

FACTORS ASSOCIATED WITH SCHOOL READINESS IN TURKEY



MERVE ÖZGÜNLÜ

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Merve Özgünlü

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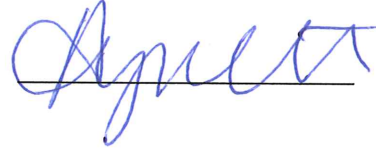
2017

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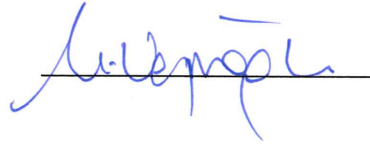
Assist. Prof. Ayşegül Metindoğan
(Thesis advisor)



Assist. Prof. Ersoy Erdemir



Assist. Prof. Mefharet Veziroğlu Çelik
(External member)



April 2017

DECLARATION OF ORIGINALITY

I, Merve Özgünlü, certify that

- I am the sole author of this thesis and that I have fully acknowledged and documented in my thesis all sources of ideas and words, including digital resources, which have been produced and published by another person or institution;
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ABSTRACT

Factors Associated with School Readiness in Turkey

The first aim of the study was to have data about children's school readiness comprehensively. The second was to have descriptive data about children's socioeconomic backgrounds. The third aim was to get data about the quality of public early childhood education classrooms. The final aim was to determine the factors associated with children's school readiness and the relationships between those factors. The results showed that children's age, gender, length of experience in formal early childhood education and the quality of interactions in early childhood education classrooms were the strongest predictors of children's readiness for school. Older children, female children, children who had longer experience in formal early childhood education, and children who were in classrooms which had better interactions quality between the class teachers and the children were more likely to show more readiness for school. There were significant positive relations between parents' socioeconomic factors (educational status and the total monthly income) and the quality of early childhood education classrooms (in terms of physical environment and social-emotional climate of the classroom). The study contributed to the early childhood education literature by identifying the factors related to children, parents, teachers and the quality of early childhood education classrooms in order to understand factors associated with children's school readiness. There is a need for further research in Turkey that defines and investigates school readiness from a multidimensional perspective and particularly including socioeconomic factors of family and quality of early childhood education.

ÖZET

Türkiye’deki Çocukların Okula Hazırbulunuşluk Düzeyleri ile İlgili Faktörler

Bu çalışmada, Milli Eğitim Bakanlığı’na bağlı devlet okullarının anasınıflarına devam etmekte olan çocukların ilkokula hazırbulunuşlukları ile ilgili kapsamlı bir veri elde etmek amaçlanmıştır. Araştırmanın ikinci amacı, bu çocukların ailelerinin sosyoekonomik durumları hakkında bilgi edinmektir. Üçüncül olarak, okul öncesi eğitim sınıflarının kalitesi hakkında detaylı veriler toplamak amaçlanmıştır. Son olarak ise, çocukların ilkokula hazırbulunuşluklarını yordayan faktörleri analiz etmek ve bu faktörlerin birbirleri ile ilişkilerini incelemek amaçlanmıştır. Araştırmanın sonunda, çocukların yaşının, cinsiyetlerinin, okul öncesi eğitim alma sürelerinin ve sınıf içindeki öğretmen ile çocuk arasındaki ilişkilerin kalitesinin, çocukların ilkokula olan hazırbulunuşluluğunun güçlü birer yordayıcısı olduğu bulunmuştur. Yaşı daha büyük olan, cinsiyeti kız olan, daha fazla okul öncesi eğitim alan ve öğretmen-çocuk ilişkileri daha kaliteli olan anasınıflarındaki çocukların ilkokula daha hazır oldukları görülmüştür. Ayrıca, çocukların ailelerinin sosyoekonomik düzeyleri (eğitim ve gelir düzeyi) yükseldikçe, kayıtlı oldukları anasınıfların eğitim kalitesinin de (fiziksel çevre ve sosyal-duygusal iklim) arttığı gözlemlenmiştir. Bu çalışma; çocukların ilkokula hazırbulunuşlukları ile ilgili aile, çocuk, okul ve öğretmen gibi farklı faktörleri kapsamlı ve çok yönlü olarak ele almasının yanında farklı değişkenler arasındaki ilişkileri incelemesiyle literature katkı sağlamaktadır. Çünkü Türkiye’de, çocukların demografik özelliklerinin yanında ailelerinin sahip olduğu sosyoekonomik özellikler ile çocukların aldığı okul öncesi eğitimin kalitesini içeren, çocukların ilkokula hazırbulunuşluk düzeylerini çok yönlü açıdan tanımlayan ve inceleyen araştırmalara ihtiyaç vardır.

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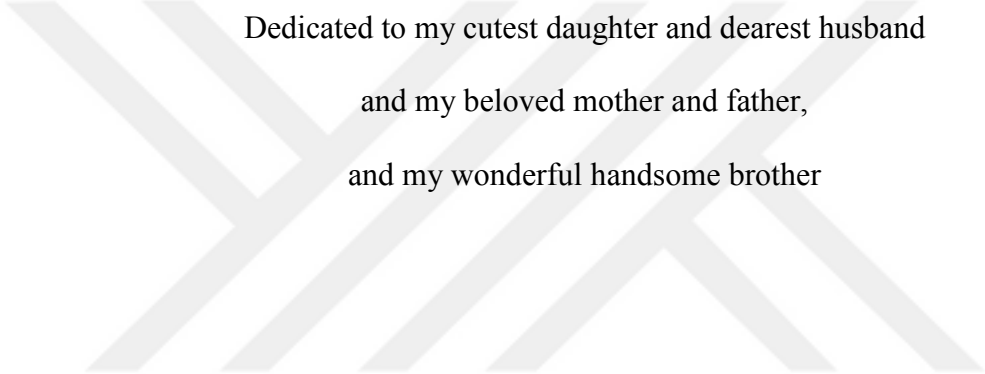
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Merve Özgünlü





Dedicated to my cutest daughter and dearest husband
and my beloved mother and father,
and my wonderful handsome brother

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CHAPTER 1

INTRODUCTION

Since the beginning of the twenty first century, educational specialists and policymakers globally has paid more attention to the significance of education especially in early childhood years. Scientists in the fields of education, psychology and other related areas conduct numerous applied researches to gain insight into factors that have long standing impacts on child development, and bring people's attention to the issue. As Abbott (2014) suggested, high quality education beginning from the early years of life is vital to be successful in the twenty first century as it helps individuals to develop skills that are content knowledge and 21st century themes; learning and innovation skills; information, media and technology skills; life and career skills (The Partnership for 21st Century Learning, 2015).

In the year of 1995, The National Association for the Education of Young Children Governing Board set goals related with early childhood education and its long-lasting impacts on later in life. In the Goal I, The Board focuses on the importance of early years for children's readiness of learning in school: "all children will start school ready to learn" (NAEYC Governing Board, 1995). In 2001, the United States did an educational reform named as No Child Left Behind Act. This educational reform aimed to improve quality of education not only for individual children but also for the welfare of the society. Therefore, the first aim of this reform was to make center-based early childhood education higher quality and wider (U.S. Department of Education, 2005). Rhode Island KIDS COUNT (2005) also pointed out the importance of making investments on early years to have children who read successfully, teens who are healthy, and adults who are productive. In this regard,

Heckman (2006) found that investing on early childhood education provides higher returns for society, families and individuals in a sustainable and comprehensive way. These global educational trends have led to some educational changes in Turkey as well.

Turkish Ministry of Education has begun to place more emphasis on early childhood years and started to provide center-based public early childhood education services for children and their families since the beginning of the twenty first century (MEB, 2016). Before the introduction of a new educational system in 2012, known as “4+4+4”, Ministry of Education had struggled to make public early childhood education services compulsory for 5 and 6 years old children and to make early childhood education services wider in the all parts of Turkey. In the Eighth Development Plan for the years between 2001 and 2005, it was aimed to make the rate of schooling in early childhood education increase from 12% to 25%. However, the rate of schooling in early childhood education was increased to 16.1% in 2005 year (Derman & Bařal, 2010). In 2009, attending a public early childhood education program became compulsory for five years old children (60-72 months). With these attempts, early childhood education enrollment rates and the number of schools that provided schooling for young children has increased dramatically (See Table 1 and Table 2). However, with the introduction of 4+4+4 in 2012, Ministry of Education has been criticized for not focusing on early childhood education adequately (AÇEV & ERG, 2013). In this new system, attending early childhood education was not compulsory for children prior to school, and parents had to register their children to the first grade when they became 66 months old. Also, families whose children were between 60 and 66 months old were given the option for registering their children to public kindergartens or registering their children to the first grade without attending

early childhood education first (MEB, 2012). This new option led families to choose to register their children to first grade instead of early childhood education because of high cost of early childhood education (AÇEV & ERG, 2013; AÇEV & ERG, 2016). As a consequence of those changes in the early childhood education system in 2012, although the number of children and schools in early childhood education has increased, the rate of schooling in early childhood education and number of children who attend center-based early childhood education programs has dropped down to be lower than the rates that were reached before the year 2013 (See Table 1 and Table 2). However, the schooling rates and number of students of early childhood education for 4 and 5 years old children has begun to increase dramatically after 2014 year.

Table 1. Schooling Rates of Early Childhood Education in Turkey

Educational Year	Pre-Primary Education			
	Age	Total	Male	Female
2009-2010	3-5	26.92	27.34	26.48
	4-5	38.55	39.17	37.91
2010-2011	3-5	29.85	30.25	29.43
	4-5	43.10	43.70	42.47
2011-2012	3-5	30.87	31.23	30.49
	4-5	44.04	44.56	43.50
2012-2013	5	65.69	66.20	65.16
	3-5	30.93	31.42	30.41
	4-5	44.04	44.86	43.18
2013-2014	5	55.35	57.34	53.24
	3-5	28.03	28.61	27.42
	4-5	37.94	38.84	36.98
2014-2015	5	43.49	45.38	41.49
	3-5	37.12	37.96	36.24
	4-5	46.83	47.88	45.72
2015-2016	5	66.02	68.42	63.48
	3-5	38.61	39.40	37.78
	4-5	49.27	50.20	48.30
	5	70.19	72.28	67.99

(MEB, 2016)

Table 2. Numbers of Teachers, Students and Schools of Early Childhood Education in Turkey

Type of School and Educational Year	Teacher			Student			School
	Total	Male	Female	Total	Male	Female	
Pre-Primary Education							
2003-2004	17,511	694	16,817	344,741	179,988	164,753	13,285
2004-2005	22,152	1,161	20,991	434,771	226,959	207,812	15,978
2005-2006	20,910	1,167	19,743	550,146	286,347	263,799	18,539
2006-2007	24,775	1,181	23,594	640,849	334,252	306,597	20,675
2007-2008	25,901	1,218	24,683	701,762	366,209	335,553	22,506
2008-2009	29,342	1,644	27,698	804,765	421,033	383,732	23,653
2009-2010	42,716	2,069	40,647	980,654	511,127	469,527	26,681
2010-2011	48,330	3,414	44,916	1,115,818	580,296	535,522	27,606
2011-2012	55,883	2,954	52,929	1,169,556	607,052	562,504	28,625
2012-2013	62,933	3,620	59,313	1,077,933	562,179	515,754	27,197
2013-2014	63,327	3,387	59,940	1,059,495	555,194	504,301	26,698
2014-2015	68,038	4,070	63,968	1,156,661	607,247	549,414	26,972
2015-2016	72,228	3,871	68,357	1,209,106	633,349	575,757	27,793

(MEB, 2016)

Although there are several factors influencing why early education is receiving greater attention, there is one main reason for why early childhood education and development have received a greater attention. The reason is that findings of applied research has documented clearly that experiences and environment of children's early childhood years have substantial effects on children's readiness for school and achievement throughout their education and life (Romano, Babchishin, Pagani, & Kohen, 2010; Pianta, Payne, Cox, & Bradley, 2002). In Canada, nationwide school readiness survey was applied to see the importance of children's school readiness for their later education life (Romano et al., 2010). At the end of this nationwide survey, Canadian educational scientists found that kindergarten math, reading and socio-emotional skills are predictors for 3rd grade school achievement. They also found that there is a strong positive correlation between early and later socio-emotional skills of children (Romano et al., 2010). In the United States, educational specialists and policy makers conducted Early Childhood Longitudinal Study between the years of 1998-2000 to assess

children's readiness for school and to see the effectiveness and appropriateness of early childhood education for children's later achievement. They used large sample to collect data from early childhood education schools and elementary schools. Findings of this research suggest that children who have multiple risk factors (less ready for school, have lower socio-economic status family) have lower points than children who have no risk factors in terms of reading and mathematic skills, general knowledge, motor skills, social skills and they show less positive attitudes towards learning activities (Denton & West, 2002; U.S. Department of Education & National Center for Educational Statistics, 2001). As it can be seen from the results of those nationwide survey studies, early childhood environment is very significant for children's readiness for school and later school life.

Defining school readiness as a term has crucial importance to reach reliable results about children and to assess their readiness for school appropriately, because definition of readiness has a significant impact on the way of assessment. NAEYC (1995) stated that definition of school readiness should be multidimensional. Also while defining readiness; schools should not forget that each child has different developmental characteristics, different socio-economic backgrounds, and different learning styles. Rimm-Kaufman (2004) suggested that it is significant to know children's characteristics appropriately and to constitute appropriate expectations and instructions for children and their families. Therefore, it is essential to define school readiness and to identify factors associated with it such as environment\school and child related factors.

Although school readiness is just recently receiving attention, there has been some applied research on children's school readiness in Turkey that are providing important information. Similar to the rest of the world, researchers in Turkey are also

trying to clarify factors that are significantly related with quality of early childhood environment, readiness for school and later school achievement of children (Cankılıç, 2009; Erkan & Kırca, 2010; Erkan, 2011; Gündüz & Çalışkan, 2013; Tozar, 2011; Yazıcı, 2002). Those researches have showed that there is a strong positive relationship between the quality of early childhood environment of children, their readiness for learning and school, and their later school success. Those empirical research evidences are very crucial for impacting early childhood education policies in Turkey in terms of making center-based early childhood education programs wider, more accessible, and higher quality.

School readiness is a very vital predictor of children's school achievement and it is a multi-dimensional concept including developmental and environmental factors (Britto, 2012). With the consideration of new educational system in Turkey that does not include early childhood education within compulsory education, it is essential to conduct research that assess relationships between quality of public early childhood education programs, socio-economic background of children, and children's readiness for elementary school, because there is no applied research that combine those variables in Turkey. This way, policy makers can be informed about the significance of early education and development for later school achievement.

CHAPTER 2

LITERATURE REVIEW

This study aimed to investigate predictive factors of children's school readiness and the relationship between children's readiness for school, the quality of early childhood education programs, and the socio-economic background of family. This section includes explanation of the theoretical orientation and conceptualization of the study and detailed literature review that is related with the scope of this study.

2.1 Early childhood education in Turkey

In Turkey, processes of determining educational standards, policies, and aims are carried out by the National Ministry of Education. Apart from the policy making, National Ministry of Education is also responsible for the application processes of the educational policies. Therefore, educational activities about early childhood are under the responsibility Ministry of National Education. According to Ministry of National Education, early childhood education programs are for children between 36 and 66 months, and attending an early childhood educational program is optional in Turkey (MEB, 2016).

The general aims and the principles catalogue of Ministry of National Education states the aims of early childhood education in Turkey (MEB, 2013). These are: preparing children to elementary school, encouraging children's creativity and analytical thinking, supporting children's whole development, supporting children from disadvantaged backgrounds, making children respectful to differences, and encouraging children to learn reforms and principles of Mustafa Kemal Atatürk. It was emphasized that these essential aims should be provided through child-

centered approach considering children's age related characteristics, concerns, needs, individual characteristics, individual differences, and environmental factors (MEB, 2016). Also, The Ministry of National Education stated that it is essential for children to gain specific achievements that are comprehensive and appropriate for children's developmental levels. The educational program should be flexible for children's diversities and it should be applied in an appropriate way. The program provides independence for teachers in teaching and teachers should work in a systematic way. Also, the program aims to make evaluation more comprehensive (in terms of evaluation for teacher, program, schools, families, and children) (MEB, 2016). The Ministry of National Education suggested that early childhood education program of Turkey prepared by the ministry itself identified certain developmental achievements and indicators for children taking into account children's ages and different developmental domains, so that teachers can prepare lesson plans and provide experiences for children, and asses children's developmental process appropriately. Furthermore, it was emphasized the importance of providing young children high quality early childhood education with physically, cognitively and socio-emotionally rich environmental stimulus in order for children to have positive experiences that would foster positive attitudes towards learning (MEB, 2013).

In the catalogue published by the Ministry of National Education, preschools are defined as schools for children who are between 36 and 66 months and preschool classrooms are defined as classrooms that provide formal education to children between 36 and 66 months of age (MEB, 2016). In this catalogue types of early childhood education institutions were divided into three categories. These were: independent preschools, preschools that are bounded to public primary education

schools and educational practice classrooms that are bounded to other educational organizations (MEB, 2016).

According to Derman and Bařal (2010), there has been an increase that early childhood education received since the establishment of Turkish Republic, peaking especially in 2009, because National Ministry of Education announced that attending early childhood education was mandatory for children who are between 5 and 6 years of age (Derman & Bařal, 2010). However, a new educational system (4+4+4) was accepted in the spring semester of 2011-2012 educational year and was launched in the fall of 2012. As a result of this new development in the educational system, attending early childhood education became optional yet again optional. In this system, the first eight years of education is defined as primary education (the first four years was primary school and second four years was middle school) and the last four years of the compulsory education system is named as high school education. It is explained in the guidebook of new educational system that early childhood education is for children who are 36 to 66 months old, but it is not compulsory. Children who are 66 months old have to begin elementary school, but families whose children are between 60 and 66 months old have an option to register their children to elementary education or early childhood education based simply on their preference (MEB, 2012). Although attending an early childhood education program was made optional for young children in the new educational system, The Ministry of National Education stated that it was its aim to make formal early childhood education accessible to the whole country for children who are between the ages of 3 and 5 (MEB, 2012). In accordance with the concerns that these changes were going to negatively affect the schooling attendance rates of young children in preschools in Turkey, the rate of increase had dropped down after the change of educational

system in 2012 (See Table 1 and Table 2). However, according to the recent statistics of MEB (2016), the number of students who attend early childhood education has begun to increase again in the 2014 year as a result of increasing the age of primary school enrollment to 66 months.

There has been number of criticisms from educational specialists and organizations in Turkey for the approval of new educational system (4+4+4). According to the report of AÇEV and ERG (2013), new educational system may cause inequalities among children because socioeconomically disadvantaged children may not have a chance to attend preschools when they are not provided by the government free of charge. It is known that early childhood education is expensive in private education centers. Families who have better socio-economic opportunities can afford to register their children to private early childhood education centers. Most of families choose to register their children to public education schools. In new educational system of Turkey, early childhood education is not compulsory and public early childhood education programs take some educational fees from families. The consequence of those, families who have low socio-economic status choose to register their children to first grade when their children become 60 months old. Children begin school without readiness for learning in terms of whole developmental domains. This makes achievement gap between children wider (AÇEV & ERG, 2013; AÇEV & ERG, 2016). TÜBİTAK (2004) stated that early childhood education aims to support children's whole development (physical, social, emotional, cognitive, and language), to make children ready for school, and to provide opportunities for children from disadvantaged backgrounds to close achievement gap. Children attended early childhood education program when they are 5 and 6 years old before 4+4+4 Education System to start elementary education

ready. However, in new program, children who are in those ages begin first grade without any readiness (Bilim Yönetim ve Kültür Platformu Politika Notları, 2013).

Educational specialists and organizations have been conducting research to assess new educational system after the year 2012. According to data from Bilim Yönetim ve Kültür Platformu Politika Notları (2013), first grade teachers have confusion to provide age-appropriate instruction for children, because they have no experience with children who are 5 and 6 years old. Also these data have showed that children who attend first grade have difficulty in school adaptation, because of physical environment problems, such as inappropriate size of desks, toilets, and stairs. Children are not secure in terms of physical environment of school. Furthermore, break times of schools are generally five minutes long and this is not enough for children's play, interaction and meeting personal needs (Bilim Yönetim ve Kültür Platformu Politika Notları, 2013).

Eğitim-Sen (2013) applied a research to assess the effects and current situation of new educational system. They gathered data from teachers, children and families. Teachers stated that children who begin elementary education earlier have some emotional, cognitive and physical developmental problems in adapting school, because younger children have less attention span, and children have difficulty in self-care skills. Teachers also reported that children want to play instead of sitting in class, have difficulty in adjusting to school and separating home and their mothers while coming to school. On the other hand, teachers believed that older children can grasp information provided to them more quickly seem to learn faster than younger children leading to seemingly wider cause achievement gaps between older and younger children. Teacher reported that the negative effects of the new educational system is more pronounced for children coming from disadvantaged environments.

Because teachers stated that children come from advantaged environments have opportunity to deal with challenges better than disadvantaged children (Eğitim-Sen, 2013). The results of this study revealed that both teachers and families believed that when children start school early, they start school not ready to learn. In fact, the negative effects are not limited to learning only and expand to all areas of development. For example, younger children have difficulties in writing due to immaturities in physical and muscular developments, but not being able to write in a classroom full of other children and not being able to complete a given task successfully could affect their self-efficacy negatively. This therefore supports that concern the teachers and the families had that the expectations from children in new educational system are not developmentally appropriate. Parents and teachers both emphasized the importance of school adaptation programs for children at the school entry level and early childhood education programs for school readiness (Eğitim-Sen, 2013).

The difficulties children, families and teachers face in the new educational system is not solely related to the maturational levels of the children and how younger children are not ready to undertake demands of a school. In fact, the report of Eğitim-Sen (2013) suggested that first grade teachers have difficulties providing appropriate teaching methods and experiences for children whose ages are between 60-66 months old because, the training of first grade teachers and their experiences so far only include teaching children children who are at least 69 months old. Based on such difficulties the teachers are experiencing, Eğitim-Sen (2013) suggested that the aftermath of this educational change can be quite serious if for first grade teachers are not provided with in-service training. In fact, the predictions suggest that providing in-service training for first grade teachers can not be a solution to these

problems unless high quality early childhood education is compulsory, free of charge and publicly accessible to all the target age children with teachers regularly receiving in-service training (AÇEV & ERG, 2013; AÇEV & ERG, 2016; Eğitim-Sen, 2013).

To conclude, policies governing the state of early childhood education in Turkey is constantly changing and making it very difficult for children, parents and teachers to adjust. In fact, these structural changes in the system seem to take all the attention and, as a result of this, improving the quality of early childhood education becomes somewhat of a neglected phenomenon. Therefore, it is still unknown how the quality of public early childhood education institutions is and if and how young children who attend such institutions are ready to learn at school.

2.2 The term of school readiness

Defining the term school readiness is vital to determine factors that are related to children's readiness to learn at school. Although there are different definitions of school readiness in the literature, most researchers put emphasis on multidimensionality of the term school readiness and the interconnectedness of those dimensions (Britto, 2012; Snow, 2006). In fact, many argue that school readiness is not solely about children and school include teachers and families and schools as well (Britto, 2012; Louisiana Department of Children and Family Services, 2011). Even though it seems to be agreed upon that it is not possible to have a simple definition of school readiness, there still seems to be a need to develop certain standards for assessment (Goodson, 2008).

Yapıcı (2004) defined the term of school readiness as being ready to school cognitively, emotionally, socially and physically. Snow (2006), defined school readiness as "children are ready for school, families are ready to support their

children's learning, and schools are ready for children". Similar to this definition, Britto (2012) in UNICEF School Readiness Report stated that school readiness has three interconnected dimensions; ready children, ready schools and ready families. According to this definition of readiness, children should be ready for learning and they should be at a developmental level that is appropriate for school entry. Schools also should be ready for providing comprehensive learning environments and they should promote a smooth transition between early childhood education and elementary school for children and families. And families should be ready through appropriate parenting practices and home environment, they should involve children's learning process and they should support children's transition from home to school. All these three dimensions should work together in a coherent way, because there is a reciprocal relation between them. This framework is very important for providing guidance for individuals, families and systems regarding readiness for school, since the relation between these three dimensions (children, families and schools) produce school readiness as a product with the impacts of cultural factors and policies (Britto, 2012).

Different perspectives and theories are used in defining school readiness and supporting such definitions. Some used maturationist perspectives of Arnold Gessell, and suggest that school readiness is a prerequisite for school life; because they believe that children should have basic skills at school entry to be able learn new and more complex concepts appropriately (North Central Regional Educational Laboratory, 1999). Maturationist Perspective emphasizes the importance of maturation, a biological concept, and believes chronological age of children to be the better indicator of maturation. Therefore, maturationists determine developmental acquisitions and prerequisites based on children's age (Snow, 2006). Secondly,

theorists that emphasize the influence of environment on development, mainly John Watson, B. F. Skinner, and Albert Bandura believe that environment of children shapes their developmental process (North Central Regional Educational Laboratory, 1999) and contexts and sociocultural environments of children affect children's whole development from the beginning of early childhood years (Snow, 2006). Those who back their ideas of school readiness by those who emphasize the importance of environment define children's school readiness as children's reaction to environment in an appropriate way (North Central Regional Educational Laboratory, 1999). Such environmental factors that include families, teachers, and physical environment have impact on children's readiness to learn. Environmentalists emphasize the importance of teacher-initiated activities. According to them, children should follow teacher's directions and respond to them appropriately. Their school readiness term concept focus on more academic aspect of children's development (North Central Regional Educational Laboratory, 1999). Thirdly, Jean Piaget, Maria Montessori and Lev Vygotsky who are constructivist theorists believe that children are active participants of their learning process and they can learn through interaction with their environment. According to school readiness researchers who come from the constructionist tradition, children can be ready for school when they can interact with the environment and other people actively (North Central Regional Educational Laboratory, 1999). They focus on properly prepared physical environment for learning and providing meaningful learning experiences for children. They believe the significance of knowing children individually and providing individually and developmentally appropriate learning opportunities. Therefore, adults (teachers, families) have significant responsibilities in knowing children individually to provide appropriate education and to make

children active participants and learners, because readiness of children is related positively with children's interactions with more knowledgeable people (Andrews & Slate, 2001; North Central Regional Educational Laboratory, 1999). Fourthly, cumulative perspective focuses on prerequisite skills that children should gain for school entry and learning more complex knowledge (Andrews & Slate, 2001). And fifthly, Transactional-Ecological perspective emphasizes the importance of ready schools for children. This perspective suggests that there are reciprocal associations between home, school and community and they all affect development of children (Snow, 2006).

Apart from definitions provided by psychologists and educational scientists also defined the term school readiness. Focus points of definitions for school readiness by the educational scientists can be divided into three categories: developmental domains; supports of family, school and community; and both developmental domains and environmental supports (Texas Early Learning Council, 2011). With focusing developmental domains, Britto (2012), Cross and Conn-Powers (2011), Scott-Little and Maxwell (2000), and Snow (2006) defined readiness for school as children's competencies in all developmental domains when they begin school and they suggested that these school entry competencies of children are significant for children's future success. Ready for School Goal Team defined school readiness in terms of environmental supports with emphasizing the importance of effective services that schools provide to children and families (personnel, policies, practices, and physical resources) (Scott-Little & Maxwell, 2000). Moreover, with focusing on both developmental domains and environmental supports, Louisiana Department of Children and Family Services (2011) defined school readiness as

abilities of children, families, schools, and communities for sustainable school success.

In addition to focus on defining children's readiness for school, researchers and educational specialists focus on the outcomes of school readiness. Readiness for learning is very important, because if children have good educational basis in terms of social, physical, intellectual and emotional skills, they can build new learning on previous ones in a meaningful way and they can get success in their school life (Children's Action Alliance, 2002; NAEYC Governing Board, 1995) and thereafter (Farrar, Goldfeld, & Moore, 2007). Britto and Limlingan (2012) argued that school readiness is an important contributor to success in life. According to them, benefits of school readiness are divided into two levels: intrinsic and instrumental. Whereas intrinsic benefits refer to direct benefits that children, families, and communities gain from school readiness; instrumental benefits are defined as more expansive developmental goals for social equity and economic development. They suggested that school readiness makes contributions for children at different stages of life. Children who enter elementary school more ready are more likely to have higher achievement and lower drop-out rates in primary school. These children are more likely to be successful and to graduate from high school. Furthermore, they have higher chances to have better employment outcomes in their adulthood years (Britto & Limlingan, 2012). Therefore, school readiness of children should be supported, because it has impacts on children's later school life and achievement (Snow, 2006).

Cross and Conn-Powers (2011) emphasized the importance of understanding children's school readiness and school entry skills for providing appropriate practices to them. Therefore, understanding different indicators of children's school readiness becomes crucial in order to provide children with experiences that will lead to

success. According to The National Center on Quality Teaching and Learning (2012), as it is pointed out by Head Start Child Development and Early Learning Framework, the indicators of school readiness include five developmental domains that children should show in their knowledge and skills. These are social and emotional development; language development and literacy; approaches to learning; cognition and general knowledge; and physical well-being and motor development. Also, according to Rhode Island KIDS COUNT (2005), indicators for school readiness of children are physical well-being (fine and motor skills), having positive social interactions with peers and showing positive social behaviors, following directions appropriately, understanding relationship between letters and sounds (phonological awareness), and recognizing basic geometric shapes.

Assessing readiness for school in an authentic way is crucial for knowing children well and providing developmentally appropriate practices to them (Halle, Hair, Burchinal, Anderson, & Zaslow, 2012). Yapıcı (2004) suggested that from the first day of school, schools should collect data about children periodically and school staff should work collaboratively in this process. It is important to determine children's developmental levels and individual needs to support their whole development comprehensively and appropriately in the long run (Halle et al., 2012; Yapıcı, 2004). It is agreed that tracking children's progress beginning from the early years provides better information about children's school readiness (Barnett, 2008; Children's Action Alliance, 2002; Yapıcı, 2004). Lewit and Baker (1995) mooted the questions that how school readiness should be measured and who are responsible for children's competency for school entry. Farrar et al. (2007) suggested that school readiness of children is related to their environmental factors and individual characteristics. Therefore, it is significant to focus on those factors while assessing

children's readiness for school to provide appropriate instruction. Since not all children have the same abilities and they come from different socio-economic backgrounds, their readiness for school are not at the same level (Ackerman & Barnett, 2005; Farrar et al., 2007; Snow, 2006). Giving a standardized education and expecting similar performances from children make achievement gap wider and cause inequalities among children in the long run (Farrar et al., 2007). In this regard, Diversity Data Kids (2013) suggested that assessments in terms of children's school readiness should aim to promote their learning in class, determine children's special and individual needs, evaluate effectiveness of early childhood education programs comprehensively and they should be open to change appropriately. Also, Farrar et al., (2007) divided criteria of school readiness assessments into two: these are chronological age of children and specific skills that can be assessed based on norms and standards of formal educational system. Lewit and Baker (1995) emphasized that chronological age has been always a determining factor for school entry, but there are other factors that create differences at children's developmental levels, because school readiness is a multi-dimensional term (Lewit & Baker, 1995). In addition to the importance of considering multiple factors while creating school readiness assessment tool for children, Snow (2006), Britto and Limlingan (2012) suggested that assessment tools for school readiness should be theory driven and empirically tested and assessment tool should be comprehensive.

2.3 Quality in early childhood education schools

Quality of early childhood education is vital for children's development because when schools meet children's needs and expectations, children can feel belonging to their school and there can be better relationships in classroom. Also in high quality

early childhood education schools, children have opportunities to acquire meaningful learning (AÇEV & ERG, 2016; NAEYC, 1995; NICHD Early Child Care Research Network, 2002).

There are different quality standards that are set by educational specialists and educational institutions. According to quality criteria as indicated by NAEYC (2005), all early childhood education teachers have to be part in professional development training and all assistant teachers have to get at least high school diplomas. Additionally, preschool education classrooms for 4 to 6 years old children should have maximum 20 children with a child to teacher ratio of 10:1, and early childhood education curriculum should be comprehensive in terms of five developmental domains (NAEYC, 2005). Similarly, AÇEV and ERG (2013) also set areas of quality standards for early childhood education programs including physical properties of learning environment (teacher-child ratio, equipment of class, and educational materials), teachers (teacher features, pre-service and in-service trainings), school administrators, education program, community and family involvement to education process, socio-emotional process (teacher-child and child-child interactions), features of staff, and health-nutrition-security services of institutions (NAEYC, 2005; NICHD Early Child Care Research Network, 2002).

Kıldan (2010) divided quality standards of education into two dimensions: Physical Equipment and Environment Quality, and Pedagogical Quality. According to Britto and Limlingan (2012), physical environment quality is significant for safety and health of children and adults. First of all, school environment and materials should be cleaned frequently. Classrooms should have enough natural light from windows and it should be easy to access outdoor from the class. There should be enough windows in classroom to have fresh air. Materials and classroom equipment

should be accessible for children to make children actively involved and engaged to learning processes. There should be individual works, informative charts and maps, and personal information about children like family photos on the walls of the class. If children can see their individual products on the wall, they can feel appreciated. Also, they can be aware of works of other children and they can learn to value and respect differences. Britto and Limlingan (2012), Kıldan (2010) and MEB (2013) also suggested that schools should have areas that support children's physical development at the indoor and outdoor space of the school area. While building these places, safety and health of children should be considered. These spaces should improve children's physical skills and they should have enough space to movement. Also, they should have fresh air for children's health. Moreover, an early childhood education school should be in an appropriately accessible location. This is important for children's safety and accessibility of school (Britto & Limlingan, 2012).

In terms of pedagogical quality, Britto and Limlingan (2012) emphasized that educational experiences of teachers are linked to quality of education and learning of children. Therefore, it is vital to have teachers who are specifically trained in the early childhood education field for children's sustainable and appropriate learning. States should pay attention and invest money for higher quality teacher training programs (Britto & Limlingan, 2012). Also, Kıldan (2010) suggested that having academically and socially effective curriculum is an indicator for high quality education. Ponitz, Rimm-Kaufman, Grimm, and Curby (2009) emphasized that educational activities should be comprehensive and should touch all developmental domains in order to support the development of children so that they can have better learning and achievement.

According to research, quality of education is positively associated with the development of children (NAEYC, 2005; NICHD, 2006; NICHD Early Child Care Research Network, 2002). In fact, as Fryer and Levitt (2004) suggested quality of schools, especially early childhood education schools, may have crucial roles for closing the achievement gap between children who come from various backgrounds particularly those from disadvantaged environments. According to Mashburn, et al. (2008), teacher's educational status is positively related with children's social competence. The results of this conducted research by Pianta et al. (2002) showed that more students in a class is positively associated with less child-centered climate in classroom, income level of families are positively correlated with attending higher child-centered climate, and higher levels of mother's education are positively related with instructional climate, child-centered climate and teacher's positivity in classroom. According to research about quality of early childhood education schools, low child-teacher ratios, higher levels of teacher training and smaller group sizes in a class are indicators of higher quality (Phillips, Mekos, Scarr, McCartney, & Abbott-Shim, 2000). Burchinal et al. (2008) assessed the relationship between quality of early childhood education as indicated by child –teacher ratio, teacher training quality and children's academic achievement. They found that higher quality in terms of teacher training and instruction predicted children's language, pre-academic, and social skills at first grade entry level. Also, gains from early childhood education are more likely to become sustainable, if instruction has higher quality. This prediction of quality is important for children's elementary school readiness.

Researchers place a substantial emphasis on quality gap between private and public early childhood education programs. For example, private schools have higher quality in terms of physical environment and equipment in Turkey (Derman & Başal,

2010). Burchinal, Vandergrift, Pianta, and Mashburn (2010) conducted a research on the inequality in quality of early childhood programs and compared high and low quality schools. They assessed quality of early childhood education schools in terms of educational activities, physical environment and social-emotional climate. They found that higher quality of an early childhood education classroom is positively related with children's language, reading and math skills. Results also showed that children from low income families attend lower quality early childhood education centers more (Burchinal et al., 2010). According to Britto and Limlingan (2012), inequality between children in terms of accessing higher quality early childhood education programs may make school readiness and achievement gap wider. They stated that children who cannot access a high quality early childhood education programs are more likely to be less prepared for learning activities in schools. In another research, after measuring cognitive developmental differences among children, Stipek et al. (1998) reached the conclusion that higher child-teacher ratio in a class and having less educated teachers in schools weaken the quality of early childhood education and lower quality early childhood education is negatively correlated with cognitive development of children. Similarly, children from schools that have higher quality (low adult-child ratio and more experienced teachers) are more successful (Tremblay, Ross, & Berthelot, 2001). Since quality of instruction in class predicts children's reading achievement and behavioral engagement (Ponitz et al., 2009), researchers suggested that states should make an effort to provide high quality early childhood education for low-income children to contribute to their whole developmental outcomes (Burchinal et al., 2010).

When it comes to quality of early childhood education in Turkey, researchers emphasize that overall levels of quality in early childhood institutions in Turkey is

low and there are significant gaps among schools that are high and low quality (Derman & Baçal, 2010). According to the statistics of the year 2016, a great part of the budget in early childhood education institutions is spent for personnel expenses. The proportion given from the national budget for education is too small and not enough to meet needs of the schools and the children (MEB, 2016).

In addition to problems that are associated with budget early childhood education receives, Kıldan (2010) stated that Turkey fell behind all the European Countries in terms of attendance rates of children to early childhood education. Derman and Baçal (2010) suggested that there should be crucial applications for make center-based early childhood education wider. Kıldan (2010) suggested that while making center-based early childhood education classrooms expand, setting comprehensive and sustainable high quality standards is very crucial. Furthermore, according to Kıldan (2010), Turkey does not achieve high quality early childhood education because of inadequacy in number of specially trained teachers, and inappropriate physical settings for early childhood education classrooms. Overcrowded classrooms, inappropriate locations of schools, inadequate learning materials, less educated teachers, and higher child-teacher ratios are indicators of low quality early childhood education programs (Britto & Limlingan, 2012).

2.4 Early childhood environment, school readiness and later achievement

After defining the term school readiness and the quality of early childhood education programs, it is important to discuss the relationship between children's early childhood experiences in pertaining to school and family environments and children's readiness for school. Researchers have been conducting studies about factors that are related to children's readiness for school (Majzub & Kurnia, 2010;

Murray & Harrison, 2011; Pagani & Fitzpatrick, 2014; Pagani, Fitzpatrick, Archambault, & Janosz, 2010; Metindoğan, 2007). More recently, researchers have approached school readiness more comprehensively assessing different factors associated with children's readiness for school (Gündüz & Çalışkan, 2013; Halle et al., 2012; Keys et al., 2013).

According to Majzub and Kurnia (2010), parents' educational status and type of kindergarten children attend are important contributors of children's reading readiness. There was no significant difference between girls and boys regarding reading readiness (Majzub & Kurnisa, 2010). Majzub and Kurnia (2010) suggested that parents' educational background is a determinant for children's reading readiness, because not only are parents creating the environment at home that supports or hinders reading skills, they also provide different meaningful learning opportunities for their children. If parents read books to/with children regularly and provide them a linguistically rich environment, children can be better prepared for elementary schools (Majzub & Kurnia, 2010).

Romano and his colleagues conducted a study showing that kindergarten math, reading and socio-emotional skills are predictors of third grade school achievement (Romano et al., 2010). In this study, cognitive, language, motor, behavioral and socio-emotional skills and children's health were the components of school readiness. They aimed to examine relationship between school readiness at kindergarten and later school achievement social-emotional skills and academic skills. Additionally, results of the study conducted by Romato et al. (2010) study showed that strong correlation exists between early and later socio-emotional skills of children as well. Claessens, Duncan, and Engel (2009) conducted a study to assess the relationship between kindergarten skills of children and their fifth-grade

achievement with children's socioeconomic background. They found that early academic skills of children predict their fifth-grade achievement (reading skills, math skills, cognitive ability, and socio-emotional skills) significantly. This research is very important, because it underlines the significance of children's school entry skills and socio-economic factors for their long-lasting comprehensive achievements.

In order to assess factors associated with achievement gap among children, Fryer and Levitt (2004) assesses child characteristics, family backgrounds, characteristics of schools that children attend, neighborhood characteristics, and math and reading scores of children.. Researchers followed children started from kindergarten to fifth grade in order to see their math and reading achievement processes over the years. Findings revealed that there is a positive relationship between socioeconomic status of family and children's reading and math achievement levels and there is a positive correlation between number of books at home and children's math and reading achievement scores. These results illustrated that home environment is a powerful predictor for children's academic success. Also, children from high socioeconomic status families were likely to attend schools that have higher qualities. However black children were more likely to attend schools with lower qualities. It is possible that the difference found between low and high socioeconomic status families is amplified by the quality of education they receive (Fryer & Levitt, 2004). According to Fryer and Levitt (2004) that the findings of their study suggest that there is an achievement gap between black and white children, because there are environmental and socio-economic background inequalities among children.

Magnuson, Ruhm, and Walfogel (2007) collected data about children's elementary school performances in terms of math and reading skills as predicted by

family background, early childhood education and child care experiences. Their goal was to see the links between school readiness and school achievement. Then they found that prekindergarten experience is positively related with children's reading and math skills in elementary school. They also found that positive early childhood experiences in early childhood education classrooms may lead to more long-lasting gains for children coming from disadvantaged environments. Moreover, the quality of early childhood care and education lead to significant differences among children both in terms of their academic and social development.

Tremblay and his colleagues suggested that characteristics of teachers as well as, families, neighborhoods and quality of schools and classrooms predict children's school achievement (Tremblay et al., 2001). They discussed that children from families who have higher socioeconomic opportunities and children who attend urban schools show more success at school than children from low SES environments and attend rural schools. Additionally, children who have more involved parents to their learning processes and school life have higher grades than other children with less involved parents. Similarly, Erkan (2011) in a study conducted in Turkey, assessed whether educational status of parents, socio-economic background of families and attending an early childhood education program lead to differences in terms of children's school readiness at first grade. She found that attending an early childhood education program, socio-economic situation of families, and educational level of mothers lead to significant differences among children's school readiness at first grade. According to another research by Erkan and Kirca (2010), again conducted in Turkey, children who attend an early childhood education program are more ready for school at first grade. Also, similar to the

results of the research conducted by Metindoğan (2007), they found that children whose parents have higher educational status are more ready for school.

Studies showed somewhat mixed results concerning how children vary in their school readiness based on their sex. Some studies in Turkey showed that children's gender does not make a significant difference in terms of children's readiness for school (Erkan, 2011; Erkan & Kırca, 2010). Similar to these studies conducted in Turkey, Denton and West (2002) conducted a study in the United States and they found that child gender does not make significant differences among children in terms of reading and mathematics in the first grade. However, the results of the research by Janus and Duku (2007) and Metindoğan (2007) illustrated that girls have higher school readiness scores. Specifically, girls showed more school readiness in terms of physical skills, literacy skills, numeracy and memory skills, communication skills and general knowledge about physical world (Metindoğan, 2007).

According to Magnuson, Meyers, Ruhm, and Waldfogel (2004) attending a formal early childhood education before first grade makes positive contributions to children's school readiness and lead higher success for reading and mathematics skills of children in the first grade. Also, they found that attending formal early childhood education is more beneficial for children from disadvantaged backgrounds, because early childhood education tends to close school readiness gap and inequalities between children from diverse environments.

According to Janus and Duku (2007), there is school readiness varies among children because of family's socioeconomic status, family structure, health status of child, health status of parents, age and gender of children, and parent involvement to children's literacy development. Their results showed that being male, entering

elementary education in younger age, having bad health status, and coming from socioeconomically low environments make children more vulnerable regarding school readiness in terms of physical health and well-being, social competence, emotional maturity, language and cognitive development, communication skills and general knowledge. Based on these results, Janus and Duku (2007) suggested that children's school readiness is related to socioeconomic, demographic and family factors. Children who have more risk factors regarding these are more likely to enter school less ready and this may make the achievement gap between children wider. Similar to this research, Coley (2002) compared children's school readiness and success based on socio-economic status of their families, gender of children, age of children, and race/ethnicity of families. The results showed that socio-economic background of families and age of children lead to vast differences among children in terms of math and reading success at school entry level (Coley, 2002). About this issue, Laosa (2005) wrote a working paper regarding effects of preschool education on children's educational achievement. She suggested that educational policymakers should work to make schools higher quality and educationally comprehensive to close achievement gap among children from different backgrounds. Laosa (2005) stated that since reaching publicly provided education is easier for families, public programs of early childhood education should become wider to provide higher quality education equally to all children. It is very important that children from disadvantaged backgrounds get a chance to attend more heterogeneous groups. All these factors make contributions to children's sustainable achievement and readiness for school (Laosa, 2005; Welsh, Nix, Blair, Bierman, & Nelson, 2010).

Gilliam and Zigler (2004) conducted a scientific research to assess prekindergarten education in the United States. These analyses are crucial for

evaluating educational system and suggesting more appropriate applications for it. They found that children's whole developmental skills benefit from attending prekindergarten program. The results also showed that developmental gains of children from prekindergarten program continue to kindergarten and primary school grades, especially in social, self-help, language, literacy and numeracy skills. Attending an early childhood education programs has positive effects on children's school success. Similarly, another study conducted by Grissmer, Grimm, Aiyer, Murrah, and Steele (2010) showed that children's fifth grade scores become higher with the combination of children's early fine motor skills, general knowledge, attention skills. Therefore, as Gilliam and Zigler (2004) offered, children who attend an early childhood education program are more likely to be ready for school and those children get higher scores from reading and math in elementary and middle school years (Grissmer et al., 2010). After getting those results from the study, Gilliam and Zigler (2004) suggested that the effects early childhood education programs can be divided into two categories: short term developmental gains and longer term indicators of educational progress of children. Short term developmental gains include skills that are related with social, emotional, cognitive, physical, and language developmental domains. Longer term educational progress may contain being less likely to have grade retention, higher rates of school attendance, getting success from achievement tests, and being more likely to graduate from university.

NICHD (2006) pointed out the importance of quality, quantity and type of early childhood care, and family factors in children's developmental process. According to the study (NICHD, 2006), children attending a center-based early childhood education program are more likely to be successful in their school lives. Results of this research showed that children who attend higher quality center-based

early childhood education programs are better in terms of cognitive, social, and language skills. Also, family factors are related to children's development. Children, whose parents have higher educational status, have higher income and provide supportive home environment show more cognitive, language and social competence than other children.

In the United States, educational specialists and policy makers conducted Early Childhood Longitudinal Study (ECLS) between the years of 1998-2000 to assess children's readiness for school and to see the effectiveness and appropriateness of early childhood education. They used a large sample to collect data from early childhood education schools and elementary schools. According to findings of this research, age of children is very important factor for children's acquiring developmental skills. Older children are more likely to gain reading skills, math skills, general knowledge (nature, science, humans, and society), motor skills (fine and gross motor skills), adaptation for school and learning activities (Denton & West, 2002; U.S. Department of Education & National Center for Educational Statistics, 2001). The research of ECLS showed that there are different kinds of risk factors for children's development: having mothers who have low educational status, coming from low-income level family, having single-parent family, and knowing English as a second language. Those risk factors have effects on children's whole development and later school achievement. According to the research results, children who have multiple risk factors have lower points than children who have no risk factors in terms of reading and mathematic skills, general knowledge, motor skills, social skills and they show less positive attitude towards learning activities. Specifically, children who come from no risk environments have better performance on recognizing letters of their own names, they can count to 20, they are physically

and health-wise better, they are more likely to be socially adaptive and less aggressive, and they are open to new knowledge and learning. (Denton & West, 2002; U.S. Department of Education & National Center for Educational Statistics, 2001).

Gormley and Gayer (2005) evaluated the pre-kindergarten program of Tulsa in Oklahoma with focusing on children's readiness for school. The results showed that attending pre-kindergarten program increases children's scores of cognitive skills, motor skills, and language skills. Children who are from more disadvantaged backgrounds (minority and low income children) benefit more from attending pre-kindergarten program. Those children benefit more from the program in terms of all developmental domains.

Pagani et al. (2010) assessed children's cognitive development, attention, physical and socio-emotional characteristics in kindergarten years. Then they tracked those children and when children were attending second grade, they assessed their math, reading and general knowledge achievements and children's classroom involvement. They found that there were positive relationships between children's developmental characteristics in kindergarten and second grade achievements. Children's cognitive, physical and social-emotional skills in kindergarten predict their math achievement the best, followed by attention skills, receptive language skills, attention and behavioral problems (Pagani et al., 2010). Pagani and Fitzpatrick (2014) conducted another research to assess relationship between children's math, vocabulary and attention skills in kindergarten and children's health and academic characteristics at fourth grade. They found that although vocabulary and attention skills predict later academic success significantly, kindergarten math skills are strongest predictors of later academic success. Girssmer, Grimm, Aiyer, Murrah, and Steele (2010) also found that kindergarten entrance skills in terms of math, reading,

attention and motor skills and general knowledge predict children's later math, reading and science achievement scores. Specifically, general knowledge in kindergarten entry is a strong predictor for later science, reading and math skills.

Duncan and his colleagues did a meta-analysis using 6 longitudinal data sets to measure relationship among children's academic, attention, and socio-emotional skills at school entry and later achievements of math and reading (Duncan et al., 2007). They also used demographic information of children and their families. After meta-analysis of 6 research data sets, they found that math, reading and attention skills at school entry are strong predictors for later achievement. School entry math skills of children are the strongest predictors for later achievement. Furthermore, they found that gender of children does not make significant differences among children from both high and low income families. According to Welsh et al. (2010), cognitive gains (working memory and attention control) in formal early childhood education schools predict children's cognitive skills at elementary school entry. These cognitive skills are positively correlated with children's reading and math achievement.

More recently, educational researchers have begun to conduct studies to assess children's readiness for school and factors that are associated with it. Yazıcı (2002) compared children's school readiness between children who attend an early childhood education program and children who do not attend an early childhood education program. She found that there are significant differences between children regarding school readiness, reading skills and math skills. Children who attend an early childhood education program have higher scores than other children who do not attend an early childhood education program. Also, children whose mothers have higher educational status are more ready to school and have higher reading and math

scores. Educational status of fathers also makes difference between children in terms of school readiness, reading and math skills. Based on the results, Yazıcı (2002) emphasized the importance of early childhood education for school readiness and school achievement for children, especially from disadvantaged environments. According to her, early childhood education can close the achievement and opportunity gap between children from diverse backgrounds. Konak, Berberoğlu, Arıkan, Tuncer, and Güzel (2010) emphasized the importance of monitoring children's cognitive and language developments process, because they argued, it is impossible to provide appropriate education for children without knowing their current developmental skills. Therefore, Konak et al. (2010) conducted a study with preschoolers and first graders to learn about their reading skills, cognitive abilities, academic achievements and readiness levels for school. They found that there is a positive correlation between children's reading and cognitive abilities and the age of children. Also, there are significant differences between children who attend early childhood education programs and children who do not attend early childhood education before first grade. Children who attend early childhood education programs have higher scores in terms of reading skills, cognitive abilities, and academic achievement during the first grade. Therefore, Konak et al. (2010) suggested that National Ministry of Education should exert more effort to make early childhood education wider, compulsory and accessible for all children from diverse backgrounds. Cankılıç (2009) conducted research to assess the effects of early childhood education to children's readiness for school in the second grade. She found that children who attend early childhood education more and who are from smaller family sizes get higher scores about understanding words, general information, matching, numbers and copying significantly. While educational status of mothers

has impacts on children's scores in understanding words, sentences, matching, and numbers; educational status of fathers influences on children's scores in understanding words, sentences, matching, numbers and copying. Cankılıç (2009) emphasized the effects of early childhood education in second grade of children. Because children who attend early childhood education more show more readiness for school. Similarly, Tozar (2011) made comparisons between children who attend early childhood education program and who do not attend when children were attending to the first grade. She found that children who attend early childhood education program have higher scores than children who do not attend early childhood education program in a significant way regarding social-emotional skills, self-care skills, physical abilities, cognitive skills, and general health. In another study, Gündüz and Çalışkan (2013) aimed to assess difference between children's school readiness and reading skills regarding their age. He found that children who are 72-84 months old are more ready for school and higher reading skills than children who are 60-66 and 66-72 months old. Results indicated that children who are 72-84 months old and 66-72 months old are more likely to learn reading better and easier than 60-66 months old children. Moreover, classroom teachers stated that children who are 60-66 and 66-72 months old have more difficulties in fine motor skills, learning skills, attention skills, and social adaptation skills than 72-84 months old children. Therefore, those results indicated that there is a positive correlation between age of children and readiness for school (Gündüz & Çalışkan, 2013).

CHAPTER 3

CONCEPTUAL MODEL AND OBJECTIVES OF THE STUDY

From the beginning of twenty first century, educational specialists and organizations have been working on conceptualizing the school readiness as a multi-dimensional concept that includes children's developmental characteristics, environmental factors such as family and the quality of schools, especially early childhood education programs (Britto, 2012; Lewit & Baker, 1995; Louisiana Department of Children & Family Services & Louisiana Department of Education, 2011; NAEYC, 1995; Scott-Little & Maxwell, 2000; Snow, 2006). As a result, more recently, there have been conducted several studies that assessed readiness for school as a multidimensional concept mainly in the western countries (Furlong & Quirk, 2011; Romano et al., 2010). However, in Turkey, most researches have focused on relationship between school readiness and reading skills (Cankılıç, 2009), school readiness and age related factors (Gündüz & Çalışkan, 2013; Konak et al., 2010), school readiness and math skills (Yazıcı, 2002), school readiness and academic achievement (Konak et al., 2010), and school readiness and socio-economic background (Cankılıç, 2009; Erkan, 2011; Metindoğan, 2007). That is to say, most researches in Turkey have placed more emphasis on relations between cognitive domains of school readiness and later school achievement (math and reading grades of children). Needless to say that there is a need for research in Turkey that defines and investigates the factors associated with school readiness from a multidimensional perspective and particularly including socio-economic factors of the family and the quality of early childhood education settings.

In order to understand factors that are associated with children's readiness for school, I proposed a model that assessed children's readiness for school more comprehensively. As results of numerous studies indicated, it is important to look not only characteristics of children, but also environmental factors that children have (Coley, 2002; Denton & West, 2002; U.S. Department of Education & National Center for Educational Statistics, 2001).

There are previous researches that assess relationship between school readiness and socio-economic background (Coley, 2002); relations between quality of early childhood education program and children's developments (Burchinal et al., 2010). However, there is a lack of research combining these three factors into one model to predict children's readiness for school in Turkey.

Providing early public childhood education services are very important for accessibility of those services for children and families (AÇEV & ERG, 2013; Laosa, 2005). In Turkey, there is a lack of specific research that assesses how quality of public early childhood education predicts children's school readiness. Despite early childhood education not being mandatory including kindergarten education, over half the children in Turkey attend publicly funded early childhood education programs (59.5%) that are located either within an elementary school setting or an independent preschool (MEB, 2016). Since more children have access to publicly funded early childhood education, it is crucial to conduct research assessing quality of publicly funded early childhood education, because quality of schools is an important factor contributing to children's holistic developmental outcomes (Mashburn, et al., 2008; Pianta et al., 2002).

Previous researches have shown that there are significant correlations between socio-economic status of families (educational status, occupational status,

age of marriage, number of children in home, marital status, monthly income), developmental outcomes of children, and educational opportunities that children can access (Coley, 2002; Erkan, 2011). In the light of these empirical evidences, investigating socio-economic background of families can provide a more comprehensive view on children's developmental outcomes.

In the past, school readiness was defined using more cognitive developmental perspectives (North Central Regional Educational Laboratory, 1999). However more recently, researchers have focused on school readiness more comprehensively (Britto, 2012; Louisiana Department of Children & Family Services & Louisiana Department of Education, 2011; Scott-Little & Maxwell, 2000). UNICEF defined readiness in terms of three dimensions: children, families, and schools (Britto, 2012). This definition asserted that not only children should be ready for school, but also families should be ready and schools should be ready for children and families. Based on this perspective, my research aim was to investigate children's school readiness multi-directionally including readiness dimensions comprehensively (assessing children's readiness for the first grade, socio-economic background of their families and quality of center-based public early childhood education schools) and to investigate associations between those dimensions with each other.

Based on the research evidence, first element in the proposed conceptual model included the relationship between children's socio-economic background and school readiness. For this purpose, monthly income of family, occupational status of parents, educational status of parents, number of siblings that children have, and marital status of parents were explored. I expected that children whose parents have higher education will have higher monthly income and have fewer children, hence leading to higher levels of readiness for elementary schools. And also, I expected that

there would be a positive relationship among the quality of children, parental education and parental income.

Second part of the conceptual model of this study was identifying the effects of quality of early childhood education programs in terms of educational background and experience of classroom teachers, and classroom environment on children's school readiness before attending first grade. Based on those data about quality of public early childhood education program, I expected that in schools that have more experienced teachers, and higher quality physical, social and cognitive features and opportunities in classrooms, children will show more readiness for the first grade.

The final goal of the current study was to propose and test a conceptual model identifying and predicting factors associated with school readiness of children in Turkey who attend early childhood education. Based on the data about children, I expected that children who have more experience in a formal early childhood education center, children who attend higher quality early childhood education classroom, children whose monthly age is older, and female children will show more readiness for the first grade.

Based on the objectives of the current research, the first research question of the study was inquiring whether there was a relationship between children's school readiness and their socioeconomic background, including total monthly income of the families, educational status of their parents, the number of children at home, children's attendance duration of formal early childhood education, age of children monthly, and gender of children. The second research question was asking how children's school readiness and quality of early childhood education classrooms including class size, teachers' length of experience in teaching occupation of teacher, age of teacher, quality scores of classrooms were related. The third research question

was asking whether was a relationship between children's socioeconomic background and quality of early childhood education classrooms. And the forth research question was asking which factors predicted school readiness of children.



CHAPTER 4

METHODOLOGY

4.1 Sample

In the current study, there were 217 preschool children who attend public preschool programs for 48-66 months old children. In the research process those children's readiness for school were investigated. There were 107 female children and 110 male children. Also, those 217 children's parents (both mothers and fathers) filled demographic information forms that were collected by classroom teachers in sealed envelopes. All of two hundred seventeen mothers of children were alive and 2 (.9%) of 217 fathers were not alive. Ninety-two point six percent of fathers' marital status was married and 5.1% of them were divorced. Ninety-three point five percent of mothers' marital status was married and 6% of them were divorced. Age of the mothers ranged from 22 to 52 years with an average age of 34.8 ($SD = 5.777$) and age of the fathers ranged from 28 to 60 years with an average age of 38.84 ($SD = 5.873$).

For data collection, there were selected eight public primary education schools in İstanbul and those schools are bounded to Turkish Ministry of Education. Of those schools selected for the study, one of them was an independent early childhood education public school that is located in Beşiktaş and the children were attending this school for full-day (8 hours). Other schools were primary education public schools that had early childhood education classrooms. Two of them were located in Beşiktaş; but the others were located in Kağıthane. Six of these schools were half-day program (5 hours), and two of them were full-day programs (8 hours).

Forty-one (18.9%) children who were attended full-day program schools and 176 (81.1%) children were attended half-day program schools.

In the research process, demographic information of 22 early childhood education classroom teachers and information about their classrooms were collected for gaining data about quality of early childhood education in classrooms. All of twenty-two early childhood education classroom teachers were female. Seventy-two-point seven percent of respondent teachers were married and 27.3% of teachers' marital status was single. Four and a half percent of the teachers were graduated from distance education faculty, 86.4% of them were graduated from four-year university, and 9.1% of them had master's degree. All respondent teachers were graduated from Early Childhood Education Department of Education Faculties.

4.2 Instruments

Four different assessment instruments were used to collect data about demographic information of the children and their parents, demographic information of early childhood education classroom teachers, children's school readiness and quality of early childhood education classrooms.

4.2.1 Demographic information of children and families

Demographic information form for parents of children was prepared by the researcher and her thesis advisor to collect data about socio-economic information of families and children (See Appendixes A and B). Early childhood education classroom teachers gave demographic information forms to children's parents after taking consent from them for participating to the research process, then parents filled demographic information forms and they gave back those forms to classroom

teachers. The researcher took demographic information forms from classroom teachers. This form included questions about parents' monthly income, their educational status, their occupational status, number of children that they have, their marital status, languages that they know, and their age. Also, this form included questions about age and gender of children, children's attendance duration to formal early childhood education, and languages that children know.

4.2.2 Demographic information of classroom teachers

Demographic information form for early childhood education classroom teachers was prepared by the researcher and her thesis advisor (See Appendixes C and D). This demographic information form included questions about teachers' age, gender, educational and occupational backgrounds. The researcher gave this form to the classroom teachers while visiting the schools after they gave consent for attending to the research process. Twenty-two early childhood education classroom teachers completed this form by themselves and the researcher collected forms from them.

4.2.3 Children's readiness to school

Children's school readiness to school was measured by using "Teacher Form of the School Readiness Checklist" to learn information about children's developmental processes and their readiness for school. This checklist was prepared by the researcher and her thesis advisor based on children's age group developmental characteristics (Janus & Offord, 2003a; Ladd & Profilet, 1996; MEB, 2013; Önder & Gülay, 2010; Pyle, 2003; Sallquist, Eisenberg, Spinrad, Eggum, & Gaertner; 2009; Turan, Kartal, Kurban, Zencir, & Kapıkıran, 2010). Also, opinions about the checklist from the experts who were the jury members of this thesis were asked.

They specifically study about the field of early childhood education research. The checklist aimed to get information about children's development. The checklist was consisted of 4-Point-Likert type items: 1 for "Never", 2 for "Sometimes", 3 for "Often", and 4 for "Always". It had 5 developmental domains: physical development, social-emotional development, language development, cognitive development, and self-care skills development. The domain of socio-emotional development consisted of 31 items and 4 subtopics: general information skills, skills of understanding and expressing emotions, communication and socialization skills, and self-efficacy skills. The domain of cognitive development consisted of 29 items and 5 subtopics: approach to learning skills, memory skills, number and counting knowledge skills, reasoning skills, and skills of identifying, grouping, comparing and matching objects. The domain of language development consisted of 15 items and 3 subtopics: expressing and talking skills, vocabulary skills, understanding visual materials skills. The domain of physical development consisted of 16 items and 2 subtopics: fine motor skills and gross motor skills. The domain of self-care skills consisted of 9 items. Exploratory factor analyses were conducted to explore whether each of the domains of school readiness were further split into different sub-scales. Despite theoretical conceptualizations, the results suggested that items in each of the five domains loaded together not allowing for each of the conceptual subdomains to be examined separately (See Appendixes E, F, G, H, I, J, K, L, M, and N). As a result, composite scores for social-emotional domain, cognitive domain, language domain, psycho-motor domain, and self care skills were used in the analyses.

Internal reliabilities of the domains of the checklist were computed with Cronbach's Alpha. It was .958 for "socio-emotional development", .973 for "cognitive development", .946 for "language development", .962 for physical

development, .950 for “self-care skills development”. Cronbach’s Alpha score of the checklist was .987.

4.2.4 Quality of early childhood education

Quality of early childhood education classrooms were assessed with “Environment Rating Scale Self-Assessment Readiness Checklist” by the researcher via non-participant classroom observations (Center for Early Childhood Professional Development, 2003). The researcher visited the schools and she did non-participant classroom observations to complete the classroom quality checklist.

The quality checklist included information about name and location of school, class size, and age group of class. The quality checklist had 7 sub-scales: space and furnishings, personal care routines, language and reasoning, activities, interactions, program structure, and parents and staff (See Appendix O). Center for Early Childhood Professional Development (2003) constructed this checklist by reviewing “Early Childhood Environment Rating Scale (Harms, Cryer, & Clifford, 1998)”, “Infant-Toddler Environment Rating Scale (Harms, Cryer, & Clifford, 2003)”, and “School Age Care Environment Rating Scale (Harms, Jacobs, & White, 1996)”.

The quality checklist consisted of 4-Point-Likert type items: 0 for “Not Apply”, 1 for “Not Met”, 2 for “Partially Met”, and 3 for “Fully Met”. Reliability score and internal reliabilities of the sub-scales of the checklist were computed with Cronbach’s Alpha. Reliability score of the checklist was .952. Internal reliability score was .845 for “Space and Furnishings”, .725 for “Personal Care Routines”, .882 for “Language and Reasoning”, .819 for “Activities”, .898 for “Interactions”, .238 for program structure, and .765 for parents and staff.

4.3 Procedure

The data is collected conveniently in several districts of the metropolitan area of İstanbul, Turkey. These districts of İstanbul city are Beşiktaş and Kağıthane and located in European Side of İstanbul city and thought to represent a diverse background of families. Although non-random purposive sampling method is used to select these districts of İstanbul, these districts are large, growing continuously, and have more heterogeneous population families in terms of socio-economic background and neighborhood characteristics. These districts constitute neighborhoods that are both socio-economically high and low and have potentials to provide rich data for this study (İstanbul Rehberi, 2015).

After receiving approval from The Primary Education Department of Educational Faculty of Boğaziçi University and Ethics Committee of the Institute for Graduate Studies in Social Sciences for conducting research, İstanbul City Administration Department of the Ministry of Education was contacted to get permission to collect data from preschool classrooms of public schools in the İstanbul metropolitan area. Then 8 public schools that are located in the two districts of İstanbul (Beşiktaş and Kağıthane) to reach children and their families were visited. Parents and classroom teachers were provided with consent forms to solicit their approval to participate in the study giving them information about the aim of the research, research process and what is expected from them.

After obtaining permissions from the parents and the teachers for participating to the study, demographic information sheets were distributed to parents to be returned to their classroom teachers in a sealed envelope. Two hundred seventeen parents of children gave permission to participate the research, they filled demographic information sheets and they gave those forms to classroom teachers in

sealed envelopes. Then, data about children's readiness for school from classroom teachers were collected. Additionally, for assessing quality of early childhood programs, 8 public primary education schools were visited observe and assess quality of early childhood education environment and demographic information data from 22 early childhood education classroom teachers were collected. The researcher spent two school days in each classroom (totally ten hours for each classroom) of the six schools to observe classroom quality, because those schools had half-day program. The researcher spent sixteen hours in the classrooms of the two schools which had full-day program (eight hours daily). Therefore, the researcher had chance to observe each classroom's daily program comprehensively.

For protecting confidentiality and anonymity, names of schools, teachers, parents and children were not used; codes were given by the researcher for each child, teacher, and school.

CHAPTER 5

RESULTS

There were 217 parents whose children were attending 8 different public preschools filled demographic information forms. Twenty-two early childhood education classroom teachers filled out the demographic information forms about themselves and first grade readiness forms about children. The researcher filled “Environment Rating Scale Self-Assessment Readiness Checklist” via non-participant classroom observations.

5.1. Descriptive findings on demographic information of children and their families

There were 107 female children whose mean age (monthly) was 64.5 months ($SD = 5.546$), and 110 male children whose mean age (monthly) was 64.68 months ($SD = 4.793$). Children’s age (monthly) ranged from 47 to 76 months; female children’s age (monthly) ranged from 49 to 76 months and male children’s age (monthly) ranged from 47 to 73 months. Fifty-four point eight percent of these children had been attending a formal early childhood education classroom for one year, 25.8% of them for two years, 16.1% of them for three years, and 3.2% of them for four years.

Based on the data from demographic information forms for parents, educational background information from parents showed that 33.6% of mothers had primary education diploma, 30.9% of them had high school diploma, 31.3% of them had university diploma, and 3.2% of them had master’s degree. Thirty-five percent of fathers had primary education diploma, 29.5% of them were graduated from high school, 28.1% of them had university diploma, 4.6% of them had master’s degree, and .9% of them had doctor’s degree. Furthermore, thirty-nine point six of mothers

were working and 59.4% of them were not working. Ninety-two point two percent of fathers were working, 5.5% of them were not working, and 1.8% of them were retired. The number of children that parents had was ranged from 1 to 6. Thirty point nine percent of parents had one child, 53.5% of them had two children, 12% of them had three children, 2.8% of them had four children, .5% of them had five children, and .5% of them had six children.

Parents rated their socio-economic status by selecting their total monthly income. One point four percent of parents' monthly income was less than 800 TL, 27.2% of them had between 801 TL and 1800 TL monthly, 42.9% of them had between 1801 TL and 3800 TL monthly, 17% of them had between 3801 TL and 5800 TL monthly, 7.3% of them had between 5801 TL and 7800 TL monthly, 1.9% of them had between 7801 TL and 9800 TL monthly, and 2.3% of them had between 9801 TL and higher total monthly income (See Table 3).

Table 3. Percentage Distribution of Total Monthly Income of Parents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than 800 TL	3	1.4	1.4	1.4
	801-1300 TL	28	12.9	12.9	14.3
	1301-1800 TL	31	14.3	14.3	28.6
	1801-2300 TL	33	15.2	15.2	43.8
	2301-2800 TL	23	10.6	10.6	54.4
	2801-3300 TL	24	11.1	11.1	65.4
	3301-3800 TL	13	6.0	6.0	71.4
	3801-4300 TL	5	2.3	2.3	73.7
	4301-4800 TL	9	4.1	4.1	77.9
	4801-5300 TL	18	8.3	8.3	86.2
	5301-5800 TL	5	2.3	2.3	88.5
	5801-6300 TL	5	2.3	2.3	90.8
	6301-6800 TL	5	2.3	2.3	93.1
	6801-7300 TL	4	1.8	1.8	94.9
	7301-7800 TL	2	.9	.9	95.9
	7801-8300 TL	1	.5	.5	96.3
	8301-8800 TL	2	.9	.9	97.2
	8801-9300 TL	1	.5	.5	97.7
	9300 TL and higher	5	2.3	2.3	100
Total		217	100	100	

5.1.2 Descriptive findings of early childhood education classrooms and demographic information of early childhood education classroom teachers

Average age of the early childhood education classroom teachers was 33 ($M = 33.18$, $SD = 6.745$) with ages ranging from 25 to 54. Those teachers' mean length of experience in teaching occupation was 9.95 years ($SD = 5.964$) and it ranged from 3 to 25 years. Teachers' mean length of experience in current schools that they were working as an early childhood education classroom teacher was 4.09 years ($SD = 2.158$) and it ranged from 1 to 9 years.

Mean of class size of 22 early childhood education classrooms was 19.55 ($SD = 2.988$) and their class sizes ranged from 13 to 25. All of twenty-two classrooms provided education for children whose age was between 48 to 66 months. Sixty-eight point two percent of classrooms had half-day program (5 hours), and 31.8% of them had full-day program (8 hours). Total quality scores of the early childhood education classrooms from "Environment Rating Scale Self-Assessment Readiness Checklist" were ranged from 103 to 162 points. The points of different sub-scales of "Environment Rating Scale Self-Assessment Readiness Checklist" were also calculated (See Table 4).

Table 4. Quality Scores of the Early Childhood Education Classrooms (N = 22)

Code of the School	Code of the Teacher	Space and Furnishings	Personal Care Routines	Language and Reasoning	Activities	Interactions	Parents and Staff Relations	Program Structure	Total Quality Score of ECE Classroom
1	1.1	21	30	20	18	15	10	21	135
1	1.2	17	26	14	13	10	7	19	106
2	2.1	19	30	11	16	8	7	19	110
2	2.2	22	30	16	16	10	8	20	122
2	2.3	20	29	12	17	6	7	19	110
3	3.1	29	39	24	24	15	11	20	162
4	4.1	17	29	10	17	8	7	16	104
4	4.2	15	30	15	16	11	7	16	110
4	4.3	17	29	12	16	7	6	16	103
5	5.1	21	31	13	15	14	7	18	119
5	5.2	20	31	16	16	11	8	18	120
6	6.1	25	32	21	18	15	9	21	141
6	6.2	21	32	17	17	13	8	21	129
7	7.1	32	34	18	23	14	11	26	158
7	7.2	29	32	13	18	8	9	25	134
7	7.3	32	35	17	23	10	9	26	152
7	7.4	29	33	18	19	13	9	26	147
8	8.1	21	31	13	17	10	8	16	116
8	8.2	19	30	14	17	10	6	18	114
8	8.3	20	30	15	17	10	6	18	116
8	8.4	21	31	15	17	10	6	17	117
8	8.5	19	30	13	17	7	6	18	110

5.2 Research questions

For determining the relationships between children's socioeconomic background and their school readiness, children's school readiness and quality of early childhood education classrooms, Pearson correlations were calculated. Multiple regression analysis was done in order to determine predictive factors of children's school readiness.

5.2.1 The relationship between children's socioeconomic background and their school readiness

The first research question of the present study was inquiring whether there was a relationship between children's school readiness and their socioeconomic background, including total monthly income of the families, educational status of their parents, the number of children at home, children's attendance duration of formal early childhood education, age of children monthly, and gender of children.

The results showed that there was a significant positive relationship between children's total school readiness scores and their attendance duration of formal early childhood education schools, $r = .167, p = .014$. The more children attended in a formal early childhood education center, the more likely they are to be ready for the first grade. The results also showed that there was a significant positive correlation between children's total school readiness scores and their age (monthly), $r = .340, p = .000$. This means that older children were more likely to show more readiness for school than younger ones (See Table 5).

Besides, even though they were not significant, there were important results related with the current study's research questions. There was a positive relationship between children's total school readiness scores and total monthly income of the

families, $r = .123$, $p = .070$. Those children whose parents had higher total monthly income were more likely to get higher school readiness scores. Also, there was a positive correlation between children's total school readiness scores and educational status of father, $r = .086$, $p = .211$. Similar to this result, there was a positive relationship between children's total school readiness scores and educational status of mother, $r = .110$, $p = .107$. These results illustrated that children who had more educated parents were more likely to show more school readiness. Furthermore, there was a negative correlation between children's total school readiness scores and number of siblings they have, $r = -.033$, $p = .628$. This indicates that children were more likely to have less total school readiness scores, if their parents have more children (See Table 5).

Table 5. Correlations between Children’s School Readiness and Their Socioeconomic Background

		School Readiness Scores	Attendance Duration to ECE	Age (monthly)	Total Monthly Income	Educational Status of Father	Educational Status of Mother	Number of Siblings
School Readiness Scores	Pearson Correlation							
	Sig. (2-tailed)							
	N							
Attendance Duration to ECE	Pearson Correlation	.167(*)						
	Sig. (2-tailed)	.014						
	N	217						
Age (monthly)	Pearson Correlation	.340(**)	.272(**)					
	Sig. (2-tailed)	.000	.000					
	N	217	217					
Total monthly income	Pearson Correlation	.123	.459(**)	.103				
	Sig. (2-tailed)	.070	.000	.131				
	N	217	217	217				
Educational status of father	Pearson Correlation	.086	.423(**)	.031	.543(**)			
	Sig. (2-tailed)	.211	.000	.658	.000			
	N	213	213	213	213			
Educational Status of mother	Pearson Correlation	.110	.501(**)	.075	.553(**)	.660(**)		
	Sig. (2-tailed)	.107	.000	.272	.000	.000		
	N	215	215	215	215	213		
Number of Siblings	Pearson Correlation	-.033	-.215(**)	-.119	-.158(*)	-.162(*)	-.303(**)	
	Sig. (2-tailed)	.628	.001	.080	.020	.018	.000	
	N	217	217	217	217	213	215	

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

When it comes to the relationships between number of years attending to formal education and children's school readiness scores in terms of separate developmental domains, the current study had important results. The results of the current study indicated that number of years attending to formal early childhood education was positively correlated with children's school readiness scores of separate developmental domains. Children who had more experience in formal early childhood education were more likely to have higher school readiness scores in terms of social-emotional domain, cognitive domain, language domain, physical domain, and self-care skills domain (See Table 6).

The relationships between children's age (monthly) and their school readiness scores in terms of different developmental domains were analyzed. Findings of the current study illustrated that older children were more likely to show higher school readiness scores in terms of social-emotional domain, cognitive domain, language domain, physical domain, and self-care skills domain (See Table 6).

Table 6. Correlations between Age of Children, Attendance Duration to Early Childhood Education and School Readiness Scores

		Attendance Duration to ECE	Readiness in Social- Emotional Domain	Readiness in Cognitive Domain	Readiness in Language Domain	Readiness in Physical Domain	Readiness in Self-Care Skills	Age of Children Monthly
Attendance Duration to ECE	Pearson Correlation							
	Sig. (2-tailed)							
Readiness in Social- Emotional Domain	Pearson Correlation	.058						
	Sig. (2-tailed)	.396						
Readiness in Cognitive Domain	Pearson Correlation	.180(**)	.840(**)					
	Sig. (2-tailed)	.008	.000					
Readiness in Language Domain	Pearson Correlation	.202(**)	.792(**)	.886(**)				
	Sig. (2-tailed)	.003	.000	.000				
Readiness in Physical Domain	Pearson Correlation	.173(*)	.655(**)	.685(**)	.600(**)			
	Sig. (2-tailed)	.010	.000	.000	.000			
Readiness in Self- Care Skills Domain	Pearson Correlation	.202(**)	.538(**)	.516(**)	.460(**)	.743(**)		
	Sig. (2-tailed)	.003	.000	.000	.000	.000		
Age of Children Monthly	Pearson Correlation	.272(**)	.266(**)	.340(**)	.340(**)	.299(**)	.204(**)	
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.002	

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Children's school readiness scores were compared based on their gender.

Results of the independent sample *t* test analysis showed that there was a statistically significant difference between female and male children in terms of their total school readiness scores. This result suggested that mean total school readiness scores of the female children were higher than the scores of the male children (See Table 7).

Table 7. Comparison of Children's Total School Readiness Scores by Gender

Gender of Children	<i>N</i>	<i>Mean</i>	<i>SD</i>	<i>t</i>	<i>df</i>	<i>p</i>	95% Confidence Interval
Female	107	352.28	42.370	-	-	-	-
Male	110	336.89	41.523	-	-	-	-
Total	217	344.48	42.551	2.702	215	.007	4.164 – 26.615

Children's school readiness scores in terms of different developmental domains were compared based on their gender with the independent sample *t* test analysis. Results showed that female children got higher mean scores than male children in terms of cognitive, social-emotional, language, physical and self-care skills developmental domains. Also, there was a statistically significant difference between girls and boys in terms of mean scores of social-emotional, cognitive and language developmental domain scores (See Tables 8, 9, 10).

Table 8. Comparison of Children's Readiness in Social-Emotional Domain Scores by Gender

Gender of Children	<i>N</i>	<i>Mean</i>	<i>SD</i>	<i>t</i>	<i>df</i>	<i>p</i>	95% Confidence Interval
Female	107	108.64	13.175	-	-	-	-
Male	110	101.93	13.306	-	-	-	-
Total	217	105.24	13.632	3.731	215	.000	3.164 – 10.252

Table 9. Comparison of Children’s Readiness in Cognitive Domain Scores by

Gender

Gender of Children	<i>N</i>	<i>Mean</i>	<i>SD</i>	<i>t</i>	<i>df</i>	<i>p</i>	95% Confidence Interval
Female	107	100.05	14.507	-	-	-	-
Male	110	95.04	16.001	-	-	-	-
Total	217	97.51	15.452	2.415	215	.017	.920 – 9.100

Table 10. Comparison of Children’s Readiness in Language Domain Scores by

Gender

Gender of Children	<i>N</i>	<i>Mean</i>	<i>SD</i>	<i>t</i>	<i>df</i>	<i>p</i>	95% Confidence Interval
Female	107	50.50	7.739	-	-	-	-
Male	110	47.90	7.863	-	-	-	-
Total	217	49.18	7.892	2.450	215	.015	.507 – 4.684

5.2.2 The relationship between children’s school readiness and quality of early childhood education classrooms

The second research question of the study was asking how children’s school readiness and quality of early childhood education classrooms including class size, teachers’ length of experience in teaching occupation of teacher, age of teacher, quality scores of classrooms were related.

Correlation analysis of the current study showed that there was a significant positive relationship between children’s total school readiness scores and teachers’ length of experience in teaching occupation, $r = .298, p = .000$. Also, there was a significant positive correlation between children’s total school readiness scores and age of early childhood education classroom teachers, $r = .220, p = .001$. These results indicated that children who had older and more experienced early childhood education teachers were more likely to have higher school readiness scores. Besides, even though it was not significant, there was a positive relationship between

children’s total school readiness scores and total quality scores of early childhood education classrooms from “Environment Rating Scale Self-Assessment Readiness Checklist”, $r = .061$, $p = .374$ (See Table 11).

Table 11. Correlations between Children’s School Readiness and Quality of Early Childhood Education Classrooms

		School Readiness Scores	Quality Scores from Checklist	Age of Teachers	Teachers’ Length of Experience
School Readiness Scores	Pearson Correlation				
	Sig. (2-tailed) N				
Quality Scores from Checklist	Pearson Correlation	.061			
	Sig. (2-tailed) N	.374 217			
Age of teachers	Pearson Correlation	.220(**)	.167(*)		
	Sig. (2-tailed) N	.001 217	.014 217		
Teachers’ Length of Experience	Pearson Correlation	.298(**)	.120	.895(**)	
	Sig. (2-tailed) N	.000 217	.079 217	.000 217	

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

The results of the study showed that teachers’ age and their length of experience in teaching occupation were significantly and positively correlated with children’s school readiness scores in various developmental domains. Those children whose teachers were older and had longer length of experience in teaching occupation were more likely to get higher scores from social-emotional domain, cognitive domain, language domain, physical domain, and self-care skills domain (See Table 12).

Analyses of the current study's findings revealed that there was a significant positive relationship between several quality variables and different school readiness domains. Early childhood education classrooms which were higher quality in terms of parents and staff relations and interactions between teachers and children were more likely to have children who showed more readiness to school in terms of self-care skills domain and physical domain (See Table 12).



Table 12. Correlations between Children’s School Readiness Scores in Separate Developmental Domains and Quality of the Classrooms

	1	2	3	4	5	6	7	8	9	10
	Readiness in Social-Emotional Domain	Readiness in Cognitive Domain	Readiness in Language Domain	Readiness in Physical Domain	Readiness in Self-Care Skills Domain	Age of ECE Teachers	Teachers’ Length of Experience in Teaching Occupation	Quality of Parents and Staff Relations	Quality of Interactions in Class	Total Quality Score of ECE Classrooms
1	Pearson Correlation Sig. (2-tailed)									
2	Pearson Correlation Sig. (2-tailed)	.840(**) .000								
3	Pearson Correlation Sig. (2-tailed)	.792(**) .000	.886(**) .000							
4	Pearson Correlation Sig. (2-tailed)	.655(**) .000	.685(**) .000	.600(**) .000						
5	Pearson Correlation Sig. (2-tailed)	.538(**) .000	.516(**) .000	.460(**) .000	.743(**) .000					
6	Pearson Correlation Sig. (2-tailed)	.131 .055	.230(**) .001	.275(**) .000	.184(**) .007	.154(*) .024				
7	Pearson Correlation Sig. (2-tailed)	.213(**) .002	.308(**) .000	.293(**) .000	.274(**) .000	.210(**) .000	.895(**) .000			
8	Pearson Correlation Sig. (2-tailed)	-.001 .984	.053 .439	.121 .076	.146(*) .032	.189(**) .005	.265(**) .000	.204(**) .003		
9	Pearson Correlation Sig. (2-tailed)	.071 .298	.089 .193	.099 .145	.117 .086	.204(**) .003	.360(**) .000	.383(**) .000	.356(**) .000	
10	Pearson Correlation Sig. (2-tailed)	-.034 .615	.011 .872	.048 .482	.003 .970	.116 .089	.167(*) .014	.120 .079	.745(**) .000	.727(**) .000

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

5.2.3 The relationship between children's socioeconomic background and quality of early childhood education classrooms

The third research question of the current study was asking whether was a relationship between children's socioeconomic background and quality of early childhood education classrooms.

Results of the study showed that there was a significant positive relationship between educational level of children's mothers and total quality scores of the early childhood education classrooms from "Environment Rating Scale Self-Assessment Readiness Checklist", $r = .454, p = .000$. Also, there was a significant positive relationship between educational status of children's fathers and total quality scores of the classrooms from the quality checklist, $r = .420, p = .000$. These results indicated that children whose parents had higher educational status were more likely to attend higher quality early childhood education classrooms (See Table 13 and 14).

Based on the results of the collected data analyses, total monthly incomes of children's families were significantly and positively correlated with total quality scores of the early childhood education classrooms, $r = .391, p = .000$. Children whose parents had higher monthly income were more likely to attend early childhood education classrooms which got higher educational quality. Furthermore, the relationships between number of siblings that children have and total quality scores of the classrooms were analyzed. The results of the analyses showed that there was a significant negative correlation between those two variables, $r = -.232, p = .001$. This result indicated that children who had more siblings were more likely to attend early childhood education classrooms that got lower quality scores (See Table 13 and 14).

Within the scope of the current study, the relationships between children's socioeconomic background variables including total monthly income of the families,

number of siblings that children have, educational status of mothers, and educational levels of fathers, and different parts of “Environment Rating Scale Self-Assessment Readiness Checklist” including “Space and Furnishings”, “Personal Care Routines”, “Language and Reasoning”, “Activities”, “Interactions”, “Parents and Staff” and “Program Structure” were calculated. The results illustrated that even if the schools are public, children who had better socioeconomic backgrounds were more likely to attend higher quality early childhood education classrooms in terms of various quality standards (See Table 13 and 14).



Table 13. Correlations between Children’s Socioeconomic Background and Quality of the Classrooms

	1	2	3	4	5	6	7	8
	Space and Furnishings	Personal Care Routines	Language and Reasoning	Activities	Educational Status of Mother	Educational Status of Father	Number of Siblings	Total Monthly Income Families
1 Pearson Correlation Sig. (2-tailed)								
2 Pearson Correlation Sig. (2-tailed)	.807(**) .000							
3 Pearson Correlation Sig. (2-tailed)	.626(**) .000	.778(**) .000						
4 Pearson Correlation Sig. (2-tailed)	.840(**) .000	.910(**) .000	.725(**) .000					
5 Pearson Correlation Sig. (2-tailed)	.507(**) .000	.315(**) .000	.302(**) .000	.349(**) .000				
6 Pearson Correlation Sig. (2-tailed)	.473(**) .000	.301(**) .000	.238(**) .000	.337(**) .000	.660(**) .000			
7 Pearson Correlation Sig. (2-tailed)	-.240(**) .000	-.193(**) .004	-.194(**) .004	.176(**) .010	-.303(**) .000	-.162(*) .018		
8 Pearson Correlation Sig. (2-tailed)	.435(**) .000	.214(**) .002	.231(**) .001	.285(**) .000	.553(**) .000	.543(**) .000	-.158(*) .020	

*Correlation is significant at the 0.05 level (2-tailed).

**Correlation is significant at the 0.01 level (2-tailed).

Table 14. Correlations between Children’s Socioeconomic Background and Quality of the Classrooms

	1	2	3	4	5	6	7	8
	Interactions	Parents and Staff Relations	Program Structure	Total Quality Score of ECE Classroom	Educational Status of Mother	Educational Status of Father	Number of Siblings	Total Monthly Income Families
1	Pearson Correlation Sig. (2-tailed)							
2	Pearson Correlation Sig. (2-tailed)	.356(**) .000						
3	Pearson Correlation Sig. (2-tailed)	.720(**) .000	.643(**) .000					
4	Pearson Correlation Sig. (2-tailed)	.727(**) .000	.745(**) .000	.903(**) .000				
5	Pearson Correlation Sig. (2-tailed)	.257(**) .000	.515(**) .000	.366(**) .000	.454(**) .000			
6	Pearson Correlation Sig. (2-tailed)	.256(**) .000	.479(**) .000	.341(**) .000	.420(**) .000	.660(**) .000		
7	Pearson Correlation Sig. (2-tailed)	-.164(*) .016	-.206(**) .002	-.160(*) .019	-.232(**) .001	-.303(**) .000	-.162(*) .018	
8	Pearson Correlation Sig. (2-tailed)	.249(**) .000	.496(**) .000	.368(**) .000	.391(**) .000	.553(**) .000	.543(**) .000	-.158(*) .020

* Correlation is significant at the 0.05 level (2-tailed).

**Correlation is significant at the 0.01 level (2-tailed).

5.2.4 Predictive factors of children's school readiness to the first grade

The fourth research question of the current study was asking which factors predicted school readiness of children. In this regard, multiple regression analyses were run for predicting children's readiness for school. Demographic information about children (age, gender, attendance duration to formal early childhood education center and, socioeconomic data of children's parents (total monthly income, number of children in home, educational status of mother, and educational status of father), and quality variables (teacher's length of experience in teaching occupation, class size, quality scores of the early childhood education classrooms from "Environment Rating Scale Self-Assessment Readiness Checklist") were entered.

The results of the analysis showed that a significant regression equation was found ($F(16,196) = 3.874, p < .01$), with an R^2 of .240. The model was able to account 24% of the variance in children's readiness for school. The analysis showed that age of child monthly, gender of child, and interactions quality score of the classroom significantly predicted children's total school readiness scores from the checklist. However, other variables did not predict children's total school readiness scores significantly (See Table 15).

Table 15. Summary of Multiple Regression Analysis for Predicting Children's Readiness for School

	Unstandardized Coefficients		Standardized Coefficients	<i>t</i>	Sig.
	B	Std. Error	Beta		
Constant	85.160	92.989		.916	.361
Age of Child Monthly	2.217	.578	.267**	3.838	.000
Gender of Child	-15.577	5.554	-.183**	-2.805	.006
Educational Status of Mother	2.579	2.235	.111	1.154	.250
Educational Status of Father	-1.798	1.999	-.082	-.900	.369
Number of Child in Home	1.082	3.620	.020	.299	.765
Total Monthly Income	.382	.844	.038	.453	.651
Child's Attendance Duration to ECE	.012	4.173	.000	.003	.998
ECE Teacher's Length of Experience in Teaching	.865	.685	.116	1.264	.208
Class Size	1.691	1.700	.109	.995	.321
Space and Furnishings Quality	-1.984	2.917	-.234	-.680	.497
Personal Care Routines Quality	5.354	3.681	.377	1.454	.147
Language and Reasoning Quality	-4.363	2.139	-.381*	-2.040	.043
Activities Quality	-1.271	2.907	-.086	-.437	.662
Interactions Quality	5.450	2.598	.367*	2.098	.037
Program Structure Quality	-4.594	3.834	-.181	-1.198	.232
Parents and Staff Relations Quality	1.789	2.862	.139	.625	.533

* $p < .05$; ** $p < .01$

Note. Dependent variable: Total school readiness score of child

The results of the multiple regression analysis for predicting children's social-emotional development indicated that a significant regression equation was found ($F(16,196) = 3.270, p < .01$), with an R^2 of .211. The model was able to account 21% of the variance in children's school readiness in social-emotional developmental domain. The analysis revealed that age of child monthly, gender of child, and interactions quality score of the classroom significantly predicted children's school readiness scores from the checklist in social-emotional developmental domain. However, other variables did not predict children's school readiness scores in social-emotional developmental domain significantly (See Table 16).

Table 16. Summary of Multiple Regression Analysis for Predicting Children's School Readiness in Socio-Emotional Domain

	Unstandardized Coefficients		Standardized Coefficients	<i>t</i>	Sig.
	B	Std. Error	Beta		
Constant	46.621	30.380		1.535	.127
Age of Child Monthly	.660	.189	.248**	3.496	.001
Gender of Child	-6.667	1.814	-.244**	-3.680	.000
Educational Status of Mother	.404	.730	.054	.553	.581
Educational Status of Father	-.288	.653	-.041	-.440	.660
Number of Child in Home	.353	1.183	.020	.298	.766
Total Monthly Income	.170	.276	.052	.617	.538
Child's Attendance Duration to ECE	-1.560	1.363	-.098	-1.144	.254
ECE Teacher's Length of Experience in Teaching	.022	.224	.009	.101	.920
Class Size	.891	.555	.180	1.604	.110
Space and Furnishings Quality	.200	.953	.074	.210	.834
Personal Care Routines Quality	1.253	1.203	.275	1.042	.299
Language and Reasoning Quality	-1.559	.699	-.425*	-2.231	.027
Activities Quality	-.899	.950	-.189	-.947	.345
Interactions Quality	2.095	.849	.440*	2.468	.014
Program Structure Quality	-1.213	1.252	-.149	-.969	.334
Parents and Staff Relations Quality	-.390	.935	-.094	-.417	.677

* $p < .05$; ** $p < .01$

Note. Dependent variable: Social-emotional development score of child

The multiple regression analysis for predicting children's cognitive development indicated that a significant regression equation was found ($F(16,196) = 3.921, p < .01$), with an R^2 of .242. The model was able to account 24% of the variance in children's school readiness in cognitive developmental domain. The analysis showed that age of child monthly, gender of child, and early childhood education classroom teacher's length of experience in teaching occupation significantly predicted children's school readiness scores from the checklist in cognitive developmental domain. However, other variables did not predict children's school readiness scores in cognitive developmental domain significantly (See Table 17).

Table 17. Summary of Multiple Regression Analysis for Predicting Children's School Readiness in Cognitive Domain

	Unstandardized Coefficients		Standardized Coefficients		Sig.
	B	Std. Error	Beta	t	
Constant	3.641	33.766		.108	.914
Age of Child Monthly	.824	.210	.273**	3.929	.000
Gender of Child	-4.983	2.017	-.161*	-2.471	.014
Educational Status of Mother	1.162	.811	.137	1.432	.154
Educational Status of Father	-.917	.726	-.114	-1.264	.208
Number of Child in Home	-.239	1.314	-.012	-.182	.856
Child's Attendance Duration to ECE	.562	1.515	.031	.371	.711
Total Monthly Income	.235	.306	.064	.768	.444
ECE Teacher's Length of Experience in Teaching	.587	.249	.216*	2.363	.019
Class Size	.389	.617	.069	.631	.529
Space and Furnishings Quality	-.715	1.059	-.232	-.675	.500
Personal Care Routines Quality	2.097	1.337	.406	1.569	.118
Language and Reasoning Quality	-.808	.777	-.194	-1.040	.299
Activities Quality	-.274	1.055	-.051	-.259	.796
Interactions Quality	.860	.943	.159	.912	.363
Program Structure Quality	-1.948	1.392	-.211	-1.400	.163
Parents and Staff Relations Quality	.289	1.039	.062	.278	.781

* $p < .05$; ** $p < .01$

Note. Dependent variable: Cognitive development score of child

The multiple regression analysis for predicting children's language development showed that a significant regression equation was found ($F(16,196) = 4.287, p < .01$), with an R^2 of .259. The model was able to account 26% of the variance in children's school readiness in language domain. The analysis revealed that age of child monthly, gender of child, and early childhood education classroom teacher's length of experience in teaching occupation significantly predicted children's school readiness scores in language domain. However, other variables did not predict children's school readiness scores in language domain significantly (See Table 18).

Table 18. Summary of Multiple Regression Analysis for Predicting Children's School Readiness in Language Domain

	Unstandardized Coefficients		Standardized Coefficients	<i>t</i>	Sig.
	B	Std. Error	Beta		
Constant	-7.052	17.073		-.413	.680
Age of Child Monthly	.429	.106	.278**	4.046	.000
Gender of Child	-2.708	1.020	-.171**	-2.656	.009
Educational Status of Mother	.781	.410	.181	1.902	.059
Educational Status of Father	-.469	.367	-.114	-1.279	.203
Number of Child in Home	.669	.665	.067	1.007	.315
Child's Attendance Duration to ECE	.259	.766	.028	.339	.735
Total Monthly Income	.021	.155	.011	.137	.891
ECE Teacher's Length of Experience in Teaching	.263	.126	.188*	2.088	.038
Class Size	-.030	.312	-.010	-.097	.923
Space and Furnishings Quality	-.309	.536	-.195	-.576	.565
Personal Care Routines Quality	1.519	.676	.575*	2.248	.026
Language and Reasoning Quality	-.850	.393	-.399*	-2.165	.032
Activities Quality	-.742	.534	-.269	-1.391	.166
Interactions Quality	.410	.477	.148	.859	.392
Program Structure Quality	.258	.704	.055	.366	.714
Parents and Staff Relations Quality	.358	.525	.149	.681	.497

* $p < .05$; ** $p < .01$

Note. Dependent variable: Language development score of child

The multiple regression analysis for predicting children's psychomotor development showed that a significant regression equation was found ($F(16,196) = 3.450, p < .01$), with an R^2 of .220. The model was able to account 22% of the variance in children's school readiness in psychomotor development domain. The analysis revealed that age of child monthly, interactions quality score of the classroom, and parents and staff relations quality score of the classroom significantly predicted children's school readiness scores in psychomotor development domain. However, other variables did not predict children's school readiness scores in psychomotor development domain significantly (See Table 19).

Table 19. Summary of Multiple Regression Analysis for Predicting Children's School Readiness in Psychomotor Domain

	Unstandardized Coefficients		Standardized Coefficients		Sig.
	B	Std. Error	Beta	<i>t</i>	
Constant	22.939	16.364		1.402	.163
Age of Child Monthly	.257	.102	.179*	2.530	.012
Gender of Child	-.756	.977	-.051	-.773	.440
Educational Status of Mother	.108	.393	.027	.274	.784
Educational Status of Father	-.012	.352	-.003	-.034	.973
Number of Child in Home	.564	.637	.060	.885	.377
Child's Attendance Duration to ECE	.449	.734	.052	.611	.542
Total Monthly Income	-.046	.148	-.026	-.308	.759
ECE Teacher's Length of Experience in Teaching	-.015	.121	-.012	-.126	.900
Class Size	.324	.299	.121	1.084	.279
Space and Furnishings Quality	-.723	.513	-.490	-1.408	.161
Personal Care Routines Quality	.139	.648	.056	.214	.831
Language and Reasoning Quality	-1.001	.376	-.503	-2.658	.009
Activities Quality	.677	.511	.263	1.324	.187
Interactions Quality	1.652	.457	.641**	3.614	.000
Program Structure Quality	-1.326	.675	-.301	-1.966	.051
Parents and Staff Relations Quality	.999	.504	.446*	1.983	.049

* $p < .05$; ** $p < .01$

Note. Dependent variable: Psychomotor development of child

The results of the multiple regression analysis for predicting children's self-care skills indicated that a significant regression equation was found ($F(16,196) = 2.178, p < .01$), with an R^2 of .151. The model was able to account 15% of the variance in children's school readiness in self-care skills. The analysis showed that interactions quality score of the classroom and parents and staff relations quality score of the classroom significantly predicted children's school readiness scores in self-care skills. However, other variables did not predict children's school readiness scores in self-care skills domain significantly (See Table 20).

Table 20. Summary of Multiple Regression Analysis for Predicting Children's School Readiness in Self-Care Skills Domain

	Unstandardized Coefficients		Standardized Coefficients	<i>t</i>	Sig.
	B	Std. Error	Beta		
Constant	19.011	7.380		2.576	.011
Age of Child Monthly	.047	.046	.075	1.022	.308
Gender of Child	-.453	.441	-.071	-1.028	.305
Educational Status of Mother	.125	.177	.071	.703	.483
Educational Status of Father	-.113	.159	-.068	-.711	.478
Number of Child in Home	-.266	.287	-.066	-.925	.356
Child's Attendance Duration to ECE	.302	.331	.081	.912	.363
Total Monthly Income	.001	.067	.002	.021	.983
ECE Teacher's Length of Experience in Teaching	.008	.054	.014	.149	.882
Class Size	.117	.135	.100	.865	.388
Space and Furnishings Quality	-.437	.231	-.686	-1.888	.060
Personal Care Routines Quality	.345	.292	.324	1.182	.239
Language and Reasoning Quality	-.145	.170	-.169	-.856	.393
Activities Quality	-.033	.231	-.030	-.145	.885
Interactions Quality	.433	.206	.388*	2.100	.037
Program Structure Quality	-.364	.304	-.191	-1.198	.232
Parents and Staff Relations Quality	.533	.227	.551*	2.348	.020

* $p < .05$; ** $p < .01$

Note. Dependent variable: Self-care skills development of child

CHAPTER 6

DICSUSSION

Children's adaptation to school and success are always serious concerns for parents and the states. Parents want to see their children's success and thriving efforts as well as factors that prepare them for success. Also, states want to have successful citizens who contribute to the welfare of their states in the future. In this regard, Heckman (2006) suggested that having personally successful and socially beneficial persons is related to investing on children's early childhood years. Providing a high quality formal early childhood education to children and their families is an investment for both persons and the future welfare of the state. In fact, there is vast literature suggesting that there is a positive relationship between children's school readiness and their later success (Romano et al., 2010; Pianta et al., 2002). Therefore, because school readiness becomes a significant factor that is related with children's school success and adaptation, this master's thesis is an important attempt at assessing factors associated with children's readiness.

In order to identify different factors associated with children's school readiness, parents, early childhood education schools, and classroom teachers were included in this study so that children's socio-economic backgrounds, quality of early childhood education and school readiness of children can be assessed. (Britto, 2012).

Educational researches that investigated factors associated with school readiness suggested that children's socioeconomic background characteristics including educational levels of parents, family income, number of siblings that children have, age of children, and children's attendance duration to center-based

early childhood education were positively related with children's school readiness (Coley, 2002; Denton & West, 2002; Erkan, 2011; Janus & Duku, 2007; Tremblay et al., 2001). Additionally, other researchers argued that parents should also be ready for their children's success in educational life with providing appropriate learning opportunities and a warm home environment to children (Britto, 2012). Researchers suggested that those parents who have higher educational status leading to have higher monthly income are more likely to provide meaningful learning opportunities and appropriate social-emotional home climate to children (Majzub & Kurnia, 2010; Janus & Duku, 2007). The results of the current study indicated that children whose parents had higher educational status were more likely to show higher readiness to school. This result supports findings of different studies from the related literature (Erkan & Kırca, 2010; Majzub & Kurnia, 2010; Yazıcı, 2002). Also, as is the case with the related research by Fryer and Levitt (2004) and Janus and Duku (2007), the current study's results showed that there was a positive correlation between children's school readiness and total monthly income of their parents. Furthermore, the results illustrated that children who have higher number of siblings were more likely to show less readiness to school. Similar to this result, Coley (2002) and Erkan (2011) suggested that number of children that parents have may lead differences between children in terms of accessing educational opportunities and developmental outcomes. Studies that investigated the influence of child related factors to children's school readiness found that children's age is a very important determinant for children's school readiness to the first grade and their later academic success in school (Denton & West, 2002; Gündüz & Çalışkan, 2013; U.S. Department of Education & National Center for Educational Statistics, 2001). According to Konak et al. (2010), older age children are more likely to have higher cognitive and reading

abilities. The current research results are similar with the related literature that there was a positive correlation between children's age and their school readiness.

Similar to other studies in the field, the findings of the current research indicated that children's attendance to early childhood education before the first grade is associated positively with their first grade readiness (Gilliam & Zigler, 2004; Konak et al., 2010; Magnuson et al., 2004; Yazıcı, 2002); cognitive skills, motor skills and language skills (Gormley & Gayer, 2005); and their later academic success, especially in reading and math skills (Gilliam & Zigler, 2004; Magnuson et al., 2007). Tozar (2011) found that children who attend early childhood education before the first grade are more likely to have better social-emotional skills, self-care skills, physical abilities, cognitive skills, and general health than children who do not have early childhood education experience. As is the case with the current study, results of the research by Erkan and Kırca (2010) and Erkan (2011) suggested that children who had longer length of experience in center-based early childhood education showed more readiness to the first grade.

When it comes to the relationship between children's socio-economic backgrounds and quality of early childhood education schools, the results of the current research showed that children who come from higher socio-economic status environments were more likely to attend early childhood education schools which have higher quality. Specifically, children whose parents have higher educational status and higher total monthly incomes were more likely to attend higher quality schools. Similarly, related literature suggested that income level of parents and educational status of them are positively related with quality of early childhood education schools that children attend (Burchinal et al., 2010; Fryer & Levitt, 2004; Pianta et al., 2002).

Within the scope of the current study, data about quality of early childhood education classrooms were collected to assess the relationship between quality of schools and children's school readiness, because researchers asserted that difference between schools in terms of quality lead achievement gap among children (Britto & Limlingan, 2012). The current study showed that there is a positive correlation between children's readiness for school and quality of early childhood education classrooms in terms of age of early childhood education teachers, teachers' length of experience in teaching occupation, social-emotional climate, interactions in classroom, school-parent interactions, and educational activities for children. These results support findings of different studies. Previous research showed that children who attend early childhood education classrooms that have higher quality are likely to have better language, reading and math skills in elementary education (Burchinal et al., 2010; NICHD, 2006). Moreover, children from lower quality schools have less developed cognitive skills (Stipek et al., 1998). Also, Pagani et al. (2010) found that characteristics of kindergarten are positively correlated with children's later math achievement, attention skills, and receptive language skills. The current study found that teachers' length of experience in teaching occupation was positively correlated with children's readiness to school. This result supports the findings of previous research results that children are more likely to show more success in school if they attend early childhood education classrooms which have more experienced teachers in the occupation (Tremblay et al., 2001). In this regard, Britto's definition of school readiness becomes more meaningful as we see based on the current findings that both parent and teacher related factors are important determinants of children's school readiness (Britto, 2012). It looks like at least based on the findings, ready parents

have higher educational levels, better income and have fewer children. Additionally, ready teachers have better education and experience.

The results of the current study suggested that children's school readiness is a concept that contains different factors predicting school readiness including child related factors, environmental factors and school related factors. Predictive analysis of the current research data showed that children's age (monthly), gender of children, and quality of early childhood education classroom in terms of interactions between children and classroom teachers predicted children's school readiness significantly. As is the case with the current study, previous research found that children's age is very important factor in predicting their school readiness levels, children whose age was older were more likely to show higher readiness to school (Coley, 2002; Denton & West, 2002; Gündüz & Çalışkan, 2013; Konak et al., 2010; U.S. Department of Education & National Center for Educational Statistics, 2001). Furthermore, the results of the current study showed that female children were more likely to show higher school readiness than male children significantly. Those results supported the findings of previous research (Janus & Duku, 2007; Metindoğan, 2007). However, there are other studies in the literature that found no significant differences between boys and girls in terms of readiness for school (Cankılıç, 2009; Denton & West, 2002; Erkan, 2011; Erkan & Kırca, 2010; Majzub & Kurnia, 2010). Also, similar to the related research results from the literature (Burchinal et al., 2010; NICHD, 2006; Tremblay et al., 2001), the results of the current study indicated that higher quality in term of interactions between children and early childhood education classroom teachers lead better school readiness skills among the children.

School readiness and quality of early childhood education schools are multidimensional concepts, therefore assessing process of children's readiness to the

first grade and quality of early childhood education classroom have crucial importance. Children's school readiness was assessed by a checklist that included items from different assessment instruments (see methods). Early childhood education classroom teachers filled those checklist forms for each child. Although teachers know children's developmental processes, they are witnesses of children's developmental changes and data obtained by them can be as good as data obtained using standardized instruments, assessing children's school readiness with a checklist for once limits still has some problems. Although teachers are expected to have better pictures of children's learning and development, their motivation and training become important factors influencing the accuracy of the information they provide for each children. In fact, in the current study, teachers tended to rate children's development in different domains very similarly suggesting that they may have a more general or global understanding of achievement and development of children. Children's readiness to school can be measured with multiple classroom observations in at different occasions and researchers can also gather data from classroom teachers and children's families. Therefore, more valid and comprehensive data about children's development can be acquired.

Another limitation of the current study is that quality data of the early childhood education classrooms was gathered by only one researcher at a limited time with using a checklist (see methods). In order to reach more accurate assessments of quality of early childhood education classrooms, future research processes may have different observers for classrooms and they may observe classrooms on several occasions in the duration of a school year. Therefore, more comprehensive and reliable data in terms of quality of educational environment can be obtained.

Another issue concerning data collection of the current study is that sample was not randomly selected. Schools were selected from different districts of İstanbul city purposefully based on accessibility. Children and schools in selected areas are not representative of the whole country. Although chosen districts have diversities in terms of socioeconomic status of the families and they are large neighborhoods, making random selection while choosing schools is important for making generalizations based on research results.

For the current study, only public schools were selected because majority of the population attend public schools. However, there are also private schools that provide early childhood education in Turkey. Studying both public and private early childhood education schools may a better perspective about the status of educational quality readiness of children. Also, gathering data from both public and private schools may lead making comparisons and reaching more meaningful results for the future educational system and services.

In summary, despite the limitations, findings of the current research provide meaningful and significant insights into the early childhood education system of Turkey. The current research is one of the few studied in Turkey with a more comprehensive perspective on school readiness combining the quality of public early childhood education schools, socioeconomic background of parents, and school readiness of children who attend those schools. Findings showed that socioeconomic factors, children's age, children's attendance duration to formal early childhood education, and quality of early childhood education are significantly associated with children readiness to the first grade. Also, findings of the current study showed that as the report of AÇEV (2009) suggested, socioeconomic background of children is associated with the quality of early childhood education. Although the schools

included in the study were all public schools, it was clear that the schools with children who had parents with better education and income were better quality in terms of child-teacher interaction and predicted children's readiness better despite relatively larger classroom sizes these schools had. Therefore, public services should be aware of the results to provide more equal and high quality educational opportunities for the whole population. The National Ministry of Education should make public early childhood education services wider and accessible and higher quality educational environments in terms of physical equipment, learning activities and social-emotional climate (AÇEV & ERG, 2016).

Despite its limitations, findings of this study are important for the improvement of the educational services in Turkey, because it leads to more questions and areas of research to explore the current educational system. More scientific research should be conducted to explore problems that we face in education so that solutions that are provided can be more meaningful and have long lasting and positive effects.

APPENDIX A

DEMOGRAPHIC INFORMATION FORM FOR PARENTS

Date: _____

Following questions will be answered by the child's MOTHER.

1. Age of the mother _____
2. Marital status of the mother?
 Married Single Other _____
3. What is the mother's the level of education?
 Primary School Middle School High School
 Vocational School Distance Education Faculty
 University Master Degree Doctorate Degree
4. Does the mother work? Yes No
5. If the mother is working, what is her job? _____
6. If the mother is working, how many days a week does she work? _____
7. What is the mother's mother tongue? _____
8. Write languages that the mother knows other than mother tongue. _____

Following questions will be answered by the child's FATHER.

9. Age of the father: _____
10. Marital status of the mother?
 Married Single Other _____
11. What is the father's level of education?
 Primary School Middle School High School
 Vocational School Distance Education Faculty
 University Master Degree Doctorate Degree
12. Does the father work? Yes No
13. If the father is working, what is his job? _____
14. If the father is working, how many days a week does he work? _____
15. What is the father's mother tongue? _____
16. Write languages that the father knows other than mother tongue. _____

17. How many people live in your house?

Adult _____

Child _____

18. Mark the total monthly income of your family.

- | | | |
|--|--|--|
| <input type="checkbox"/> 800 TL and below | <input type="checkbox"/> 3301 TL - 3800 TL | <input type="checkbox"/> 6301 TL - 6800 TL |
| <input type="checkbox"/> 801 TL - 1300 TL | <input type="checkbox"/> 3801 TL - 4300 TL | <input type="checkbox"/> 6801 TL - 7300 TL |
| <input type="checkbox"/> 1301 TL - 1800 TL | <input type="checkbox"/> 4301 TL - 4800 TL | <input type="checkbox"/> 7301 TL - 7800 TL |
| <input type="checkbox"/> 1801 TL - 2300 TL | <input type="checkbox"/> 4801 TL - 5300 TL | <input type="checkbox"/> 7801 TL - 8300 TL |
| <input type="checkbox"/> 2301 TL - 2800 TL | <input type="checkbox"/> 5301 TL - 5800 TL | <input type="checkbox"/> 8301 TL - 8800 TL |
| <input type="checkbox"/> 2801 TL - 3300 TL | <input type="checkbox"/> 5801 TL - 6300 TL | <input type="checkbox"/> 8801 TL - 9300 TL |
| <input type="checkbox"/> 9301 TL - 9800 TL | <input type="checkbox"/> 9801 TL and over | |

19. Fill in the following table for all your children.

	Date of Birth (Day/Mouth/Year)	Gender
First child		
Second child		
Third child		
Fourth child		
Fifth child		
Sixth child		
Seventh child		
Eighth child		

20. What is the child's birth order in your family? _____

21. Write the languages your child knows. _____

22. How long does your child attend formal early childhood education?

- 1 yıl 2 yıl 3 yıl 4 yıl 5 yıl

THANKS FOR YOUR CONTRIBUTIONS.

NOTE: AFTER FILLING THE FORM, GIVE THE SEALED ENVELOPE TO THE CLASSROOM TEACHER.

APPENDIX B

DEMOGRAPHIC INFORMATION FORM FOR PARENTS (TURKISH)

Bugünün tarihi: _____

Bu alan çocuğun ANNESİ ile bilgileri doldurmanız için ayrılmıştır.

1. Annenin yaşı? _____

2. Annenin medeni durumu?

Evli Bekâr Diğer _____

3. Annenin en son mezun olduğu okul (diploma olarak) hangisidir?

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 Meslek Yüksek Okulu Açık Öğretim Fakültesi Üniversite
 Yüksek Lisans Doktora

4. Anne çalışıyor mu? Evet Hayır

5. Anne çalışıyorsa ne iş yapıyor? _____

6. Anne çalışıyorsa haftada kaç gün çalışıyor? _____

7. Annenin ana dili nedir? _____

8. Annenin ana dili dışında bildiği dilleri yazınız. _____

Bu alan çocuğun BABASI ile bilgileri doldurmanız için ayrılmıştır.

9. Babanın yaşı? _____

10. Babanın medeni durumu?

Evli Bekâr Diğer _____

11. Babanın en son mezun olduğu (diploma olarak) okul hangisidir?

İlkokul Ortaokul Lise
 Meslek Yüksek Okulu Açık Öğretim Fakültesi Üniversite
 Yüksek Lisans Doktora

12. Baba çalışıyor mu? Evet Hayır

13. Baba çalışıyorsa ne iş yapıyor? _____

14. Baba çalışıyorsa haftada kaç gün çalışıyor? _____

15. Babanın ana dili nedir? _____

16. Babanın ana dili dışında bildiği dilleri yazınız. _____

17. Evde kaç kişi yaşıyorsunuz?

Yetişkin _____

Çocuk _____

18. Aşağıda ailenizin toplam aylık kazancını(TL) işaretleyebileceğiniz liste vardır. Listede ailenizin toplam aylık kazancına(TL) denk gelecek olan SEÇENEĞİ bularak işaretleyiniz.

- 800 TL ve aşağısı 3301 TL ve 3800 TL arası 6301 TL ve 6800 TL arası
 801 TL ve 1300 TL arası 3801 TL ve 4300 TL arası 6801 TL ve 7300 TL arası
 1301 TL ve 1800 TL arası 4301 TL ve 4800 TL arası 7301 TL ve 7800 TL arası
 1801 TL ve 2300 TL arası 4801 TL ve 5300 TL arası 7801 TL ve 8300 TL arası
 2301 TL ve 2800 TL arası 5301 TL ve 5800 TL arası 8301 TL ve 8800 TL arası
 2801 TL ve 3300 TL arası 5801 TL ve 6300 TL arası 8801 TL ve 9300 TL arası
 9301 TL ve 9800 TL arası 9801 TL ve üzeri

19. Aşağıdaki bilgileri tüm çocuklarınız için doldurunuz. Bu anketi doldurduğunuz çocuğu da dâhil edin.

	Yaşı (gün/ ay/ yıl)	Cinsiyeti
1.çocuk		
2.çocuk		
3.çocuk		
4. çocuk		
5.çocuk		
6.çocuk		
7.çocuk		
8.çocuk		

20. Bu anketi doldurduğunuz çocuğunuz kaçınçı çocuğunuzdur? _____

21. Bu anketi doldurduğunuz çocuğunuzun bildiği dilleri yazınız. _____

22. Bu anketi doldurduğunuz çocuğunuz ne kadar süredir okul öncesi eğitim almaktadır?

- 1 yıl 2 yıl 3 yıl 4 yıl 5 yıl

KATKILARINIZ İÇİN ÇOK TEŞEKKÜRLER.

UYARI: FORMU DOLDURDUKTAN SONRA ZARFA YERLEŞTİRİNİZ VE KAPALI BİR ŞEKİLDE SINIF ÖĞRETMENİNE TESLİM EDİNİZ.

APPENDIX C

DEMOGRAPHIC INFORMATION FORM FOR TEACHERS

Date: _____

1. Name and Surname: _____

2. Age: _____

3. Gender: Female Male

4. Marital Status?

Married

Single

Other _____

5. What is your level of education?

Primary School

Middle School

High School

Vocational School

Distance Education Faculty

University

Master Degree

Doctorate Degree

6. Which high school did you graduate from? _____

7. Which department did you graduate from university? _____

8. Did you graduate from the educational faculty? If not, how did you get the teaching formation? _____

9. How long have you been teaching? _____

10. Write name of the school that you are currently working. _____

11. How long have you been teaching in the school that you are currently working?

12. What is class size of your classroom? _____

13. Write the age group of your classroom? _____

14. Write the type of program of your classroom (Half-day program or full-day program?). _____

15. Write duration length of a school day of your classroom. _____ hours

16. Write in-service trainings and other training programs related with teaching and education that you attended.

THANKS FOR YOUR CONTRIBUTIONS.

APPENDIX D

DEMOGRAPHIC INFORMATION FORM FOR TEACHERS (TURKISH)

Bugünün tarihi: _____

12. Adınız-Soyadınız: _____

13. Yaşınız? _____

14. Cinsiyetiniz: Kadın Erkek

15. Medeni Durumunuz?

Evli Bekâr Diğer _____

16. En son mezun olduğunuz okul (diploma alarak) hangisidir?

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Meslek Yüksek Okulu Açık Öğretim Fakültesi Üniversite
Yüksek Lisans Doktora

17. Hangi liseden mezunsunuz? _____

18. Üniversitede hangi bölümden mezun oldunuz? _____

19. Eğitim Fakültesinden mezun değilseniz öğretmenlik formasyonunuzu nasıl aldınız? _____

20. Ne kadar süredir öğretmenlik yapıyorsunuz? _____

21. Şu an görev yaptığınız okulun adını yazınız. _____

11. Şu an görev yaptığınız okulda ne kadar süredir çalışıyorsunuz? _____

12. Şu anda öğretmenlik yaptığınız sınıfın mevcudu kaçtır? _____

13. Şu anda öğretmenlik yaptığınız sınıfın yaş grubunu yazınız. _____

14. Şu anda öğretmenlik yaptığınız sınıf eğitime tam gün mü yarım gün mü devam etmektedir? Toplam süre ile birlikte belirtiniz.

_____ gün _____ saat

15. Öğretmenlik mesleği ile ilgili aldığınız hizmetiçi ve diğer eğitimleri yazınız.

KATKILARINIZ İÇİN ÇOK TEŞEKKÜRLER.

APPENDIX E

ENVIRONMENT RATING SCALE SELF-ASSESSMENT READINESS

CHECKLIST

Facility Name: _____ Date Completed: _____

Age Group: _____

Directions: Read each statement carefully. Decide if the stated criteria is “Not Met” in the classroom environment, “Partially Met”, or “Fully Met”, by placing a check mark in the appropriate box. For those areas either “Not Met” or “Partially Met”, the center is encouraged to adapt the classroom environment to fully meet the criteria stated.

Definitions: Not Met = Child care program shows little evidence to support statement. Partially Met = Child care program shows some evidence to support statement. Fully Met = Child care program shows a great deal of evidence to support statement. NA = Statement does not apply to the child care program.

SPACE AND FURNISHING	Not Met	Partially Met	Fully Met	N/A
1. Sufficient indoor space and furnishings for children and adults. Space is in good repair, clean and well-maintained. Individual space is made available for storage of children’s individual belongings.				
2. Adequate lighting, ventilation, temperature control, and sound absorbing materials. Natural light is used in spaces where available.				
3. Most furniture is child-sized, sturdy, and in good repair. Some storage used for extra toys and supplies.				
4. Soft furnishings and toys are accessible to children a substantial part of the day. Toys are clean and in good repair, and a protected cozy area is provided in the classroom for one or two children to play without intrusion by others.				
5. At least 3 interest or routine care areas are defined and conveniently equipped (Ex. Water provided near the art area, diaper supplies are on hand by the changing table, shelving adequate for blocks and manipulatives).				
6. Areas for quiet and active play are separated and toys are stored for easy access by children.				
7. Arrangement of room makes it possible for staff to see all children at a glance.				
8. Appropriate materials for age group served are provided (Ex. Mobiles or other colorful or hanging objects, photos of children, simple pictures, beginning reading and math for older preschoolers, seasonal displays, or popular culture items for school-age children).				
9. Items are displayed at child’s eye-level where children can easily see them and staff talks to children about displayed materials. Most of the display is work done by the children.				

	Not Met	Partially Met	Fully Met	N/A
10. Sufficient outdoor space that is easily accessible for children in group. Gross motor space is generally safe (Ex. Impact material under climbers and swings, fenced outdoor area).				
11. Outdoor space and equipment is age-appropriate for children in group. Ample materials and equipment for physical activity are available so children have access without long periods of waiting. Both stationary and portable equipment is used (Ex. Balls, hula hoops, volleyball, trikes).				
12. School-age program has play space dedicated for its exclusive use. Older children with homework are given a suitable area for quiet study.				
PERSONAL CARE ROUTINES	Not Met	Partially Met	Fully Met	N/A
1. Children are greeted individually with pleasant arrivals and departures. Children are helped to become involved in activities, if needed. Separation issues are handled sensitively. Parents are greeted warmly.				
2. Daily written record of children's routines is available for parents to see. (Ex. Infant daily sheets, toddler daily sheets, preschool activity announcement board, school-age news board).				
3. Well-balanced and scheduled meals are served appropriate to the age group in the classroom. Basic sanitary procedures are maintained (Ex. Tables and high chair trays are sanitized before and after meals, infant foods are served from individual bowls and spoons, milk and juice in bottles not allowed to sit unrefrigerated no longer than an hour).				
4. Allergies are posted and food beverage substitutions are posted in the kitchen and classroom areas (Ex. Milk allergies, peanut allergies).				
5. Staff sits and talks with children and provides a pleasant and relaxed meal or snack time. Children are encouraged to eat independently when necessary. Preschool and school-age children are encouraged to do self-serve snack times.				
6. Nap/rest is scheduled appropriate to age group in classroom. Sufficient supervision is provided and children are helped to relax in space conducive to resting. Rest or relaxation area is provided to school-age children.				
7. All cots or mats are at least 3 feet apart or separated by a solid barrier.				
8. Diapering/toileting schedules meets individual needs of children met in an appropriate manner suited to the age of children that includes adequate supervision.				
9. Diapering/toileting sanitary conditions maintained. This includes use of diaper sanitization between diaper changes, sinks sanitized between diapering/toileting, and food preparation.				

	Not Met	Partially Met	Fully Met	N/A
10. Hand washing practices with soap and running water are observed by staff and children after diapering/toileting, before and after meals/snacks, wiping noses, use of sand and water tables, upon arrival to facility, giving medications, handling body fluids, serving bottles or infant foods.				
11. Procedures used to minimize spread of contagious disease (Ex. Ensuring children have immunizations, exclusion of children with contagious diseases, mouthed toys washed daily, outdoor sandboxes are covered).				
12. Health information kept for each individual child and staff is trained to detect signs of illness, child abuse and neglect, and report when necessary. Medications given only with written permission from parents and exact instructions on original pharmacy container are followed.				
13. Children are properly cared for to meet health needs indoors and outdoors. Children are dressed properly for weather when outdoors (Ex. Sunscreen, hats and mittens, coats).				
14. No major safety hazards indoors or outdoors (Ex. Small toys which are choking hazards, electrical outlets covered, spills on floors are cleaned up immediately to prevent falls, substances labeled "Keep Out of Reach of Children" are locked away, open stairwells are not accessible, fall zones are protected by adequate impact material, no easy access to busy roads or streets).				
15. Staff anticipates and takes action to prevent safety problems and staff explains reasons for safety rules to all children in care. Frequent inspections of grounds, facilities and equipment for potential hazards and safety hazards are eliminated.				
16. All staff trained in safety and emergency procedures (Ex. CPR, First Aide, Poison Control, Fire Extinguisher use). First aide supplies are well stocked and accessible to all age groups. Evacuation procedures are practiced monthly.				
17. Only parents or other persons authorized by parents may call and pick up child(ren) in care. A system is put in place for parents to leave messages for staff concerning their child(ren).				
LANGUAGE AND REASONING	Not Met	Partially Met	Fully Met	N/A
1. At least 12 books appropriate for infant/toddlers are accessible daily. Preschool children have at least 20 children's books accessible daily. This includes a variety and wide selection of topics for children (Ex. fantasy, factual information, people, animals, science, books that reflect cultures and different abilities).				
2. Staff read books daily with individuals or small groups of children. Book times are warm and interactive.				
3. Language *materials and **activities are appropriate for children in group.				

	Not Met	Partially Met	Fully Met	N/A
4. Staff talks with children frequently throughout the day during routines and play. Content of talk is generally encouraging and positive rather than discouraging and negative. Verbal communication is personalized.				
5. *Materials that encourage children to communicate are accessible in a variety of interest centers (Ex. Figures and animals in block areas, puppets and flannel boards pieces in a book area, toys for dramatic play indoors and outdoors).				
6. Staff adds words to the actions they take in responding to children throughout the day. Staff adds information to expand on ideas presented by children (Ex. Teacher says, "Look at this truck, it is a red dump truck, see it has a place to carry things, " "I'm changing your diaper and now you are all dry, doesn't that feel better?"). Staff generally responds in a timely and positive manner to children's attempts to communicate.				
7. Staff talks about logical relationships while children play with materials that stimulate reasoning. Children encouraged to talk through or explain their reasoning when solving a problem (Ex. Sorting objects into different groups, in what way are two pictures the same or different, sequence cards, lotto games, size and shape games).				
8. Concepts are introduced appropriately for ages and abilities of children in group, using words and concrete experiences (Ex. ABC matching games instead of rote teaching the ABC's, color matching games instead of drilling children on knowing colors of objects).				
ACTIVITIES	Not Met	Partially Met	Fully Met	N/A
1. Many developmentally appropriate fine motor materials of each type accessible for a substantial portion of the day according to age group served (Ex. Pegs and pegboards, building toys, sewing cards). Sets are stored separately, well-organized, and similar toys stored together.				
2. Many and varied art materials, which are safe and non-toxic, are accessible for a substantial portion of the day according to age group served. Individual expression and use of art materials is encouraged for all ages. Staff facilitates appropriate use of materials.				
3. Many and varied music materials including instruments and dance props are accessible for much of the day according to age group served. Various types of music are used including classical, and popular children's music, music characteristic of different cultures, and some songs in different languages.				
4. Variety of blocks and accessories are accessible for much of the day according to age group served. Special block area set aside out of traffic, with storage and suitable building surface. Blocks and accessories are organized according to type.				

	Not Met	Partially Met	Fully Met	N/A
5. Sand or water activities set up to facilitate play for at least one hour daily according to age group served. Variety of toys accessible for play (Ex. Containers, spoons, funnels, shovels).				
6. Many and varied age-appropriate dramatic play materials accessible for a substantial portion of the day according to the age group served. Props for at least 2 themes accessible daily including child-sized play furniture (Ex. Housekeeping and work). Dramatic play area clearly defined with organized storage.				
7. Developmentally appropriate games, materials, or activities from 2 nature/science categories accessible daily. Children are encouraged to bring in natural things to share with other or add to collections. Daily events used as a basis for learning about nature/science.				
8. Age-appropriate math/number materials of various types accessible for a substantial portion of the day according to the age group served (Ex. Materials for counting, shapes, measure, learning shape and size).				
9. All materials used are developmentally appropriate, non-violent, and culturally sensitive. TV use is limited to 30 minutes for infants/toddlers and 1 hour for preschool. Computer use is limited to 10 minutes for infants/toddlers and 20 minutes for preschool. Most of materials encourage active involvement by children and adults. All materials are limited to those considered "good for children" (Ex. Sesame Street, educational video and computer games, but not most cartoons).				
10. Many books, props, pictures, and materials accessible showing people of different races, cultures, ages, abilities, and gender in non-stereotyping roles (Ex. Dolls of different races, ethnic clothing, males and females shown doing many types of work, cooking and eating utensils from various cultural groups).				
INTERACTIONS	Not Met	Partially Met	Fully Met	N/A
1. Staff/child interactions are pleasant and helpful. Staff shows awareness of the whole group even while working with 1 child or a small group. Staff reacts quickly to solve problems in a comforting and supportive way and act to prevent dangerous situations before they occur.				
2. Careful supervision of all children adjusted appropriately for all ages. Staff gives children help and encouragement when needed.				
3. Staff consistently does not use physical punishment or severe discipline. Expectations are generally realistic and based on age and ability of children. Staff use non-punitive discipline methods effectively and program is set up to avoid conflict and promote appropriate interaction.				

	Not Met	Partially Met	Fully Met	N/A
4. Staff responds to children in a warm, supportive manner through the use of appropriate verbal and physical contact that is respectful and sympathetic to children who are upset, hurt, or angry.				
5. Staff facilitate positive peer interactions among all children. This includes stopping negative and hurtful interactions and modeling good social skills (Ex. Being kind to others, listen, empathized, cooperate, use gentle touching, warm and affectionate).				
PROGRAM STRUCTURE	Not Met	Partially Met	Fully Met	N/A
1. Daily schedule is written and posted in rooms and provides a balance of structure and flexibility with a variety of play activities a substantial portion of the day. No long periods of waiting during transitions between daily events. Indoor/outdoor play periods occur daily (weather permitting) for all age groups.				
2. Free play occurs daily indoors and outdoors, weather permitting, with supervision that protects children's health and safety. Staff is actively involved in facilitating children's play. Ample and varied toys, games, and equipment are accessible for children to use in free play.				
3. Whole-group gatherings limited to short periods suited to age and individual needs of children. Some routines done in small groups or individually. Children are never forced to participate in group play.				
4. Provisions for children with disabilities include: minor modifications made to meet the needs of children with disabilities; parents are involved in sharing information with staff, setting goals, and giving feedback about how program is working; staff follow through with activities and interactions recommended by other professionals; children with disabilities are included in on-going activities with the other children in the classroom.				
5. Some use made of community resources when planning special activities for children (Ex. Visits to parks, museums, libraries, or community services that provide on-site activities). Parent permission obtained for all trips out of center and rules of conduct and safety are explained to children prior to trip.				
PARENTS AND STAFF	Not Met	Partially Met	Fully Met	N/A
1. Parents are made aware of philosophy and approach practiced in the program and is urged to observe in child's group prior to enrollment.				
2. Much sharing of child-related information between parents and staff with a variety of alternatives are used to encourage family involvement in the children's program.				
3. Parents and staff participate in an evaluation of the program annually.				

	Not Met	Partially Met	Fully Met	N/A
4. Parent resources are provided and parents are referred to other professionals when needed.				
5. Separate adult bathrooms are provided for staff. Storage for personal belongings with security provisions and facilities for meals and snacks are provided when necessary. At least one break daily is scheduled for staff working in classrooms. Lounge or adult planning space is available with adult sized furniture. Accommodations are made for staff members that have disabilities.				
6. Equipped office space, which includes file/storage space and office equipment including phone, needed for daily use. Some space available for individual adult meetings that are separate from areas used by children.				
7. Interpersonal interaction among staff does not interfere with caregiving responsibilities. Staff interactions are positive and add a feeling of warmth and support. Staff duties are shared fairly and child-related information is communicated daily among staff.				
8. Annual written evaluation of performance shared with staff at least yearly. This includes supervisory observations and well as feedback from individual staff members regarding their identified strengths and weaknesses. Action is taken to implement the recommendations of the evaluation.				
9. In-service training, workshops, and conferences are provided for staff members. This includes opportunities to belong to professional organizations supporting young children. Professional resources and materials are provided on site for staff to access.				
10. Thorough orientation for new staff takes place and monthly staff meetings are held to include staff development activities.				
11. Staff continuity is maintained with groups of children in care. This includes one to two staff members who lead the group everyday. Children rarely change to new groups or staff members. A stable group of substitutes familiar with the children and program are always available.				
12. For staff working with school-age children, some communication between staff and children's classroom teachers takes place as needed to support the child.				

*Materials for infants and toddlers: cloth or hard page books, pictures of familiar objects. For two-year olds and older: children's books, magazines, or records; commercial or homemade picture games like lotto, talking about pictures. Additional materials include: puppets, books, puzzles, and props for dramatic play, toy telephones, records, dolls, mirrors, and pictures, commercial or homemade toys to learn colors, sizes, shapes, number and letters.

**Activities: repeating nursery rhymes, singing and babbling to babies, naming familiar objects, talking about drawings or pictures in books, dictating stories, show and tell.

Compiled self-assessment checklist adapted from: Early Childhood Environment Rating Scale – Revised 1998, Infant-Toddler Environment Rating Scale – Revised 2003, School-Age Care Environment Rating Scale 1996. Date of development: August 2003.

APPENDIX F

FACTOR ANALYSIS FOR SOCIAL-EMOTIONAL DOMAIN OF THE SCHOOL READINESS CHECKLIST

	Communality
1. Child follows the directions.	.750
2. Child uses appropriate phrases (Good morning, good bye, etc.).	.697
3. Child follows the rules (while eating, playing, story time, etc.)	.749
4. Child is aware of the classroom rules.	.787
5. Child knows his name, surname and age.	.639
6. Child easily recognize emotions of others (sadness, happiness, anger, etc.).	.592
7. Child cannot express his feelings appropriately.	.563
8. Child expresses his negative feelings aggressively (e.g. He expresses his anger by harming another child.).	.646
9. Child expresses his requests by crying and groaning.	.586
10. Child tries to comfort a sad or unhappy friend.	.650
11. Child becomes happy when his friends are happy.	.627
12. Child takes and shares responsibility.	.748
13. Child participates appropriately to an ongoing activity or group (e.g. without interrupting the flow of an activity.).	.712
14. Child waits his turn while playing.	.815
15. Child makes disruptions while playing with others.	.641
16. Child cooperates with his peers.	.591
17. Child adapts to planned activity changes.	.640
18. Child shares his toys or classroom materials with others.	.670
19. Child asks for help in a proper way when he needs help or assistance.	.658
20. Child easily makes friends.	.640
21. Child solves problems with others without fighting (e.g. physically or verbally).	.689
22. Child listens to his classmates.	.743
23. Child makes other children angry or he makes fun of other children.	.607
24. Child requests/asks someone's permission.	.668
25. Child asks for help when he has a problem.	.635
26. Child works on his own when necessary.	.583
27. Child does teacher's directions.	.788
28. Child accepts responsibility of a given assignment.	.721
29. Child is able to separate appropriately from caregivers most days of the week.	.532
30. Child cannot find or suggest solution to solve a problem.	.600
31. Child demonstrates self-confidence while playing or working on something.	.702

Eigenvalue: 14.682

% of Total Variance: 47.363

Total Variance: 47.363

APPENDIX G

FACTOR ANALYSIS FOR SOCIAL-EMOTIONAL DOMAIN OF THE SCHOOL READINESS CHECKLIST (TURKISH)

	Communality
1. Yönergeleri takip eder.	.750
2. Okula gelişte ve ayrılıştta uygun sözleri söyler (Günaydın, vb).	.697
3. Kurallara uyar (yemek yeme, oyun, hikaye dinleme kuralları vb.).	.749
4. Sınıf kurallarından haberdardır.	.787
5. Adını, soyadını ve yaşını bilir.	.639
6. Başkalarının duygu durumlarını kolayca fark eder (Diğeri üzgün mü, yorgun mu, vb.)	.592
7. Duygularını ifade edemez (mutlu olduğunu veya üzıldüğünü ifade edememesi, mutlu veya üzgün olduğunu içine atması gibi).	.563
8. Olumsuz duygularını saldırgan bir şekilde ifade eder (öfkesini başkasına zarar vererek ifade eder).	.646
9. İsteklerini ağlayarak ve mızımızlanarak ifade eder.	.586
10. Üzgün ya da mutsuz bir arkadaşını rahatlatmaya çalışır.	.650
11. Arkadaşları neşeli ve mutluyken o da mutlu olur.	.627
12. İşbölümüne uyar.	.748
13. Devam eden bir etkinliğe veya gruba uygun bir şekilde katılır (etkinliğin akışını bozmadan vb.).	.712
14. Oyun oynarken sırasını bekler.	.815
15. Akranları ile oyun oynarken oyunbozanlık eder.	.641
16. Akranları ile işbirliği yapar.	.591
17. Planlanmış etkinliklerdeki değişikliklere adapte olur.	.640
18. Oyuncaklarını paylaşır.	.670
19. Yardıma ihtiyacı olduğunda uygun bir şekilde yardım ister.	.658
20. Kolayca arkadaş edinir.	.640
21. Başkalarıyla olan problemlerini kavga etmeden çözer.	.689
22. Sınıf arkadaşlarını dinler.	.743
23. Diğerk çocuklarla alay eder ya da onları kızdırır.	.607
24. İzin ister.	.668
25. Bir sorunu olduğu zaman yardım ister.	.635
26. Gerektiğinde kendi başına bir iş üzerinde çalışır.	.583
27. Öğretmenin söylediklerini yapar.	.788
28. Verilen bir görevin sorumluluğunu kabul eder.	.721
29. Haftanın çoğu günü ebeveynlerinden sorunsuz bir şekilde ayrılabilir.	.532
30. Bir problem olduğunda o problemi çözmek için çözüm üretemez.	.600
31. Çalışmalar esnasında kendine güvendiğini belli eder.	.702

Eigenvalue: 14.682

% of Total Variance: 47.363

Total Variance: 47.363

APPENDIX H

FACTOR ANALYSIS FOR COGNITIVE DOMAIN OF THE SCHOOL

READINESS CHECKLIST

	Communality
1. Child is curious in approaching new activities.	.755
2. Child is enthusiastic about coming to school.	.644
3. Child is willing to read book or he shows interest to books.	.697
4. Child is inattentive and he has difficulty to concentrate/focus on something.	.398
5. Child listens to teacher's directions and sayings attentively.	.755
6. Child asks questions about activities and works.	.623
7. Child draws pictures or symbols to tell a story.	.649
8. Child can follow simple two-step directions.	.640
9. Child draws a human body that includes at least six body parts.	.711
10. Child completes puzzle that is consisted of 4-8 pieces.	.615
11. Child retells sequence of a story/action/circumstance correctly.	.709
12. Child says at least 8 names of colors correctly (Yellow, red, blue, orange, green, white, black, purple).	.731
13. Child recognizes some kinds of paper money and coins and he says their names correctly.	.455
14. Child completes puzzles with looking at models.	.659
15. Child tells stories by looking at models/pictures.	.634
16. Child matches objects and numbers (from 1 to 10).	.652
17. Child counts from 1 to 20.	.587
18. Child is interested in games involving numbers.	.645
19. Child answers/responds "Why?" questions.	.752
20. Child understands and says cause-effect relationships of events/actions/cases.	.828
21. Child says time of a day based on activities in the daily routine of classroom.	.752
22. Child answers questions showing knowledge about the word, nature and environment (e.g. leaves fall in the autumn, apple is a fruit, dogs bark).	.700
23. Child groups objects/living beings/non-living beings based on common characteristics.	.712
24. Child matches sets that include 3 or 4 objects.	.828
25. Child recognizes spatial locations of objects.	.766
26. Child says what objects are made from.	.820
27. Child recognizes different kinds of surfaces (e.g. soft, hard).	.764
28. Child groups colors based on tones, primary colors and secondary colors.	.737
29. Child compares weight of objects and he says which one is heavier or lighter.	.721
Eigenvalue: 17.101	
% of Total Variance: 58.970	
Total Variance: 58.970	

APPENDIX I

FACTOR ANALYSIS FOR COGNITIVE DOMAIN OF THE SCHOOL READINESS CHECKLIST (TURKISH)

	Communality
1. Yeni etkinliklere başlamaya ilgilidir/meraklıdır.	.755
2. Okula gelme konusunda isteklidir/heyecanlıdır.	.644
3. Yeni bir kitabı okumaya heveslidir (okuyamasa da kitaba bakmaya).	.697
4. Dikkati dağınıktır, kendini bir işe vermekte zorluk çeker.	.398
5. Öğretmenin yönergelerini ve söylediklerini dikkatle dinler.	.755
6. Çalışmalarla ilgili soru sorar.	.623
7. Bir hikayeyi anlatmak için resimler ve semboller çizer.	.649
8. İki adımlı basit yönergeleri takip edebilir.	.640
9. İnsan resmini 6 ögeyi içerecek şekilde çizer (Yüz, kollar, bacaklar gibi).	.711
10. 4-8 parçalı bul-yapı tamamlar.	.615
11. Bir olayı oluş sırasına göre sıralar.	.709
12. 8 rengi isimlendirir (sarı, kırmızı, mavi, turuncu, yeşil, mor, beyaz, siyah).	.731
13. Bazı kağıt ve demir paraları tanıır ve isimlendirir.	.455
14. Eksik resimleri modele bakarak tamamlar.	.659
15. Gösterilen resimle ilgili bir öykü anlatır.	.634
16. Sayısı 1'den 10'a kadar olan nesnelere ile ifade ettikleri rakamları eşleştirir.	.652
17. 1'den 20'ye kadar ezbere sayar.	.587
18. Rakamları içeren oyunlarla ilgilidir.	.645
19. "Neden?" sorusuna cevap verir.	.752
20. Olaylar arasındaki neden-sonuç ilişkilerini kurar.	.828
21. Etkinliklere bağlı olarak günün hangi zamanında olduğunu söyler.	.752
22. Sorulara, dünya, doğa ve çevre hakkında bilgisi olduğunu gösterecek cevaplar verir (yapraklar sonbaharda dökülür, elma bir meyvedir, köpekler havlar, gibi).	.700
23. Nesnelere ortak özelliklerine göre (taşıtlar, hayvanlar, büyük / küçük nesnelere, ağır / hafif nesnelere vb.) sınıflandırır.	.712
24. 3'lü, 4'lü eşit setleri eşleştirir.	.828
25. Baştaki, sondaki ortadaki gibi mekânsal konumları ayırt eder.	.766
26. Nesnelere neden yapıldığını söyler.	.820
27. Dokuları ayırt eder. (Yumuşak, sert, pürüzlü gibi.)	.764
28. Renkleri gruplandırır (tonlarına göre, ara renk-ana renk oluşlarına göre gibi).	.737
29. Bir nesnenin diğerine göre ağır ya da hafif olduğunu söyler.	.721

Eigenvalue: 17.101

% of Total Variance: 58.970

Total Variance: 58.970

APPENDIX J

FACTOR ANALYSIS FOR LANGUAGE DOMAIN OF THE SCHOOL

READINESS CHECKLIST

	Communality
1. Child orally retells a familiar story.	.634
2. Child communicates his/her needs and thoughts verbally.	.641
3. Child has ability to articulate clearly, without sound substitutions.	.534
4. Child listens with interest and understanding to stories.	.684
5. Child uses compound sentences (e.g. The weather is cold, because we are in winter season.)	.796
6. Child uses/knows antonym words.	.668
7. Child uses conjunctions in a proper way while talking.	.825
8. Child uses negators of words in a proper way while talking.	.844
9. Child is showing awareness of rhyming words.	.540
10. Child understands what said to him at once.	.691
11. Child demonstrates knowledge that print carries the message in a picture book.	.493
12. Child knows how to handle book (e.g. turn a page).	.526
13. Child is generally interested in books (pictures and print).	.825
14. Child is interested in reading (inquisitive/curious about the meaning of printed material).	.835
15. Child is aware of writing directions of Turkish (left to right, top to bottom).	.722

Eigenvalue: 8.858
% of Total Variance: 57.718
Total Variance: 57.718

APPENDIX K

FACTOR ANALYSIS FOR LANGUAGE DOMAIN OF THE SCHOOL READINESS CHECKLIST (TURKISH)

	Communality
1. Bildiđi/tanıdık olduđu bir hikayeyi sözlü bir şekilde tekrar anlatır.	.634
2. İhtiyaçlarını ve düşüncelerini sözlü bir şekilde ifade eder.	.641
3. Kelimelerin söylenişini deđiştirmeden, anlaşılabilir şekilde konuşabilir.	.534
4. Hikayeleri ilgiyle ve anlama isteđi ile dinler.	.684
5. Birleşik cümleler kullanır (Bugün hava güzel olursa dışarıda oynayabilir miyiz? Kış geldiđi için havalar sođudu. gibi).	.796
6. Zıt sözcükleri söyler.	.668
7. Konuşmalarında bağlaç (ve, ile, çünkü, ama gibi) kullanır.	.825
8. Konuşmalarında sözcüklerin olumsuz biçimlerini de kullanır.	.844
9. Kafiyeli kelimelerin farkına vardığını gösterir (Kafiyeli sesleri fark eder.).	.540
10. Söylenileni bir seferde anlayabilir.	.691
11. Resimli bir kitaptaki yazıların bir mesaj taşıdığını bilir.	.493
12. Kitabı kullanmayı (sayfa çevirme gibi) bilir.	.526
13. Genellikle kitaplarla ilgilidir (resim ve yazı).	.825
14. Okumaya ilgilidir (Yazılı şeylerin anlamları hakkında meraklı/ilgilidir.).	.835
15. Türkçedeki yazma kurallarından haberdardır (soldan sağa, yukarıdan aşağıya)	.722

Eigenvalue: 8.858

% of Total Variance: 57.718

Total Variance: 57.718

APPENDIX L

FACTOR ANALYSIS FOR PSYCHOMOTOR DOMAIN OF THE SCHOOL

READINESS CHECKLIST

	Communality
1. Child is able to use objects such as pencils and paint brushes.	.800
2. Child holds scissors correctly and uses appropriately.	.878
3. Child strings objects (e.g. bead, pasta).	.796
4. Child draws different types of geometric shapes and he paints them.	.752
5. Child shows an established hand preference (right vs. left or vice versa).	.300
6. Child can walk and run with ease.	.730
7. Child walks on a line balancedly.	.783
8. Child jumps to a certain distance with two legs.	.866
9. Child jumps with two legs.	.849
10. Child jumps with one leg balancedly.	.853
11. Child stands on one foot in a couple seconds.	.841
12. Child climbs/goes down the stairs step by step.	.823
13. Child bounces a ball and catches it consecutively by his own.	.708
14. Child is able to jump from 20 cm height balancedly.	.773
15. Child walks on his heels and toes balancedly.	.778
16. Child moves balancedly.	.787

Eigenvalue: 10.789

% of Total Variance: 67.429

Total Variance: 67.429

APPENDIX M

FACTOR ANALYSIS FOR PSYCHOMOTOR DOMAIN OF THE SCHOOL READINESS CHECKLIST (TURKISH)

	Communality
1. Kalem, resim fırçası, pastel boya, keçeli kalem gibi araçları kullanabilir.	.800
2. Makası doğru bir şekilde tutar ve kullanır.	.878
3. Boncuk, makarna vb. nesnelere ipe dizer.	.796
4. Çeşitli şekiller (üçgen, daire, kare gibi) çizer ve boyar.	.752
5. Çeşitli materyalleri kullanırken veya eylemleri gerçekleştirirken, el tercihi yapar. (soldan çok sağ ya da tersi)	.300
6. Kolaylıkla yürüyebilir ve koşabilir.	.730
7. Çizgi üzerinde yürür.	.783
8. Çift ayakla belli bir uzaklığa atlar.	.866
9. Çift ayakla sıçrar.	.849
10. Tek ayak üzerinde sıçrar.	.853
11. Tek ayak üzerinde bir kaç saniye durur.	.841
12. Ayak değiştirerek iner çıkar (merdiven gibi.).	.823
13. Topu kendisi sıçratıp yakalar.	.708
14. 20 cm yükseklikten atlar.	.773
15. Topuk ve ayakcuyla yürür.	.778
16. Hareketleri dengelidir.	.787

Eigenvalue: 10.789

% of Total Variance: 67.429

Total Variance: 67.429

APPENDIX N

FACTOR ANALYSIS FOR SELF-CARE SKILLS DOMAIN OF THE SCHOOL

READINESS CHECKLIST

	Communality
1. Child eats by his own independently.	.558
2. Child wears/takes of his buttonless and strapless clothes by his own.	.680
3. Child recognizes back and front sides of different types of clothes.	.774
4. Child goes to the bathroom/toilet by his own without needing any help or assistance.	.885
5. Child blows his nose with a tissue by his own.	.774
6. Child tidies up his belongings.	.704
7. Child washes his hands by his own.	.803
8. Child is independent in washroom habits most of the time.	.844
9. Child wears his strapless shoes by his own independently.	.655

Eigenvalue: 6.678

% of Total Variance: 74.196

Total Variance: 74.196

APPENDIX O

FACTOR ANALYSIS FOR SELF-CARE SKILLS DOMAIN OF THE SCHOOL READINESS CHECKLIST (TURKISH)

	Communality
1. Kendi kendine yemek yer.	.558
2. Düğmesiz ve bağısız giysileri yardımsız giyer, çıkarır.	.680
3. Giysilerin önünü ve arkasını ayırt eder.	.774
4. Gereksinim duyduğunda bağımsız olarak tuvalete gider.	.885
5. Burnunu mendille siler.	.774
6. Kendine ait eşyaları toplar.	.704
7. Ellerini yıkar.	.803
8. Bağımsız ve uygun bir şekilde tuvaleti ve lavaboyu kullanabilir.	.844
9. Ayakkabılarını (bağciksız) kendisi giyer ve çıkarır.	.655

Eigenvalue: 6.678

% of Total Variance: 74.196

Total Variance: 74.196

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