almaları gerekir. Okul öncesi çocukların çerçeveleme maddelerini diğer boyutlardan daha ustaca kullandıklarını ortaya koymuştur. Çocukların oyuna aktif katılımı daha kolay ve sıklıkla gözlemlenmiştir. Dolayısyla, serbest oyun oynarken çocukların kendi tercihlerine göre özgür oynamalarını sağladığı için aktif katılımları yüksek olmaktadır.

4.6 Sosyal Becerileri

Verilerin analizi, Türk okul öncesi çocukların çoğunun uygun şekilde yardım beklemek, sorumluluk almak ve boş vakitlerini uygun bir şekilde kullanmada daha işbirlikçi olduğunu göstermiştir. Ancak çocukların yardım ve yönlendirme ihtiyacına daha çok eğilimli olduğu bulunmuştur. Çocukların atılganlık alt boyut becerilerinde

zorlanma sebeplerinden biride okul öncesi döneminde olmaları olarak açıklanabilir. Örneğin, büyük çocuklar okulda daha iddialı davranışlar gösterirler. Ayrıca, öğretmenler bu davranışları okul yıllarında daha fazla görebilirler ve bu da puanlarını arttırmalarını sağlar (Atkins-Burnet, 2001).

Okul öncesi çocukların dışsal problem davranışları çoğunlukla cisimler ve insanlara karşı olduğu bulunmuştur. Küçük çocuklar öfkelerini kontrol etmekte zorluk çekerler. Bir çocuk kendi hayal kırıklıklarını kontrol edebildiğinde, kişisel çatışmalarının dışa dönük davranışları göstermede rolü olabilir (Atkins-Burnet, 2001).

4.7 Oyun Severlik ve Çevrenin Rolü

Bu çalışmada; düşük, orta ve yüksek derecede destekleyici okul öncesi eğitim kurumları karşılaştırıldığında, yüksek ile düşük seviye destekleyici sınıflar arasında çocukların oyun severlik değerleri açısından anlamlı farklılıklar bulunmuştur. Bu bulgular, okul öncesi çocukların okullarında daha uygun koşullara sahip olduklarında, oyun oynama düzeylerinin artabileceğini ortaya koymaktadır. Bununla birlikte, sonuçlar, öğretmenin çocukların oyun severlik" düzeyleri için rolünün çok sınırlı olduğunu gösterdi. Benzer şekilde, Lobman (2001) tarafından yapılan bir araştırma, okul öncesi öğretmenlerinin, yeni şeyler öğretmek dışında çocuklar oynarken çoğunlukla eğlenceli oyun yöntemleri kullanmadığını ortaya koymuştur.

4.8 Oyun Severlik ve Sosyal Becerileri

Okul öncesi dönem çocukları akranları ile oynamaya çalışırken, olumlu sosyal ilişkiler ve daha az problem davranışları gösterdikleri bulunmuştur. Özel olarak, oyun çerçevesi ve kontrol algısı alt boyutları ile öz denetim alt boyutunun ilişkili olduğu bulunmuştur. Bu sonuçlar çocukların oyun severlik düzeylerinin arttırılmasının öz denetim kontrolünü geliştirebileceğini gösterebilir.

Bu çalışma, Türk okul öncesi dönem çocuğunun oyun oynamaya yaklaşımı ve okulöncesi ortamının oyunlarını ne kadar iyi desteklediği ile ilgili bilgi edinilmesine katkı sağlamıştır. Çevrenin Oyun Ortamına Desteği Testi kullanılarak çocukların oyuna eğilimleri, davranış ve becerilerini nelerin desteklediğini ve olumsuz etkilebileceği hakkında bilgi sahibi olunmasına yardımcı olmuştur. Ayrıca, çocukların öz denetim becerilerinin geliştirilerek oyun severlikleri için oyun kontrolü ve oyun çerçevelerinin olumlu etkilebileceği dolayısıyla oyun severlik düzeylerinin arttırılmasıyla sosyal becerilerinin de olumlu etkilenecebileğini göstermiştir.

Bu çalışmanın sonuçlarına dayanarak, ileriki araştırmalar, öğretmenler ve aileler için aşağıdaki önerilerde bulunabilir.

Çocukların oyun severliğinin arttırılması için günlük sınıf rutinlerinde serbest zamanlarının genişletilmesi önemlidir. Öğretmenlerin, çocukların nesneleri amaç dışı kullanırken veya farklı roller oynarken onları engellemek yerine onlara destek olması gerekmektedir. Öğretmenler, çocukların oyunlarındaki yaratıcı rollerini sürdürmeleri veya kurulan oyun içerisinde katılımcı rollerinin artmasını sağlamaları gerekmektedir. Bu çalışma, öğretmenlerin çocuk oyunlarına katılımına ihtiyaç olduğunu, ancak yöneten, baskın bir rolü olmadan veya sadece gözlemci olmadan katılması gerektiğini göstermektedir.

Öğretmen eğitim programının hazırlanması sırasında, öğretmen adaylarının çocuklara daha çok risk almaları için destekleme, eğlenceli fikirlerini takdir etme, oyun kurallarına saygı gösterme ve tercihlerine saygı duymaları ve oyun sever çevre hazırlama konusunda bilgilendirilmesi gerekmektedir.

Çocukların oyun severliklerinin anlaşılması için kardeşleriyle ve anne-babalarıyla oynarken gözlemlenmesi önerilir. Doğal alanlar, su alanları gibi farklı açık alan türlerinin çocukların oyun severlik düzeylerine etkisi araştırılabilinir.

Sonuç olarak, oyun severlik sadece bir kişilik özelliği dışında bazı çocuklarda içinde bulunan durum nedenyle oluşan bir özellik olabilmektedir. Bu nedenle oyun severlikleri farklı ortamlar ve koşullar altında değiştirilebilir. Çocukların oyun eğilimlerini geliştirmek için oyun sever öğretmenlerle daha duyusal ve doğal materyaller kullanılarak sınıf çevreleri düzenlenebilir. Bu bilgiler ışığında

çocukların kendi penceresinden oyun davranışlarına bakma yeteneğini geliştirebiliriz.

Appendix C: Tez Fotokopisi İzin Formu

ENSTİTÜ

Fen Bilimleri Enstitüsü ☐

Sosyal Bilimler Enstitüsü ■

Uygulamalı Matematik Enstitüsü ☐

Enformatik Enstitüsü ☐

Deniz Bilimleri Enstitüsü ☐

YAZARIN

Soyadı : Sicim Sevim
Adı : Berna
Bölümü : Temel Eğitim Bölümü

TEZİN ADI (İngilizce) : Investigating The Association Between Playfulness, Environment And Socıal Skills Of Preschool Chıldren

TEZİN TÜRÜ : Yüksek Lisans ☐ Doktora ■

1. Tezimin tamamından kaynak gösterilmek şartıyla fotokopi alınabilir. ☐
2. Tezimin içindekiler sayfası, özet, indeks sayfalarından ve/veya bir bölümünden kaynak gösterilmek şartıyla fotokopi alınabilir. ☐
3. Tezimden bir bir (1) yıl süreyle fotokopi alınamaz. ■

TEZİN KÜTÜPHANEYE TESLİM TARİHİ: