

RELATIONSHIP BETWEEN EMOTIONAL SKILLS OF PRESCHOOLERS AND  
EMOTIONAL INTELLIGENCE OF THEIR TEACHERS AND MOTHERS

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Approval of the Graduate School of Social Sciences

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## **ABSTRACT**

### **RELATIONSHIP BETWEEN EMOTIONAL SKILLS OF PRESCHOOLERS AND EMOTIONAL INTELLIGENCE OF THEIR TEACHERS AND MOTHERS**

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The purpose of this study is to investigate the emotional skills of 66–72-month-old children and the emotional intelligence levels of their preschool teachers and mothers, as well as to examine the predictive impact of the emotional intelligence of the preschool teachers and the emotional intelligence of the mothers on the emotional skills of the 66–72-month-old children. The sample of this study involves 66–72-month-old children (N=126) who are attending public and primary elementary schools and preschools operated by MoNE in Çankaya, Yenimahalle, and Etimesgut districts of Ankara, their preschool teachers (N=126) and mothers (N=126). The data was collected through four different instruments: demographic information form for preschool teachers, demographic information form for mothers, Bar-On Emotional Quotient Inventory (EQ-i), and Assessment of Children’s Emotional Skills Test (ACES). The findings of the study reveal that 66–72-month-old children have the highest mean scores in understanding of emotions and lowest mean scores in identification of emotions. It was also found that the emotional skills of 66–72-month-

old children differ with respect to their gender, family income, preschool teachers' age, educational level, years of experience, and self-reported skills in developing children's emotional skills, and mothers' educational level. Furthermore, the results also showed that the emotional skills of 66–72-month-old children do not differ with respect to their mothers' age. Finally, the results indicated that preschool teachers have higher impact on 66–72-month-old children's emotional skills than mothers.

**Keywords:** Preschoolers, preschool teachers, mothers, emotional skills, emotional intelligence

## ÖZ

### OKUL ÖNCESİ DÖNEMDEKİ ÇOCUKLARIN DUYGUSAL BECERİLERİ İLE ÖĞRETMENLERİNİN VE ANNELERİNİN DUYGUSAL ZEKALARI ARASINDAKİ İLİŞKİ

Terzioğlu, Tuğçe Esra  
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Bu çalışmanın amacı, 66-72 aylık çocukların duygusal becerilerini, okul öncesi öğretmenlerinin ve annelerinin duygusal zeka düzeylerini araştırmak ve okul öncesi öğretmenlerin ve annelerin duygusal zekalarının 66-72 aylık çocukların duygusal becerileri üzerindeki öngörücü etkisini incelemektir. Bu çalışmanın örneklemini Ankara'nın Çankaya, Yenimahalle ve Etimesgut ilçelerinde Milli Eğitim Bakanlığı bünyesindeki devlet okullarına devam eden 66-72 aylık çocuklar (N=126), okul öncesi öğretmenleri (N=126) ve anneleri (N=126) oluşturmaktadır. Veriler dört farklı veri toplama aracı kullanılarak toplanmıştır: Okul öncesi öğretmenleri için demografik bilgi formu, anneler için demografik bilgi formu, Bar-On Duygusal Zeka Ölçeği (EQ-i), ve Altı Yaş Çocuklarının Duygusal Becerilerinin Değerlendirilmesi Testi (ACES). Araştırmanın bulguları, 66-72 aylık çocukların duyguları anlama boyutunda en yüksek, duyguları tanımlama boyutunda ise en düşük puana sahip olduğunu ortaya koymaktadır. 66-72 aylık çocukların duygusal becerilerinin cinsiyetlerine, aile

gelirlerine, okul öncesi öğretmenlerinin yaşlarına, eğitim düzeylerine, deneyim yıllarına ve çocukların duygusal becerilerini geliştirmeye ilişkin becerilerine yönelik öz-değerlendirmelerine ve annelerinin eğitim düzeylerine göre değiştiği bulunmuştur. Ayrıca çalışmanın sonuçları, 66-72 aylık çocukların duygusal becerilerinin annelerinin yaşlarına göre farklılaşmadığını göstermiştir. Son olarak, okul öncesi öğretmenlerin 66-72 aylık çocukların duygusal becerilerinin üzerine annelerden daha fazla etkisinin olduğu ortaya koymaktadır.

**Anahtar Kelimeler:** Okul öncesi dönemdeki çocuklar, okul öncesi öğretmenleri, anneler, duygusal beceriler, duygusal zeka

To My Beloved Family...

To My Husband...

To My Lovely Niece, Esilya Özüdođru...



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## **LIST OF ABBREVIATIONS**

<b>EI</b>	Emotional Intelligence
<b>EQ</b>	Emotional Intelligence
<b>IQ</b>	Intelligence Quotient
<b>ACES</b>	Assessment of Children's Emotion Skills Test
<b>EQ-i</b>	Bar-On Emotional Quotient Inventory
<b>MoNE</b>	Ministry of National Education

## CHAPTER 1

### INTRODUCTION

“All learning has an emotional base.”

Plato

Presently, individuals leave children’s emotional education to chance, and the results are more devastating for children (Goleman, 2005). As such, many of the problems that society faces are related directly to emotional ignorance (Payne, 1986). Therefore, in a rapidly developing and changing world, the main problem among individuals is bringing intelligence to one’s emotions (Goleman, 2005). Therefore, regarding the relationship between emotions and intelligence in terms of sociology (Çakar & Arbak, 2004), it is argued that emotional and cognitive processes cannot be separated (Caine & Caine, 1991; Çakar & Arbak, 2004). The skills of emotional competence, which are a range of resources that young people bring to cope with various challenges encountered in their lives, do not progress separately from each other, and their progression is closely related to cognitive development (Saarni, 2011).

Aristotle said, “Anyone can become angry—that is easy; but to be angry with the right person, to the right degree, at the right time, for the right purpose, and in the right way—that is not easy” (Goleman, 2005, p. 1/23). In doing so, he defined emotional intelligence in the sense of being aware of one’s emotions, being able to understand others’ emotions, and having the emotional abilities of empathy and self-control (Aksaraylı & Özgen, 2008). Gardner (1987) identified intelligence as the ability to resolve a problem or to create a product valuable in at least one cultural setting. When explaining human behavior with only the studies titled as intelligence became hard, the emotional research increased. In effect, the concept of emotional intelligence has attracted much attention from researchers in recent years to explain human behavior

(Göçet, 2006). In addition, when traditional measures, such as IQ tests, which can be attributed to as little as 20% of the real world's achievements (Goleman, 2005), the concept of emotional intelligence—a mental process to recognize, use, understand, and manage the emotions of oneself and others for problem solving and behavior regulation (Mayer & Salovey, 1997; Salovey & Mayer, 1990)—appeared to predict who will be successful in real life (Dulewicz & Higgs, 2000).

Although the term emotional intelligence was not used in the theory of multiple intelligence (Gardner, 1983), which consists of logical-mathematical intelligence, linguistic intelligence, musical intelligence, spatial intelligence, bodily-kinesthetic intelligence, interpersonal intelligence, and intrapersonal intelligence (Gardner & Hatch, 1989), interpersonal intelligence and intrapersonal intelligence are seen as the foundation of later models of emotional intelligence (Schutte et al., 1998). Furthermore, this versatile intelligence vision provided a richer picture of the ability and potential of a child than the normal IQ test for his or her success (Goleman, 2005).

The term emotional intelligence was first used by Peter Salovey of Yale University and Jack Mayer of the University New Hampshire in 1990 (Mayer, DiPaolo, & Salovey, 1990; Salovey & Mayer, 1990; Yeşilyaprak, 2001) while they were searching for the factors behind functioning well in society (Mayer & Salovey, 1997). However, In 1995 Daniel Goleman brought the term to the general public in the United States and worldwide through his book named Emotional Intelligence (Bar-On, 2006; Mayer, Roberts, & Barsade, 2008; Schutte et al., 1998), which argued that schools would make children better equipped for real life if the fundamentals of not only academic competence but also social and emotional competence (Lantieri & Goleman, 2014) were taught. These fundamentals can be improved through education (Goleman, 2005; Shapiro, 2004; Weisinger, 1998), while a child's IQ levels cannot be changed much, even by experience or education (Goleman, 2005).

Salovey and Mayer (1990) defined emotional intelligence as a type of social intelligence that involves six different components—emotional self-awareness; assertiveness; empathy; interpersonal relationships; stress tolerance and impulse control to manage one's and others' emotions, differentiation of emotions; and the

utilization of the information to guide the thoughts and actions of oneself. On the other hand, Bar-On (2006) identified emotional intelligence as the personal, emotional, and social skills and capabilities that affect a person's ability to cope with daily demands and pressures. The emotional competencies are categorized into five key components: intrapersonal (self-regard, emotional self-awareness, assertiveness, independence, and self-actualization); interpersonal (empathy, social responsibility, and interpersonal relationship); stress management (stress tolerance and impulse control); adaptability (reality testing, flexibility, and problem solving); and general mood (optimism and happiness) (Bar-On, 2006).

Emotions are identified as "a feeling and its distinctive thoughts, psychological and biological states, and range of propensities to act" (Goleman, 2005, p. 1). Emotions influence our decisions and behaviors significantly (Ulutaş & Ömeroğlu, 2007), and they serve as motivational and communicative functions to adapt to the environment for babies (Ashiabi, 2000). According to Yaban and Yükselen (2007), as a socio-cultural entity, individuals try to adapt to the environment beginning from birth. Furthermore, in this adaptation process, individuals are faced with many situations that require them to understand, control, and express their emotions appropriately and, at the same time, identify the emotions of others (Başal, 2004). The process of socialization begins with the relationship between the baby and the caregiver and it continues with relationships with other adults and peers throughout the growth and development of the child; along the way, the child will face many problems in social environments. Solving social problems requires the child to develop the skills needed to communicate with others and to understand correctly their emotions and the emotions of others (Yaban & Yükselen, 2007).

Emotional competence is seen as central in terms of children's skills in interacting with each other and in forming relationships (Saarni, 1999); in addition, it is also identified as a predictor of the social and behavioral outcomes for children (Eisenberg et al., 2001; Mostow, Izard, Fine, & Trentacosta, 2002). Emotional skills need to be acquired in the early childhood period by children, and they consist of multiple skills, including the identification of emotions, the understanding of emotions, and the expressing of

emotions (Saarni, 1999). While Köksal (2007) and Yurdakavuştu (2011) stated that thus, emotional intelligence is affected by conditions, including age, gender, family, and culture, that are present rather than by the individual characteristics of the person. These conditions, Ulutaş (2005) pointed out the factors influencing emotional intelligence as temperament, brain development, age, gender, modelling, and culture.

The studies (Bar-On, Brown, Kirkcaldy, & Thome, 2000; Derksen, Kramer, & Katzko, 2002; Güllüce & İşcan, 2010; Pamukoğlu, 2004) related to investigating the relationship between emotional intelligence and age showed that the older age group of individuals has higher emotional intelligence scores than the younger age group of individuals. Additionally, the research (Bosacci & Moore, 2004; Durmuşoğlu-Saltalı & Arslan, 2011; Durmuşoğlu-Saltalı & Arslan, 2012) found that the emotional intelligence of female individuals is higher than that of male individuals. While LaFrance and Banaji (1992) explained this difference as a biological effect, Naghavi and Redzuan (2011) assert that this difference between female and male individuals is derived from a cultural effect.

For developing children, facial expressions are a source of information about not only the personal identities but also the emotional expressions of others. Facial expressions and invariable patterns help children to both distinguish and identify individuals in their surroundings (Cunningham & Odom, 1986). The ability to identify emotions, which is a skill to read emotional facial expressions, is stated as a nonverbal skill that plays an important role in the social and emotional development of children (Boyatzis, Chazan, & Ting, 1993). It was found that newborn babies could distinguish at least three different facial expressions: happy, sad, and surprised (Field, Woodson, Greenberg, & Cohen, 1982). Furthermore, Lewis, Sullivan, and Vasen (1987) pointed out that young children, even when they are 48 or 60 months old, are able to encode and decode facial expressions with regard to emotions; in other words, even young children are able to identify emotions.

The ability to understand emotions also involves the ability to identify emotions, to perceive the causes of emotional experiences, and to understand their interrelationships (Bohnert, Crnic, & Lim, 2003). Laible and Song (2006) pointed out



that the content of early conversations between family and children affect the social and emotional understanding of children. Additionally, Fivush and Haden (2005) also stated that if mothers name and explain emotions more while talking with their children, the number of emotional words used by children while talking increases; furthermore, the children's skills in understanding emotions also increase.

Expressing of emotions in parallel with the culture in which one is living is one emotional skill (Saarni, 1999). By looking at social development theories and biological/maturation theories, gender differences in expressing emotions can be assumed stronger with age, as over time, children have more opportunities to experience and adopt gender roles as a female or male, and biologically based gender differences in expressing emotions emerge over time (Chaplin & Aldoa, 2013).

Emotions affect human life considerably, such that individuals with high IQ levels may not always be successful in their social lives. Nowadays, emotional intelligence, which can be developed in contrast to cognitive intelligence, is seen as key to success in human life (Yücel & Saka-Ilgın, 2016). Therefore, individuals must have certain dimensions of emotional intelligence, such as an understanding of emotions, the ability to express emotions, and empathy, to be successful in their social lives (Shapiro, 2004; Goleman, 2005). Furthermore, the fundamental values and characteristics of an individual, above all, originated not from IQ but from emotional competencies (Cooper & Sawaf, 1997). That is why people with high levels of emotional intelligence are more successful both in controlling their feelings and in their emotional awareness, and they are able to cope with problems (Matthews, Zeidner, & Roberts, 2002).

Emotions involve information about the relationship between a person and their environment, and they could be triggered by changes in this relationship, particularly for children, as the environment (Lazarus, 1991) in which they live has a significant impact on their overall growth and development. The emotional well-being of young children is closely related to the social-emotional characteristics of the environments in which they live (Shonkoff et al., 2004). Although, there is a little questioning that children come to the world ready to learn about both emotions and relationships, and these phenomena are complemented by opportunities that support learning about

emotions in the context of families (Laible & Song, 2006). Therefore, families should be good role models by displaying appropriate behaviors to give their children the opportunity to use their capabilities in parallel with their development (Shapiro, 2004).

The quality of the family environment and family attachments has the greatest impact on a child's social and emotional development. One of the core implications of Bowlby's attachment theory (1969, 1973), which has become a major hypothesis for research on socio-emotional development in young children, is that a secure infant–parent attachment promotes a child's socio-emotional development (Smeekens, Riksen-Walraven, & Van-Bakel, 2009). Even though certain emotional skills are brought by the child, other personalities contribute to the development of his or her emotional competence, that is, inborn distinctness and early care interactions can constitute the early adaptation of the child (Vaughn et al., 1992). The attachment relationship with caregivers is the first context in which the emotional life of a child begins (Saarni, 2011).

The theory of attachment supports preschool teachers' perceptions about how the qualifications of teacher–student relationships affect considerably their students' behavior in the first grade (Birch & Ladd, 1998). Additionally, children having higher levels of emotional knowledge were predicted to have closer relationships with their teachers, and they were predicted to have the capability to both understand and respond to the emotions and expectations of their teachers (Trentacosta & Izard, 2007).

While the all school system aims to promote the development of students' potential in all aspects, there is no doubt that the tendency of the teacher plays a major role, and it determines the success or failure of the learning objectives (Iheanyi, 2015). Not only do parents have an important role in the social and emotional development of children, but preschool teachers also play an important role in child development by enhancing the learning environment (Voinea & Damian, 2014). Emotionally supportive teachers have a tendency to construct positive classroom environments and equate the need for child autonomy sensitively to children's need for extra support (Hamre & Pianta, 2001). In the pre-school period, children have restricted vocabulary knowledge, which is why emotions are important social signs for them. For this reason, educators should

be aware of the importance of the development of emotional skills related to feelings, which have a significant place in expressing the behaviors of children and expressing their feelings, and they should include emotional development activities in their educational programs (Havighurst, Harley, & Prior, 2004).

Teachers' teaching about emotions can affect children's emotional expressiveness positively, and teachers' discussing of emotions can help children with understanding themselves better and finding ways to feel better, and it can support children in finding their own ways to express or regulate their own emotions (Denham, Bassett, & Zinsser, 2012). Therefore, teachers should create a classroom environment in which both academic and socio-emotional learning are supported and are facilitated (Evertson & Weinstein, 2006). By the time teachers believe in the value of feelings and show an interest in children's emotions, create a classroom environment in which children can be empowered in their emotional competencies (Hyson, 1994).

Recent studies in preschool education and psychology have emphasized the considerable significance of the development of emotional skills in the field of child development (Trentacosta, Izard, Mostow, & Fine, 2006). However, there is little known about the role of emotions in learning to teach, about how teachers' emotional experiences are related to their teaching practices, about the ways teachers regulate their emotions and relationships with their students, or about the importance of emotional experiences for teacher development (Sutton & Wheatley, 2003).

### **1.1. Purpose of the Study**

The study aimed to investigate the emotional skills of 66–72-month-old children and the emotional intelligence of their preschool teachers and mothers, as well as to examine the predictive impact of the emotional intelligence of the preschool teachers and the emotional intelligence of the mothers on the emotional skills of the 66–72-month-old children.

The current study focused on the following research questions:

**R.Q.1.** What are the levels of 66–72-month-old children’s emotional skills (overall and under each dimensions: identification of emotions, understanding of emotions, and expressing of emotions)?

**R.Q.1.a.** Do the emotional skill scores of 66–72-month-old children differ with respect to their gender, family income, preschool teachers’ and mothers’ background information?

**R.Q.2.** What are the levels of the emotional intelligence (overall and under each dimensions: intrapersonal, interpersonal, stress management, adaptability, and general mood) of preschool teachers and mothers?

**R.Q.2.a.** Do the emotional intelligence (overall and under each dimensions: intrapersonal, interpersonal, stress management, adaptability, and general mood) of preschool teachers differ with respect to their age, educational level, years of experience, and self-reported skills?

**R.Q.2.b.** Do the emotional intelligence (overall and under each dimensions: intrapersonal, interpersonal, stress management, adaptability, and general mood) of mothers differ with respect to their age and educational level?

**R.Q.3.** How well do the overall emotional intelligence levels of preschool teachers and mothers predict overall emotional skills of 66–72-month-old children?

## **1.2. Significance of the Study**

The development of a child’s emotional skills begins at birth and progresses rapidly during the early childhood period. In early childhood, research has shown that getting an education regularly in this period has a positive effect on the understanding of the emotions of oneself and others, the managing of the emotions of oneself, and the development of positive behaviors (Denham et al., 2003). In addition, it was also stated that the development of children’s emotional skills can play a major role, not only in character growth, but also in their academic learning (Bagdi & Vacca, 2005; Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011; Izard et al., 2001; Trentacosta &

Izard, 2007). The first years of life are seen as a critical period for the social and emotional development of children. In this period of life, the most effective factor that affects the emotional skills of children is considered the family of the children. When previous studies related to parents' emotional intelligence were considered, it can be seen that positive emotional experiences shared between parents and their children are seen as a building block for the well-being of social and emotional development in infants and toddlers (Bagdi & Vacca, 2005). Alpan (2006) also determined the importance of interactions between parents and children in the development of emotional skills. This is why parents must have a sufficient level of emotional awareness so they can help their children to deal constructively with their own feelings (Schilling, 2009). A way for children to learn about their emotions is to be exposed to parents when they express emotions (Halberstadt, Fox, & Jones, 1993). Furthermore, children with parents adept at controlling or managing their emotions learn how to regulate their own emotions by watching their parents. Close and sensitive parents using verbal directions, such as suggesting emotional regulation strategies and explaining these strategies, reinforce children's capacity to cope with stress (Colman, Hardy, Albert, Raffaelli, & Crockett, 2006). Hence, it is vital to investigate the emotional intelligence levels of mothers to provide a broader perspective of the emotional levels of mothers and to raise awareness among mothers about their emotional intelligence levels and the effects of their emotional intelligence levels on their children's emotional skills.

While emphasizing that preschool education has been widespread in recent years, education programs and teachers have a vital prescription for the developmental support of the children, especially for families and teachers in terms of the developmental of children's social and emotional skills (Saltalı, 2010). For that reason, this study is conducted to provide a wider perspective of the emotional skills of 66–72-month-old children with respect to their gender; family income; preschool teachers' background information, such as age, educational level, years of experience, and self-reported skills; and mothers' background information, such as age and educational level.

Teachers should be conscious of their own emotional intelligence to improve the emotional skills of their students (Kaufhold & Johanson, 2005). Socially and emotionally competent teachers construct a positive classroom environment by means of developing supportive and encouraging relationships with their students, planning lessons by taking students' strengths and abilities into consideration, creating and implementing behavioral guidelines to promote students' inner motivation, coaching students when they are in conflict, encouraging collaboration between students, and being a role model (Jennings & Greenberg, 2009). The emotional intelligence of the preschool teachers is seen as a factor affecting the emotional skills of children due to their reactions to the children's emotions (Ersay, 2007). Additionally, it was found that preschool teachers having lower levels of emotional intelligence do not have the capabilities to use their emotional skills in the classroom environment, and this affects their effectiveness as a teacher (Perry & Ball, 2007). The educational programs implemented in the classroom by preschool teachers and the way the families communicate with their children in the home environment will provide the basis for the development of healthy emotional skills (Akaydın, 2015). Therefore, teachers should think about how to teach emotional competencies, such as self-awareness, emotion management, motivation, empathy, and social relations, in planning their activities, as well as how to ask themselves questions in this regard (Yeşilyaprak, 2001). Therefore, it is important to examine the emotional intelligence levels of preschool teachers to provide a broader perspective of the emotional levels of preschool teachers and to raise awareness among preschool teachers about both their emotional intelligence levels and the effects of their emotional intelligence levels on the emotional skills of their students in the classroom environment.

Hence, this study aims to put forward the importance of the emotional development of children for their present and future lives and to determine the factors affecting the development of children's emotional skills to raise greater awareness about the significance of emotional intelligence rather than IQ.

The literature review of the studies conducted in Turkey shows that there is a lack of research conducted with children, their preschool teachers and mothers. The studies

conducted with preschool children are mostly aimed to investigate the possible impact of emotional education program on emotional skills of children and to examine the possible differences in emotional skills of children with respect to their families background information. And the studies conducted with adults are mostly aimed to determine the possible differences in their emotional intelligence with respect to their demographic information. Furthermore, unlike previous studies, this study aims to present the factors affecting children's emotional skills from a broad perspective by including their preschool teachers and mothers in the same study to determine whether the preschool teachers or mothers are more effective in the development of children's emotional skills.

### **1.3. Definition of Important Terms**

The following terms need to be described for the clarification of this current study:

*Emotion:* "A feeling and its distinctive thoughts, psychological and biological states, and range of propensities to act." (Goleman, 2005, p. 1).

*Emotional Competence:* It is the observable side of emotional intelligent that one has the competencies to comprise self-awareness, social awareness, self-managemen, and social skills in sufficient time and ways to be effective in the case (Boyatzis, Goleman, & Rhee, 1999).

*Emotional Skill:* Being aware of the emotions of oneself and others and ability to identificate, understand and express the emotions properly (Faupel, 2003).

*Identification of Emotions:* Ability to recognize the meanings of the emotions given through messages like smile, scowling, surprise, tone of voice etc. (Elksnin & Elksnin, 2003).

*Understanding of Emotions:* Skills of preschool children including two main domains: an understanding of their own emotions and an understanding of others' emotions in the social environment (Harris & Saarni, 1989).

*Expressing of Emotions:* The ability to express one's emotion by using behavioral expressions such as an appropriate face expression, eyes, tone of voice etc. in the way that others can perceive what his/her emotion is (Gross, John, & Richards, 2000).

*Intelligence:* "An ability to solve a problem or to fashion a product which is valued in one or more cultural settings." (Gardner, 1987).

*Emotional Intelligence:* "a cross-section of interrelated emotional and social competencies, skills and facilitators that determine how effectively we understand and express ourselves, understand others and relate with them, and cope with daily demands" (Bar-On, 2006).

*Intrapersonal Skills:* To be aware of personality, emotions, strengths, weaknesses, beliefs and thought of oneself and to have an ability of self-expression. Intrapersonal skills involve five sub-dimensions: *Self-regard*; to have an ability to perceive, understand and accept the worth and abilities of oneself. *Emotional self-awareness*; to be aware of emotions of oneself. *Assertiveness*; to have an ability to express the emotions of oneself and others effectively. *Independence*; to be emotionally independent and have a self-confidence. *Self-actualization*; to make an effort to achieve personal goals and to actualise potential of oneself (Bar-On, 2006).

*Interpersonal Skills:* To have an ability to understand others and to be in a relation with others. Interpersonal skills consist of three sub-dimensions: *Empathy*; to recognize and understand the feelings of others. *Social responsibility*, to identify oneself with a social group and be in a cooperation with others. *Interpersonal relationship*; to be able to establish relationships which are mutually satisfying and establish good relations with others (Bar-On, 2006).

*Stress Management Skills:* To be able to cope with stressful situations without being despair and losing control. Stress management skills consist of two sub-dimensions: *Stress tolerance*; to be able to constructively and effectually manage own emotions in stressful situations. *Impulse control*; to be able to constructively and effectually control own emotions in stressful situations (Bar-On, 2006).



*Adaptability Skills:* To be able to adapt oneself to the changed circumstances or environment. Adaptability skills involve three sub-dimensions: *Reality-testing;* to be able to perceive one's emotions away from sensuality, in a realistic way. *Flexibility;* to be able to adapt one's feelings and thoughts to new circumstances. *Problem-solving;* to be able to effectually solve problems of nature which is personal and interpersonal (Bar-On, 2006).

*General Mood:* To be able to develop a positive point of view about life, to get pleasure out of life, and to be able to motivate oneself. General mood consists of two sub-dimensions: *Optimism;* to be able to look on the brighter side of events. *Happiness;* to feel pleasure about oneself, others and life (Bar-On, 2006).

## CHAPTER 2

### LITERATURE REVIEW

This chapter includes eight parts. In the first part, definition of intelligence is given. The second part includes definition of emotion. In the third part, emotional intelligence is explained. Models of emotional intelligence including model of John. D. Mayer and Peter Salovey, model of Reuven Bar-On and model of Daniel Goleman are explained in the fourth part. In the fifth part, emotional skills are given. In the factors effecting emotional intelligence part, temperament, brain development, age, gender, modelling, culture are explained. National and international studies related to emotional intelligence are included in the seventh part. Last part contains a summary of the current chapter.

#### **2.1. Definition of Intelligence**

Intelligence is one of the most difficult concepts to define. The meaning of intelligence has been discussed for centuries, and many definitions of intelligence have been offered (Titrek, 2016). Experts have tried to develop an objective measure to ensure that the more scientific aspects of intelligence are dominant and, as a result, they have developed intelligence tests (Ören, 2011).

In 1927, Thorndike defined three different types of intelligence: abstract intelligence, concrete intelligence, and social intelligence. The third type of intelligence, which he described as social intelligence, is associated with the same area as emotional intelligence. Gardner (1987) described intelligence as an ability to solve a problem or to create a valuable product in at least one cultural milieu. Furthermore, Gardner (1983) developed what is known as the theory of multiple intelligences which consisted of seven different intelligences.

- *Logical-mathematical intelligence*: sensitivity and discrimination capacity of patterns which are logical or numerical; the ability to perceive long intellectual chains.
- *Linguistic intelligence*: sensitivity to the rhythms, sounds, and meaning of words; sensitivity to diversified functions of language.
- *Musical intelligence*: the skills to generate and comprehend rhythm and timbre, and the comprehension of the different types of musical expressiveness.
- *Spatial intelligence*: the skills to understand the visual-spatial world correctly.
- *Bodily-kinesthetic intelligence*: the ability to control body movements to manipulate objects proficiently.
- *Interpersonal intelligence*: the discernment and response of moods, motivations, desires, and temperaments of other people's capacity.
- *Intrapersonal intelligence*: the awareness of the person's own feelings, strengths, weakness, intelligences, and desires and the ability to discriminate among their own feelings (Gardner & Hatch, 1989).

## **2.2. Definition of Emotion**

Emotions are seen as psychological, cognitive, motivational, and experiential psychological systems (Mayer & Salovey, 1990). Goleman (2005) defined emotions as feelings which are for specific emotions as psychological and biological states and a set of movement tendencies. Cooper and Sawaf (1997) identified emotions as an internal source of energy, information, and activity. Additionally, they stated that emotions cannot be termed either good or bad from birth. The difference in emotions arises from what we do based on the energy and knowledge we produce. Feldman (1996) emphasized that emotions prepare individuals to act, to shape future behavior, and to help organize social relations.

Researchers have discussed exactly which emotions are described as primary, which primary emotions cause all emotional mixtures, and even whether primary emotions exist. Although not everyone has the same opinion, some theorists suggest that basic

emotions belong to basic families. The main candidates and some members of these families are stated below:

- Anger: rage, indignation, insult, exhaustion, wrath, anger, vengeance, irritability, hatred, hostility, irritability, and, when pathological, hatred and violence.
- Sadness: sorrow, pain, cheerlessness, melancholy, gloom, self-pity, boredom, loneliness, and hopelessness, such as a pathological, major depression.
- Fear: anxiety, delusion, nervousness, wonder, doubt, wakefulness, conscience, disquiet, discomfort, fright, and horror, and, when pathological, panic and phobia.
- Enjoyment: happiness, enthusiasm, relaxation, satisfaction, pleasure, sensual pleasure, pride, joy, fun, excitement, ecstasy, self-transcendence, and, when pathological, mania.
- Love: acceptance, friendship, trust, infatuation, goodness, close attention, loyalty, admiration, and agape.
- Surprise: shock, amazement, staggering, and curiosity.
- Disgust: disdain, humiliation, hate, dislike, and repulsion.
- Shame: guilt, frustration, embarrassment, regret, sadness, and humiliation (Goleman, 1995).

However, Izard (1992) suggested that there are five basic emotions: anxiety, hostility, depression, hate, and love. Ekman suggested that identification of the four specific facial expressions (fear, anger, pleasure, and sadness) by illiterate people from different cultures in the world, and those who have not seen movies or television before, showed the universality of these emotions (Goleman, 2005).

### **2.3. Emotional Intelligence**

For centuries, emotion and cognition have been regarded as separate concepts. While emotion is traditionally seen as a primitive mechanism, conversely, cognition was seen a more complicated visible feature of the human psyche (Ekman & Davidson, 1994). Intelligence and emotional intelligence (EI) are complex abilities that cannot be

completely separated from each other. An individual's intelligence potential is related to EI. This is why EI is regarded as the basic condition for intelligence (Konrad & Hendl, 2001).

EI, also known as emotional quotient (EQ), is a term that has been accepted by the American Dialect Society since 1955. The concept of EI is an increasingly prominent concept when it comes to human relationships and communication. EI is often referred to as EQ, which is the British counterpart (Ören, 2011). Though the first academic journal on EI was introduced in the 1990s by John Mayer of the University of New Hampshire and Peter Salovey of Yale University (Goleman, 2005), the term has been used for decades (Rau, 2002). Thorndike introduced the notion of social intelligence in the 1920s, and his work led to the emergence of EI (Aşan & Özyer, 2003). Prior to the article written about EI in 1990, the term was often used informally and in a sometimes confusing manner. One literary criticism noted that some of Jane Austen's characters displayed an "emotional intelligence" (Van-Ghent, 1953). In a pre-feminist German article about motherhood, the author claimed that women may deny their roles as housewives and mothers by virtue of the absence of EI (Leuner, 1966). The term became more focused as a result of Payne's dissertation thesis (1986) (Mayer, Salovey, Caruso, & Cherkasskiy, 2011). Then, in 1990, Salovey and Mayer proposed a new intelligence entity named "emotional intelligence." Based on research findings in the areas of emotion, psychotherapy, intelligence, and cognition, it is suggested that some people may be smarter about emotions than others (Salovey & Mayer, 1990). After Salovey and Mayer (1990), this concept was expanded by the book entitled *Why It Can Matter More Than IQ* written by Goleman (1995) who stated that intelligence quotient (IQ) is less important than EQ to be successful in life.

Many researchers and theoreticians offered various definitions for the concept of EI, as well as the concept of emotion (Özdemir, 2015). Mayer and Salovey (1997), in order to understand what EI means, stated that two component terms, intelligence and emotion, should be clearly identified. Thus, the definition of EI must, in one way or another, relate emotions to intelligence if the two terms are to retain their meaning. They identified EI as the following:

. . . the ability to perceive accurately, appraise, and express emotion; the ability to access and/or generate feelings when they facilitate thought; the ability to understand emotion and emotional knowledge; and the ability to regulate emotions to promote emotional and intellectual growth (p. 10).

EI is defined as a factor which drives us toward our own potentials and goals, motivates our sincere values and aspirations, and transforms our thoughts into action (Cooper & Sawaf, 2003). Additionally, Goleman (1995) stated that there are five different components of EI: self-awareness, motivation, self-regulation, social skills, and empathy.

## **2.4. Models of EI**

Researchers' various approaches to the concept of EI have led to this concept being considered in two different models. One of the models derived from these approaches is called the "mixed model" and is commonly referred to as Goleman's model. The mixed model of EI is more widespread, better known, and defined in a wider frame. Another approach to EI deals with it in the framework of "the ability model" developed by Salovey and Mayer, which defined the concept of EI in a narrower framework focused on the concept of ability (Doğan & Şahin, 2007).

There are three dominant models based on EI, and each has its own measurement to test EI. One is that of Salovey and Mayer, who first presented the concept of EI in their article, the second is Bar-On's model, and the third is the Goleman model (Goleman, 2011).

### **2.4.1. The Model of John D. Mayer and Peter Salovey**

Salovey and Mayer (1990) defined EI as "the ability to monitor one's own and others' feelings and emotions, to discriminate among them, and to use this information to guide one's thinking and action" (p. 189). Subsequently, this definition was changed to include thinking about feelings.

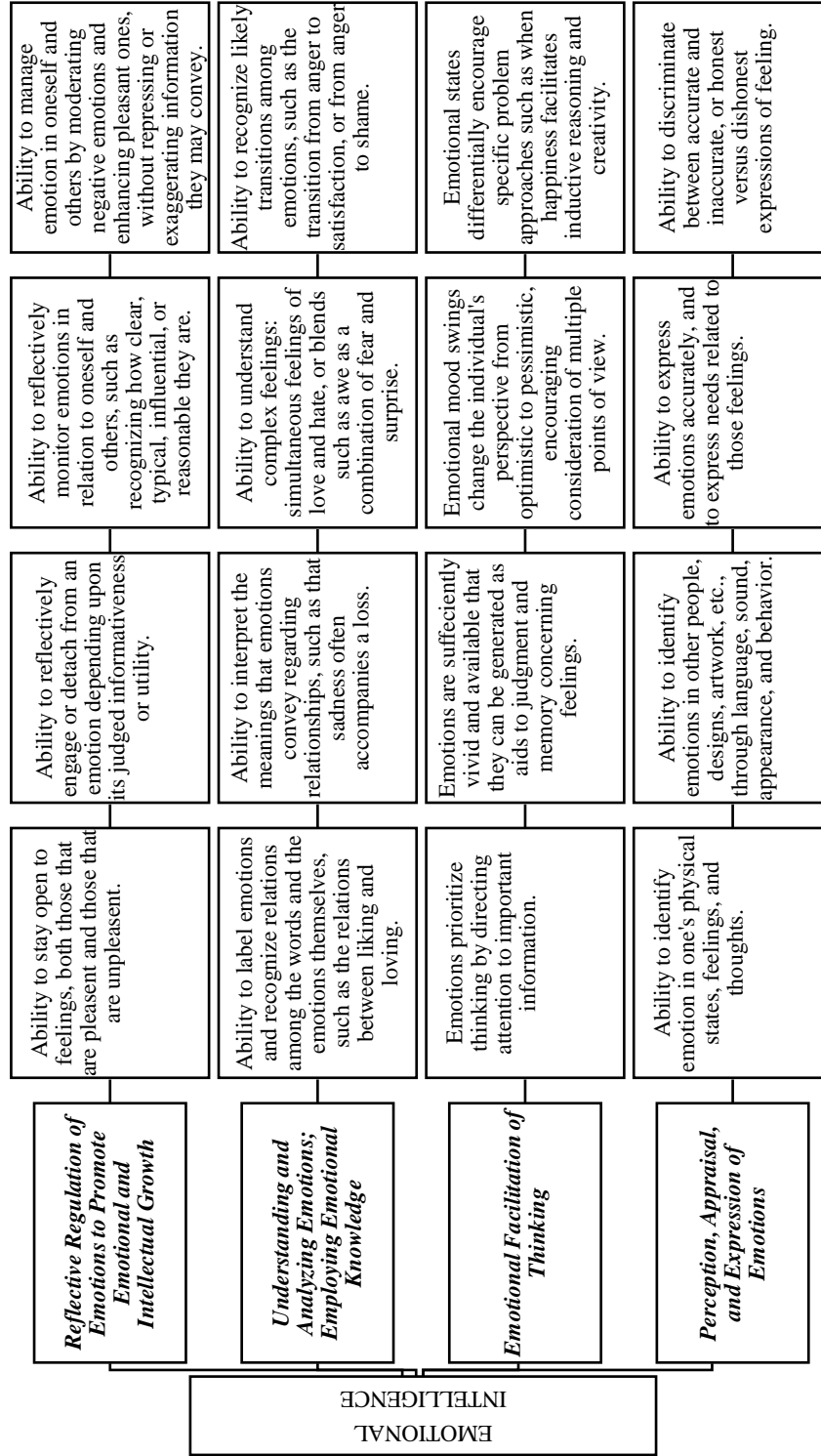
The skills seen as the components of the EI have been diagramed into four branches: (see Figure 2.1):

- Reflective regulation of emotions to promote emotional and intellectual growth,
- Understanding and analyzing emotions; employing emotional knowledge,
- Emotional facilitation of thinking, and
- Perception, appraisal, and expression of emotion (Mayer & Salovey, 1997, p. 11).

These branches are arranged hierarchically with each step in close proximity to the previous one. The lowest level branch involves basic skills, such as perceiving and expressing emotions, while the highest level branch consists of more conscious skills, such as the reflective regulation of emotion (see Figure 2.1). While branches 1, 3, and 4, which are about perception, understanding, and regulation of emotions, consist of reasoning about emotions, branch 2, which is assimilation of emotion in thought, consists of enhanced reasoning by using emotions (Brackett & Salovey, 2006).

**Figure 2.1**

*A Four-Branch Model of the Skills Involved in Emotional Intelligence*



Mayer & Salovey, 1997, p.11



### **2.4.2. Model of Reuven Bar-On**

In accordance with this model, emotional-social intelligence is a point of interrelated that determines the emotional and social competencies, facilitators, and skills associated with each other. Furthermore, it determines the effectiveness of an individual's understanding and self-expression, understanding other individuals and interacting with them, and dealing with the daily requirements of life. The theoretical background for the emotional quotient inventory (EQ-i) , which consists of five different dimensions, including intrapersonal, interpersonal, stress management, adaptability, and general mood (see Table 2.1), was developed to evaluate various aspects of this structure and to investigate its conceptualization as provided by the Bar-On model (Bar-On, 2006).

Furthermore, based on the Bar-On model, the Bar-On Emotional Quotient Inventory: Youth Version, which consists of six different dimensions: intrapersonal, interpersonal, stress management, adaptability, general mood, and positive impression, was developed to evaluate the emotional social intelligence of youths from 7 to 18 years of age. The total EQ-i scale which shows the overall emotional-social intelligence consists of intrapersonal, interpersonal, stress management, and adaptability. The findings obtained from this scale showed that, if the standard score obtained from this scale ranges from 90 to 110, it can be inferred that the youth has an effective emotional and social intelligence; if the standard score is above 110, it shows that the youth has an enhanced emotional and social intelligence; but, if the standard score is below 90, it can be concluded that the emotional and social skills of youth should be enriched (Bar-On & Parker, 2000).

**Table 2.1.***The Bar-On EQ-i scales and what they assess*

<b>EQ-i SCALES</b>	<b>The EI competencies and skills assessed by each scale</b>
Intrapersonal	Self-awareness and self-expression
Self-regard	<i>To accurately perceive, understand and accept oneself</i>
Emotional self-awareness	<i>To be aware of and understand one's emotions</i>
Assertiveness	<i>To effectively and constructively express one's emotions and oneself</i>
Independence	<i>To be self-reliant and free of emotional dependency on others</i>
Self-actualization	<i>To strive to achieve personal goals and actualize one's potential</i>
Interpersonal	Social awareness and interpersonal relationship:
Empathy	<i>To be aware of and understand how others feel</i>
Social responsibility	<i>To identify with one's social group and cooperate with others</i>
Interpersonal relationship	<i>To establish mutually satisfying relationships and relate well with others</i>
Stress management	Emotional management and regulation:
Stress tolerance	<i>To effectively and constructively manage emotions</i>
Impulse control	<i>To effectively and constructively control emotions</i>
Adaptability	Change management:
Reality-testing	<i>To objectively validate one's feelings and thinking with external reality</i>
Flexibility	<i>To adapt and adjust one's feelings and thinking to new situations</i>
Problem-solving	<i>To effectively solve problems of a personal and interpersonal nature</i>
General mood	Self-motivation:
Optimism	<i>To be positive and look at the brighter side of life</i>
Happiness	<i>To feel content with oneself, others and life in general</i>

Bar-On, 2006, p.23

### **2.4.3. Model of Daniel Goleman**

For years, the success of individuals was connected to IQ. However, Goleman (2005) emphasized that EI, which has become increasingly important in recent years, plays a more active role in the functioning of individuals.

Before revising his EI model in 1998, Goleman defined twenty-five competencies into five dimensions of EI: knowing one's emotions, managing emotions, recognizing emotions in others, motivating oneself, and handling relationships (Goleman, 2001). These five elements set up the potential to learn basic, practical skills, and our emotional competence shows how much we can transfer this potential to our talents in the context of an organization. Additionally, emotional competences include not only cognitive elements in the active state, but also some degree of emotional skills (Tunalı-Özdemir, 2008).

In 1998, Goleman presented the current version of his EI framework (see Figure 2.2) by determining 20 competencies instead of 25 competencies and sorting them into four dimensions: self-awareness, emotional self-management, social awareness, and relationship management (Goleman, 2001). Self-awareness is seen as the first component of EI and is identified as having the ability to understand one's emotions, strengths, needs, and weaknesses, as well as having the ability to recognize how one's emotions affect both oneself and others (Goleman, 2003). The second component of EI in Goleman's model is emotional self-management, which is identified as the ability to manage distressing influences, such as anger and anxiety and avoid emotional impulsivity. The third component stated in Goleman's EI framework is social awareness, which consists of empathy and amygdala (Goleman, 2001), and is identified as the ability to handle relationships and to be aware of the emotions, concerns, and needs of others (Goleman, 2014). Finally, the last component of Goleman's model is relationship management, which is actually built on the self-management and social awareness components (Goleman, 2001).

**Figure 2.2.**

*A Framework of Emotional Competencies*

	Self (Personal Competence)	Other (Social Competence)
Recognition	<p><b>Self-Awareness</b></p> <ul style="list-style-type: none"> <li>• Emotional self-awareness</li> <li>• Accurate self-assessment</li> <li>• Self-confidence</li> </ul>	<p><b>Social Awareness</b></p> <ul style="list-style-type: none"> <li>• Empathy</li> <li>• Service orientation</li> <li>• Organizational awareness</li> </ul>
Regulation	<p><b>Self-Management</b></p> <ul style="list-style-type: none"> <li>• Emotional self-control</li> <li>• Trustworthiness</li> <li>• Conscientiousness</li> <li>• Adaptability</li> <li>• Achievement drive</li> <li>• Initiative</li> </ul>	<p><b>Relationship Management</b></p> <ul style="list-style-type: none"> <li>• Developing others</li> <li>• Influence</li> <li>• Communication</li> <li>• Conflict management</li> <li>• Visionary leadership</li> <li>• Catalyzing change</li> <li>• Building bonds</li> <li>• Teamwork and collaboration</li> </ul>

(Goleman & Cherniss, 2001, p. 28)

**2.5. Emotional Skills**

Emotional skills, which must be acquired in early childhood, consist of multiple skills that include certain dimensions, such as identification, understanding, and expression of emotions that provide children with social relationships and promote harmony with society by interacting successfully with each other (Saarni, 1999).

Identification of emotions is defined as the ability to recognize the meanings of emotions given through subtle messages, such as a smile, a surprised expression, a scowl, and the tone of a voice (Elksnin & Elksnin, 2003). At about three to four years of age, children are able to identify and name emotions based on meaningful cues. For

example, at this age, many children are able to identify and name the facial expressions about basic emotions, such as happiness, fear, sadness, and anger, if they are presented in a picture (Cutting & Dunn, 1999; Denham, 1986). Understanding emotions is an advanced emotional skill, consisting of the ability to identify emotions and comprehending the causes of emotional situations and their interrelationships (Bohnert et al., 2003) and understanding of others' emotions in a social environment (Harris & Saarni, 1989). The ability to express oneself and others' emotions using behavioral expressions in a way that others can perceive the emotions is defined as the expressing of emotions (Gross et al., 2000).

## **2.6. Factors Effecting Emotional Intelligence**

### **2.6.1. Temperament**

Children are born with a natural way of interacting with people and their environment; this is their temperament (Oliver, 2002). Temperament is believed to be a biological factor which differentiates emotional regulation skills of individuals (Zeidner, Matthews, Roberts, & MacCann, 2003). Additionally, Goleman (2011) also highlighted that some biological and constitutional factors contribute significantly to EI development. Individual differences based on these biological factors have often been examined as proof of temperament qualities, such as positive emotionality, negative emotionality, emotional intensity, and inhibition. Temperamental features are seen to have a connection with specific brain systems which control emotion, attention, and motivation, and contain emotional regulatory structures. Children differ in temperamental features, which can, in the proper sequence, affect more particular processes and behaviors, such as understanding, expression of basic emotions, and simple control strategies (Zeidner et al., 2003).

### **2.6.2. Brain Development**

The most primitive part of any brain which has more than a simple nervous system is the brain stem that surrounds the top of the spinal cord. Emotional centers developed in this primitive root, which is known as the brain stem. With evolution, over millions

of years, the neocortex developed from these areas of emotion, bringing the upper layers to the fountain. The fact that the thinking brain evolved from the center of emotions illuminates the relationship between the two: the emotional brain existed long before the intelligent brain (Goleman, 2011).

The nerve cells grow most rapidly in the first years of life. In these years, the brain works intensively, and stimulants have a significant influence on the development of emotions. The proliferation of brain nerve cells develops from children's experiences during their younger years. For this reason, EI is gained easily in the early years of life, and leads to controlled behavior becoming easier in childhood (Ulutaş, 2005). As the brain and central nervous system evolve, children learn to express and manage their emotions in the right place and at the right time. In normally developing children, this process occurs spontaneously, as expected. In particular, as the cerebral cortex matures, children can suppress their inappropriate emotions which can lead to negative behaviors (Hyson, 1994).

### **2.6.3. Age**

Development of the emotional system occurs as a product of the maturation of the nervous system, of changing adaptational needs, and of cognitive development (Malatesta et al., 1989). The development of the component skills of EI is a developmental process in which a particular skill emerges differently at different ages in children (Saarni, 2011). Basic emotions can be recognized from the early years of childhood through facial expressions and in basic and familiar situations (Campbel & James, 2007). In young children, the focus on emotional information is a more observable factor. Emotional expression and emotional regulation of young children are less developed and require more support and empowerment from the social circle. Primary school children develop self-reported emotions and the ability to use words to describe emotional situations. As children mature, they incorporate not only situational information but also prior knowledge about past experiences and history, as well as conclusions about what others feel. Older children can better understand and express complex feelings like pride, embarrassment, and shame (Saarni, 2011).

#### **2.6.4. Gender**

Gender is the most important biological feature which distinguishes individuals from each other. Female children are generally more capable than male children in identifying and managing their emotions. For example, male children display a more negative affect than female children when they receive a gift which disappoints them. In addition, when it is handled emotionally, female children are more responsive, more empathic, and more socially responsive than male children (Davis, 1995). Goleman (2011) also highlighted that females have higher EI scores than males. There might be various reasons for these differences in gender, such as parenting and social acceptance. In the social world, female children learn to behave appropriately by the pressure exerted on them to “behave like a lady.” If they act differently from the expectations of society, they will not be accepted by society. Moreover, parents treat their children differently based on their gender. When bringing up their children, parents also express themselves differently to their daughters and to their sons. For example, mothers smile more at their sons than their daughters; furthermore, they expect their daughters to manage their emotions better (Davis, 1995).

#### **2.6.5. Modelling**

At an early age, being a model in the development of emotional skills is very effective, and children take their parents as their first models; next, they take their teachers as models. By observing the emotions and reactions of the adults around them, they develop strategies to manage their emotions. It is important that parents and teachers act as good role models for children by exhibiting appropriate behavior and giving them the opportunity to use their emotional skills in accordance with their development, in order to help them develop emotional skills (Shapiro, 2004).

#### **2.6.6. Culture**

Heritage and cultural dynamism, which are seen as developmental forces, can be analyzed in terms of the definition of culture (Cole & Parker, 2011). According to the social constructivist theory in psychology, emotions are the products of culture, and

these cultural products have significance and consistency in learned social rules (Özbayrak, 2006).

Culture is identified as a large group of values which are inherited from previous human activities involving the beliefs, rituals, and different perceptions of the world, in general, and which teach people how to deal with emotions and behave in a wide range of activities (Cole & Packer, 2011). Acquisition of emotional regulation and self-regulation of children is influenced by one's cultural background (Boyer, 2012). Although some emotions are very general and universal among cultures, the emotional lives of individuals are also affected by the culture, and this leads to the development of emotional differences (Özbayrak, 2006).

## **2.7. Studies Related to Emotional Intelligence**

### **2.7.1. Related National Studies**

Saltalı, Deniz, Çeliköz, and Arı (2009) adapted into Turkish the Evaluation of Six-Year-Old Children Emotional Skills Test, which was developed by Schultz and Izard in 1998. A year later, in her doctoral dissertation, Saltalı (2010) investigated the possible effect of an emotional education program on the emotional skills of six-year-old children attending kindergarten. The data were collected from 64 children attending nursery school classes in two different elementary schools operated by MoNE in Konya. The 64 children were equally divided into a control group (N=32) and an experimental group (N=32). The data were obtained from the participating children using the Assessment of Children's Emotional Skills Test, and a follow up study was carried out six weeks after the end of the study. The findings of the research revealed no significant difference in the pretest scores of the experimental and control groups; however, there was a significant difference in total Assessment of Children's Emotional Skills (ACES) scores and for the scores for the dimensions of identification of emotions, understanding of emotions, and expressing of emotions, respectively, for children in the experimental group with respect to taking emotional education. There was also no significant difference between the pre-test scores and the post-test scores in total ACES scores and for the respective scores for the dimensions of identification



of emotions, understanding of emotions, or expressing of emotions for children in the control group. Additionally, no significant difference was found between the post-test and follow-up test with respect to overall emotional skills scores for each dimension. Therefore, it can be inferred that the emotional education program supported the development of emotional skills in the children.

Ulutaş (2005) examined the possible effect of education on emotional intelligence on the emotional intelligence of six-year-olds of different socio-economic status who attended preschools in Ankara. The total of 120 children who participated in this study were equally divided into three groups: an experimental group (N=40), a placebo control group (N=40), and a control group (N=40). The emotional intelligence program was used for the 40 children in the experimental group. Three different scales were used in this study: the Sullivan Emotional Intelligence Scale for Children, the Sullivan Brief Empathy Scale for Children, and the Sullivan Teacher Rating Scale of Emotional Intelligence in Children. The findings of the study revealed that there was a significant difference in the emotional intelligence of the children depending on whether they had enrolled in the emotional education program or not. Additionally, the children who had enrolled in the emotional education program had higher scores in emotional intelligence than the other two groups of children. Furthermore, it was found that there were no significant differences in emotional intelligence among the participating children with respect to their gender, socio-economic status, or the educational levels of their parents.

Işık (2016) investigated possible differences in emotional skills (overall and for each dimension: identification of emotions, understanding of emotions, and expressing of emotions) of 60- to 72-month-old children with respect to the empathetic tendencies of their mothers, parent and child communication, age of their parents, educational level of their parents, total income of their family, whether their mothers were working or not, structure of their family, gender, number of siblings, birth order, the age when they started preschool education, type of school they were enrolled in, and having a friend as a playmate outside the school. The data were collected from 120 children and their mothers using the Empathic Tendency Scale, the Communication of Parents and

Children Assessment Tool (ABÇİDA), and the ACES. The findings of this study revealed that the emotional skills of the 60- to 72-month-old children whose mothers who had higher levels of empathy scored higher than the 60- to 72-month-old children whose mothers had lower levels of empathy. By examining the findings, it can be inferred that the emotional skill levels of the children living in large or extended families were higher than those of children living in nuclear families. Additionally, it was found that the emotional skill levels of children whose parents had a higher mother–father–child empathy and non-verbal communication skills were higher than those of children whose parents had lower mother–father–child empathy and non-verbal communication skills. Furthermore, the results of this study revealed no significant difference in the emotional skills of children regarding age of their parents, educational level of their parents, total income of their family, whether their mothers were working or not, gender, number of siblings, birth order, the age when they started preschool education, type of school they were enrolled in, and having a friend as a playmate outside the school.

Akaydın (2015) investigated the possible relationship between the emotional intelligence of six-year-old children enrolled in preschools and the style of humor of their mothers. The study was conducted with 206 six-year-old children who attended preschools in the Çubuk district of Ankara and their mothers. The data were obtained through general information forms for both the children and their mothers: the Sullivan Emotional Intelligence Scale for Children, and the Humor Styles Questionnaire. The results of the study revealed that there was a statistically significant difference in the emotional intelligence of children with respect to their gender, the number of years the children spent in preschool, the type of preschool as well as their mothers' age, educational level, and occupation. Additionally, it was found that there was a statistically negative relationship between the face dimension, which is one of the dimensions of emotional intelligence in children, and the self-deprecating style of humor of their mothers.

Karayılmaz (2008) determined the possible relationship between the emotional intelligence and the social adaptation skills of children enrolled in preschools. The

sample in this study consisted of 266 children, their parents, and their preschool teachers. The data were collected using the Sullivan Emotional Quotient Scale for Children, the Sullivan Scale for Evaluation of the Emotional Quotient of Children for Teachers, and the Social Adaptation and Skills Scale. The findings of this study revealed a positive correlation between the emotional intelligence and social adaptation skills of children. Additionally, there was no significant difference in the emotional intelligence of children with respect to their gender, birth order, the number of siblings, or the socio-economic status of their family.

Öztürk-Samur (2015) investigated the possible relationship between the externalizing behaviors and emotional skills of 60- to 72-month-old children and also investigated the differences in the externalizing behaviors those children as well as in their emotional skills with respect to their gender. The participants in the study were 209 children (F=96, M=113) aged between 60 and 72 months old. The data were collected using the Eyberg Child Behavior Inventory and the Assessment of Children's Emotional Skills. The findings of the study revealed that while there was a significant relationship, respectively, between the children's total scores obtained from the ACES, the understanding of emotions dimension, and the expressing of emotions dimension with the externalizing behaviors of the 60- to 72-month-old children, there was no significant relationship between the identification of emotions dimension and the externalizing behaviors of the children. Furthermore, it was found that there was a significant difference in total ACES scores and the identification of emotions dimension scores with respect to the gender of the children. Moreover, it was found that the female children obtained higher scores on the ACES and identification of emotions than male children.

Arı and Seçer-Şahin (2004) examined possible differences in identifying emotional facial expressions of children with respect to their gender, socio-cultural factors, mothers' educational level, fathers' educational level, and number of siblings. The data were obtained from 100 children attending six different nursery schools in different socio-cultural districts in Konya using two-dimensional standard drawings developed by Cüceloğlu in 1968, including happy, surprised, sad, and angry facial expressions.

The findings of this study showed that there was a significant difference in ability to identify the happy, sad, and angry facial expressions with respect to the children's socio-cultural status and their mothers' educational level; however, there was no significant difference in identifying emotional facial expressions of children with respect to gender, fathers' educational level, or number of siblings.

Eryılmaz (2010) investigated the differences between the emotional skills of six-year-old children living with their family and living in nurseries. The sample in this study consisted of 99 children living in Konya. The findings of the study revealed that while the overall ACES scores and the scores for the dimension of identification of emotions of children living in nurseries were significantly higher than those of the children living with their families, the scores for the dimensions of understanding of emotions and expressing of emotions of children living with their families were significantly higher than those of the children living in nurseries. There was no significant difference in overall ACES scores or in the scores for the dimensions of identification of emotions, understanding of emotions, or expressing of emotions for children both living with their families and living in nurseries with respect to their gender.

Yılmaz (2012) determined the possible effect of understanding of emotions of 60- to 72-month-old children on their social problem-solving skills. The sample in the study consisted of 350 children aged 60- to 72-months-old attending preschools in the Selçuklu, Meram, and Karatay districts of Konya. In order to obtain the data, the Denham's Affect Knowledge Test and the Wally Social Problem Solving Test were used. It was found that there was a significant difference in the social problem-solving skills of the 60- to 72-month-old children with respect to understanding of emotions, age, number of siblings, number of years at preschool, and the educational level of their mothers.

Kurt (2015) examined the possible relationship between the emotional skills levels of 60- to 72-month-old children and their problem behaviors. The sample in the study consisted of 494 children aged 60 to 72 months old enrolled in kindergartens in the Üsküdar district of İstanbul. The ACES, the Preschool and Kindergarten Behavior

Scales (PKBS-2), and a demographic information form were used in order to collect the data from the children. The findings of this study revealed that there was negative correlation between the emotional skills of 60- to 72-month-old children and their problem behaviors. There was also a significant difference in the emotional skills of the children depending on their gender, total income of the family, preschool education status, educational level of their parents, and family type.

Aşan and Özyer (2003) examined the demographic factors affecting emotional intelligence. The data were obtained from 220 students studying in Hacettepe University using the questionnaire developed by Schutte et al. (1998). The findings showed that while there was a significant difference in the emotional intelligence of the student participants with respect to gender and number of siblings, there was no significant difference in the emotional intelligence of the participants with respect to their educational level, type institution they were enrolled in, their mothers' and fathers' educational level, or the total income of their families. The findings showed that female students had higher scores for emotional intelligence than male students. Furthermore, the students with one or more siblings had higher emotional intelligence scores than the students without any siblings.

Özdemir (2015) examined the emotional intelligence and life satisfaction levels of university students enrolled in a faculty of education. The data were collected from 751 students (F=519, M=232) enrolled in the Kazım Karabekir Faculty of Education using the Trait Emotional Intelligence Scale – Short Form (TEIS-SF), the Life Satisfaction Scale, and a demographic information form developed by the researcher. The findings of this study revealed that there was a significant relationship between the emotional intelligence mean scores and the life satisfaction mean scores. It was also found that there was no significance difference in emotional intelligence mean scores of participants with respect to their departments. Furthermore, it was also inferred that emotional intelligence significantly predicted life satisfaction skills.

İşmen (2001) investigated the possible relationship between emotional intelligence and the perception of problem-solving skills. The data were obtained from 225

students attending Istanbul University using the EQ-NED and the Problem Solving Inventory. The findings of this study revealed that there was a significant positive correlation between emotional intelligence levels and perception of problem-solving skills and that there was a significant difference in emotional intelligence scores with respect to gender. Additionally, it was also found that the female students had higher emotional intelligence scores than the male students and that there was no significant difference in emotional intelligence and perception of problem-solving skills with respect to age.

Toytok (2013) investigated the level of emotional intelligence qualities used by primary school teachers in classroom management. The data were collected from 487 primary school teachers in Adapazarı. The results of this study revealed that primary school teachers had high levels of emotional intelligence in all areas except their empathy levels. Furthermore, the findings showed that married primary school teachers had higher levels of emotional intelligence. It was also found that the years of experience of primary school teachers had positive effects on emotional intelligence levels regarding classroom management.

Öztürk and Deniz (2008) investigated the possible differences in emotional intelligence levels of preschool teachers with respect to their age, educational level, number of social activities they engaged in, and number of in-service education events they participated in. The data were obtained from 378 preschool teachers working in public and private preschools in 13 different cities in the Central Anatolia Region of Turkey using the Bar-On Emotional Intelligence Scale, the Hackman and Oldham Job Satisfaction Scale, the Maslach Burnout Inventory, and a demographic information form. The findings of this study revealed that there was a significant difference in the emotional intelligence of preschool teachers depending on their educational level and the number of social activities they engaged in. There was also a significant difference in the job satisfaction of preschool teachers depending on the number of social activities they participated in and the number of in-service education events they participated in, and there was a significant difference in the burnout levels of preschool

teachers depending on their age, educational level, number of social activities they engaged in, and number of in-service education events they participated in.

Babaođlan (2010) determined the emotional intelligence of school administrators with respect to their gender, age, marital status, number of children in their district, whether they were elementary school administrators or high school administrators, whether they were principals or assistant principals, educational background, whether they had taken a course in managerial education, years of experience, and years of seniority in management. The sample in this study consisted of 180 administrators in elementary schools and high schools in Düzce. The data were obtained using the questionnaire developed by Schutte et al. (1998). The findings of this study revealed that while there was a significant difference in the emotional intelligence of administrators with respect to their school district and whether they were elementary school administrators or high school administrators, there was no significant difference in emotional intelligence of administrators with respect to their gender, age, marital status, number of children they had, whether they were a principal or an assistant principal, educational background, whether they had taken a course in managerial education, years of experience, or years of seniority in management.

Yılmaz and Şahin (2004) examined the possible differences in emotional intelligence levels of pre-service preschool teachers with respect to the city where they lived, their age, educational level, mothers' and father's educational level, and the socio-economic status of their family. The data were obtained from 210 pre-service preschool teachers using the Evaluation of Emotional Intelligence Scale and the demographic information form. The results of this study revealed that while there was a significant difference in the emotional intelligence of pre-service preschool teachers regarding their educational level and their mothers' and fathers' educational level, there was no significance difference in the emotional intelligence of pre-service preschool teachers with respect to the city where they lived, their age, or the socio-economic status of their family.

Deniz and Yılmaz (2006) determined the possible relationship between the emotional intelligence and the styles of coping with stress of college students. The data were obtained from 428 students (F=198, M=230) using the Bar-On Emotional Quotient Inventory and the Coping with Stress Scale. The findings showed that while there was a significant positive correlation between the intrapersonal, interpersonal, adaptability, stress management, and general mood dimensions of emotional intelligence of students and dealing with the problematic dimension of coping with stress, there was a significant negative correlation between the intrapersonal dimension of emotional intelligence and avoidance of the problematic dimension of coping with stress. Furthermore, it was found that there was a significant positive correlation between the interpersonal and general mood dimensions of emotional intelligence and the seeking social support dimension of coping with stress.

Aydın (2017) investigated the possible relationship between emotional intelligence and stress management. The data were collected from 80 teachers using the Bar-On EQ-i and the Stress Control Scale. The findings of this study revealed that teachers had a high level of emotional intelligence and communication skills; on the other hand, they had only middle-level stress management. Additionally, it was found that there was a significant positive relationship between emotional intelligence and stress management. The findings of this study also showed that there were no significant differences in the intrapersonal, interpersonal, stress management, adaptability, general mood dimensions or overall emotional intelligence scores of teachers with respect to their gender, age, or having children. While there were no significant differences in the intrapersonal, interpersonal, stress management, adaptability, or overall emotional intelligence scores of teachers with respect to their marital status, there was a significant difference in the general mood dimension scores of teachers with respect to their marital status. Additionally, it was found that single teachers had higher general mood scores than married teachers. Furthermore, it was found that there was a significant difference in the interpersonal dimension scores of teachers with respect to their years of experience. In other words, by examining the findings, it can



be inferred that teachers having one year or less of experience had higher levels of interpersonal skills than the teachers having between 10 and 15 years of experience.

Kayserili and Gündoğdu (2010) investigated the possible relationship between the emotional intelligence and the attitudes toward the teaching profession of pre-service preschool teachers and in-service preschool teachers. The data were obtained from 90 in-service preschool teachers and 80 pre-service preschool teachers using the Bar-On EQ-i and the Teaching Profession Attitude Scale. The findings of this study showed that the in-service preschool teachers had higher levels of emotional intelligence than the pre-service preschool teachers. Additionally, it was found that the female pre-service preschool teachers and in-service preschool teachers had higher levels of emotional intelligence than their male counterparts. Furthermore, it can be inferred that there was a positive correlation between the emotional intelligence of pre-service preschool teachers and in-service preschool teachers and their attitudes toward the teaching profession.

### **2.7.2. Related International Studies**

Poulo (2017) investigated the possible predictors of the emotional and behavioral difficulties of children in preschool classrooms. The study also examined the possible relationship between preschool teachers' perception of their own emotional intelligence and the emotional and behavioral difficulties of children as well as the possible relationship between preschool teachers' perception of the emotional skills of children and the emotional and behavioral difficulties of children. Also investigated were the possible differences in preschool teachers' perception of their own emotional intelligence with respect to their perceptions of children's emotional and behavioral difficulties based on the social skills of the children. The data were collected from 92 preschool teachers and 238 children. The findings of this study revealed that higher scores in preschool teachers' perception of their own emotional intelligence and children's social skills were related to lower scores in preschool teachers' perception of children's emotional and behavioral difficulties. Furthermore, it was found that the

preschool teachers' perception of their own emotional intelligence had a substantial effect on predicting children's emotional and behavioral difficulties.

Zinsler, Denham, Curby, and Shewark (2015) investigated the relationship between the emotional competence of preschool teachers and the social-emotional learning of children. The sample in this study was comprised of 32 teachers. The data were obtained using the Classroom Assessment Scoring System. The teacher participants also engaged in focus group discussions. The findings of this study revealed that preschool teachers with high emotional support were found to have similar beliefs to preschool teachers with moderate emotional support regarding the expression of emotions in preschool classrooms. Additionally, it was found that there were differences between the two groups with respect to knowledge of emotions and regulation of emotions. It was also inferred from the findings that preschool teachers who were more emotionally supportive not only introduced a pedagogical approach to the management of their own emotions in the classroom but also had a better understanding of emotions.

Roberts, LoCasale-Crouch, Hamre, and DeCoster (2016) examined the possible changes in social-emotional development of children in the interaction of the teachers having depressive symptoms. The sample of this study consisted of 2203 children and 355 Head Start teachers. The data were collected from preschool teachers by using the short-form of the CES-D in order to investigate the depression symptoms of the preschool teachers and from children by interviewing with preschool teachers and parents and doing an observation in the classrooms. The results of this study revealed that the children with more depressed preschool teachers had fewer gains in social-emotional skills.

Domitrovich, Cortes, and Greenberg (2007) adapted the Promoting Alternative Thinking Strategies Curriculum (PATHS) for children enrolled in Head Start preschools. The study was conducted in twenty preschool classrooms. The experimental group consisted of preschool teachers in 10 classrooms that had implemented the PATHS curriculum over nine months. When the findings of the pre-

test and post-test were investigated, it was found that children enrolled in the classrooms where the PATHS curriculum was implemented had higher emotional intelligence skills; additionally, they were rated more socially competent than their peers by their parents and preschool teachers.

Durlak et al. (2011) examined the possible impact of social and emotional learning programs consisting of 270,034 students from kindergarten through high school. The findings of this study showed that social and emotional learning programs had positive effects on the socio-emotional competencies of children and their attitudes toward self, others, and school.

Petrides and Furnham (2000) studied the possible relationship between emotional intelligence and gender. The data were obtained from 260 participants (F=175, M=85) with a mean age of 23.4 years from three different British Universities using the Emotional Intelligence Questionnaire (Schutte et al. , 1998) and Self-Estimated EI. The findings of this study showed that while there was no significant difference in total emotional intelligence of the participants with respect to their gender, there was a significant difference in social skills, which is one of the factors on the questionnaire that favors females. Additionally, it was also found that the gender is the significant predictor of self-estimated EI, which favors males.

Garner, Mahatmya, Moses, and Bolt (2014) determined the possible relationship between preschool type and teacher-child variables on positive and negative outcomes for children. The data were collected from 145 children (F=71, M=74). The findings of this study revealed that there was a significant difference in social-emotional development with respect to the type of preschool they attended. Additionally, it was found that the emotional regulation and emotional knowledge of children attending urban preschools were lower than in suburban preschools, as were those of children from the university-affiliated center. Teacher-child closeness was found to be lower in the urban preschools than in the suburban preschools or in the university-affiliated centers.

Houtmeyers (2000) investigated the possible relationship between attachment to mothers and fathers and the emotional intelligence of children. The sample in this study consisted of 31 (F=19, M=12) preschool age children, their parents, and their preschool teachers. Different measurements were used to gather data from the children, their parents, and their preschool teachers, and the emotional intelligence of the children was assessed in terms of three different dimensions: emotional self-awareness, achievement orientation, and empathy. The findings of this study revealed that although there is no significant relationship between the attachment relationship to mothers and the emotional intelligence of children, there is a significant relationship between the attachment relationship to fathers and the emotional intelligence of children, as a more secure attachment relationship with the father leads to lower levels of externalizing behavioral difficulties in children. It was also found that the emotional intelligence of children differs depending on their age, gender, and receptive language skills and that the empathy of children differs depending on their gender and favors female children.

Hudson and Jacques (2014) examined possible differences in the emotion regulation skills of children with respect to their age, gender, knowledge of emotion and display rules, theories of mind, and inhibitory control. The data were collected from 107 children (F=64, M=43) using emotion ToM, display rule knowledge, emotional understanding, and go/no go tasks. The findings of this study revealed that there were no significant differences in the emotion regulation skills of children with respect to their gender. It was also found that there was a correlation among understanding of others' emotions, inhibitory control skills, and emotion display rules for the children and their emotion regulation. Age and inhibitory control were found to be significantly predictive of the emotion regulation skills and emotion knowledge of children.

Havighurst et al. (2004) developed a parenting program aimed at enhancing the emotional competence of children. The sample in this study consisted of 47 parents with children of age four or five. The findings of showed that parents who enrolled in the parenting program began to use emotion-focused approaches in communicating

with their children more frequently than before the training. Furthermore, it was found that the children of parent participants had less emotional negativity.

Laible and Thompson (1998) examined the possible relationship between the attachment styles and the understanding of emotions of preschool children. The data were collected from preschool children aged between 2.5 and 6 years and their mothers. The mothers responded to the items of the Attachment Q-set; the understanding of emotions of the children was evaluated by a two-part affective perspective-taking task; and the children were also naturally interviewed in their preschools. The results of this study showed that children having secure attachment to their mothers also had better emotional understanding. Furthermore, the findings of this study revealed that older children have better emotional understanding with respect to their remarkable emotional developments throughout the preschool years. And finally, by looking at the findings of this study, it can be inferred that there is no significant difference in emotional understanding with respect to gender.

Malinauskas and Akelaitis (2015) investigated the emotional skills of children aged between 15 and 18 years in physical education classes. The data were collected from 401 students (F=203, M=198) aged between 15 and 18 years using the Schutte Self-Report Inventory (SSRI), which consists of four different emotional components: ability to use “personal positive emotional experience, ability to understand and analyze emotions, ability to assess and express emotions, [and] ability to manage emotions” (p. 1). The findings of this study revealed that the older students were better at using positive emotional experience than younger students. Additionally, it was found that the female students were better at understanding and analyzing emotions than the male students in physical education classes.

Morris, Denham, Bassestt, and Curby (2013) investigated the possible relationship between the emotion socialization beliefs and practices of preschool teachers and the emotional competence of children. The sample in this study consisted of 326 children aged between 33 and 71 months and 41 preschool teachers. The emotional knowledge of the children was evaluated using a shortened form of the Affect Knowledge Test

(AKT; Denham, 1986); the expression of emotions and the emotional behavior of children were determined using the Minnesota Preschool Affect Checklist-Revised. The teachers were observed using the Classroom Assessment Scoring System-Pre-K and the Classroom Expressiveness Questionnaire. Additionally, the preschool teacher participants responded to the items of the Coping with Children's Negative Emotions Scale (CCNES) and the Teacher Emotion Socialization Self-Test (TESST). The findings of this study showed that older children have higher emotional knowledge scores than younger children. Furthermore, a significant negative relationship was found between teacher sensitivity and the negative-aggressive behavior of children, and the educational level of preschool teachers was found to be a significant predictor of children's emotional knowledge.

Maguire, Niens, McCann, and Connolly (2016) determined the possible relationship between the social and emotional development and social behaviors of children; the study was also aimed at investigating the predictive effect of gender. The sample in this study consisted of 749 children aged between four and six years and their preschool teachers. While the children were assessed using the ACES, the Emotional Recognition Questionnaire, and the Tapping Test, data were collected from preschool teachers using a measure derived from the PATHS and the Strengths and Difficulties Questionnaire (SDQ). The findings of this study revealed that there was a significant difference in recognition of emotions, emotional regulation, and expressing of emotions with respect to gender, and difference favored the females.

Casey (1993) investigated the impact of social assessment on emotional experience and understanding of emotions of children. The data were obtained from 66 children by videotaping while playing a game with a slight positive and negative feedback from other children the gender of whom was same and who were at the same age. The result of this study revealed that the female children exhibited more positive and negative emotions than male children, and they were also better at expressing of emotions than male children. And it was also found that there was no significant difference in understanding of emotions of children with respect to age.

Rafaila (2015) examined the impact of an emotional education program on the emotional skills of first grade primary school children. The data were collected from 30 first grade primary school children in Buzau via observation, questionnaire, talk, and pedagogical experiment. The findings of this study showed that the emotional education program implemented helped children to find small differences in basic emotions and to better identify the determinants of these emotions.

Harrod and Scheer (2005) determined the emotional intelligence of adolescent with respect to demographic characteristics: age, gender, family income, parents' educational level, and location of their residences. The data were collected from 200 adolescent (F=91, M=109) aged between 16 and 19 by using demographic information form and the Bar-On Emotional Quotient Inventory Youth Short Version. The results of this study revealed that the emotional intelligence of the participant adolescents did not differ with respect to their age, location of their residences, and family income. On the other hand, it was also found that there was a significant difference in the emotional intelligence of the adolescents regarding their parents' educational level. The female adolescents had higher levels of emotional intelligence than male adolescents. The gender and fathers' educational level were found to be a significant predictor of the emotional intelligence of the adolescents.

Afolabi and Balogun (2017) investigated the possible impacts of psychological security, emotional intelligence, and self-efficacy on life satisfaction. The sample in this study consisted of 273 undergraduate students (F=95, M=178) in Nigeria. The data were collected using the Life Satisfaction Scale (Diener, Emmons, Larsen, & Griffin, 1985), and the Emotional Intelligence Scale (Afolabi, 2004); additionally, the psychological security of the student participants was assessed using a 10-item scale (Taormina & Sun, 2015), and self-efficacy was also evaluated using a 10-item scale (Schwarzer & Jerusalem, 1995). The results of this study revealed that psychological security, self-efficacy, and emotional intelligence of students independently predict their life satisfaction.

## **2.8. Summary**

This literature review chapter addresses four main aspects of emotional intelligence. First, a detailed definition of intelligence, emotion and emotional intelligence including historical bases of it are given. Secondly, three different models of emotional intelligence including model of John D. Mayer, model of Reuven Bar-On and model of Daniel Goleman are explained in the context of mixed model and ability model in detail. Thirdly, emotional skills including identification of emotions, understanding of emotions and expressing of emotions are described and the factors effecting emotional intelligence of individuals are given as temperament, brain development, age, gender, modelling and culture. Finally, reviews and summaries of the studies about emotional intelligence which were conducted both in abroad and in Turkey are given.



## CHAPTER 3

### METHODOLOGY

In this chapter how the data was collected and analyzed are presented. First, the design of the study is presented. Secondly, the population and samples of the study are described. Then, data collection instruments, information about the pilot study, and data collection procedures are given. Finally, data analysis is presented and the limitations and internal validity threats are identified.

#### **3.1. Design of the Study**

The main purpose of the current study is to examine the emotional skills of 66–72-month-old children and emotional intelligence of their preschool teachers and mothers. Additionally, the possible relationship between the emotional skills of 66–72-month-old children and the emotional intelligence of their preschool teachers and their mothers is also investigated. In addition, the current study is aimed to determine whether the emotional skills of 66–72-month-old children differ with respect to their gender, family income, preschool teachers' age, educational level, years of experience, self-reported skills, mothers' age and educational level, whether the emotional intelligence of preschool teachers differ with respect to their age, educational level, years of experience, and self-reported skills, and whether the emotional intelligence of mothers differ with respect to their age and educational level. Finally, it is also aimed to investigate the predictive impact of the emotional intelligence of the preschool teachers and the emotional intelligence of mothers on the emotional skills of 66–72-month-old children. In order to accomplish the purposes of the present study, quantitative methods and a cross-sectional survey research design were implemented (Fraenkel, Wallen & Hyun, 2015) by means of the following questions:

**R.Q.1.** What are the levels of 66–72-month-old children’s emotional skills (overall and under each dimensions: identification of emotions, understanding of emotions, and expressing of emotions)?

**R.Q.1.a.** Do the emotional skill scores of 66–72-month-old children differ with respect to their gender, family income, preschool teachers’ and mothers’ background information?

**R.Q.2.** What are the levels of the emotional intelligence (overall and under each dimensions: intrapersonal, interpersonal, stress management, adaptability, and general mood) of preschool teachers and mothers?

**R.Q.2.a.** Do the emotional intelligence (overall and under each dimensions: intrapersonal, interpersonal, stress management, adaptability, and general mood) of preschool teachers differ with respect to their age, educational level, years of experience, and self-reported skills?

**R.Q.2.b.** Do the emotional intelligence (overall and under each dimensions: intrapersonal, interpersonal, stress management, adaptability, and general mood) of mothers differ with respect to their age and educational level?

**R.Q.3.** How well do the overall emotional intelligence levels of preschool teachers and mothers predict overall emotional skills of 66–72-month-old children?

### **3.2. Population and Samples**

As Fraenkel et al. (2015) stated, the actual population (named as the target population) which a researcher really wants to generalize is seldomly available. In this current study, the target population which the researcher would actually like to generalize the findings of the study consisted of all 66–72-month-old children who are attending public and primary elementary schools and preschools operated by Ministry of National Education (MoNE) in Ankara capital city of Turkey, their preschool teachers, and their mothers.

As Fraenkel et al. (2015) stressed that the accessible population is the population that a researcher can generalize the findings of a research. In this current study, the accessible population the researcher is able to generalize realistically is all the 66–72-month-old children attending public and primary elementary schools and preschools operated by MoNE in Çankaya, Yenimahalle, and Etimesgut districts of Ankara, their preschool teachers and mothers.

Since, reaching all of them was both really hard and impractical, convenience sampling method which is a type of a non-random sampling method was employed to identify the sample which is emphasised as the group from which the information is obtained in a research study (Fraenkel et al., 2015).

### **3.2.1. Demographic Information of 66–72-Month-Old Children**

A total of 126 children who are 66–72-month-old participated in this study. 65 (51.6%) of the participant children were female, and 61 (48.4) of them were male. The ages of the participant children were ranged from 66 to 72 months ( $M=68.6$ ). In addition, 65 (51.6%) ( $F=35$ ,  $M=30$ ) of the participant children were aged between 66 and 68 months old and 61 (48.4%) ( $F=30$ ,  $M=31$ ) of them were aged between 68.01 and 72 months old (see Table 3.1).

42 (33.3%) ( $F=26$ ,  $M=16$ ) of the participant children were attending the public and primary elementary schools and preschools operated by MoNE in Çankaya, 42 (33.3%) ( $F=21$ ,  $M=21$ ) of them were attending the public and primary elementary schools and preschools operated by MoNE in Yenimahalle, and 42 (33.3%) ( $F=18$ ,  $M=24$ ) of them were attending the public and primary elementary schools and preschools operated by MoNE in Etimesgut. The family income of the participant children were ranged from 2500 to 8900 TL. 42 ( $F=20$ ,  $M=20$ ) of the participant children's family income were ranged between 2500 and 3500 TL, 42 ( $F=20$ ,  $M=20$ ) of the participant children's family income were ranged between 3501 and 5550 TL and 42 ( $F=25$ ,  $M=17$ ) of the participant children's family income were ranged between 5551 and 8900 TL.

**Table 3. 1***Demographic Information of the Participant Children*

<i>Gender</i>	<i>f</i>	<i>%</i>
Female	65	51.6
Male	61	48.4
<i>Age</i>	<i>f</i>	<i>%</i>
66 – 68 months	65	51.6
68.01 – 72 months	61	48.4

**3.2.2. Demographic Information of Preschool Teachers**

A total of 126 preschool teachers participated in this present study. All of the participant preschool teachers were female and working in public and primary elementary schools and preschools operated by MoNE. 42 (33.3%) of the participant preschool teachers were working in the public and primary elementary schools and preschools operated by MoNE in Çankaya, 42 (33.3%) of them were working in the public and primary elementary schools and preschools operated by MoNE in Yenimahalle, and 42 (33.3%) of them were working in the public and primary elementary schools and preschools operated by MoNE in Etimesgut. The ages of the participant preschool teachers ranged from 28 to 49 ( $M=35.83$ ). In addition, 51 (40.5%) of the participant preschool teachers were aged between 29 and 34 years old, 36 (28.6%) of them were aged between 35 and 37 years old, and 39 (31%) of them were aged between 38 and 49 years old. 28 (22.2%) of the participant preschool teachers were high school graduates, 45 (35.7%) of them held an associate's degree, and 33 (42.1) of them held a bachelor's degree. The years of experience of the participant preschool teachers ranged between 8.5 to 29 years ( $M=13.91$ ). 48 (38.1%) of the participant preschool teachers had an experience between 8.5 and 11 years, 36 (28.6%) of them had an experience between 11.01 and 16 years, and 42 (33.3%) of them had an experience between 16.1 and 29 years (see Table 3.2).

### 3.2.2.1. Information Related to Children's Emotional Skills

Together with the questions which were related to demographic information, the participant preschool teachers were asked an additional question in order to determine their self-reported skills in developing children's emotional skills in the early childhood setting. 15 (11.9%) of the participant preschool teachers reported that they had a moderately competent level of skills in developing children's emotional skills in the early childhood setting, 78 (61.9%) of them reported that they had competent level of skills in developing children's emotional skills in the early childhood setting, and 33 (26.2%) of them reported that they had very competent level of skills in developing children's emotional skills in the early childhood setting (see Table 3.3).

**Table 3. 2**

*Demographic Information of the Participant Preschool Teachers*

<i>District</i>	<i>f</i>	<i>%</i>
Çankaya	42	33.3
Yenimahalle	42	33.3
Etimesgut	42	33.3
<i>Age</i>	<i>f</i>	<i>%</i>
29-34 years old	51	40.5
35-37 years old	36	28.6
38-49 years old	39	31
<i>Educational Level</i>	<i>f</i>	<i>%</i>
High school graduate	28	22.2
Associate's degree	45	35.7
Bachelor's degree	33	42.1
<i>Years of Experience</i>	<i>f</i>	<i>%</i>
8.5-11 years	48	38.1
11.01-16 years	36	28.6
16.1-29 years	42	33.3

**Table 3.3**

*Information concerning Preschool Teachers' Self-Reported Skills in Developing Emotional Skills of Children*

<i>Self-Reported Skills</i>	<i>f</i>	<i>%</i>
Moderately Competent	15	11.9
Competent	78	61.9
Very Competent	33	26.2

### 3.2.3. Demographic Information of the Mothers

A total of 126 mothers participated in this current study. The ages of the participant mothers ranged between 26 and 45 (M=33.9). 53 (42.1%) of the participant mothers were aged between 26 and 32 years old, 37 (29.4%) of them were aged between 33 and 36, and 36 (28.6%) of them were aged between 37 and 45 years old. 122 (96.8%) of the participant mothers were married and 4 (3.2%) of them were divorced. 55 (43.7%) of the participant mothers had an associate's degree or lower, and 71 (56.3%) of them had a bachelor's degree and higher (see Table 3.4).

**Table 3.4**

*Demographic Information of the Participant Mothers*

<i>Age</i>	<i>f</i>	<i>%</i>
26-32 years old	53	42.1
33-36 years old	37	29.4
37-45 years old	36	28.6
<i>Marital Status</i>	<i>f</i>	<i>%</i>
Married	122	96.8
Divorced	4	3.2
<i>Educational Level</i>	<i>f</i>	<i>%</i>
Associate's degree or lower	55	43.7
Bachelor's degree or higher	71	56.3

### **3.3. Data Collection Instruments**

The data were collected through four different instruments. First, two different demographic information forms were prepared for preschool teachers and mothers by researcher. Secondly, the emotional intelligence of 66–72-month-old children’s preschool teachers and mothers were investigated through “Bar-On Emotional Quotient Inventory (EQ-i)” (Bar-On, 1997). At last, to determine the emotional skills of 66–72-month-old children, “Assesment of Children’s Emotional Skills Test (ACES)” (Schultz & Izard, 1998) was used. In this part, the instruments used in this study are described particularly (see Table 3.5).

**Table 3.5***Instruments and Variables*

<i>Instruments</i>	<i>Variables</i>
Demographic Information Form for Preschool Teachers	Gender Age Educational level Years of experience The strategies used in the classroom environment to improve the emotional skills of children Previous participation in education program/ course/ seminar about the children's emotional skills Levels of proficiency the preschool teachers perceive in developing children's emotional skills
Demographic Information Form for Mothers	Gender of 66–72-month-old children Age Marital status Educational level Family income Previous participation in the family education program Previous participation in education program/ course/ seminar about children's emotional skills
Bar-On Emotional Quotient Inventory (EQ-i) (Bar-On, 1997)	Intrapersonal Interpersonal Stress Management Adaptability General Mood
Assessment of Children's Emotional Skills Test (ACES) (Schultz & Izard, 1998)	Identification of Emotions Understanding of Emotions Expressing of Emotions



### **3.3.1. Demographic Information Form For Preschool Teachers**

To get the socio-demographic information of participant preschool teachers, a demographic information form was developed by researcher. This demographic information form (see Appendix A) includes questions about the participant preschool teachers' gender, age, educational level, years of experience in early childhood education, the strategies used in the classroom environment to improve the emotional skills of children, previous participation in education program/ course/ seminar about the children's emotional skills, self-reported skills in developing children's emotional skills.

### **3.3.2. Demographic Information Form For Mothers**

To get the socio-demographic information of participant mothers, a demographic information form was developed. This demographic information form (see Appendix B) includes questions about participant mothers' gender of 66–72-month-old children, marital status, educational level, total income of the family, previous participation in the family education program and previous participation in education program/ course/ seminar about children's emotional skills.

### **3.3.3. Bar-On Emotional Quotient Inventory**

The "Bar-On Emotional Quotient Inventory (EQ-i)" (see Appendix C) was developed by Reuven Bar-On in 1997 to measure the emotional intelligence of a human. In 2001, this scale was adapted to Turkish by Acar. The scale was constructed in five different dimension; first dimension contains 29 items to identify intrapersonal which are constructed in five different sub- dimensions: self-regard, emotional self-awareness, assertiveness, independence, and self-actualization. Second dimension contains 18 items to identify interpersonal which are constructed in three sub- dimensions: Empathy, social responsibility, and interpersonal relationship. Third dimension contains 13 items to identify stress management which is constructed in two sub- dimensions: stress tolerance and impulse control. Fourth dimension contains 15 items to identify adaptability which is constructed in three sub- dimensions: reality-testing, flexibility,

and problem-solving, and the last dimension contains 12 items to identify general mood which is constructed in two sub- dimensions: optimism and happiness (see Table 3.6).

**Table 3.6**

*Dimensions, Sub-dimensions and Items of EQ-i*

<i>Dimensions</i>	<i>Sub-dimensions</i>	<i>Items</i>
Intrapersonal	Self-regard	10, 14, 26, 44, 55, 69
	Emotional self-awareness	2, 8, 13, 38, 53, 84
	Assertiveness	7, 9, 20, 27, 39, 86
	Indepence	22, 24, 47, 64, 73
	Self-actualization	15, 17, 19, 21, 28, 35
Interpersonal	Empathy	25, 30, 49, 77, 81
	Social-responsibility	34, 43, 45, 48, 59, 79
	Interpersonal relationship	16, 32, 42, 46, 57, 62, 67
Stress Management	Stress tolerance	3, 6, 60, 63, 68, 75, 80
	Impulse control	11, 29, 36, 41, 66, 70
Adaptability	Reality testing	4, 12, 52, 56, 82
	Flexibility	18, 50, 58, 61, 71
	Problem solving	1, 23, 33, 51, 87
General Mood	Optimism	5, 31, 76, 78, 85
	Happiness	37, 40, 54, 65, 72, 74, 83

The scale is based on a 5-point Likert scale with following choices: 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree. The Bar-On Emotional Quotient Inventory has 39 inverse items.

**Table 3.7***Cronbach Alpha Values for the Bar-On Emotional Quotient Inventory*

<i>Dimensions</i>	<i>Number of Items</i>	<i>Cronbach Alpha (Acar, 2001)</i>	<i>Cronbach Alpha of the Current Study</i>
Intrapersonal	29 items	.83,73	.93
Interpersonal	18 items	.77,87	.83
Stress Management	13 items	.73,14	.83
Adaptability	15 items	.65,42	.82
General Mood	12 items	.75,06	.92
EQ-i	87 items	.92,12	.94

Even though this emotional intelligence scale had 133 items, Acar excluded fifty five of the items. As Acar (2001) reported, fifteen of the 133 items which measure the respondents' tendencies to fill the scale were not included in any dimensions. So these fifteen items were excluded from the scale. Content validity was established by getting expert opinion.

The reliability of the scale was determined by ensuring the Cronbach Alpha Coefficient (see Table 3.7). The Cronbach alpha coefficient values were reported for each sub-dimension was .83,73 for the intrapersonal, .77,87 for the interpersonal, .73,14 for the stress management, .65,42 for the adaptability, .75,06 for the general mood, and .92,12 for the whole scale (Acar, 2001).

In the present study, the Cronbach alpha coefficient value for the whole scale was reported as .94. As for the dimensions of the scale, the Cronbach alpha coefficient values were reported as .93 for the intrapersonal, .83 for the interpersonal, .83 for the stress management, .82 for the adaptability, and .92 for the general mood. Since the Cronbach alpha coefficient values which are above .70 are considered to be acceptable although, a cronbach alpha coefficient values which are higher than .80 are recommended (Pallant, 2010). Since the all cronbach alpha coefficient values were

above .70, the EQ-i scale and its dimensions were considered to be reliable with the sample of this current study.

#### **3.3.4. Assessment of Children's Emotional Skills Test (ACES)**

The "Assessment of Children's Emotional Skills Test (ACES)" (see Appendix D) was developed by Schultz and Izard (1998) to evaluate children's emotional skills. The scale includes total of 36 items and consist of three dimensions, which are identification of emotions, understanding of emotions and expressing of emotions. Identification of emotions dimension includes 12 pictures showing emotional facial expression such as sad, happy, frightened, and angry. Both understanding of emotions and expressing of emotions dimension include 12 sample events which consist of emotional situations that children can face in their daily life (Schultz & Izard, 1998). The test is scored as 1 point for every correct answers and 0 point for every wrong answers and "do not know" answers. While the minimum score which can be obtained from identification of emotions dimension, understanding of emotions dimension, and expressing of emotions dimension is 0 point, the maximum score which can be get from identification of emotions dimension, understanding of emotions dimension, and expressing of emotions dimension is 10 points. Additionally, while the minimum score for total emotional skills is 0 point, the maximum score for total emotional skills is 30 points. The test was adapted into Turkish by Saltalı et al. in 2009. As a result of the validity and reliability studies, two items were excluded from each sub-test.

To translate "ACES" into Turkish, first, the test was translated into Turkish by three different experts in early childhood education. Secondly, these translated items were compared with each other to choose the best translated items by the experts whom translated the items into Turkish. Then, these chosen items were translated into English by three different English linguists. Lastly, the conversion is terminated as a result of determining that the test items are equivalent to the initial items.

An adaptation study was conducted with 111 six-year-old preschoolers (F=51, M=60) who were attending four different public and one private nursery school which are operated by MoNE in Konya by Saltalı et al. (2009).

To determine the construct validity of the test, factor analysis was carried out by the researchers. The factor load is reported between .35 and .59 in the identification of emotions dimension; between .30 and .60 in the understanding of emotions dimension and between .31 and .68 in the expressing of emotions dimension. The coefficients of correlation between sub-tests are reported as .568 between the identification of emotions dimension and the understanding of emotions dimension; .428 between the identification of emotions dimension and the expressing of emotions dimension, and .472 between the understanding emotions dimension and the expressing emotions dimension (Saltalı et al., 2009)

The reliability of the test was determined by split half method and Kuder-Richardson formula 20 method. The score obtained from split half method was reported .87 for the identification of emotions dimension, .82 for the understanding of emotions dimension, .78 for the expressing of emotions dimension, and lastly .79 for the total score of the test. KR-20 values calculated for each dimension was .83 for the identification of emotions dimension, .89 for the understanding of emotions dimension, .83 for the expressing of emotions dimension, and lastly .81 for the total score of the test (Saltalı et al., 2009).

In the current study, the Cronbach alpha coefficient value for the whole scale found to be .86. As for the dimensions of the scale, the Cronbach alpha coefficient values were reported as .81 between the identification of emotions dimension and understanding of emotions dimension, .83 between the identification of emotions dimension and the expressing of emotions dimension, and .84 between the understanding of emotions dimension and the expressing of emotions dimension. According to Pallant (2010), Cronbach alpha coefficient values above .70 are considered as acceptable, even though the values higher than .80 are recommended. As the all cronbach alpha coefficient values were above .70, the ACES and its dimensions were considered as reliable with the sample of this present study.

### **3.4. Pilot Study**

Before the main study, a pilot study was conducted with 48 children (F=24, M=24) who were 66–72-month-old and were attending public and primary elementary schools and preschools which are different from the main study public and primary elementary schools and preschools operated by MoNE in Çankaya, Yenimahalle, and Etimesgut districts of Ankara.

The convenience sampling method which is a type of nonrandom sampling method is based on collecting data from a group of individuals conveniently available to participate in a study (Fraenkel et al., 2015). So the convenience sampling method was used to collect data. Data collection procedure was occurred in the first semester of the 2015-2016 academic year. Then, the validity and reliability analyses of the Assessment of Children's Emotional Skills Test (ACES) were conducted by using the pilot data.

In the pilot study, the Cronbach alpha coefficient value for the entire scale was .85. As for the dimensions of the scale, the Cronbach alpha coefficient values were reported as .81 between identification of emotions dimension and understanding of emotions dimension, .77 between identification of emotions dimension and expressing of emotions dimension, and .70 between understanding of emotions dimension and expressing of emotions dimension.

### **3.5. Data Collection Procedure**

Before the data collection was initiated in the second semester of the 2015-2016 academic year, some formal procedures are followed for the implementation of the instruments. First, ethical permission was taken from the Research Center for Applied Ethics ethical committee at Middle East Technical University (see Appendix F). Data collection process occurred between March 2016 and June 2016. Preschools were chosen based on their convenience to the researcher.

Before the data collection process occurred, the researcher visited the preschools, introduced herself and gave information about the study. More specifically, school administrations were informed about the purpose of the study. Then, the preschool

teachers were informed about the purpose of the study and their help was requested about sending questionnaires and consent form to mothers.

The researcher informed the mothers about the study and the procedure through consent forms sent them via preschool teachers. The mother was requested to sign the consent form if they give permission about their children's participation in the current study. Furthermore, the researcher requested from the mothers who signed the consent form in order to participate voluntarily in this current study to fill the demographic information form and Bar-On Emotional Quotient Inventory (EQ-i) in their houses and send the signed consent forms and filled EQ-i back to school via their children.

A week later, the researcher went to the public and primary elementary schools and preschools in order to get the consent forms sent to the mothers and questionnaires which were filled by the mothers and also in order to apply Assessment of Children's Emotional Skills Test (ACES) to 66–72-month-old children whose mothers gave permission for their children's participation.

The researcher introduced herself to children and explained simplistically the aim of the study and the procedure which they will be encountered. After getting consents for being participation from the children as verbally, the researcher began to apply Assessment of Children's Emotional Skills Test (ACES) to the 66–72-month-old children in rooms which were addressed by school administrations. In the rooms, there was nobody else other than the researcher. The items were asked in the same order to each child. Secondly, the researcher showed 10 different photos and wanted from a child to identify the emotions. The researcher read 10 different case about emotions and wanted from a child to understand the emotions. Finally, the researcher read 10 different case about emotions and wanted from a child to express the emotions. Children were encouraged to talk about their and other's emotions. They were given time to think about the photos and cases. Children were informed that they could give up or take a break if they got bored. Responding the items took approximately 20 minutes for each child.

The researcher requested from the preschool teachers to participate voluntarily in this present study. Before data collection sessions, the preschool teachers were informed about the aim of the current study and they were told that there was no right or wrong response in the scale and their responses were important. Furthermore, to keep the confidentiality of the data, researcher informed them that any of the data would not be shared and the data would be used only for the scientific research studies. Finally, they were told that they could give up responding the test any time if they do not want to continue and the researcher ask them not to write their names on the forms in order to converse the anonymity of the participant preschool teachers and the confidentiality of the research data. Responding the items took approximately 15-20 minutes for preschool teacher.

### **3.6. Data Analysis**

The SPSS 23.0 package program was used to analyze the data. A preliminary data analysis was conducted to check for missing data, outliers, and normality assumption.

First, a descriptive analysis was conducted to examine the general patterns of the 66–72-month-old children’s emotional skills, emotional intelligence of the mothers and the preschool teachers. Information about means, standard deviations, minimum and maximum values was provided via using descriptive statistics.

Secondly, a one-way between-groups multivariate analysis of variance (MANOVA) was performed to determine the mean differences among groups on the dependent variables in order to examine if there was a significant difference in the emotional skills (under each dimensions: identification of emotions, understanding of emotions, and expressing of emotions) of the 66–72-month-old children with respect to their gender, family income, and preschool teachers’ and mothers’ background information.

Independent sample t-test was conducted to examine the mean differences among groups on the dependent variable in order to examine whether there was a significant difference in the emotional skills overall scores of the 66–72-month-old children with respect to their gender. And a one-way between-groups analysis of variance (ANOVA) was conducted to investigate the mean differences among groups on the dependent



variable. To examine if there was a significant difference in 66–72-month-old children's emotional skills overall scores with respect to their family income and preschool teachers' and mothers' background information.

A one-way between-groups multivariate analysis of variance (MANOVA) was conducted to whether there was a significant difference in the emotional intelligence (under each dimensions: intrapersonal, interpersonal, stress management, adaptability, and general mood) of the preschool teachers of the 66–72-month-old children with respect to their age, educational level, years of experience, and self-reported skills.

A one-way between-groups analysis of variance (ANOVA) was performed to investigate whether there was a significant difference in preschool teachers' overall emotional intelligence scores with respect to their age, educational level, years of experience, and self-reported skills.

A one-way between-groups multivariate analysis of variance (MANOVA) was conducted to examine if there was a significant difference in the emotional intelligence (under each dimensions: intrapersonal, interpersonal, stress management, adaptability, and general mood) of the mothers with respect to their age and educational level.

A one-way between-groups analysis of variance (ANOVA) was performed in order to investigate whether there was a significant difference in mothers' emotional intelligence overall scores with respect to their age. And independent sample t-test was conducted in order to examine whether there was a significant difference in the mothers' emotional intelligence overall score with respect to their educational level.

Lastly, multiple regression analysis was conducted to explore the impact of the preschool teachers' emotional intelligence and mothers' emotional intelligence on the emotional skills of the 66–72-month-old children.

### **3.7. Assumptions and Limitations**

It is assumed that participant mothers and preschool teachers responded to the items of the instrument honestly. The participant 66–72-month-old children were assumed not being tired or sleepy while responding the items of the instrument.

The study was only conducted in the Çankaya, Yenimahalle and Etimesgut districts of Ankara with 126 children who are 66–72-month-old, their preschool teachers and their mothers which made it difficult to generalize the findings.

### **3.8. Threats to the Internal Validity of the Study**

Internal validity has been identified as, "any relationship observed between two or more variables should be unambiguous as to what it means rather than being due to something else" (Fraenkel et al., 2015, p.167). That is to say that internal validity means that the differences observed in the dependent variable are directly related with the independent variable and not related with some other unintended variables. Researchers can design ways to eliminate or at least minimize the possible threats by identifying these threats otherwise, researchers can never be sure that the reason for observed results is whether possible threats or not. Probable internal threats are stated as subject characteristics (selection bias), mortality (loss of subjects), location, and instrumentation for survey-based research (Fraenkel et al., 2015).

Selecting people for a study can end up individuals or groups different from one and another in unintended ways which are about the variables being studied (Fraenkel et al., 2015). In the current study, to minimize of this threat, 66–72-month-old children enrolled in public and primary elementary schools and preschools operated by MoNE in Çankaya, Yenimahalle, and Etimesgut districts of Ankara were chosen as the sample group by assuming that they would have similar characteristics depending on similar ages and living in the same city and their mothers and their preschool teachers were chosen as the sample group by assuming that they would have similar characteristics based on living in the same city.

Mortality (loss of subjects) threat which affects the outcomes of the study is defined as the loss of the subjects by the reason of attrition, withdrawal of subjects from the study or low participation rates (Fraenkel et al., 2015). In this current study, before the data collection procedures occurred, preschool teachers of 66–72-month-old children were informed about the purpose of the study and their help was requested for sending consent forms to mothers for both the participation of their children and being

participation voluntarily in the current study. After the researcher got the consent forms and the Bar-On Emotional Quotient Inventory (EQ-i) filled by the mothers, the researcher began to apply the Assessment of Children Emotional Intelligence Test (ACES) to the 66–72-month-old children one to one. Thus, the mortality was not a threat to the internal validity of this current study.

Locations where data are collected can affect the outcomes of a study (Fraenkel et al., 2015). To minimize the effect of this threat, in this current study, the researcher wanted the administrators to show a place where there would not be any objects which can distract the participant children's attention before applying the ACES to the children one to one.

Instrumentation may cause some threats to the internal validity of the study. Possible instrumentation threats are stated as instrument decay, characteristics of the data collector(s), and/or the bias of the data collector(s) by Fraenkel et al. (2015). Instrument decay treat which can affect the results of the study is defined as changing the nature of the instrument or scoring the instrument in a different way (Fraenkel et al., 2015). The original scoring of the data collection instruments was not changed. Additionally, to make the scoring process easier, all scales were printed in the same format. As a result, the instrument decay was not considered as a threat to the internal validity of this study. The characteristics of the data collector can affect the outcome of the study (Fraenkel et al., 2015). Due to the fact that the same researcher collected the data of this current study, the data collector characteristics were the same for all participant 66–72-month-old children and participant preschool teachers. Therefore, data collector characteristics were not a threat to the internal validity of this current study. The data collector can consciously or unconsciously change the data. This is referred to as data collector bias (Fraenkel et al., 2015). In this study, the data collector got some sort of training to be able to standardized all the data collection procedures before the data collection procedure was occurred and to be able to adopt a standardized approach through the application. Furthermore, there was no treatment to encourage an interaction between the data collector and the participants of the study. Thus, data collector bias was not a threat to the internal validity of the current study.

## **CHAPTER 4**

### **RESULTS**

This chapter includes the results of the preliminary data analysis, descriptive statistics and inferential statistics. First, the preliminary analyses were conducted in order to ensure that assumptions required for the analysis are met and the results of the preliminary analysis were presented by checking missing data, outliers, and normality assumption. Secondly, the descriptive statistics including the characteristics of the participants and study variables were determined, a one-way between-groups multivariate analysis of variance (MANOVA), independent sample t-test, and a one-way between-groups analysis of variance (ANOVA) were performed. Finally, Multiple Regression Analysis were conducted and the findings of these analyses are presented in detail.

#### **4.1. Preliminary Data Analysis**

Preliminary data analysis was conducted to ensure that assumptions which are required for the statistical analysis are met by checking for missing data and outliers, and assessing normality. In this current study, preliminary data analysis were performed by using the SPSS 23.0 package program.

##### **4.1.1. Missing Data Analysis**

According to Pallant (2010), especially when doing a research with human beings, it is very rare to get a complete data from every case of a study. So, these missing values can effect the results of the statistical analyses dramatically. Therefore, it is important to check the data file for missing values.

Tabachnick and Fidell (2007) stated that if 5% or less data points are missing on a random pattern in a large data set, the problems are less crital and almost all procedures

to deal with missing data yields similar results. However, the problems might be very critical if there is too much missing data in a small and moderately sized data set. In this current study, there are no missing values in the demographic data of the participant preschool teachers, demographic data of the participant mothers except family income values, demographic data of the participant children, and Assessment of Children's Emotional Skills Test (ACES). Every missing item which were less than 5% in The Bar-On Emotional Quotient Inventory (EQ-i) was replaced with the mean value of that item which is one of the option to deal with missing data by giving the mean value for the variable to every missing data (Pallant, 2010).

#### **4.1.2. Outliers**

An outlier identified as "a case with such an extreme value on one variable (a univariate outlier) or such a strange combination of scores on two or more variables (multivariate outlier) that it distorts statistics." (Tabachnick & Fidell, 2007, p. 72). Outliers can be distinguished from the dataset by specifying extreme points are identified as the values which extend more than three box-lengths away from the edge of the box by using box plots (Pallant, 2010).

The external values have a significant effect on the mean which can be determined by the 5% trimmed mean value in each dimension. If the mean value is very different from the 5% trimmed value, the data values should be examined in more detailed way (Pallant, 2010). In the current study, all of the criteria which are stated above were taken into consideration in order to find out the outliers and in order to deal with the outliers, transforming the data option which is used to reduce the effect of univariate outliers by changing the shape of the distribution to almost more normal (Field, 2009) was used.

#### **4.1.3. Normality**

To screen continuous variables in order to check the normality is an important step before performing an inferential statistic. Normality can be checked by obtaining skewness and kurtosis values. If a skewness and kurtosis value is 0, the distribution is

accepted as perfectly normal. But this rarely arises in social sciences. While if the skewness and kurtosis values which are within the range of -1 and +1 may be considered as a good value, the skewness and kurtosis values which are within the range of -2 and +2 might be considered as acceptable (Tabachnick & Fidell, 2007).

In this current study, the skewness and kurtosis values of each continuous variables were checked for the normality and they were found within the range of -2 and +2.

#### **4.2. 66–72-month-old children’s emotional skills (overall and under each dimension: identification of emotions, understanding of emotions, and expressing of emotions)**

In order to answer this research question, descriptive statistics were performed to analyze the data collected from 66–72-month-old children by using ACES. Mean, standard deviation, minimum, and maximum values get from this scale are presented in Table 4.1.

**Table 4.1**

*Mean Values and Maximum Points for ACES Dimensions*

<i>Dimensions</i>	<i>M</i>	<i>SD</i>	<i>Min.</i>	<i>Max.</i>
Identification of Emotions	8.35	1.25	5	10
Understanding of Emotions	9.12	.86	6	10
Expressing of Emotions	8.90	.94	7	10
ACES	26.37	2.78	18	30

Descriptive statistics results for the entire ACES indicated that the mean value was 26.37 (SD=2.78, Min=18, Max=30). When the mean value of ACES was examined, it can be inferred that 66–72-month-old children had high level of emotional skills. In other words, they have high level of emotional skills: identification of emotions, understanding of emotions, and expressing of emotions. Furthermore, when the mean scores of the 66–72-month-old children in each dimension were compared, it could be seen that the children had the highest scores in understanding of emotions (M=9.12, SD=.86, Min=6, Max=10). When compared with the above stated dimension, children had the lowest mean scores in identification of emotions (M=8.35, SD=1.25, Min=5,

Max=10) (see Table 4.1). Therefore, it can be inferred that 66–72-month-old children are able to understand of oneself and others' emotions. However, they are not able to easily recognize the meanings of emotions given by facial expressions.

#### **4.2.1. 66–72-month-old children's emotional skill scores (overall and under each dimensions: identification of emotions, understanding of emotions, and expressing of emotions) with respect to their gender, family income, preschool teachers' and mothers' background information**

Multivariate analysis of variance (MANOVA) is conducted to compare the groups on more than one dependent variable (Pallant, 2010). Conducting MANOVA instead of conducting a series of ANOVAs separately for each dependent variable provides the control of the risk of a Type I error (Pallant, 2010).

The assumptions of multivariate analysis of variance (MANOVA) are stated as sample size, normality, linearity, univariate and multivariate outliers, homogeneity of variance-covariance matrices, and multicollinearity (Pallant, 2010). Before proceeding with the multivariate analysis of variance (MANOVA), assumptions were met. The results of each assumption are presented below.

In order to check the multicollinearity and singularity assumption, correlation analysis were proceed which is the simplest way to check the strength of the correlations between the dependent variables (Pallant, 2010). Correlations were found to be .93 for the overall ACES score and the identification of emotions score, .89 for the overall ACES score and the understanding of emotions score, and .90 for the overall ACES score and the expressing of emotions score. According to Pallant (2010), if the correlations were found as up around .8 or .9, removing of the dependent variable which is the strongly correlated with other dependent variables can be a way to meet the multicollinearity and singularity assumption. Therefore, the overall ACES score which was highly correlated with other dependent variables was removed from the analysis. The correlations between the other dependent variables (identification of emotions, understanding of emotions, and expressing of emotions) were less than .8 or .9. Thus, multicollinearity assumption was not violated for this current study.

In order to check the multivariate normality assumption, Mahalanobis distance value was investigated. As we have 3 dependent variables, the critical value is identified as 16.27 (Tabachnick & Fidell, 2007). Since the maximum value for Mahalanobis distance (15.014) was less than the critical value (16.27), it can be safely inferred that there were no substantial multivariate outliers.

To check the linearity assumption, a matrix of scatterplots can be used (Pallant, 2010). According to the scatter plots, there was a linear relationship between each pair of the dependent variables. Therefore, it can be inferred that the linearity assumption was met.

In order to check the homogeneity of variance – covariance matrices assumption, Box’s Test of Equality of Covariance Matrices was investigated (see Table 4.2 ). Since the significance values were larger than .001, it can be inferred that the homogeneity of variance – covariance matrices assumption was not violated in this current study (Tabachnick & Fidell, 2007).

**Table 4. 2**

*Box’s Test of Equality of Covariance Matrices*

Variable	Box’s M	F	df1	df2	Sig.
Gender	8.740	1.418	6	110172.702	.203
Family income	17.412	1.400	12	73317.462	.157
Preschool teachers’ age	13.124	1.054	12	61384.591	.395
Preschool teachers’ educational level	33.012	2.645	12	39633.265	.002
Preschool teachers’ years of experience	36.744	2.952	12	64840.149	.003
Preschool teachers’ self-reported skills	21.951	1.720	12	7963.155	.056
Mothers’ age	8.568	.688	12	57959.665	.765
Mothers’ educational level	16.535	2.682	6	94130.548	.013



*"Emotional skill scores (under each dimensions: identification of emotions, understanding of emotions, and expressing of emotions) of 66–72-month-old children with respect to their gender"*

It can be inferred that, one of the dependent variables (expressing of emotions) have significance value of .013 which is less than .05. Therefore, the equality of variance assumption for that variable can not be met (Pallant, 2010). In the present case, it is recommended to use the alpha level of .025 or .01 instead of .05 (Tabachnick & Fidell, 2007). For this reason the alpha level of .01 was used for specific variable.

One-way between-groups multivariate analyses of variance (MANOVA) was performed to examine the differences in emotional skills scores of children with respect to gender. Three dependent variables were used in this present study: identification of emotions, understanding of emotions, and expressing of emotions. The independent variable of this current study was gender. Normality, linearity, univariate and multivariate outliers, homogeneity of variance – covariance matrices, and multicollinearity assumption were met, with no serious violations noted before the one-way between-groups multivariate analyses was run. There was a statistically significant difference between females and males on the dependent variables: identification of emotion, understanding of emotions, and expressing of emotions, Multivariate  $F(3,122) = 9.17, p < .001$ ; Wilks' Lambda = .82;  $\eta_p^2 = .18$  (see Table 4.3).

**Table 4.3**

*Results of Multivariate Test for Gender effect*

Effect	Statistics	Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Gender	Wilks' Lambda	.82	9.17	3	122	.000	.18

According to Pallant (2010), if a significant result is obtained from the multivariate test of significance, further investigation in respect of each dependent variables can be

done and it is suggested to use higher alpha level in order to reduce the chance of a Type I error by applying Bonferroni adjustment which contains dividing the alpha level of .05 by the number of dependent variables of the study. Therefore, new alpha level of .017 was found by dividing the alpha level of .05 by the number of dependent variables: identification of emotions, understanding of emotions, and expressing of emotions. When the results for the dependent variables were considered separately, the differences to reach statistical significance, using a Bonferroni adjusted alpha level of .017, were identification of emotions,  $F(1,124) = 12.06$ ,  $p = .001$ ,  $\eta_p^2 = .09$ ; understanding of emotions  $F(1,124) = 10.70$ ,  $p = .001$ ,  $\eta_p^2 = .08$ , and expressing of emotions  $F(1,124) = 27.57$ ,  $p = .000$ ,  $\eta_p^2 = .18$  (see Table 4.4). An inspection of the mean scores indicated that females reported higher levels of identification of emotions ( $M=8.71$ ,  $SD=1.03$ ) than males ( $M=7.97$ ,  $SD=1.35$ ), females reported higher levels of understanding of emotions ( $M=9.35$ ,  $SD=.74$ ) than males ( $M=8.87$ ,  $SD=.92$ ), and females reported higher levels of expressing of emotions ( $M=9.29$ ,  $SD=.72$ ) than males ( $M=8.49$ ,  $SD=.98$ ).

In other words, there are statistically significant differences between the emotional skill scores of females and the emotional skill scores of males. Gender was found a .09% predictor of identification of emotions scores, .08% predictor of understanding of emotions scores, and .18% predictor of expressing of emotions scores. Furthermore, females had higher levels of identification of emotions, understanding of emotions, and expressing of emotions than males. It can be inferred that females are better than males at recognizing the emotions which are given by others through facial expressions or tone of voice, are better at understanding of oneself and others' emotions than males, and also are better at expressing oneself emotions in an appropriate way than males.

**Table 4.4***Results of Univariate Effects for Gender*

Effect	Dependent Variable	F	Sig.	Partial Eta Squared
Gender	Identification of emotions	12.06	.001*	.09
	Understanding of emotions	10.70	.001*	.08
	Expressing of emotions	27.57	.000*	.18

\* Bonferroni adjusted alpha level= .017

*"Emotional skill scores (under each dimensions: identification of emotions, understanding of emotions, and expressing of emotions) of 66–72-month-old children with respect to family income"*

One of the dependent variables (understanding of emotions) have significance value of .04 which is less than the value of .05. Since, the equality of variance assumption for that dependent variable was violated (Pallant, 2010). In this circumstances, it is recommended to use the alpha level of .025 or .01 instead of .05 (Tabachnick & Fidell, 2007). Therefore, the alpha level of .025 was used for this current study.

One – way between – groups multivariate analyses of variance (MANOVA) was performed to investigate the differences in emotional skill scores of children in terms of family income. Three dependent variables which were identification of emotions, understanding of emotions, and expressing of emotions were used in this current study. The independent variable of this present study was family income. Normality, linearity, univariate and multivariate outliers, homogeneity of variance – covariance matrices, and multicollinearity assumption were checked, with no serious violations noted before the one – way between-groups multivariate analyses was performed. There was a statistically significant difference between children’s family income on the combined dependent variables: identification of emotions, understanding of emotions, and expressing of emotions, Multivariate  $F(6,242) = 6.58, p = .000$ ; Wilks’ Lambda = .74;  $\eta_p^2 = .14$  (see Table 4.5).

**Table 4.5***Results of Multivariate Test for Family Income effect*

Effect	Statistics	Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Family Income	Wilks' Lambda	.74	6.58	6	242	.000	.14

If a significant result is get from multivariate test of significance, further investigation in respect to each dependent variables can be done and it is suggested to use higher alpha level in order to reduce the chance of a Type I error by applying Bonferroni adjustment which includes dividing the alpha level of .05 by the number of dependent variables of the study (Pallant, 2010). Since, new alpha level of .017 was found by dividing the alpha level of .05 by the number of dependent variables. When the results for the dependent variables were considered separately, the differences to reach statistical significance, using a Bonferroni adjusted alpha level of .017, were identification of emotions,  $F(2,123) = 11.85, p = .000, \eta_p^2 = .16$ , understanding of emotions,  $F(2,123) = 12.33, p = .000, \eta_p^2 = .17$ , and expressing of emotions,  $F(2,123) = 10.27, p = .000, \eta_p^2 = .14$  (see Table 4.6). In order to determine where the significant differences lie, a follow up univariate analysis of variance should be conducted (Pallant, 2010). Therefore, a follow up univariate analysis of variance was performed (see Table 4.7).

It was found that, the identification of emotions of higher family income group (5551+) was significantly different from both average (3501-5550) and low ( $\leq 3500$ ) family income group. An inspection of the mean scores indicated that, children with higher family income had higher levels of identification of emotions ( $M=9, SD=.91$ ) than the children with average family income ( $M=8.26, SD=1.27$ ) and also from the children with lower family income ( $M=7.79, SD=1.24$ ). The partial eta square represented 16 percent of the variance in identification of emotions scores which were explained by family income. In other words, children with higher family income are better at

recognizing what the emotions mean given by facial expression and tone of voice etc. than children with average family income and also from the children with lower family income.

It was found that, the understanding of emotions of higher family income group (5551+) was significantly different from both average (3501-5550) and low ( $\leq 3500$ ) family income group. An inspection of the mean scores indicated that, children with higher family income had higher levels of understanding of emotions ( $M=9.57$ ,  $SD=.55$ ) than the children with average family income ( $M=9.07$ ,  $SD=.84$ ) and also from the children with lower family income ( $M=8.71$ ,  $SD=.94$ ). The partial eta square represented 17 percent of the variance in understanding of emotions scores which were explained by family income. In other words, children with higher family income are better at understanding of both oneself emotions and others' emotions than children with average family income and also from the children with lower family income.

It was also found that, the expressing of emotions of higher family income group (5551+) was significantly different from both average (3501-5550) and low ( $\leq 3500$ ) family income group. An inspection of the mean scores indicated that, children with higher family income had higher levels of expressing of emotions ( $M=9.40$ ,  $SD=.73$ ) than the children with average family income ( $M=8.69$ ,  $SD=.90$ ) and also from the children with lower family income ( $M=8.62$ ,  $SD=.99$ ). The partial eta square represented 14 percent of the variance in expressing of emotions scores which were explained by family income. In other words, children with higher family income are better at expressing oneself emotions in an appropriate ways than children with average family income and also from the children with lower family income.

**Table 4.6***Results of Univariate Effects for Family Income*

Effect	Dependent Variable	F	Sig.	Partial Eta Squared
Family	Identification of emotions	11.85	.000*	.16
Income	Understanding of emotions	12.33	.000*	.17
	Expressing of emotions	10.27	.000*	.14

\* Bonferroni adjusted alpha level= .017

**Table 4.7***Multiple Comparison for identification of emotions, understanding of emotions, and expressing of emotions variables across family income groups (Bonferroni)*

Dependent Variable	Family Income (I)	Family Income (J)	Mean Difference (I-J)	Std. Error	Sig.	98.3% Confidence Interval	
						Lower Bound	Upper Bound
Identification of emotions	<= 3500	3501 - 5550	-.476	.251	.145	-1.18	.22
		5551+	-1.214*	.251	.000	-1.91	-.51
	3501 - 5550	<= 3500	.476	.251	.145	-.22	1.18
		5551+	-.738*	.251	.011	-1.44	-.04
	5551+	<= 3500	1.214*	.251	.000	.51	1.91
		3501 - 5550	.738*	.251	.011	.04	1.44
Understanding of emotions	<= 3500	3501 - 5550	-.357	.173	.103	-.84	.13
		5551+	-.857*	.173	.000	-1.34	-.37
	3501 - 5550	<= 3500	.357	.173	.103	-.13	.84
		5551+	-.500*	.173	.013	-.98	-.02
	5551+	<= 3500	.857*	.173	.000	.37	1.34
		3501 - 5550	.500*	.173	.013	.02	.98
Expressing of emotions	<= 3500	3501 - 5550	.071	.192	.926	-.46	.61
		5551+	-.714*	.192	.001	-1.25	-.18
	3501 - 5550	<= 3500	-.071	.192	.926	-.61	.46
		5551+	-.786*	.192	.000	-1.32	-.25
	5551+	<= 3500	.714*	.192	.001	.18	1.25
		3501 - 5550	.786*	.192	.000	.25	1.32

\*. The mean difference is significant at the .017 level.

*"Emotional skill scores (under each dimensions: identification of emotions, understanding of emotions, and expressing of emotions) of 66–72-month-old children with respect to their preschool teachers' age"*

When we look at the Levene's test of Equality of Error Variances, it can be seen that one of the dependent variables: identification of emotions recorded a significant value as .016 which is less than .05. Therefore, the equality of variance assumption for that dependent variable was violated (Pallant, 2010). In such circumstances, it is suggested to use the alpha level of .025 or .01 instead of using the alpha level of .05 (Tabachnick & Fidell, 2007). Since, the alpha level of .01 was used for this study.

One – way between – groups multivariate analyses of variance (MANOVA) was performed in order to examine the differences in emotional skill scores of children with respect to their preschool teachers' age. Three dependent variables: identification of emotions, understanding of emotions, and expressing of emotions were used in this study. The independent variable of this study was preschool teachers' age. Normality, linearity, univariate and multivariate outliers, homogeneity of variance – covariance matrices, and multicollinearity assumptions were checked, with no serious violations noted before the one-way between-groups multivariate analyses was performed. There was a statistically significant difference between preschool teachers' age on the combined dependent variables: identification of emotions, understanding of emotions, and expressing of emotions, Multivariate  $F(6,242) = 10.03, p = .000$ ; Wilks' Lambda = .64;  $\eta_p^2 = .20$  (see Table 4.8).

**Table 4.8**

*Results of Multivariate Test for Preschool Teachers' Age effect*

Effect	Statistics	Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Preschool Teachers' Age	Wilks' Lambda	.64	10.03	6	242	.000	.20

Pallant (2010) stated that if a significant result is get from multivariate test of significance, further investigation in respect to each dependent variables can be done and it is suggested to use higher alpha level in order to reduce the chance of a Type I error by applying Bonferroni adjustment that includes dividing the alpha level of .05 by the number of dependent variables of this current study. Therefore, new alpha level of .017 was found by dividing the alpha level of .05 by the number of dependent variables. When the results for the dependent variables were considered separately, the differences to reach statistical significance, using a Bonferroni adjusted alpha level of .017 were identification of emotions,  $F(6,242) = 27.39, p = .000, \eta_p^2 = .31$ , understanding of emotions,  $F(6,242) = 21.14, p = .000, \eta_p^2 = .26$ , and expressing of emotions,  $F(6,242) = 24.50, p = .000, \eta_p^2 = .29$  (see Table 4.9). According to Pallant (2010), in order to determine where the significant differences lie, a follow up univariate analysis of variance should be conducted. Since, a follow up univariate analysis of variance was performed (see Table 4.10).

It was found that, identification of emotions of children who had the older preschool teacher (38+ years) was significantly different from both the children who had the middle-aged preschool teacher (35 – 37 years) and the children who had the younger preschool teacher ( $\leq 34$  years). An inspection of the mean scores indicated that, children who had the older preschool teacher had lower levels of identification of emotions ( $M=7.33, SD=1.26$ ) than the children who had the middle- aged preschool teacher ( $M=8.64, SD=1.02$ ) and from the children who had the younger preschool teacher ( $M=8.92, SD=.87$ ). The partial eta square represented 31 percent of the variance in identification of emotions score explained by preschool teachers' age. In other words, children having older preschool teachers are worse at recognizing the meanings of the facial expressions and tone of voice etc. than children having middle-aged preschool teachers and also from the children having younger preschool teachers.

It was found that, the understanding of emotions of children who had the older preschool teacher (38+ years) was significantly different from both the children who had the middle-aged preschool teacher (35 – 37 years) and the children who had the



younger preschool teacher ( $\leq 34$  years). An inspection of the mean scores indicated that, children who had the older preschool teacher had lower levels of understanding of emotions ( $M=8.51$ ,  $SD=.85$ ) than the children who had the middle-aged preschool teacher ( $M=9.17$ ,  $SD=.81$ ) and from the children who had the younger preschool teacher ( $M=9.55$ ,  $SD=.61$ ). The partial eta square represented 26 percent of the variance in understanding of emotions score explained by preschool teachers' age. In other words, children having older preschool teachers are worse at understanding of oneself and others' emotions than children having middle-aged preschool teachers and also from the children having younger preschool teachers.

It was also found that, the expressing of emotions of children who had the older preschool teacher (38+ years) was significantly different from both the children who had the middle-aged preschool teacher (35 – 37 years) and the children who had the younger preschool teacher ( $\leq 34$  years). An inspection of the mean scores indicated that, children who had the older preschool teacher had lower levels of expressing of emotions ( $M=8.18$ ,  $SD=.85$ ) than the children who had the middle-aged preschool teacher ( $M=9.06$ ,  $SD=.75$ ) and from the children who had the younger preschool teacher ( $M=9.35$ ,  $SD=.80$ ). The partial eta square represented 29 percent of the variance in expressing of emotions score explained by preschool teachers' age. In other words, children having older preschool teachers are worse at expressing oneself emotions in an appropriate way than children having middle-aged preschool teachers and also from the children having younger preschool teachers.

**Table 4.9**

*Results of Univariate Effects for Preschool Teachers' Age*

Effect	Dependent Variable	F	Sig.	Partial Eta Squared
Preschool	Identification of emotions	27.39	.000*	.31
Teachers' Age	Understanding of emotions	21.14	.000*	.26
	Expressing of emotions	24.50	.000*	.29

\* Bonferroni adjusted alpha level= .017

**Table 4.10**

*Multiple Comparison for identification of emotions, understanding of emotions, and expressing of emotions variables across preschool teachers' age groups (Bonferroni)*

Dependent Variable	Preschool Teachers' Age (I)	Preschool Teachers' Age (J)	Mean Difference (I-J)	Std. Error	Sig.	98,3% Confidence Interval	
						Lower Bound	Upper Bound
Identification of emotions	<= 34	35 - 37	,283	,228	,431	-,35	,92
		38+	1,588*	,223	,000	,97	2,21
	35 - 37	<= 34	-,283	,228	,431	-,92	,35
		38+	1,306*	,242	,000	,63	1,98
	38+	<= 34	-1,588*	,223	,000	-2,21	-,97
		35 - 37	-1,306*	,242	,000	-1,98	-,63
Understanding of emotions	<= 34	35 - 37	,382	,163	,054	-,07	,84
		38+	1,036*	,160	,000	,59	1,48
	35 - 37	<= 34	-,382	,163	,054	-,84	,07
		38+	,654*	,174	,001	,17	1,14
	38+	<= 34	-1,036*	,160	,000	-1,48	-,59
		35 - 37	-,654*	,174	,001	-1,14	-,17
Expressing of emotions	<= 34	35 - 37	,297	,175	,209	-,19	,78
		38+	1,173*	,171	,000	,70	1,65
	35 - 37	<= 34	-,297	,175	,209	-,78	,19
		38+	,876*	,186	,000	,36	1,39
	38+	<= 34	-1,173*	,171	,000	-1,65	-,70
		35 - 37	-,876*	,186	,000	-1,39	-,36

\*. The mean difference is significant at the .017 level.

*"Emotional skill scores (under each dimensions: identification of emotions, understanding of emotions, and expressing of emotions) of 66–72-month-old children with respect to preschool teachers' educational level"*

When we look at the Leneve's test of Equality of Error Variances, it can be inferred that two of the dependent variables recorded a significant value: for identification of emotions .02 and for the understanding of emotions .04 which are less than .05. Since, the assumption of the equality of variance for these dependent variables were violated (Pallant, 2010). Tabachnick and Fidell (2007) stated that in such circumstances, the

alpha level of .025 or .01 can be used instead of the alpha level of .05. Therefore, the alpha level of .01 was used for this current study.

One – way between – groups multivariate analyses of variance (MANOVA) was performed in order to determine the differences in emotional skill scores of children with respect to their preschool teachers’ educational level. In this present study, three dependent variables: identification of emotions, understanding of emotions, and expressing of emotions were used. The independent variable of this present study was preschool teachers’ educational level. Normality, linearity, univariate and multivariate outliers, homogeneity of variance – covariance matrices, and multicollinearity assumptions were checked, with no serious violations noted before the one-way between-groups multivariate analyses was performed. There was a statistically significant difference between preschool teachers’ educational level on the combined dependent variables: identification of emotion, understanding of emotions, and expressing of emotions, Multivariate  $F(6,242) = 27.39, p = .000$ ; Wilks’ Lambda = .36;  $\eta_p^2 = .40$  (see Table 4.11).

**Table 4.11**

*Results of Multivariate Test for Preschool Teachers’ Educational Level effect*

Effect	Statistics	Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Preschool Teachers’ Educational Level	Wilks’ Lambda	.36	27.39	6	242	.000	.40

Pallant (2010) indicated that if a significant result is obtained from multivariate test of significance, further investigation in respect to each dependent variables should be done and it is suggested to use higher alpha level in order to reduce the chance of a Type I error by applying Bonferroni adjustment which includes dividing the alpha level of .05 by the number of dependent variables of this present study. Since, new alpha value of .017 was found by dividing the alpha level of .05 by the number

of dependent variables. When the results for the dependent variables were considered separately, the differences to reach statistical significance, using a Bonferroni adjusted alpha level of .017 were identification of emotions,  $F(6,242) = 73.26, p = .000, \eta_p^2 = .54$ , understanding of emotions,  $F(6,242) = 43.12, p = .000, \eta_p^2 = .41$ , and expressing of emotions,  $F(6,242) = 80.73, p = .000, \eta_p^2 = .57$  (see Table 4.12). Pallant (2010) stated that in order to examine where the significant differences lie, a follow up univariate analysis of variance should be conducted. Therefore, a follow up univariate analysis of variance was performed (see Table 4.13).

It was found that identification of emotions of children was significantly different among three different groups: children who had high school graduate preschool teachers, children who had associate's degree preschool teachers, and children who had bachelor's degree preschool teachers. An inspection of the mean scores indicated that, children who had bachelor's degree preschool teachers had higher levels of identification of emotions ( $M=9.19, SD=.12$ ) than the children who had associate's degree preschool teachers ( $M=8.33, SD=.13$ ) and from the children who had high school graduate preschool teachers ( $M=6.79, SD=.16$ ). The partial eta square represented 54 percent of the variance in identification of emotions score explained by preschool teachers' educational level. In other words, children having bachelor's degree preschool teachers are better at recognizing the meanings of the facial expressions and tone of voice etc. than children having associate's degree preschool teachers and from the children having high school graduate preschool teachers.

It was found that understanding of emotions of children was significantly different among three different groups: children who had high school graduate preschool teachers, children who had associate's degree preschool teachers, and children who had bachelor's degree preschool teachers. An inspection of the mean scores indicated that, children who had bachelor's degree preschool teachers had higher levels of understanding of emotions ( $M=9.68, SD=.09$ ) than the children who had associate's degree preschool teachers ( $M=9, SD=.10$ ) and from the children who had high school graduate preschool teachers ( $M=8.25, SD=.13$ ). The partial eta square represented 41

percent of the variance in understanding of emotions score explained by preschool teachers' educational level. In other words, children having bachelor's degree preschool teachers are better at understanding of oneself and others' emotions than children having associate's degree preschool teachers and from the children having high school graduate preschool teachers.

It was also found that expressing of emotions of children was significantly different among three different groups: children who had high school graduate preschool teachers, children who had associate's degree preschool teachers, and children who had bachelor's degree preschool teachers. An inspection of the mean scores indicated that, children who had bachelor's degree preschool teachers had higher levels of expressing of emotions ( $M=9.57$ ,  $SD=.09$ ) than the children who had associate's degree preschool teachers ( $M=8.87$ ,  $SD=.09$ ) and from the children who had high school graduate preschool teachers ( $M=7.71$ ,  $SD=.12$ ). The partial eta square represented 57 percent of the variance in expressing of emotions score explained by preschool teachers' educational level. In other words, children having bachelor's degree preschool teachers are better at expressing oneself emotions in an appropriate way than children having associate's degree preschool teachers and from the children having high school graduate preschool teachers.

**Table 4.12**

*Results of Univariate Effects for Preschool Teachers' Educational Level*

Effect	Dependent Variable	F	Sig.	Partial Eta Squared
Preschool	Identification of emotions	73.26	.000*	.54
Teachers'	Understanding of emotions	43.12	.000*	.41
Educational	Expressing of emotions	80.73	.000*	.57
Level				

\* Bonferroni adjusted alpha level= .01

**Table 4.13**

*Multiple Comparison for identification of emotions, understanding of emotions, and expressing of emotions variables across preschool teachers' educational level groups (Bonferroni)*

Dependent Variable	Preschool Teachers' Educational Level (I)	Preschool Teachers' Educational Level (J)	Mean Difference (I-J)	Std. Error	Sig.	98,3% Confidence Interval		
						Lower Bound	Upper Bound	
Identification of emotions	High School Graduate	Associate's Degree	-1.548*	.205	.000	-2.12	-.98	
		Bachelor's Degree	-2.403*	.199	.000	-2.96	-1.85	
	Associate's Degree	High School Graduate	1.548*	.205	.000	.98	2.12	
		Bachelor's Degree	-.855*	.172	.000	-1.33	-.38	
	Bachelor's Degree	High School Graduate	2.403*	.199	.000	1.85	2.96	
		Associate's Degree	.855*	.172	.000	.38	1.33	
	Understanding of emotions	High School Graduate	Associate's Degree	-.750*	.161	.000	-1.20	-.30
			Bachelor's Degree	-1.429*	.156	.000	-1.86	-1.00
Associate's Degree		High School Graduate	.750*	.161	.000	.30	1.20	
		Bachelor's Degree	-.679*	.135	.000	-1.06	-.30	
Bachelor's Degree		High School Graduate	1.429*	.156	.000	1.00	1,86	
		Associate's Degree	.679*	.135	.000	.30	1.06	

**Table 4.13***(Continued)*

Expressing of emotions	High School Graduate	Associate's Degree	-1.152*	.150	.000	-1.57	-.73
		Bachelor's Degree	-1.852*	.146	.000	-2.26	-1.45
	Associate's Degree	High School Graduate	1.152*	.150	.000	.73	1.57
		Bachelor's Degree	-.699*	.127	.000	-1.05	-.35
	Bachelor's Degree	High School Graduate	1.852*	.146	.000	1.45	2.26
		Associate's Degree	.699*	.127	.000	.35	1.05

\*. The mean difference is significant at the .017 level.

*"Emotional skill scores (under each dimensions: identification of emotions, understanding of emotions, and expressing of emotions) of 66–72-month-old children with respect to preschool teachers' years of experience"*

When we look at the Leneve's test of Equality of Error Variances, it can be inferred that two of the dependent variables of this study recorded a significant value: for identification of emotions .012 and for understanding of emotions .011 which are less than .05. Therefore, the assumption of the equality of variance for these dependent variables were violated (Pallant, 2010). According to Tabachnick and Fidell (2007) in such circumstances, the alpha level of .025 or .01 can be used instead of the alpha level of .05. Since, the alpha level of .01 was used for this study.

One-way between-groups multivariate analyses of variance (MANOVA) was used in order to investigate the differences in emotional skill scores of children with respect to their preschool teachers' years of experience. In this study, three dependent variables which were identification of emotions, understanding of emotions, and expressing of emotions were used. The independent variable of this study was preschool teachers' years of experience. Normality, linearity, univariate and multivariate outliers, homogeneity of variance – covariance matrices, and

multicollinearity assumptions were checked, with no serious violations noted before the one-way between-groups multivariate analyses was performed. There was a statistically significant difference between preschool teachers' years of experience on the combined dependent variables: identification of emotion, understanding of emotions, and expressing of emotions, Multivariate  $F(6,242) = 15.46, p = .000$ ; Wilks' Lambda = .52;  $\eta_p^2 = .28$  (see Table 4.14).

**Table 4.14**

*Results of Multivariate Test for Preschool Teachers' Years of Experience effect*

Effect	Statistics	Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Preschool Teachers' Years of Experience	Wilks' Lambda	.52	15.46	6	242	.000	.28

If a significant result is obtained from multivariate test of significance, further investigation in respect to each dependent variables should be done and it is suggested to use higher alpha level in order to reduce the chance of a Type I error by applying Bonferroni adjustment which includes dividing the alpha level of .05 by the number of dependent variables of a study (Pallant, 2010). Since, new alpha value of .017 was found by dividing the alpha level of .05 by the number of dependent variables of this study. When the results for the dependent variables were considered separately, the differences to reach statistical significance, using a Bonferroni adjusted alpha level of .017 were identification of emotions,  $F(6,242) = 43.83, p = .000, \eta_p^2 = .42$ , understanding of emotions,  $F(6,242) = 28.51, p = .000, \eta_p^2 = .32$ , and expressing of emotions,  $F(6,242) = 40.04, p = .000, \eta_p^2 = .39$  (see Table 4.15). According to Pallant (2010), in order to determine where the significant differences lie, a follow up univariate analysis of variance should be conducted. For this reason, a follow up univariate analysis of variance was performed in this study (see Table 4.16).



It was found that identification of emotions of children was significantly different among three different groups: children whose preschool teachers had 11 or less years of experience, children whose preschool teachers had between 11.01 and 16 years of experience, and children whose preschool teachers had 16.01 or more years of experience. An inspection of the mean scores indicated that, children whose preschool teachers had 11 or less years of experience had higher levels of identification of emotions ( $M=9.21$ ,  $SD=.71$ ) than the children whose preschool teachers had between 11.01 and 16 years of experience ( $M=8.42$ ,  $SD=.81$ ) and from the children whose preschool teachers had 16.01 or more years of experience ( $M=7.31$ ,  $SD=1.28$ ). The partial eta square represented 42 percent of the variance in identification of emotions score explained by preschool teachers' years of experience. In other words, children having 11 years or less years of experienced preschool teachers are better at recognizing the meanings of the facial expressions and tone of voice etc. than children whose preschool teachers had between 11.01 and 16 years of experience and from the children whose preschool teacher had 16.01 or more years of experience.

It was found that understanding of emotions of children was significantly different among three different groups: children whose preschool teachers had 11 or less years of experience, children whose preschool teachers had between 11.01 and 16 years of experience, and children whose preschool teachers had 16.01 or more years of experience. An inspection of the mean scores indicated that, children whose preschool teachers had 11 or less years of experience had higher levels of understanding of emotions ( $M=9.69$ ,  $SD=.47$ ) than the children whose preschool teachers had between 11.01 and 16 years of experience ( $M=9.03$ ,  $SD=.74$ ) and from the children whose preschool teachers had 16.01 or more years of experience ( $M=8.55$ ,  $SD=.92$ ). The partial eta square represented 32 percent of the variance in understanding of emotions score explained by preschool teachers' years of experience. In other words, children having 11 years or less years of experienced preschool teachers are better at understanding of oneself and others' emotions than than children whose preschool teachers had between 11.01 and 16 years of experience and from the children whose preschool teacher had 16.01 or more years of experience.

It was also found that expressing of emotions of children was significantly different among three different groups: children whose preschool teachers had 11 or less years of experience, children whose preschool teachers had between 11.01 and 16 years of experience, and children whose preschool teachers had 16.01 or more years of experience. An inspection of the mean scores indicated that, children whose preschool teachers had 11 or less years of experience had higher levels of expressing of emotions ( $M=9.58$ ,  $SD=.54$ ) than the children whose preschool teachers had between 11.01 and 16 years of experience ( $M=8.83$ ,  $SD=.78$ ) and from the children whose preschool teachers had 16.01 or more years of experience ( $M=8.19$ ,  $SD=.90$ ). The partial eta square represented 39 percent of the variance in expressing of emotions score explained by preschool teachers' years of experience. In other words, children having 11 years or below years of experienced preschool teachers are better at expressing oneself emotions in an appropriate way than children whose preschool teachers had between 11.01 and 16 years of experience and from the children whose preschool teacher had 16.01 or more years of experience.

**Table 4.15**

*Results of Univariate Effects for Preschool Teachers' Years of Experience*

Effect	Dependent Variable	F	Sig.	Partial Eta Squared
Preschool Teachers' Years of Experience	Identification of emotions	43.83	.000*	.42
	Understanding of emotions	28.51	.000*	.32
	Expressing of emotions	40.04	.000*	.39

\* Bonferroni adjusted alpha level= .017

**Table 4.16**

*Multiple Comparison for identification of emotions, understanding of emotions, and expressing of emotions variables across three preschool teachers' years of experience groups (Bonferroni)*

Dependent Variable	Preschool Teachers' Years of Experience (I)	Preschool Teachers' Years of Experience (J)	Mean Difference (I-J)	Std. Error	Sig.	98,3% Confidence Interval	
						Lower Bound	Upper Bound
Identification of emotions	<= 11	11.01 - 16	.792*	.212	.001	.20	1.38
		16.01+	1.899*	.203	.000	1.33	2.46
	11.01 - 16	<= 11	-.792*	.212	.001	-1.38	-.20
		16.01+	1.107*	.218	.000	.50	1.71
16.01+	<= 11	-1.899*	.203	.000	-2.46	-1.33	
	11.01 - 16	-1.107*	.218	.000	-1.71	-.50	
Understanding of emotions	<= 11	11.01 - 16	.660*	.159	.000	.22	1.10
		16.01+	1.140*	.152	.000	.72	1.56
	11.01 - 16	<= 11	-.660*	.159	.000	-1.10	-.22
		16.01+	.480*	.163	.011	.03	.94
16.01+	<= 11	-1.140*	.152	.000	-1.56	-.72	
	11.01 - 16	-.480*	.163	.011	-.94	-.03	
Expressing of emotions	<= 11	11.01 - 16	.750*	.163	.000	.30	1.20
		16.01+	1.393*	.156	.000	.96	1.83
	11.01 - 16	<= 11	-.750*	.163	.000	-1.20	-.30
		16.01+	.643*	.168	.001	.18	1.11
16.01+	<= 11	-1.393*	.156	.000	-1.83	-.96	
	11.01 - 16	-.643*	.168	.001	-1.11	-.18	

\*. The mean difference is significant at the .017 level.

*"Emotional skill scores (under each dimensions: identification of emotions, understanding of emotions, and expressing of emotions) of 66–72-month-old children with respect to preschool teachers' self-reported skills"*

When we look at the Leneve' test of Error Variances, it can be inferred that none of the dependent variables of this current study indicated significant values; therefore, it can be assumed that the assumption of equality of variances was not violated (Pallant, 2010).

One-way between-groups multivariate analyses of variance (MANOVA) was performed to examine differences in emotional skill scores of children with respect to their preschool teachers' self-reported skills. In this current study, three dependent variables: identification of emotions, understanding of emotions, and expressing of emotions were used. The independent variable of this present study was preschool teachers' self-reported skills. Normality, linearity, univariate and multivariate outliers, homogeneity of variance – covariance matrices, and multicollinearity assumptions were checked, with no serious violations noted before the one-way between-groups multivariate analyses was performed. There was a statistically significant difference between preschool teachers' self-reported skills on the combined dependent variables: identification of emotion, understanding of emotions, and expressing of emotions, Multivariate  $F(6,242) = 11.10, p = .000$ ; Wilks' Lambda = .62;  $\eta_p^2 = .22$  (see Table 4.17).

**Table 4.17**

*Results of Multivariate Test for Preschool Teachers' Self-Reported Skills effect*

Effect	Statistics	Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Preschool Teachers' Self- Reported Skills	Wilks' Lambda	.62	11.10	6	242	.000	.22

Pallant (2010) stated that if a significant result is obtained from multivariate test of significance, further investigation in respect to each dependent variables should be done and it is suggested to use higher alpha level in order to reduce the chance of a Type I error by applying Bonferroni adjustment which includes dividing the alpha level of .05 by the number of dependent variables of this present study. Since, new alpha value of .017 was found by dividing the alpha level of .05 by the number of dependent variables. When the results for the dependent variables were considered separately, the differences to reach statistical significance, using a Bonferroni adjusted alpha level of .017 were identification of emotions,  $F(6,242) = 31.65, p = .000, \eta_p^2 =$

.34, understanding of emotions,  $F(6,242) = 29.28, p = .000, \eta_p^2 = .32$ , and expressing of emotions,  $F(6,242) = 22.01, p = .000, \eta_p^2 = .26$  (see Table 4.18). According to Pallant (2010) in order to investigate where the significant differences lie, a follow up univariate analysis of variance should be conducted. Therefore, a follow up univariate analysis of variance was performed (see Table 4.19).

It was found that the identification of emotions of children who had preschool teachers having self-reported skills as moderately competent was significantly different from both children who had preschool teachers having self-reported skills as competent and children who had preschool teachers having self-reported skills as very competent. An inspection of the mean scores indicated that, children who had preschool teachers having self-reported skills as moderately competent had lower levels of identification of emotions ( $M=6.40, SD=1.30$ ) than the children who had preschool teachers having self-reported skills as competent ( $M=8.54, SD=1.05$ ) and from the children who had preschool teachers having self-reported skills as very competent ( $M=8.79, SD=.78$ ). The partial eta square represented 34 percent of the variance in identification of emotions scores which were explained by preschool teachers' self-reported skills. In other words, children having preschool teachers who have self-reported skills as moderately competent are worse in recognizing the meanings of the facial expressions and tone of voice etc. than children having preschool teachers who have self-reported skills as competent and also from the children having preschool teachers who have self-reported skills as very competent.

It was found that the understanding of emotions of children who had preschool teachers having self-reported skills as moderately competent was significantly different from both children who had preschool teachers having self-reported skills as competent and children who had preschool teachers having self-reported skills as very competent. An inspection of the mean scores indicated that, children who had preschool teachers having self-reported skills as moderately competent had lower levels of understanding of emotions ( $M=7.80, SD=.94$ ) than the children who had preschool teachers having self-reported skills as competent ( $M=9.26, SD=.73$ ) and

from the children who had preschool teachers having self-reported skills as very competent ( $M=9.39$ ,  $SD=.56$ ). The partial eta square represented 32 percent of the variance in understanding of emotions scores which were explained by preschool teachers' self-reported skills. In other words, children having preschool teachers who have self-reported skills as moderately competent are worse in understanding of oneself and others' emotions than children having preschool teachers who have self-reported skills as competent and also from the children having preschool teachers who have self-reported skills as very competent.

It was also found that the expressing of emotions of children who had preschool teachers having self-reported skills as moderately competent was significantly different from both children who had preschool teachers having self-reported skills as competent and children who had preschool teachers having self-reported skills as very competent. An inspection of the mean scores indicated that, children who had preschool teachers having self-reported skills as moderately competent had lower levels of expressing of emotions ( $M=7.60$ ,  $SD=.74$ ) than the children who had preschool teachers having self-reported skills as competent ( $M=9.05$ ,  $SD=.84$ ) and from the children who had preschool teachers having self-reported skills as very competent ( $M=9.15$ ,  $SD=.80$ ). The partial eta square represented 26 percent of the variance in expressing of emotions scores which were explained by preschool teachers' self-reported skills. In other words, children having preschool teachers who have self-reported skills as moderately competent are worse in expressing oneself emotions in an appropriate way than children having preschool teachers who have self-reported skills as competent and also from the children having preschool teachers who have self-reported skills as very competent.

**Table 4.18***Results of Univariate Effects for Preschool Teachers' Self-Reported Skills*

Effect	Dependent Variable	F	Sig.	Partial Eta Squared
Preschool	Identification of emotions	31.65	.000*	.34
Teachers' Self-Reported Skills	Understanding of emotions	29.28	.000*	.32
	Expressing of emotions	22.01	.000*	.26

\* Bonferroni adjusted alpha level= .017

**Table 4.19***Multiple Comparison for identification of emotions, understanding of emotions, and expressing of emotions variables across preschool teachers' self-reported skills groups (Bonferroni)*

Dependent Variable	Preschool Teachers' Self-Reported Skills (I)	Preschool Teachers' Self-Reported Skills (J)	Mean Difference (I-J)	Std. Error	Sig.	98,3% Confidence Interval	
						Lower Bound	Upper Bound
Identification of emotions	moderately competent	competent	-2.138*	.288	.000	-2.94	-1.34
		very competent	-2.388*	.318	.000	-3.27	-1.50
	competent	moderately competent	2.138*	.288	.000	1.34	2.94
		very competent	-.249	.212	.470	-.84	.34
Understanding of emotions	moderately competent	competent	-1.456*	.202	.000	-2.02	-.89
		very competent	-1.594*	.223	.000	-2.22	-.97
	competent	moderately competent	1.456*	.202	.000	.89	2.02
		very competent	-.138	.149	.626	-.55	.28
very competent	moderately competent	1.594*	.223	.000	.97	2.22	
	competent	.138	.149	.626	-.28	.55	

**Table 4.19***(Continued)*

Expressing of emotions	moderately competent	competent	-1.451*	.230	.000	-2.09	-.81
	competent	very competent	-1.552*	.254	.000	-2.26	-.85
	competent	moderately competent	1.451*	.230	.000	.81	2.09
		very competent	-.100	.169	.824	-.57	.37
	very competent	moderately competent	1.552*	.254	.000	.85	2.26
		competent	.100	.169	.824	-.37	.57

\*. The mean difference is significant at the .017 level.

*"Emotional skill scores (under each dimensions: identification of emotions, understanding of emotions, and expressing of emotions) of 66–72-month-old children with respect to their mothers' age"*

When we look at the Leneve' test of Error Variances, it can be inferred that none of the dependent variables of this study indicated significant values; therefore, according to Pallant (2010), it can be assumed that the assumption of equality of variances was not violated.

One-way between-groups multivariate analyses of variance (MANOVA) was performed to examine differences in emotional skill scores of children with respect to their mothers' age. In this study, three dependent variables: identification of emotions, understanding of emotions, and expressing of emotions were used. The independent variable of this study was mothers' age. Normality, linearity, univariate and multivariate outliers, homogeneity of variance – covariance matrices, and multicollinearity assumptions were checked, with no serious violations noted before the one-way between-groups multivariate analyses was performed. There was a not statistically significant difference between mothers' age on the combined dependent variables, Multivariate  $F(6,242) = 1.139, p = .34$ ; Wilks' Lambda = .95;  $\eta_p^2 = .027$  (see Table 4.20). As the non-significant result was obtained, between subject effects



were not investigated. In other words, children’s level of recognizing the meanings of the facial expressions and tone of voice etc., understanding of oneself and others’ emotions, and also expressing oneself emotions in an appropriate way differ with respect to their mothers’ age.

**Table 4.20**

*Results of Multivariate Test for Mothers’ Age effect*

Effect	Statistics	Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Mothers’ Age	Wilks’ Lambda	.95	1.139	6	242	.34	.027

*"Emotional skill scores (under each dimensions: identification of emotions, understanding of emotions, and expressing of emotions) of 66–72-month-old children with respect to mothers’ educational level"*

When we look at the Leneve’s test of Error Variances, it can be inferred that one of the dependent variables of this present study indicated a significant value: for understanding of emotions .014 which is less than .05. Since, the assumption of the equality of variance for this dependent variable was violated (Pallant, 2010). For such circumstances, Tabachnick and Fidell (2007) suggested to use the alpha level of .025 or .01 instead of using the alpha level of .05. For this reason, the alpha level of .01 was used for this present study.

One-way between-groups multivariate analyses of variance (MANOVA) was performed to examine differences in emotional skill scores of children with respect to their mothers’ educational level. In this study, three dependent variables: identification of emotions, understanding of emotions, and expressing of emotions were used. The independent variable of this study was mothers’ educational level. Normality, linearity, univariate and multivariate outliers, homogeneity of variance – covariance matrices, and multicollinearity assumptions were checked, with no serious violations noted before the one-way between-groups multivariate analyses was performed. There

was a statistically significant difference between mothers' educational level on the combined dependent variables which were identification of emotions, understanding of emotions, and expressing of emotions, Multivariate  $F(3,122) = 7.643, p = .000$ ; Wilks' Lambda = .84;  $\eta_p^2 = .16$  (see Table 4.21).

**Table 4.21**

*Results of Multivariate Test for Mothers' Educational Level effect*

Effect	Statistics	Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Mothers' Educational Level	Wilks' Lambda	.84	7.643	3	122	.000	.16

According to Pallant (2010), if a significant result is obtained from multivariate test of significance, further investigation in respect to each dependent variables should be done and it is suggested to use higher alpha level in order to reduce the chance of a Type I error by applying Bonferroni adjustment which includes dividing the alpha level of .05 by the number of dependent variables of this present study. Since, new alpha value of .017 was found by dividing the alpha level of .05 by the number of dependent variables. When the results for the dependent variables were considered separately, the differences to reach statistical significance, using a Bonferroni adjusted alpha level of .017 were identification of emotions,  $F(3,122) = 20.42, p = .000, \eta_p^2 = .14$ , understanding of emotions,  $F(3,122) = 18.90, p = .000, \eta_p^2 = .13$ , and expressing of emotions,  $F(3,122) = 14.16, p = .000, \eta_p^2 = .10$  (see Table 4.22). An inspection of the mean scores indicated that children whose mothers had bachelor's degree or higher reported higher levels of identification of emotions ( $M=8.76, SD=1.04$ ) than children whose mothers had associate's degree or lower level of education ( $M=7.82, SD=1.31$ ), children whose mothers had bachelor's degree or higher reported higher levels of understanding of emotions ( $M=9.39, SD=.64$ ) than children whose mothers had associate's degree or lower level of education ( $M=8.76, SD=.98$ ), and children whose

mothers had bachelor's degree or higher reported higher levels of expressing of emotions ( $M=9.17$ ,  $SD=.86$ ) than children whose mothers had associate's degree or lower level of education ( $M=8.56$ ,  $SD=.94$ ).

In other words, it can be inferred that children whose mothers have bachelor's degree or higher are better than children whose mothers have associate's degree or lower level of education at recognizing the emotions which are given by others through facial expression or tone of voice etc., are better at understanding of oneself and others' emotions, and also are better at expressing oneself emotions appropriately.

**Table 4.22**

*Results of Univariate Effects for Mothers' Educational Level*

Effect	Dependent Variable	F	Sig.	Partial Eta Squared
Mothers' Educational Level	Identification of emotions	20.42	.000*	.14
	Understanding of emotions	18.90	.000*	.13
	Expressing of emotions	14.16	.000*	.10

\* Bonferroni adjusted alpha level= .017

*"Emotional skill scores (overall) of 66–72-month-old children with respect to their gender, family income, preschool teachers' and mothers' background information"*

An independent sample t-test was performed in order to compare the mean scores of emotional skill scores of the 66–72-month-old children with respect to their gender. An independent sample t-test is used for comparing the mean score on continuous variable for the participants of two different groups (Pallant, 2010). In this current study, there is one dependent variable, which is emotional skills. The two different groups of 66–72-month-old children are females and males. Five assumptions, the level of measurement, random sampling, independence of observations, normal distribution and the homogeneity of variance, are considered before proceeding with the independent sample t-test (Pallant, 2010). Before proceeding with the independent

sample t-test, assumptions mentioned above were met. The results of each assumption are presented below.

In order to meet the level of measurement assumption, the dependent variable should be measured at the interval or ratio level, and also it must be a continuous variable. However, there is an exception if there is one dichotomous independent variable such as gender and one dependent variable. In this cases, there should be roughly the same number of participant in each category of the dichotomous variable (Pallant, 2010). In this current study, the gender of the 126 children aged 66-72 months old (F=65 and M=61) is the dichotomous independent variable. This means that the number of the participant children in each category, female and male, are roughly same.

In this current study, to examine mean differences with respect to gender of the participant children, the mean scores for the overall emotional skill scores of the 66–72-month-old children were used as a continuous variable. By this way, level of measurement assumption was met.

The random sampling assumption is about selecting the data in order to use in the independent sample t-test randomly. In this study, the 66–72-month-old children attending public and primary elementary schools and preschools operated by MoNE in three different districts of Ankara were choosen randomly. In this present study, in order to meet the assumption of the independence of observation, responses of the participant children were not influenced by any other factor.

Pallant (2010) stated that the scores of each group should be normally distributed on the dependent variable in order to meet the normality assumption. In this current study, the two groups for the independent sample t-test were female and male. The skewness and kurtosis values for both groups were between -2 and +2, so the mean scores were normally distrubuted in both groups (see Table 4.23).

**Table 4.23**

*Skewness and Kurtosis Values for the overall Emotional Skill Scores of the 66–72-Month-Old Children regarding Gender*

<i>Groups</i>	<i>ACES Score</i>		
	<i>Skewness</i>	<i>Kurtosis</i>	<i>N</i>
Female	-.666	.037	65
Male	-.283	-.331	61

The last assumption, homogeneity of variance, was investigated by using the Levene's test of equality variance. The results of the Leneve's test was found to be .024 which is below the significance level ( $>.05$ ) (see Table 4.24). If the significance level of Leneve's test is  $p=.05$  or less, this means that the two groups had not equal variances and so the equal variance assumption is violated. In this case, it is recommended to use the information which is in the second line of the t-test table (Pallant,2010). Therefore, in this current study, the information in the second line of the t-test table was used.

**Table 4.24**

*The Results of the Leneve's Test for the Equality of Variances Results*

	<i>Leneve's Test of Equality of Means</i>	
	<i>F</i>	<i>Sig.</i>
ACES Score	5.225	.024

After all assumptions were met, the independent sample t-test analysis was conducted. Significant difference was found ( $t(109.778)=4.340$ ,  $p=.000$ ) (see Table 4.25) in the mean scores with regard to ACES scores between the children who are female ( $M=27.35$ ,  $SD=2.18$ ) and who are male ( $M=25.33$ ,  $SD=2.97$ ).

**Table 4.25***The Results of the Independent Sample T-Test*

<i>T-Test for the Equality of Means</i>						
<i>t</i>	<i>df</i>	<i>Sig</i> (2- tailed)	<i>Mean</i> <i>Difference</i>	<i>Std. Error</i> <i>Difference</i>	<i>95% Confidence Interval</i> <i>of Difference</i>	
					<i>Lower</i>	<i>Upper</i>
4.340	109.778	.000	2.026	.467	1.101	2.951

The mean score of children who are female was calculated as 27.35 with the standard deviation of 2.18 while the mean score of children who are male is 25.33 with the standard deviation of 2.97. An independent sample t-test was conducted to compare the ACES scores for females and males. There was a significant difference in scores for females ( $M=27.35$ ,  $SD=2.18$ ) and males ( $M=25.33$ ,  $SD=2.97$ ;  $t(109.778)=4.340$ ,  $p=.000$ , two-tailed). The magnitude of the differences in the means (mean difference=2.026, 95%  $CI=1.101$  to 2.951) was a moderate effect (eta squared=0.13). In other words, it can be inferred that levels of children in ability to be aware of oneself and others' emotions, ability to identify, understand, and express the emotions in an appropriate way differ with respect to their gender.

In order to explore the differences in emotional skill overall scores of children with respect to family income and preschool teachers' and mothers' background information, a one-way between-groups analysis of variance was conducted. If there is one categorical independent variable with three or more categories and one dependent continuous variable, one-way between-groups ANOVA can be used in order to examine whether there are significant mean differences on the dependent variable among three or more groups (Pallant, 2010).

The assumptions of One-way between-groups analysis of variance (ANOVA) are stated as level of measurement, independence of observations, normal distribution and homogeneity of variance (Pallant, 2010). Before proceeding with One-way between-

groups analysis of variance (ANOVA), assumptions mentioned below were met. The results of each assumption are presented below.

In order to meet the level of measurement assumption, the dependent variable should be measured at the interval or ratio level, and also it must be a continuous variable (Pallant, 2010). In this current study, in order to examine differences in emotional skill overall scores of children with respect to family income, the preschool teachers' and mothers' background information, the mean scores for the emotional skill scores were used as a continuous variable. By the way, level of measurement assumption was met.

The random sampling assumption is about selecting the data in order to use in the ANOVA randomly. In this study, 66–72-month-old children attending public and primary elementary schools and preschools operated by MoNE in three different districts of Ankara and their preschool teachers and mothers were chosen randomly. In this present study, in order to meet the assumption of the independence of observation, responses of the children were not influenced by any other factor.

Pallant (2010) stated that the scores of each group should be normally distributed on the dependent variable in order to meet the normality assumption. The skewness and kurtosis values for these three groups were between -2 and +2. So it can be inferred that the mean scores were normally distributed in the independent variable groups.

The last assumption, homogeneity of variance, was investigated by using the Levene's test of equality variance. The results of the Levene's test was found as above the significance level ( $>.05$ ). Therefore, it can be inferred that two groups had equal variances and so the equal variance assumption was met. After all assumptions were met, One-way between-groups analysis of variance (ANOVA) was conducted.

There was a statistically significant difference at the  $p<.05$  level in ACES scores of the children with respect to three different family income groups:  $F(2,123)=13.57, p=.00$ . The actual difference in mean scores between the groups was large. The effect size, calculated using eta squared, was .18. Post-hoc comparisons using the Tukey HSD test indicated the mean score for Group 3 ( $M=27.98, SD=1.81$ ) was significantly

different from Group 1 ( $M=25.19$ ,  $SD=2.82$ ) and Group 2 ( $M=25.95$ ,  $SD=2.83$ ). In other words, it can be inferred that family income is a statistically significant predictor of emotional skill overall scores of children with large effect. Furthermore, it can also be inferred that the overall emotional skill scores of children having higher family income are higher than the children having average family income and also from the children having lower family income.

There was a statistically significant difference at the  $p<.05$  level in ACES scores of the children for the three different age groups of preschool teachers:  $F(2, 123)=32.15$ ,  $p=.00$ . The actual difference in mean scores between the groups was large. The effect size, calculated using eta squared, was .34. Post-hoc comparisons using the Tukey HSD test indicated the mean score for Group 3 ( $M=24.03$ ,  $SD=2.67$ ) was significantly different from Group 1 ( $M=27.82$ ,  $SD=1.91$ ) and Group 2 ( $M=26.86$ ,  $SD=2.27$ ). In other words, it can be inferred that preschool teachers' age is a statistically significant predictor of emotional skill overall scores of children with large effect. Furthermore, it can also be inferred that the overall emotional skill scores of children having older preschool teachers are lower than the children having middle aged preschool teachers and also from the children having younger preschool teachers.

There was a statistically significant difference at the  $p<.05$  level in ACES scores of children for the three different educational level groups of preschool teachers:  $F(2, 123)=98.87$   $p=.00$ . The actual difference in mean scores between the groups was large. The effect size, calculated using eta squared, was .56. Post-hoc comparisons using the Tukey HSD test indicated the mean score for Group 1 ( $M=22.75$ ,  $SD=2.03$ ) was significantly different from Group 2 ( $M=26.20$ ,  $SD=1.91$ ) and Group 3 ( $M=28.43$ ,  $SD=1.37$ ). In other words, it can be inferred that preschool teachers' educational level is a statistically significant predictor of emotional skill overall scores of children with large effect. Furthermore, it can also be inferred that the overall emotional skill scores of children having high school graduate preschool teachers are lower than the children having associate degree preschool teachers and also from the children having bachelor's degree preschool teachers.



There was a statistically significant difference at the  $p < .05$  level in ACES scores of children for the three different years of experience groups of preschool teachers:  $F(2, 123) = 51.77$ ,  $p = .00$ . The actual difference in mean scores between the groups was large. The effect size, calculated using eta squared, was .46. Post-hoc comparisons using the Tukey HSD test indicated the mean score for Group 1 ( $M = 28.48$ ,  $SD = 1.37$ ) was significantly different from Group 2 ( $M = 26.28$ ,  $SD = 1.88$ ) and Group 3 ( $M = 24.05$ ,  $SD = 2.76$ ). In other words, it can be inferred that preschool teachers' years of experience is a statistically significant predictor of emotional skill overall scores of children with large effect. Furthermore, it can also be inferred that the overall emotional skill scores of children whose preschool teachers have 11 or less years of experience are higher than the children whose preschool teachers have years of experience between 11.01 and 16 and also from the children whose preschool teachers have 16.01 or more years of experience.

According to Pallant (2010, p.253), "If the significance value is less than or equal to .05, there is a significant difference somewhere among the mean scores on dependent variable for three groups." The significance level was found to be .498. So it can be inferred that there was not a significant difference among the mean scores on the ACES scores of children with respect to three different age groups of mothers. In other words, it can be inferred that emotional skill overall scores of children do not differ with respect to their mothers' age.

There was a significance difference in ACES scores of children with respect to the mothers' having a bachelor's degree or higher level of education ( $M = 27.32$ ,  $SD = 2.22$ ) and ACES scores with respect to the mothers' having an associate's degree or lower level of education ( $M = 25.15$ ,  $SD = 2.95$ ;  $t(124) = -4.727$ ,  $p = .000$ , two-tailed). The magnitude of the differences in the means (mean difference = - 2.178, 95%  $CI = -3.091$  to  $-1.266$ ) was large (eta squared = .15). In other words, it can be inferred that levels of children in ability to be aware of oneself and others' emotions, ability to identify, understand, and express the emotions in an appropriate way differ with respect to their mothers' educational level.

### **4.3. Emotional intelligence level (overall and under each dimensions: intrapersonal, interpersonal, stress management, adaptability, and general mood) of preschool teachers and mothers**

Descriptive statistics results for the entire Bar-On Emotional Quotient Inventory indicated that the mean value was 402.97 ( $SD=15.62$ ,  $Min=322$ ,  $Max=415$ ). The mean scores are ranged between 1.08 and 5.00 for the items. In this 5-point Likert type scale, moderate level corresponded with 3 as the highest level corresponded with 5. When the mean value of EQ-i was examined, it can be inferred that the preschool teachers' had high level of emotional intelligence. When the mean scores of preschool teacher in each dimension were compared, it could be seen that preschool teachers had the highest mean scores in general mood ( $M=57.26$ ,  $SD=4.71$ ,  $Min=43$ ,  $Max=60$ ), in interpersonal ( $M=84.89$ ,  $SD=3.32$ ,  $Min=71$ ,  $Max=86$ ), and in intrapersonal ( $M=136.33$ ,  $SD=4.65$ ,  $Min=106$ ,  $Max=141$ ) dimension. When compared with the above stated three dimensions, preschool teachers had the lowest mean scores in stress management ( $M=58.21$ ,  $SD=3.17$ ,  $Min=47$ ,  $Max=61$ ) and in adaptability ( $M=66.28$ ,  $SD=3.99$ ,  $Min=53$ ,  $Max=71$ ) dimension. In other words, it can be inferred that preschool teachers are optimist and happy, have an empathy to understand the feelings of other individuals, are able to establish relationships with others, and have a social responsibility, and additionally they are also aware of their emotions, weaknesses and strenghts. On the other hand, it can be inferred that they are unable to cope with stressfull situations enough and are not able to keep up with changing conditions easily.

Participant preschool teachers had the highest mean scores in item 12 ( $M=5$ ,  $SD=.00$ ), which is one of the items in reality testing sub-dimensions under the adaptability dimension, in item 70 ( $M=4.98$ ,  $SD=.13$ ), which is one of the items in impulse control sub-dimension under the stress management dimension, in item 38 ( $M=4.95$ ,  $SD=.21$ ), which is one of the item in emotional self\_awareness sub-dimension under the intrapersonal dimension, in item 59 ( $M=4.95$ ,  $SD=.21$ ), which is one of the items in social responsibility sub-dimension under the interpersonal dimension, in item 63 ( $M=4.95$ ,  $SD=.21$ ), which is one of the items in stress tolerance sub-dimension under

the stress management skills, and in item 74 ( $M=4.95$ ,  $SD=.21$ ), which is in happiness sub-dimension under the general mood dimension. It can be inferred that most of the participant preschool teachers are aware of what is going on their around, are able to control tone of their voice when they argue with people, are good at define their feelings, have the social responsibility, are able to deal with problems, and also like weekends and holidays.

On the other hand, they had the lowest mean score in item 6 ( $M=1.08$ ,  $SD=.27$ ), which is one of the item in the stress tolerance sub-dimension under the stress management dimension, in item 50 ( $M=1.44$ ,  $SD=.50$ ), which is one of the items in flexibility sub-dimension under adaptability dimension, and in item 49 ( $M=2.77$ ,  $SD=1.92$ ), which is one of the items in empathy sub-dimension under the interpersonal dimension. In other words, most of the participant preschool teachers have a problem about stress tolerance, have difficulty changing their mind about something, and do not care what happens to others.

Descriptive statistics results for the entire Bar-On Emotional Quotient Inventory indicated that mean value was 345.44 ( $SD=7.52$ ,  $Min=239$ ,  $Max=407$ ). The mean scores are ranged between 1.31 and 4.98 for the items. In this 5-point Likert type scale, moderate level corresponded with 3 as the highest level corresponded with 5. When the mean value of EQ-i was examined, it can be inferred that the mothers' had high level of emotional intelligence. When the mean scores of the mothers in each dimension were compared, it could be seen that mothers had the highest mean scores in interpersonal ( $M=77.30$ ,  $SD=1.53$ ,  $Min=61$ ,  $Max=86$ ), in general mood ( $M=50.04$ ,  $SD=1.28$ ,  $Min=34$ ,  $Max=60$ ), and in adaptability ( $M=59.07$ ,  $SD=2.54$ ,  $Min=38$ ,  $Max=71$ ) dimension. When compared with the above stated three dimensions, mothers had the lowest mean scores in stress management ( $M=49.30$ ,  $SD=2.07$ ,  $Min=37$ ,  $Max=57$ ) and in intrapersonal ( $M=109.72$ ,  $SD=2.51$ ,  $Min=62$ ,  $Max=137$ ) dimension. In other words, it can be inferred that mothers are aware of what the others think and feel, have a social responsibility, and are able to establish relationships easily, are optimist and happy, and also they are able to adapt themselves to the changing environment or circumstances. Furthermore, it can be also inferred that they are not

able to deal with stressful situations easily, and are not good at being aware of oneself emotions, strengths, and weaknesses.

Participant mothers had the highest mean scores in item 12 ( $M=4.98$ ,  $SD=.15$ ), which is one of the items in reality testing sub-dimension under the adaptability dimension, in item 70 ( $M=4.94$ ,  $SD=.23$ ), which is one of the items in impulse control sub-dimension under the stress management dimension, in item 74 ( $M=4.85$ ,  $SD=.36$ ), which is in happiness sub-dimension under the general mood dimension, item 79 ( $M=4.85$ ,  $SD=.36$ ), which is in social responsibility sub-dimension under the interpersonal dimension, and in item 59 ( $M=4.85$ ,  $SD=.90$ ), which is one of the items in social-responsibility sub-dimension under the interpersonal dimension. In other words, it can be inferred that mothers are aware of what is going on around oneself, are able to control tone of oneself voice when they with people, like the holidays and weekends, and are seen as a reliable person by others.

On the other hand, they had the lowest mean score in item 6 ( $M=1.31$ ,  $SD=.46$ ), which is one of the item in the stress tolerance sub-dimension under the stress management dimension, in item 13 ( $M=1.42$ ,  $SD=.47$ ), which is in the emotional self-awareness sub-dimension under the intrapersonal dimension, and in item 50 ( $M=1.59$ ,  $SD=.49$ ), which is in the flexibility sub-dimension under the adaptability dimension. Therefore, it can be inferred that most of the participant mothers are not able to tolerate oneself stress, are not able to share oneself emotions with others, and also they cannot easily change their minds in changing circumstances.

#### **4.3.1. Emotional intelligence (overall and under each dimensions: intrapersonal, interpersonal, stress management, adaptability, and general mood) of preschool teachers with respect to their age, educational level, years of experience, and self-reported skills**

Multivariate analysis of variance (MANOVA) is conducted to compare the groups on more than one dependent variable and in order to control of the risk of a Type I error, it is suggested to perform MANOVA instead of a series of ANOVAs separately for each dependent variable (Pallant, 2010).

Sample size, normality, linearity, univariate and multivariate outliers, homogeneity of variance – covariance matrices, and multicollinearity are identified as the assumptions of multivariate analysis of variance (MANOVA) (Pallant, 2010). Assumptions were met before proceeding with the multivariate analysis of variance (MANOVA). The results of each assumption are stated below.

Pallant (2010) stated that in order to check the multicollinearity and singularity assumption, correlation analysis are performed which is the simplest way to check the strength of the correlations among dependent variables. Correlations between the dependent variables of the study were found to be .99 for the overall EQ-i score and the intrapersonal score, .97 for the overall EQ-i score and the interpersonal score, .80 for the overall EQ-i score and the stress management score, .90 for the overall EQ-i score and the adaptability score, and .99 for the overall EQ-i score and the general mood score. According to Pallant (2010), if the correlations are found as up around .8 or .9, in order to meet the multicollinearity and singularity assumption, the dependent variable which is the strongly correlated with other dependent variables can be removed. Therefore, the overall EQ-i score which was highly correlated with other dependent variables was removed from the analysis. Thus, it can be assumed that multicollinearity assumption was not violated for this present study.

In order to check the multivariate normality assumption, Mahalanobis distance value was examined. As we have 5 dependent variables, the critical value is identified 20.52 (Tabachnick & Fidell, 2007). Since the maximum value for Mahalanobis distance (25.36) was not less than the critical value (20.52), it can be inferred that there were a substantial multivariate outlier. According to Pallant (2010), if there is one person who scored with exceeded the critical value and their score is not too high, it is suggested to leave this data in the data file. Therefore, the person with ID= 121, and scored with 25.36 was not excluded from the data file.

In order to check the homogeneity of variance – covariance matrices assumption, Box's Test of Equality of Covariance Matrices was investigated (see Table 4.26). Since the significance values were larger than .001, it can be inferred that the homogeneity of

variance – covariance matrices assumption was not violated in this study (Tabachnick & Fidell, 2007).

**Table 4.26**

*Box's Test of Equality of Covariance Matrices*

Variable	Box's M	F	df1	df2	Sig.
Preschool teachers' age	393.442	24.290	15	21149.570	.003
Preschool teachers' educational level	602.204	36.841	15	13164.389	.012
Preschool teachers' years of experience	432.184	40.736	15	26126.657	.005
Preschool teachers' self-reported skills	505.444	29.090	15	2430.865	.008

*"Emotional intelligence (under each dimensions: intrapersonal, interpersonal, stress management, adaptability, and general mood) of preschool teachers with respect to their age"*

From Leneve' test of Error Variances, it can be inferred that none of the dependent variables in this current study indicated significant values; therefore, it can be assumed that the assumption of equality of variances was not violated (Pallant, 2010).

One-way between-groups multivariate analyses of variance (MANOVA) was conducted in order to examine the differences in preschool teachers' emotional intelligence with respect to their age. In this current study, five dependent variable which were intrapersonal, interpersonal, stress management, adaptability, and general mood were used. The independent variable of this current study was preschool teachers' age. Normality, linearity, univariate and multivariate outliers, homogeneity of variance – covariance matrices, and multicollinearity assumptions were checked, with no serious violations noted before the one-way between-groups multivariate analyses was performed. There was a statistically significant difference between preschool teachers' age on the combined dependent variables: intrapersonal, interpersonal, stress management, adaptability, and general mood, Multivariate  $F(10,238) = 8.48, p = .000$ ; Wilks' Lambda = .54;  $\eta_p^2 = .26$  (see Table 4.27).

**Table 4.27***Results of Multivariate Test for Preschool Teachers' Age effect*

Effect	Statistics	Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Preschool Teachers' Age	Wilks' Lambda	.54	8.48	10	238	.000	.26

According to Pallant (2010), if a significant result is found from multivariate test of significance, further investigation in respect to each dependent variables should be done and it is suggested to use higher alpha level to reduce the chance of a Type I error by applying Bonferroni adjustment which includes dividing the alpha level of .05 by the number of dependent variables of this current study. Since, new alpha value of .01 was obtained by dividing the alpha level of .05 by the number of dependent variables. When the results for the dependent variables were considered separately, the differences to reach statistical significance, using a Bonferroni adjusted alpha level of .01 were intrapersonal,  $F(10,238) = 31.95, p = .000, \eta_p^2 = .34$ ; interpersonal,  $F(10,238) = 20.13, p = .000, \eta_p^2 = .25$ ; stress management,  $F(10,238) = 42.42, p = .000, \eta_p^2 = .41$ ; adaptability,  $F(10,238) = 13.32, p = .000, \eta_p^2 = .18$ , and general mood,  $F(10,238) = 33.43, p = .000, \eta_p^2 = .35$  (see Table 4.28). In order to investigate where the significant differences lie, a follow up univariate analysis of variance should be performed (Pallant, 2010). Therefore, a follow up univariate analysis of variance was conducted (see Table 4.29).

The intrapersonal of older preschool teachers (38+ years) was significantly different from both the middle-aged preschool teachers (35-37 years) and the younger preschool teachers ( $\leq 34$  years). An inspection of the mean scores indicated that, older preschool teachers had lower levels of intrapersonal ( $M=128.87, SD=1.13$ ) than the middle-aged preschool teachers ( $M=138.67, SD=1.18$ ) and from the younger preschool teachers ( $M=140.37, SD=.99$ ). The partial eta square represented 34 percent of the variance in intrapersonal scores which were explained by age. In other words, older preschool

teachers have lower levels of awareness about oneself personality, emotions, weaknesses, and strenghts than the middle-aged preschool teachers and also from younger preschool teachers.

The interpersonal of older preschool teachers (38+ years) was significantly different from both the middle-aged preschool teachers (35-37 years) and the younger preschool teachers ( $\leq 34$  years). An inspection of the mean scores indicated that, older preschool teachers had lower levels of interpersonal ( $M=82.44$ ,  $SD=.47$ ) than the middle-aged preschool teachers ( $M=85.97$ ,  $SD=.48$ ) and from the younger preschool teachers ( $M=86.00$ ,  $SD=.41$ ). The partial eta square represented 25 percent of the variance in interpersonal scores which were explained by age. In other words, older preschool teachers are worse at understanding the emotions of others, establishing relationships with others, and being in a cooperation with other individuals than middle-aged preschool teachers and also from younger preschool teachers.

The stress management of preschool teachers was significantly different among three different age groups. An inspection of the mean scores indicated that, younger preschool teachers had higher levels of stress management ( $M=60.22$ ,  $SD=.34$ ) than the middle-aged preschool teachers ( $M=58.42$ ,  $SD=.41$ ) and from the older preschool teachers ( $M=55.41$ ,  $SD=.39$ ). The partial eta square represented 41 percent of the variance in stress management scores which were explained by age. In other words, younger preschool teachers are better at dealing with stressfull situations than middle-aged preschool teachers and also from older preschool teachers.

The adaptability of older preschool teachers (38+ years) was significantly different from both the middle-aged preschool teachers (35-37 years) and the younger preschool teachers ( $\leq 34$  years). An inspection of the mean scores indicated that, older preschool teachers had lower levels of adaptability ( $M=63.80$ ,  $SD=.58$ ) than the middle-aged preschool teachers ( $M=67.16$ ,  $SD=.51$ ) and from the younger preschool teachers ( $M=67.72$ ,  $SD=.61$ ). The partial eta square represented 18 percent of the variance in adaptability scores which were explained by age. In other words, older preschool



teachers are worse at adapting oneself in a changing environment than middle-aged preschool teachers and also from younger preschool teachers.

The general mood of older preschool teachers (38+ years) was significantly different from both the middle-aged preschool teachers (35-37 years) and the younger preschool teachers ( $\leq 34$  years). An inspection of the mean scores indicated that, older preschool teachers had lower levels of general mood ( $M=53.15$ ,  $SD=.61$ ) than the middle-aged preschool teachers ( $M=58.50$ ,  $SD=.64$ ) and from the younger preschool teachers ( $M=59.53$ ,  $SD=.54$ ). The partial eta square represented 35 percent of the variance in general mood scores which were explained by age. In other words, older preschool teachers are less happy and less optimist than middle-aged preschool teachers and also from younger preschool teachers.

**Table 4.28**

*Results of Univariate Effects for Preschool Teachers' Age*

Effect	Dependent Variable	F	Sig.	Partial Eta Squared
Preschool Teachers' Age	Intrapersonal	31.95	.000*	.34
	Interpersonal	20.13	.000*	.25
	Stress Management	42.42	.000*	.41
	Adaptability	13.32	.000*	.18
	General Mood	33.43	.000*	.35

\* Bonferroni adjusted alpha level= .01

**Table 4.29**

*Multiple Comparison for intrapersonal, interpersonal, stress management, adaptability, and general mood variables across preschool teachers' age groups (Bonferroni)*

Dependent Variable	Preschool Teachers' Age (I)	Preschool Teachers' Age (J)	Mean Difference (I-J)	Std. Error	Sig.	99% Confidence Interval	
						Lower Bound	Upper Bound
Intrapersonal	<= 34	35 - 37	1.706	1.540	.511	-2.87	6.28
		38+	11.501*	1.505	.000	7.03	15.97
	35 - 37	<= 34	-1.706	1.540	.511	-6.28	2.87
		38+	9.795*	1.635	.000	4.94	14.65
	38+	<= 34	-11.501*	1.505	.000	-15.97	-7.03
		35 - 37	-9.795*	1.635	.000	-14.65	-4.94
Interpersonal	<= 34	35 - 37	.028	.633	.999	-1.85	1.91
		38+	3.564*	.618	.000	1.73	5.40
	35 - 37	<= 34,	-.028	.633	.999	-1.91	1.85
		38+	3.536*	.672	.000	1.54	5.53
	38+	<= 34	-3.564*	.618	.000	-5.40	-1.73
		35 - 37	-3.536*	.672	.000	-5.53	-1.54
Stress Management	<= 34	35 - 37	1.799*	.535	.003	.21	3.39
		38+	4.805*	.523	.000	3.25	6.36
	35 - 37	<= 34	-1.799*	.535	.003	-3.39	-.21
		38+	3.006*	.568	.000	1.32	4.69
	38+	<= 34	-4.805*	.523	.000	-6.36	-3.25
		35 - 37	-3.006*	.568	.000	-4.69	-1.32
Adaptability	<= 34	35 - 37	-.565	.794	.757	-2.92	1.79
		38+	3.362*	.776	.000	1.06	5.67
	35 - 37	<= 34	.565	.794	.757	-1.79	2.92
		38+	3.927*	.844	.000	1.42	6.43
	38+	<= 34	-3.362*	.776	.000	-5.67	-1.06
		35 - 37	-3.927*	.844	.000	-6.43	-1.42
General Mood	<= 34	35 - 37	1.029	.832	.433	-1.44	3.50
		38+	6.376*	.813	.000	3.96	8.79
	35 - 37	<= 34	-1.029	.832	.433	-3.50	1.44
		38+	5.346*	.883	.000	2.73	7.97
	38+	<= 34	-6.376*	.813	.000	-8.79	-3.96
		35 - 37	-5.346*	.883	.000	-7.97	-2.73

\*. The mean difference is significant at the .01 level.

*"Emotional intelligence (under each dimensions: intrapersonal, interpersonal, stress management, adaptability, and general mood) of preschool teachers with respect to educational level"*

When we look at the Leneve' test of Error Variances, it can be inferred that none of the dependent variables of this current study indicated significant values; therefore, it can be assumed that the assumption of equality of variances was not violated (Pallant, 2010).

One-way between-groups multivariate analyses of variance (MANOVA) was conducted to examine the differences in the emotional intelligence of preschool teachers' with respect to their educational level. In this current study, five dependent variable which were intrapersonal, interpersonal, stress management, adaptability, and general mood were used. The independent variable of this current study was preschool teachers' educational level. Normality, linearity, univariate and multivariate outliers, homogeneity of variance – covariance matrices, and multicollinearity assumptions were checked, with no serious violations noted before the one-way between-groups multivariate analyses was conducted. There was a statistically significant difference between preschool teachers' educational level on the combined dependent variables: intrapersonal, interpersonal, stress management, adaptability, and general mood, Multivariate  $F(10,238) = 32.06, p = .000$ ; Wilks' Lambda = .18;  $\eta_p^2 = .57$  (see Table 4.30).

**Table 4.30**

*Results of Multivariate Test for Preschool Teachers' Educational Level effect*

Effect	Statistics	Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Preschool Teachers' Educational Level	Wilks' Lambda	.18	32.06	10	238	.000	.57

If a significant result is found from multivariate test of significance, further investigation in respect to each dependent variables should be done and it is suggested to use higher alpha level to reduce the chance of a Type I error by applying Bonferroni adjustment which includes dividing the alpha level of .05 by the number of dependent variables of this current study (Pallant, 2010). Since, new alpha value of .01 was obtained by dividing the alpha level of .05 by the number of dependent variables. When the results for the dependent variables were considered separately, the differences to reach statistical significance, using a Bonferroni adjusted alpha level of .01 were intrapersonal,  $F(10,238) = 76.94, p = .000, \eta_p^2 = .56$ ; interpersonal,  $F(10,238) = 38.95, p = .000, \eta_p^2 = .39$ ; stress management,  $F(10,238) = 144.16, p = .000, \eta_p^2 = .70$ ; adaptability,  $F(10,238) = 21.01, p = .000, \eta_p^2 = .26$ , and general mood,  $F(10,238) = 74.28, p = .000, \eta_p^2 = .55$  (see Table 4.31). Pallant (2010) stated that in order to investigate where the significant differences lie, a follow up univariate analysis of variance should be performed. Therefore, a follow up univariate analysis of variance was conducted (see Table 4.32).

The intrapersonal of high school graduate preschool teachers was significantly different from both the associate's degree preschool teachers and the bachelor's degree preschool teachers. An inspection of the mean scores indicated that, high school graduate preschool teachers had lower levels of intrapersonal ( $M=124.54, SD=2.14$ ) than the associate's degree preschool teachers ( $M=138.16, SD=2.02$ ) and from the bachelor's degree preschool teachers ( $M=141.00, SD=.01$ ). The partial eta square represented 56 percent of the variance in intrapersonal scores which were explained by educational level. In other words, high school graduate preschool teachers have lower levels of awareness about oneself personality, emotions, weaknesses, and strengths than associate's degree preschool teachers and also from bachelors' degree preschool teachers.

The interpersonal of high school graduate preschool teachers was significantly different from both the associate's degree preschool teachers and the bachelor's degree

preschool teachers. An inspection of the mean scores indicated that, high school graduate preschool teachers had lower levels of interpersonal ( $M=81.04$ ,  $SD=.58$ ) than the associate's degree preschool teachers ( $M=85.98$ ,  $SD=.15$ ) and from the bachelor's degree preschool teachers ( $M=86.00$ ,  $SD=.01$ ). The partial eta square represented 39 percent of the variance in interpersonal scores which were explained by educational level. In other words, high school graduate preschool teachers are worse at understanding the emotions of others, establishing relationships with others, and being in a cooperation with other individuals than associate's degree preschool teachers and also from bachelor's degree preschool teachers.

The stress management of preschool teachers was significantly different among three different educational level groups. An inspection of the mean scores indicated that, bachelor's degree preschool teachers had higher levels of stress management ( $M=60.92$ ,  $SD=.33$ ) than the associate's degree preschool teachers ( $M=57.58$ ,  $SD=2.34$ ) and from the high school graduate preschool teachers ( $M=54.11$ ,  $SD=2.18$ ). The partial eta square represented 70 percent of the variance in stress management scores which were explained by educational level. In other words, bachelor's degree preschool teachers are better at dealing with the stressfull situations than associate's degree preschool teachers and also from high school graduate preschool teachers.

The adaptability of high school graduate preschool teachers was significantly different from both the associate's degree preschool teachers and the bachelor's degree preschool teachers. An inspection of the mean scores indicated that, high school graduate preschool teachers had lower levels of adaptability ( $M=62.57$ ,  $SD=.37$ ) than the associate's degree preschool teachers ( $M=67.00$ ,  $SD=.01$ ) and from the bachelor's degree preschool teachers ( $M=67.73$ ,  $SD=.69$ ). The partial eta square represented 26 percent of the variance in adaptability scores which were explained by educational level. In other words, high school graduate preschool teachers are worse at adapting oneself in a changing environment than associate's degree preschool teachers and also from bachelor's degree preschool teachers.

The general mood of preschool teachers was significantly different among three different educational level groups. An inspection of the mean scores indicated that, bachelor's degree preschool teachers had higher levels of general mood ( $M=60.00$ ,  $SD=.01$ ) than the associate's degree preschool teachers ( $M=57.93$ ,  $SD=1.41$ ) and from the high school graduate preschool teachers ( $M=51.00$ ,  $SD=.58$ ). The partial eta square represented 55 percent of the variance in general mood scores which were explained by educational level. In other words, bachelor's degree preschool teachers are happier and more optimist than associates' degree preschool teachers and also from high school graduate preschool teachers.

**Table 4.31**

*Results of Univariate Effects for Preschool Teachers' Educational Level*

Effect	Dependent Variable	F	Sig.	Partial Eta Squared
Preschool Teachers' Educational Level	Intrapersonal	76.94	.000*	.56
	Interpersonal	38.95	.000*	.39
	Stress Management	144.16	.000*	.70
	Adaptability	21.01	.000*	.26
	General Mood	74.28	.000*	.55

\* Bonferroni adjusted alpha level= .01

**Table 4.32**

*Multiple Comparison for intrapersonal, interpersonal, stress management, adaptability, and general mood variables across preschool teachers' educational level groups (Bonferroni)*

Dependent Variable	Preschool Teachers' Educational Level (I)	Preschool Teachers' Educational Level (J)	Mean Difference (I-J)	Std. Error	Sig.	99% Confidence Interval	
						Lower Bound	Upper Bound
Intrapersonal	High School Graduate	Associate's Degree	-13.620*	1.399	.000	-17.77	-9.47
		Bachelor's Degree	-16.464*	1.358	.000	-20.50	-12.43
	Associate's Degree	High School Graduate	13.620*	1.399	.000	9.47	17.77
		Bachelor's Degree	-2.844	1.178	.045	-6.34	.65
	Bachelor's Degree	High School Graduate	16.464*	1.358	.000	12.43	20.50
		Associate's Degree	2.844	1.178	.045	-.65	6.34
Interpersonal	High School Graduate	Associate's Degree	-4.942*	.630	.000	-6.81	-3.07
		Bachelor's Degree	-4.964*	.612	.000	-6.78	-3.15
	Associate's Degree	High School Graduate	4.942*	.630	.000	3.07	6.81
		Bachelor's Degree	-.022	.531	.999	-1.60	1.55
	Bachelor's Degree	High School Graduate	4.964*	.612	.000	3.15	6.78
		Associate's Degree	.022	.531	.999	-1.55	1.60

**Table 4.32***(Continued)*

Stress Management	High School Graduate	Associate's Degree	-3.471*	.420	.000	-4.72	-2.22
		Bachelor's Degree	-6.817*	.408	.000	-8.03	-5.61
	Associate's Degree	High School Graduate	3.471*	.420	.000	2.22	4.72
		Bachelor's Degree	-3.347*	.354	.000	-4.40	-2.30
	Bachelor's Degree	High School Graduate	6.817*	.408	.000	5.61	8.03
		Associate's Degree	3.347*	.354	.000	2.30	4.40
Adaptability	High School Graduate	Associate's Degree	-5.162*	.837	.000	-7.65	-2.68
		Bachelor's Degree	-4.429*	.812	.000	-6.84	-2.02
	Associate's Degree	High School Graduate	5.162*	.837	.000	2.68	7.65
		Bachelor's Degree	.733	.704	.553	-1.36	2.82
	Bachelor's Degree	High School Graduate	4.429*	.812	.000	2.02	6.84
		Associate's Degree	-.733	.704	.553	-2.82	1.36
General Mood	High School Graduate	Associate's Degree	-6.933*	.769	.000	-9.22	-4.65
		Bachelor's Degree	-9.000*	.746	.000	-11.22	-6.78
	Associate's Degree	High School Graduate	6.933*	.769	.000	4.65	9.22
		Bachelor's Degree	-2.067*	.647	.005	-3.99	-.14
	Bachelor's Degree	High School Graduate	9.000*	.746	.000	6.78	11.22
		Associate's Degree	2.067*	.647	.005	.14	3.99

\*. The mean difference is significant at the .01 level.



*"Emotional intelligence (under each dimensions: intrapersonal, interpersonal, stress management, adaptability, and general mood) of preschool teachers with respect to years of experience"*

When we look at the Leneve' test of Error Variances, it can be inferred that none of the dependent variables of this current study indicated significant values; therefore, it can be assumed that the assumption of equality of variances was not violated (Pallant, 2010).

One-way between-groups multivariate analyses of variance (MANOVA) was performed in order to determine the differences in preschool teachers' emotional intelligence with respect to their years of experience. In this study, five dependent variable which were intrapersonal, interpersonal, stress management, adaptability, and general mood were used. The independent variable of this current study was preschool teachers' years of experience. Normality, linearity, univariate and multivariate outliers, homogeneity of variance – covariance matrices, and multicollinearity assumptions were checked, with no serious violations noted before the one-way between-groups multivariate analyses was performed. There was a statistically significant difference between preschool teachers' years of experience on the combined dependent variables which were intrapersonal, interpersonal, stress management, adaptability, and general mood, Multivariate  $F(10,238) = 18.69, p = .000$ ; Wilks' Lambda = .35;  $\eta_p^2 = .41$  (see Table 4.33).

**Table 4.33**

*Results of Multivariate Test for Preschool Teachers' Years of Experience effect*

Effect	Statistics	Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Preschool Teachers' Years of Experience	Wilks' Lambda	.35	18.69	10	238	.000	.41

If a significant result is found from multivariate test of significance, further investigation in respect to each dependent variables should be done and it is suggested to use higher alpha level to reduce the chance of a Type I error by applying Bonferroni adjustment which includes dividing the alpha level of .05 by the number of dependent variables of this current study (Pallant, 2010). Since, new alpha value of .01 was obtained by dividing the alpha level of .05 by the number of dependent variables. When the results for the dependent variables were considered separately, the differences to reach statistical significance, using a Bonferroni adjusted alpha level of .01 were intrapersonal,  $F(10,238) = 33.34, p = .000, \eta_p^2 = .35$ ; interpersonal,  $F(10,238) = 17.44, p = .000, \eta_p^2 = .22$ ; stress management,  $F(10,238) = 66.82, p = .000, \eta_p^2 = .52$ ; adaptability,  $F(10,238) = 9.16, p = .000, \eta_p^2 = .13$ , and general mood,  $F(10,238) = 33.34, p = .000, \eta_p^2 = .35$  (see Table 4.34). According to Pallant (2010), in order to investigate where the significant differences lie, a follow up univariate analysis of variance should be performed. Therefore, a follow up univariate analysis of variance was conducted (see Table 4.35).

The intrapersonal of preschool teacher with 16.01 or more years of experience was significantly different from both the preschool teachers with 11.01 – 16 years of experience and the preschool teachers with 11 or less years of experience. An inspection of the mean scores indicated that, the preschool teachers with 16.01 or more years of experience had lower levels of intrapersonal ( $M=129.26, SD=2.04$ ) than the preschool teachers with 11.01 – 16 years of experience ( $M=138.33, SD=1.91$ ) and from the preschool teacher with 11 or less years of experience ( $M=141.00, SD=.01$ ). The partial eta square represented 35 percent of the variance in intrapersonal scores which were explained by years of experience. In other words, preschool teachers with 16.01 or more years of experience have lower levels of awareness about their own personality, emotions, weaknesses, and strengths than preschool teachers with 11.01-16 years of experience and also from preschool teachers with 11 or below years of experience.

The interpersonal of preschool teacher with 16.01 or more years of experience was significantly different from both the preschool teachers with 11.01 – 16 years of experience and the preschool teachers with 11 or less years of experience. An inspection of the mean scores indicated that, the preschool teachers with 16.01 or more years of experience had lower levels of interpersonal ( $M=82.69$ ,  $SD=.12$ ) than the preschool teachers with 11.01 – 16 years of experience ( $M=85.97$ ,  $SD=.17$ ) and from the preschool teacher with 11 or less years of experience ( $M=86.00$ ,  $SD=.01$ ). The partial eta square represented 22 percent of the variance in interpersonal scores which were explained by years of experience. In other words, preschool teachers with 16.01 or more years of experience are worse at understanding emotions of others, establishing relationships with others, and being in a cooperation with other individuals than preschool teachers with 11.01 – 16 years of experience and also from preschool teachers with 11 or less years of experience.

The stress management of preschool teachers was significantly different among three different years of experience groups. An inspection of the mean scores indicated that preschool teachers with 11 or less years of experience had higher levels of stress management ( $M=60.92$ ,  $SD=.35$ ) than the preschool teachers with 11.01 – 16 years of experience ( $M=57.69$ ,  $SD=1.38$ ) and from the preschool teachers with 16.01 or more years of experience ( $M=55.57$ ,  $SD=1.12$ ). The partial eta square represented 52 percent of the variance in stress management scores which were explained by years of experience. In other words, preschool teachers with 11 or less years of experience are better at dealing with stressfull situations than preschool teachers with 11.01 – 16 years of experience and also from preschool teachers with 16.01 or more years of experience.

The adaptability of preschool teacher with 16.01 or more years of experience was significantly different from both the preschool teachers with 11.01 – 16 years of experience and the preschool teachers with 11 or less years of experience. An inspection of the mean scores indicated that, the preschool teachers with 16.01 or more years of experience had lower levels of adaptability ( $M=64.29$ ,  $SD=.29$ ) than the preschool teachers with 11.01 – 16 years of experience ( $M=67.00$ ,  $SD=.01$ ) and from the preschool teacher with 11 or less years of experience ( $M=67.64$ ,  $SD=.49$ ). The

partial eta square represented 13 percent of the variance in adaptability scores which were explained by years of experience. In other words, preschool teachers with 16.01 or more years of experience are worse at adapting to a changing environment than preschool teachers with 11.01 – 16 years of experience and also from preschool teachers with 11 or less years of experience.

The general mood of preschool teacher with 16.01 or more years of experience was significantly different from both the preschool teachers with 11.01 – 16 years of experience and the preschool teachers with 11 or less years of experience. An inspection of the mean scores indicated that, the preschool teachers with 16.01 or more years of experience had lower levels of general mood ( $M=53.50$ ,  $SD=.48$ ) than the preschool teachers with 11.01 – 16 years of experience ( $M=58.00$ ,  $SD=.43$ ) and from the preschool teacher with 11 or less years of experience ( $M=60.00$ ,  $SD=.01$ ). The partial eta square represented 35 percent of the variance in general mood scores which were explained by years of experience. In other words, preschool teachers with 16.01 or more years of experience are less happy and less optimistic than preschool teachers with 11.01 – 16 years of experience and also from preschool teachers with 11 or less years of experience.

**Table 4.34**

*Results of Univariate Effects for Preschool Teachers' Years of Experience*

Effect	Dependent Variable	F	Sig.	Partial Eta Squared
Preschool Teachers' Years of Experience	Intrapersonal	33.34	.000*	.35
	Interpersonal	17.44	.000*	.22
	Stress Management	66.82	.000*	.52
	Adaptability	9.16	.000*	.13
	General Mood	33.34	.000*	.35

\* Bonferroni adjusted alpha level= .01

**Table 4.35**

*Multiple Comparison for intrapersonal, interpersonal, stress management, adaptability, and general mood variables across preschool teachers' years of experience groups (Bonferroni)*

Dependent Variable	Preschool Teachers' Years of Experience (I)	Preschool Teachers' Years of Experience (J)	Mean Difference (I-J)	Std. Error	Sig.	99% Confidence Interval	
						Lower Bound	Upper Bound
Intrapersonal	<= 11	11.01 - 16	2.667	1.549	.201	-1.93	7.26
		16.01+	11.738*	1.484	.000	7.33	16.14
	11.01 - 16	<= 11	-2.667	1.549	.201	-7.26	1.93
		16.01+	9.071*	1.595	.000	4.34	13.81
	16.01+	<= 11	-11.738*	1.484	.000	-16.14	-7.33
		11.01 - 16	-9.071*	1.595	.000	-13.81	-4.34
Interpersonal	<= 11	11.01 - 16	.028	.651	.999	-1.91	1.96
		16.01+	3.310*	.624	.000	1.46	5.16
	11.01 - 16	<= 11	-.028	.651	.999	-1.96	1.91
		16.01+	3.282*	.671	.000	1.29	5.27
	16.01+	<= 11	-3.310*	.624	.000	-5.16	-1.46
		11.01 - 16	-3.282*	.671	.000	-5.27	-1.29
Stress Management	<= 11	11.01 - 16	3.222*	.488	.000	1.77	4.67
		16.01+	5.345*	.467	.000	3.96	6.73
	11.01 - 16	<= 11	-3.222*	.488	.000	-4.67	-1.77
		16.01+	2.123*	.502	.000	.63	3.61
	16.01+	<= 11	-5.345*	.467	.000	-6.73	-3.96
		11.01 - 16	-2.123*	.502	.000	-3.61	-.63
Adaptability	<= 11	11.01 - 16	-.639	.828	.721	-3.10	1.82
		16.01+	2.714*	.794	.002	.36	5.07
	11.01 - 16	<= 11	.639	.828	.721	-1.82	3.10
		16.01+	3.353*	.853	.000	.82	5.89
	16.01+	<= 11	-2.714*	.794	.002	-5.07	-.36
		11.01 - 16	-3.353*	.853	.000	-5.89	-.82

**Table 4.35***(Continued)*

General	<= 11	11.01 - 16	2.000	.843	.050	-.50	4.50
Mood		16.01+	6.500*	.807	.000	4.10	8.90
	11.01 - 16	<= 11	-2.000	.843	.050	-4.50	.50
		16.01+	4.500*	.868	.000	1.92	7.08
	16.01+	<= 11	-6.500*	.807	.000	-8.90	-4.10
		11.01 - 16	-4.500*	.868	.000	-7.08	-1.92

\*. The mean difference is significant at the .01 level.

*"Emotional intelligence (under each dimensions: intrapersonal, interpersonal, stress management, adaptability, and general mood) of preschool teachers with respect to self-reported skills"*

When we look at the Leneve' test of Error Variances, it can be inferred that none of the dependent variables of this current study indicated significant values; therefore, it can be assumed that the assumption of equality of variances was not violated (Pallant, 2010).

One-way between-groups multivariate analyses of variance (MANOVA) was performed in order to investigate the differences in preschool teachers' emotional intelligence with respect to their self-reported skills. In this current study, five dependent variable which were intrapersonal, interpersonal, stress management, adaptability, and general mood were used. The independent variable of this current study was preschool teachers' self-reported skills. Normality, linearity, univariate and multivariate outliers, homogeneity of variance – covariance matrices, and multicollinearity assumptions were checked, with no serious violations noted before the one-way between-groups multivariate analyses was performed. There was a statistically significant difference between preschool teachers' self-reported skills on the combined dependent variables: intrapersonal, interpersonal, stress management, adaptability, and general mood, Multivariate  $F(10,238) = 22.11, p = .000$ ; Wilks' Lambda = .27;  $\eta_p^2 = .48$  (see Table 4.36).

**Table 4.36***Results of Multivariate Test for Preschool Teachers' Self-Reported Skills effect*

Effect	Statistics	Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Preschool Teachers' Self-Reported Skills	Wilks' Lambda	.27	22.11	10	238	.000	.48

Pallant (2010) stated that if a significant result is obtained from multivariate test of significance, further investigation in respect to each dependent variables should be done and it is suggested to use higher alpha level to reduce the chance of a Type I error by applying Bonferroni adjustment which includes dividing the alpha level of .05 by the number of dependent variables of this current study. Since, new alpha value of .01 was obtained by dividing the alpha level of .05 by the number of dependent variables. When the results for the dependent variables were considered separately, the differences to reach statistical significance, using a Bonferroni adjusted alpha level of .01 were intrapersonal,  $F(10,238) = 129.27, p = .000, \eta_p^2 = .68$ ; interpersonal,  $F(10,238) = 138.89, p = .000, \eta_p^2 = .69$ ; stress management,  $F(10,238) = 30.17, p = .000, \eta_p^2 = .33$ ; adaptability,  $F(10,238) = 106.39, p = .000, \eta_p^2 = .63$ , and general mood,  $F(10,238) = 127.43, p = .000, \eta_p^2 = .67$  (see Table 4.37). According to Pallant (2010), in order to investigate where the significant differences lie, a follow up univariate analysis of variance should be performed. Therefore, a follow up univariate analysis of variance was conducted (see Table 4.38).

The intrapersonal of preschool teachers having moderately competent self-reported skills was significantly different from both the preschool teachers having competent self-reported skills and the preschool teachers having very competent self-reported skills. An inspection of mean scores indicated that, preschool teachers having moderately competent self-reported skills had lower levels of intrapersonal ( $M=117.07, SD=1.78$ ) than the preschool teachers having competent self-reported

skills ( $M=138.62$ ,  $SD=1.06$ ) and from the preschool teachers having very competent self-reported skills ( $M=139.67$ ,  $SD=1.92$ ). The partial eta square represented 68 percent of the variance in intrapersonal scores which were explained by self-reported skills. In other words, preschool teachers having moderately competent self-reported skills have lower levels of awareness about their own personality, emotions, weaknesses, and strengths than preschool teachers having competent self-reported skills and also from preschool teachers having very competent self-reported skills.

The interpersonal of preschool teachers having moderately competent self-reported skills was significantly different from both the preschool teachers having competent self-reported skills and the preschool teachers having very competent self-reported skills. An inspection of mean scores indicated that, preschool teachers having moderately competent self-reported skills had lower levels of interpersonal ( $M=77.40$ ,  $SD=1.81$ ) than the preschool teachers having competent self-reported skills ( $M=85.86$ ,  $SD=1.14$ ) and from the preschool teachers having very competent self-reported skills ( $M=86.00$ ,  $SD=1.21$ ). The partial eta square represented 69 percent of the variance in interpersonal scores which were explained by self-reported skills. In other words, preschool teachers having moderately competent self-reported skills are worse at understanding the emotions of others, establishing relationships with others, and being in a cooperation with other individuals than than preschool teachers having competent self-reported skills and also from preschool teachers having very competent self-reported skills.

The stress management of preschool teachers having moderately competent self-reported skills was significantly different from both the preschool teachers having competent self-reported skills and the preschool teachers having very competent self-reported skills. An inspection of mean scores indicated that, preschool teachers having moderately competent self-reported skills had lower levels of stress management ( $M=53.33$ ,  $SD=2.90$ ) than the preschool teachers having competent self-reported skills ( $M=58.71$ ,  $SD=2.68$ ) and from the preschool teachers having very competent self-reported skills ( $M=59.27$ ,  $SD=2.32$ ). The partial eta square represented 33 percent of the variance in stress management scores which were explained by self-reported skills.



In other words, preschool teachers having moderately competent self-reported skills are worse at dealing with the stressful situations than preschool teachers having competent self-reported skills and also from preschool teachers having very competent self-reported skills.

The adaptability of preschool teachers having moderately competent self-reported skills was significantly different from both the preschool teachers having competent self-reported skills and the preschool teachers having very competent self-reported skills. An inspection of mean scores indicated that, preschool teachers having moderately competent self-reported skills had lower levels of adaptability ( $M=57.67$ ,  $SD=.83$ ) than the preschool teachers having competent self-reported skills ( $M=67.33$ ,  $SD=.48$ ) and from the preschool teachers having very competent self-reported skills ( $M=67.49$ ,  $SD=.79$ ). The partial eta square represented 63 percent of the variance in adaptability scores which were explained by self-reported skills. In other words, preschool teachers having moderately competent self-reported skills are worse at adapting to a changing environment than preschool teachers having competent self-reported skills and also from preschool teachers having very competent self-reported skills.

The general mood of preschool teachers having moderately competent self-reported skills was significantly different from both the preschool teachers having competent self-reported skills and the preschool teachers having very competent self-reported skills. An inspection of mean scores indicated that, preschool teachers having moderately competent self-reported skills had lower levels of general mood ( $M=46.80$ ,  $SD=1.86$ ) than the preschool teachers having competent self-reported skills ( $M=58.54$ ,  $SD=1.15$ ) and from the preschool teachers having very competent self-reported skills ( $M=59.00$ ,  $SD=1.44$ ). The partial eta square represented 67 percent of the variance in general mood scores which were explained by self-reported skills. In other words, preschool teachers having moderately competent self-reported skills are less happy and less optimistic than preschool teachers having competent self-reported skills and also from preschool teachers having very competent self-reported skills.

**Table 4.37***Results of Univariate Effects for Preschool Teachers' Self-Reported Skills*

Effect	Dependent Variable	F	Sig.	Partial Eta Squared
Preschool Teachers' Self-Reported Skills	Intrapersonal	129.27	.000*	.68
	Interpersonal	138.89	.000*	.69
	Stress Management	30.17	.000*	.33
	Adaptability	106.39	.000*	.63
	General Mood	127.43	.000*	.67

\* Bonferroni adjusted alpha level= .01

**Table 4.38***Multiple Comparison for intrapersonal, interpersonal, stress management, adaptability, and general mood variables across preschool teachers' self-reported groups (Bonferroni)*

Dependent Variable	Preschool Teachers' Self-Reported Skills (I)	Preschool Teachers' Self-Reported Skills (J)	Mean Difference (I-J)	Std. Error	Sig.	99% Confidence Interval	
						Lower Bound	Upper Bound
Intrapersonal	moderately competent	competent	-21.549*	1.396	.000	-25.69	-17.40
		very competent	-22.600*	1.542	.000	-27.18	-18.02
	competent	moderately competent	21.549*	1.396	.000	17.40	25.69
		very competent	-1.051	1.028	.564	-4.10	2.00
	very competent	moderately competent	22.600*	1.542	.000	18.02	27.18
		competent	1.051	1.028	.564	-2.00	4.10

**Table 4.38***(Continued)*

Interpersonal	moderately competent	competent	-8.459*	.523	.000	-10.01	-6.91
		very competent	-8.600*	.578	.000	-10.31	-6.89
	competent	moderately competent	8.459*	.523	.000	6.91	10.01
		very competent	-.141	.385	.929	-1.28	1.00
Stress Management	very competent	moderately competent	8.600*	.578	.000	6.89	10.31
		competent	.141	.385	.929	-1.00	1.28
	moderately competent	competent	-5.372*	.738	.000	-7.56	-3.18
		very competent	-5.939*	.815	.000	-8.36	-3.52
Adaptability	competent	moderately competent	5.372*	.738	.000	3.18	7.56
		very competent	-.568	.543	.550	-2.18	1.05
	very competent	moderately competent	5.939*	.815	.000	3.52	8.36
		competent	.568	.543	.550	-1.05	2.18
General Mood	moderately competent	competent	-9.821*	.687	.000	-11.86	-7.78
		very competent	-9.667*	.759	.000	-11.92	-7.41
	competent	moderately competent	9.821*	.687	.000	7.78	11.86
		very competent	.154	.506	.950	-1.35	1.66
General Mood	very competent	moderately competent	9.667*	.759	.000	7.41	11.92
		competent	-.154	.506	.950	-1.66	1.35
	moderately competent	competent	-11.738*	.763	.000	-14.00	-9.47
		very competent	-12.200*	.843	.000	-14.70	-9.70
General Mood	competent	moderately competent	11.738*	.763	.000	9.47	14.00
		very competent	-.462	.562	.691	-2.13	1.21
	very competent	moderately competent	12.200*	.843	.000	9.70	14.70
		competent	.462	.562	.691	-1.21	2.13

\* . The mean difference is significant at the .01 level.

*"Emotional intelligence (overall) of preschool teachers with respect to their age, educational level, years of experience, and self-reported skills"*

In order to examine the differences in emotional intelligence overall scores of preschool teachers with respect to their educational level, years of experience, and self-reported skills, a one-way between-groups of analysis of variance was performed.

The assumptions of one-way between-groups analysis of variance (ANOVA) are identified as level of measurement, independence of observations, normal distribution and homogeneity of variance by Pallant (2010). Before proceeding with One-way between-groups analysis of variance (ANOVA), assumptions mentioned below were met. The results of each assumption are presented below.

The dependent variable should be measured at the interval or ratio level, and also it must be a continuous variable in order to meet the level of measurement assumption (Pallant, 2010). In this present study, in order to investigate the differences in emotional intelligence overall scores of preschool teachers with respect to their age, educational level, years of experience and self-reported skills, the mean scores for the emotional intelligence overall scores were used as a continuous variable. By the way, it can be inferred that the level of measurement assumption was met. In this present study, responses of the preschool teachers were not influenced by any other factor in order to meet the assumption of the independence of observation.

According to Pallant (2010), in order to meet the normality assumption, the scores of each group should be normally distributed on the dependent variable. The skewness and kurtosis values for these three groups were between -2 and +2. So it can be inferred that the mean scores were normally distributed in the independent variable groups.

By using the Levene's test of equality variance, the last assumption, homogeneity of variance, was examined. The results of the Levene's test was found as above the significance level ( $>.05$ ). Therefore, it can be inferred that two groups had equal variances and so it can be inferred that the equal variance assumption was met. After

all assumptions were met, One-way between-groups analysis of variance (ANOVA) was performed.

There was a statistically significant difference at the  $p < .05$  level in emotional intelligence overall scores of the preschool teachers with respect to three different age groups:  $F(2,123)=30.88, p=.00$ . The effect size, calculated using eta squared, was .33. Post-hoc comparisons using the Tukey HSD test indicated the mean score for Group 3 (38-49yrs) ( $M=383.67, SD=4.69$ ) was significantly different from Group 1 (29-34yrs) ( $M=413.27, SD=4.04$ ) and Group 2 (35-37yrs) ( $M=409.28, SD=4.73$ ). In other words, it can be inferred that preschool teachers' age is a statistically significant predictor of emotional intelligence overall scores of preschool teachers with large effect. Furthermore, it can also be inferred that overall emotional intelligence scores of older preschool teachers are lower than middle-aged preschool teachers and also from younger preschool teachers.

There was a statistically significant difference at the  $p < .05$  level in emotional intelligence overall scores of the preschool teachers with respect to three different educational level groups:  $F(2,123)=66.28, p=.00$ . The effect size, calculated using eta squared, was .51. Post-hoc comparisons using the Tukey HSD test indicated the mean score for Group 1 (high school graduate) ( $M=373.25, SD=4.12$ ) was significantly different from Group 2 (associate's degree) ( $M=407.38, SD=3.15$ ) and Group 3 (bachelors' degree) ( $M=414.92, SD=3.34$ ). In other words, it can be inferred that preschool teachers' education level is a statistically significant predictor of emotional intelligence overall scores of preschool teachers with large effect. Furthermore, it can also be inferred that overall emotional intelligence scores of high school graduate preschool teachers are lower than associate's degree preschool teachers and also from bachelor's degree preschool teachers.

There was a statistically significant difference at the  $p < .05$  level in emotional intelligence overall scores of the preschool teachers with respect to three different years of experience groups:  $F(2,123)=29.50, p=.00$ . The effect size, calculated using eta squared, was .32. Post-hoc comparisons using the Tukey HSD test indicated the mean score for Group 3 (16.01-29yrs) ( $M=385.31, SD=3.34$ ) was significantly different from

Group 1 (8.5-11yrs) ( $M=413.27$ ,  $SD=3.23$ ) and Group 2 (11.01-16yrs) ( $M=409.28$ ,  $SD=4.18$ ). In other words, it can be inferred that preschool teachers' years of experience is a statistically significant predictor of the emotional intelligence overall scores of preschool teachers with large effect. Furthermore, it can also be inferred that the overall emotional intelligence scores of preschool teachers having years of experience between 16.01 and 29 years are lower than preschool teachers having years of experience between 8.5 and 11 years and also from the preschool teachers having years of experience between 11.01 and 16 years.

There was a statistically significant difference at the  $p<.05$  level in emotional intelligence overall scores of the preschool teachers with respect to three different self-reported skills groups:  $F(2,123)=134.25$ ,  $p=.00$ . The effect size, calculated using eta squared, was .69. Post-hoc comparisons using the Tukey HSD test indicated the mean score for Group 1 (moderately competent self-reported skills) ( $M=352.27$ ,  $SD=3.27$ ) was significantly different from Group 2 (competent self-reported skills) ( $M=409.21$ ,  $SD=2.83$ ) and Group 3 (very competent self-reported skills) ( $M=411.27$ ,  $SD=3.17$ ). In other words, it can be inferred that preschool teachers' self-reported skills is a statistically significant predictor of emotional intelligence overall scores of preschool teachers with large effect. Furthermore, overall emotional intelligence scores of preschool teachers having moderately competent self-reported skills are lower than preschool teachers having competent self-reported skills and also from preschool teachers having very competent self-reported skills.

#### **4.3.2. Emotional intelligence (overall and under each dimensions: intrapersonal, interpersonal, stress management, adaptability, and general mood) of mothers with respect to their age and educational level**

Multivariate analysis of variance (MANOVA) is performed to compare the groups on more than one dependent variable and in order to control of the risk of a Type I error, it is suggested to conduct MANOVA instead of a series of ANOVAs separately for each dependent variable (Pallant, 2010).

Sample size, normality, linearity, univariate and multivariate outliers, homogeneity of variance – covariance matrices, and multicollinearity are identified as the assumptions of multivariate analysis of variance (MANOVA) (Pallant, 2010). Assumptions were met before proceeding with the multivariate analysis of variance (MANOVA). The results of each assumption are stated below.

According to Pallant (2010), in order to check the multicollinearity and singularity assumption, correlation analysis are proceed which is the simplest way to check the strength of the correlations among dependent variables. Correlations between the dependent variables of the study were found to be .97 for the overall EQ-i score and the intrapersonal score, .98 for the overall EQ-i score and the interpersonal score, .91 for the overall EQ-i score and the stress management score, .92 for the overall EQ-i score and the adaptability score, and .95 for the overall EQ-i score and the general mood score. Pallant (2010) stated that if the correlations are found as up around .8 or .9, in order to meet the multicollinearity and singularity assumption, the dependent variable which is the strongly correlated with other dependent variables can be removed. Therefore, the overall EQ-i score which was highly correlated with other dependent variables was removed from the analysis. Thus, it can be assumed that multicollinearity assumption was not violated for this present study.

In order to check the multivariate normality assumption, Mahalanobis distance value was examined. As we have 5 dependent variables, the critical value is identified 20.52 (Tabachnick & Fidell, 2007). Since the maximum value for Mahalanobis distance (15.817) was less than the critical value (20.52), it can be safely inferred that there were no substantial multivariate outliers.

According to Pallant (2010), in order to check the linearity assumption, a matrix of scatterplots can be used. By examining the scatter plots, there was a linear relationship between each pair of the dependent variables. Therefore, it can be inferred that the linearity assumption was met.

In order to check the assumption of homogeneity of variance – covariance matrices, Box's Test of Equality of Covariance Matrices was examined (see Table 4.39). Since

the significance values larger than .001, it can be assumed that the assumption of homogeneity of variance – covariance matrices was not violated in this present study (Tabachnick & Fidell, 2007).

**Table 4.39**

*Box's Test of Equality of Covariance Matrices*

Variable	Box's M	F	df1	df2	Sig.
Mothers' age	17.419	.545	30	39062,214	.979
Mothers' educational level	102.140	6.508	15	53993.641	.002

*"Emotional intelligence (under each dimensions: intrapersonal, interpersonal, stress management, adaptability, and general mood) of mothers with respect to their age"*

When we look at the Leneve's test of Error Variances, it can be assumed that none of the dependent variables of this study indicated significant values; since it can be inferred that the assumption of equality of variances was not violated for this study (Pallant, 2010).

One-way between-groups multivariate analyses of variance (MANOVA) was conducted in order to examine the differences in mothers' emotional intelligence with respect to their age. In this study, five independent variables: intrapersonal, interpersonal, stress management, adaptability, and general mood were used. The independent variable of this study was mothers' age. Normality, linearity, univariate and multivariate outliers, homogeneity of variance – covariance matrices, and multicollinearity assumptions were checked, with no serious violations noted before the one-way between-groups multivariate analyses was conducted. There was a not statistically significant difference between mothers' age on the combined dependent variables: intrapersonal, interpersonal, stress management, adaptability, and general mood, Multivariate  $F(10,238) = .55, p = .85$ ; Wilks' Lambda = .96;  $\eta_p^2 = .023$  (see



Table 4.40). As the non-significant result was obtained, between subject effects were not investigated. In other words, it can be inferred that mothers' awareness about their own personality, emotions, weaknesses, and strenghts, understanding emotions of others, establishing relationships with others, and being in a cooperation with other individuals, dealing with stressfull situations, adapting to a changing environment, happiness and optimism do not differ with respect to age.

**Table 4.40**

*Results of Multivariate Test for Mothers' Age effect*

Effect	Statistics	Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Mothers' Age	Wilks' Lambda	.96	.55	10	238	.85	.023

*"Emotional intelligence (under each dimensions: intrapersonal, interpersonal, stress management, adaptability, and general mood) of mothers with respect to their educational level"*

When we look at the Leneve's test of Error Variances, it can be assumed that none of the dependent variables of this study indicated significant values; since it can be inferred that the assumption of equality of variances was not violated for this study (Pallant, 2010).

In order to investigate the differences in mothers' emotional intelligence with respect to their educational level, one-way between-groups multivariate analyses of variance (MANOVA) was performed. In this current study, five dependent variables which were intrapersonal, interpersonal, stress management, adaptability, and general mood were used. The independent variables of this current study was mothers' educational level. Normality, linearity, univariate and multivariate outliers, homogeneity of variance – covariance matrices, and multicollinearity assumptions were checked, with no serious violations noted before the one-way between-groups multivariate analyses was performed. There was a statistically significant difference between mothers'

educational level on the combined dependent variables: intrapersonal, interpersonal, stress management, adaptability, and general mood, Multivariate  $F(5,120) = 7.992$ ,  $p = .000$ ; Wilks' Lambda = .75;  $\eta_p^2 = .25$  (see Table 4.41).

**Table 4.41**

*Results of Multivariate Test for Mothers' Educational Level effect*

Effect	Statistics	Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Mothers' Educational Level	Wilks' Lambda	.75	7.922	5	120	.000	.25

According to Pallant (2010), if a significant result is found from multivariate test of significance, further investigation in respect to each dependent variables should be done and it is suggested to use higher alpha level in order to reduce the chance of a Type I error by applying Bonferroni adjustment which includes dividing the alpha level of .05 by the number of dependent variables of this present study. Since, new alpha value of .01 was found by dividing the alpha level of .05 by the number of dependent variables. When the results for the dependent variables were considered separately, the differences to reach statistical significance, using a Bonferroni adjusted alpha level of .01 were intrapersonal,  $F(5,120) = 24.19$ ,  $p = .000$ ,  $\eta_p^2 = .16$ ; interpersonal  $F(5,120) = 22.77$ ,  $p = .000$ ,  $\eta_p^2 = .16$ ; stress management,  $F(5,120) = 30.00$ ,  $p = .000$ ,  $\eta_p^2 = .20$ ; adaptability,  $F(5,120) = 20.67$ ,  $p = .000$ ,  $\eta_p^2 = .14$ , and general mood,  $F(5,120) = 26.86$ ,  $p = .000$ ,  $\eta_p^2 = .19$  (see Table 4.42). An inspection of the mean scores indicated that mothers having bachelor's degree or higher educational level reported higher levels of intrapersonal ( $M=121.94$ ,  $SD=2.54$ ) than the mothers having associate's degree or lower educational level ( $M=93.95$ ,  $SD=3.36$ ), mothers having bachelor's degree or higher educational level reported higher levels of interpersonal ( $M=81.28$ ,  $SD=2.60$ ) than the mothers having associate's degree or lower

educational level ( $M=72.16$ ,  $SD=1.86$ ), mothers having bachelor's degree or higher educational level reported higher levels of stress management ( $M=52.42$ ,  $SD=3.78$ ) than the mothers having associate's degree or lower educational level ( $M=45.27$ ,  $SD=2.85$ ), mothers having bachelor's degree or higher educational level reported higher levels of adaptability ( $M=62.23$ ,  $SD=1.09$ ) than the mothers having associate's degree or lower educational level ( $M=53.71$ ,  $SD=1.41$ ), and mothers having bachelor's degree or higher educational level reported higher levels of general mood ( $M=54.21$ ,  $SD=2.51$ ) than the mothers having associate's degree or lower educational level ( $M=44.65$ ,  $SD=1.17$ ).

In other words, there are statistically significant differences between emotional intelligence scores of mothers having bachelor's degree or higher educational level and mothers having associate's degree or lower educational level. Educational level was found as .16% predictor of intrapersonal scores, .16% predictor of interpersonal scores, .20% predictor of stress management scores, .20.67% predictor of adaptability scores, and .19% predictor of general mood scores. Furthermore, mothers having bachelor's degree or higher educational level have higher levels of intrapersonal, interpersonal, stress management, adaptability, and general mood than mothers having associate's degree or lower educational level. In other words, it can be inferred that mothers having bachelor degree or higher educational level are better at being aware of their own personality, emotions, weaknesses, and strenghts, at understanding the emotions of others, establishing relationships with others, and being in a cooperation with other individuals, at dealing with the stressfull situations, in adapting to a changing environment, and also are happier and more optimistic than mothers having associate's degree or lower educational level.

**Table 4.42***Results of Univariate Effects for Mothers' Educational Level*

Effect	Dependent Variable	F	Sig.	Partial Eta Squared
Mothers' Educational Level	Intrapersonal	24.19	.000*	.16
	Interpersonal	22.77	.000*	.16
	Stress Management	30.00	.000*	.20
	Adaptability	20.67	.000*	.14
	General Mood	26.86	.000*	.19

\* Bonferroni adjusted alpha level= .01

*"Emotional intelligence scores (overall) of mothers with respect to their age and educational level"*

A one-way between-groups analysis of variance was performed in order to investigate the differences in emotional intelligence overall scores of mothers with respect to their age. The assumptions of One-way between-groups ANOVA are stated as level of measurement, independence of observations, normal distribution and homogeneity of variance (Pallant, 2010). Before proceeding with One-way between groups ANOVA, assumptions mentioned below are met. The results of each assumption are presented below.

In order to meet the level of measurement assumption, the dependent variable should be measured at the interval or ratio level, and also it must be a continuous variable (Pallant, 2010). In this current study, in order to examine differences in emotional intelligence with respect to age of the participant mothers, the mean scores for the emotional intelligence were used as a continuous variable. By the way, level of measurement assumption was met.

The random sampling assumption is about selecting the data in order to use in the independent sample t-test randomly. In this study, the mothers of 66–72-month-old children attending public and primary elementary schools and preschools operated by MoNE in three different districts of Ankara were chosen randomly. In this present

study, in order to meet the assumption of the independence of observation, responses of the participant mothers were not influenced by any other factor.

Pallant (2010) stated that the scores of each group should be normally distributed on the dependent variable in order to meet the normality assumption. The skewness and kurtosis values for these three groups were between -2 and +2. So it can be inferred that the mean scores were normally distributed in three groups

The last assumption, homogeneity of variance, was investigated by using the Levene's test of equality variance. The results of the Levene's test was found to be .024 which is below the significance level ( $>.05$ ). If the significance level of Levene's test is  $p=.05$  or less, this means that the two groups had not equal variances and so the equal variance assumption is violated. In this case, it is recommended to use the table headed as Robust Tests of Equality of Means (Pallant, 2010).

After all assumptions were met, One-way between-groups ANOVA analysis was conducted. According to Pallant (2010, p.253), "If the significance value is less than or equal to .05, there is a significant difference somewhere among the mean scores on your dependent variable for three groups.". The significance level was found to be .365 which is above the significance level. So it can be inferred that there is no significant difference among the mean scores on the emotional intelligence of mothers for three different age groups. In other words, it can be inferred that mothers' emotional intelligence scores do not differ with respect to age.

In order to compare the mean scores of mothers' emotional intelligence with respect to their educational level, an independent sample-t test was conducted. An independent sample t-test is used for comparing the mean score on continuous variable for the participants of two different groups (Pallant, 2010). In this present study, there is one dependent variable, which is the emotional intelligence of mothers of 66–72-month-old children.

Five assumptions, the level of measurement, random sampling, independence of observations, normal distribution and the homogeneity of variance, are considered

before proceeding with the independent sample t-test (Pallant, 2010). Before proceeding with the independent sample t-test, assumptions mentioned below were met. The results of each assumption are presented below.

In order to meet the level of measurement assumption, the dependent variable should be measured at the interval or ratio level, and also it must be a continuous variable (Pallant, 2010). In this current study, in order to examine differences in emotional intelligence overall scores of mothers with respect to their educational level, the mean scores for the emotional intelligence were used as a continuous variable. By the way, level of measurement assumption was met.

The random sampling assumption is about selecting the data in order to use in the independent sample t-test randomly. In this study, the mothers of the 66–72-month-old children attending public and primary elementary schools and preschools operated by MoNE in three different districts of Ankara were chosen randomly. In this present study, in order to meet the assumption of the independence of observation, responses of the participant mothers were not influenced by any other factor.

Pallant (2010) stated that the scores of each group should be normally distributed on the dependent variable in order to meet the normality assumption. In this current study, the two groups for the independent sample t-test were having an associate's degree or below and having a bachelor's degree or above. The skewness and kurtosis values for both groups were between -2 and +2, so the mean scores were normally distributed in both groups.

The last assumption, homogeneity of variance, was investigated by using the Levene's test of equality variance. The results of the Levene's test was found to be .000 which is below the significance level ( $>.05$ ) (see Table 4.43). In this case, it is recommended to use the table headed as Robust Tests of Equality of Means (Pallant, 2010).

**Table 4.43***The Results of the Leneve's Test for the Equality of Variances Results*

	<i>Leneve's Test of Equality of Means</i>	
	<i>F</i>	<i>Sig.</i>
EQ-i	24.051	.000

After all assumptions were met, the independent sample t-test analysis was conducted. Significant difference was found ( $t(102.281)=-4.823, p=.000$ ) (see Table 4.44) in the mean scores with regard to EQ-i between the mothers having an associate' degree or below ( $M=309.75, SD=4.28$ ) and having a bachelor's degree or above ( $M=373.08, SD=4.09$ ).

**Table 4.44***The Results of the Independent Sample T-Test*

<i>t</i>	<i>df</i>	<i>Sig</i> (2- tailed)	<i>Mean</i> <i>Difference</i>	<i>Std. Error</i> <i>Difference</i>	<i>95% Confidence Interval</i> <i>of Difference</i>	
					<i>Lower</i>	<i>Upper</i>
					-4.828	102.281

The mean score of the mothers having a bachelor's degree or higher educational level was calculated as 373.08 with a standard deviation of 4.28 while the mean score of the mothers having an associate's degree or below educational level was calculated as 309.75 with a standard deviation of 4.09. There was a significance difference in EQ-i for the mothers having a bachelor's degree or higher educational level ( $M=373.08, SD=4.28$ ) and the mothers having an associate's degree or lower educational level ( $M=309.75, SD=4.09; t(102.281)=-4.823, p=.000, two-tailed$ ). The magnitude of the differences in the means (mean difference= - 63.339, 95%  $CI=-89.362$  to  $-31.316$ ) was large (eta squared= .16). In other words, it can be inferred that mothers having bachelor's degree or higher educational level have higher levels of emotional intelligence than mothers having associate's degree or lower educational level.

#### **4.4. Prediction of the overall emotional skills of 66–72-month-old children through the overall emotional intelligence levels of preschool teachers and mothers**

“Multiple regression can be used to explore the relationship between one continuous dependent variable and a number of independent variables.” (Pallant, 2010, p.148). In this current study, there was one dependent variable named as the emotional skills of 66–72-month-old children, and there were two independent variables which were the emotional intelligence of preschool teachers and the emotional intelligence of mothers. Before performing the analysis, the required assumptions which are sample size, multicollinearity and singularity, outliers, normality, linearity, homoscedasticity, independence of residuals, and absence of outliers assumptions should be checked (Tabachnick & Fidell, 2007). The results of the multiple regression analysis based on the each assumption are stated below.

In order to obtain the results which can be generalise to other samples, the formula of “ $N > 50 + 8m$ ” ( $m$  = number of independent variable) should be used (Tabachnick & Fidell, 2007, p.123). In the current study, there are two independent variables which are emotional intelligence of preschool teachers and emotional intelligence of mothers. Sample size should be higher than 66 based on the formula. Since there was 126 participants in the present study, the sample size assumption was met.

Multicollinearity and singularity is the sign of the relationship between the independent variables. If the independent variables are highly correlated which is  $r = .9$  or above, it can be inferred that multicollinearity exists and if one independent variable is combination of the other independent variables, singularity occurs (Pallant, 2010, p.151). In the present study, the correlation between independent variable was  $.60$  which was lower than  $.7$ . Multicollinearity and singularity assumption can be checked by two values: Tolerance value and Variance Inflation Factor (VIF). If the Tolerance value is less than  $.10$  and VIF values are above  $10$ , it can be indicate the probability of multicollinearity (Pallant, 2010). Tolerance and VIF values are stated below. As seen



in Table 4.45, it can be inferred that multicollinearity and singularity assumptions were met in present study.

**Table 4.45**

*Tolerance and VIF values for all independent variables*

<i>Variables</i>	<i>Tolerance</i>	<i>VIF</i>
EQ-i of Preschool Teachers	.635	1.575
EQ-i of Mothers	.635	1.575

The outliers between the dependent variable and the independent variables can have an effect on the regression analysis considerably. In order to deal with the outliers, deleting the data, transforming the data or recoding the data should be used before performing the regression analysis (Tabachnick & Fidell, 2007). In the present study, the outliers were transformed before performing the regression.

Normality, linearity, and homoscedasticity assumptions can be investigated from the residuals referring the differences between the obtained and the predicted dependent variables scatterplots (Pallant, 2010). In the scatterplot, the residuals should be rectangularly distributed and the standardised residuals should be within the range of -3.3 and +3.3. In the normal P-P, values should be lie in a straight line and a normal distribution on the histogram (Tabachnick & Fidell, 2007). All the assumptions stated below was met in present study.

The absence of outliers in the solution assumption. Outliers can be defined by using the residual plot and using the analysis of the Mahalanobis Distances and Cook's Distances. The critical values for the present study is 18. In addition, according to Tabachnick and Fidell (2007, p.75), cases with values larger than 1 are a potential problem. In this current study, the maximum value for Cook's Distance was inferred was .095 which suggested no major problems. The results based on the Mahalanobis Distance inferred that there are two outliers (Table 4.46).

**Table 4.46***Residual Statistics*

	<i>Minimum</i>	<i>Maximum</i>	<i>Mean</i>	<i>Standard Deviation</i>	<i>N</i>
Mahal. Distance	.483	13.792	1.984	2.489	126
Cook's Distance	.000	.095	.008	.010	126

After all assumptions stated above were met, the multiple regression analysis was performed in order to investigate the effect of the emotional intelligence of preschool teachers and the emotional intelligence of mothers to emotional skills of 66–72-month-old children.

According to the results of the ANOVA test, it can be inferred that this model predicted the scores for the emotional skills of 66–72-month-old children at a significant level (see Table 4.47).

**Table 4.47***ANOVA Table for the Whole Model*

<i>Model</i>	<i>Sum of Squares</i>	<i>df</i>	<i>Mean Square</i>	<i>F</i>	<i>Sig.</i>
Regression	778.459	2	389.229	258.771	.000
Residual	185.010	123	1.504		
Total	963.468	125			

Predictors: EQ-i of Preschool Teachers, EQ-i of Mothers

Dependent Variable: Emotional Skills of 66–72-Month-Old Children

Pearson correlations were examined to define the relationships between the emotional skills of 66–72-month-old children, the emotional intelligence of the preschool teachers, and the emotional intelligence of the mothers (see Table 4.48). It can be inferred that a statistically significant positive correlation between these variables. The strength of the correlation can be categorized as large ( $r=.818$ ,  $p<.01$ ) for emotional intelligence of preschool teachers and as large ( $r=.791$ ,  $p<.01$ ) for the emotional intelligence of mothers (Cohen, 1998).

**Table 4.48***Correlation between the Scores*

		Emotional Intelligence of Preschool Teachers	Emotional Intelligence of Mothers
Pearson Correlation	Emotional Skills of Children	.818	.791
Sig.(1-tailed)	Emotional Skills of Children	.000**	.000**

\*\* $p < .01$ 

The results get from the overall model was also significant,  $R^2 = .808$ ,  $F(2.123) = 258.77$ ,  $p < .05$ . The effect size inferred that this model explained 80.8% of the variance in the emotional skills of 66–72-month-old children. The significant predictor of the model were found to be the emotional intelligence of the preschool teachers ( $\beta = .535$ ,  $p = .000$ ) and the emotional intelligence of mothers ( $\beta = .468$ ,  $p = .000$ ) in terms of the emotional skills of 66–72-month-old children when considered together (see Table 4.49). In other words, higher emotional intelligence of preschool teachers and higher emotional intelligence of mothers lead to higher emotional skills of children. The results of this study revealed that preschool teachers have higher impact on children's emotional skills than mothers.

**Table 4.49***Multiple Regression Analysis for Variables Predicting the Emotional Skills of 66–72-Month-Old Children*

	<i>B</i>	<i>Std. E.</i>	$\beta$	<i>t</i>	<i>p</i>
Constant	-3.399	2.141	.....	-1.588	.115
Emotional Intelligence of Preschool Teachers	.057	.002	.535	10.789	.000
Emotional Intelligence of Mothers	.019	.006	.468	9.443	.000

#### 4.5. Summary

This current study was conducted for the following seven main aims; to investigate emotional skills of 66–72-month-old children, to examine whether there were any significant differences in emotional skills of 66–72-month-old children with respect to their gender, family income, their preschool teachers' age, educational level, years of experience and self-reported skills in developing children's emotional skills, and mothers' age and educational level, emotional intelligence of preschool teachers, to determine whether emotional intelligence of preschool teachers differs with respect to their age, educational level, years of experience and self-reported skills in developing children's emotional skills, to determine emotional intelligence of mothers, to investigate whether there were any significant differences in emotional intelligence of mothers with respect to their age and educational level, and as well as to examine the predictive impact of emotional intelligence of preschool teachers and emotional intelligence of mothers on emotional skills of 66–72-month-old children.

The results of the study revealed that 66–72-month-old children had high level of emotional skills ( $M=26.37$ ) and when the mean scores got from identification of emotions, understanding of emotions and expressing of emotions dimensions were compared, it was found that as 66–72-month-old children had the highest mean scores in understanding of emotions dimension ( $M=9.12$ ), they had the lowest mean scores in identification of emotions dimension ( $M=8.35$ ). Moreover, it was also found that the emotional skills (overall and under each dimensions: identification of emotions, understanding of emotions, and expressing of emotions) of 66–72-month-old children differ with respect to their gender, family income, their preschool teachers' age, educational level, years of experience and self-reported skills in developing children's emotional skills, and mothers' educational level. On the other hand, the results of the current study revealed that the emotional skills (overall and under each dimensions: identification of emotions, understanding of emotions, and expressing of emotions) of 66–72-month-old children do not differ with respect to their mothers' age.

It was found that preschool teachers had high level of emotional intelligence. While they had the highest mean scores in general mood, interpersonal, and in intrapersonal

dimensions, they had the lowest mean scores in stress management and in adaptability dimensions. Furthermore, the results also revealed that there were statistically significant difference in emotional intelligence (overall and under each dimensions: intrapersonal, interpersonal, stress management, adaptability, and general mood) of preschool teachers with respect to their age, educational level, years of experience and self-reported skills in developing children's emotional skills.

The findings of the study revealed that mothers had high level of emotional intelligence. Moreover, while they had the highest mean scores in interpersonal, in general mood, and in adaptability dimensions, they had the lowest mean scores in stress management and in intrapersonal dimensions. It was also found that there were statistically significant difference in emotional intelligence (overall and under each dimensions: intrapersonal, interpersonal, stress management, adaptability, and general mood) of mothers with respect to their educational level, on the other hand there were no statistically significant difference in emotional intelligence (overall and under each dimensions: intrapersonal, interpersonal, stress management, adaptability, and general mood) of mothers regarding their age.

Lastly, the results of the current study revealed that emotional intelligence of preschool teachers and emotional intelligence of mothers had a significantly predictive impact on emotional skills of 66–72-month-old children. Moreover, it was found that emotional intelligence of preschool teachers had higher predictive impact on emotional skills of 66–72-month-old children than emotional intelligence of mothers.

## CHAPTER 5

### DISCUSSION, IMPLICATIONS, and RECOMMENDATIONS

In this chapter, first, the results of the study are summarized and the findings are discussed in the light of previous research. Second, the possible implications of this study are discussed, along with methods for improving children's emotional skills, preschool teachers' emotional intelligence, and mothers' emotional intelligence. Finally, recommendations for further studies are presented.

The present study investigates the emotional skills of 66–72-month-old children and the emotional intelligence of preschool teachers and mothers. It examines whether the emotional skills of 66–72-month-old children differ with respect to their gender, family income, their preschool teacher's age, educational level, years of experience, self-reported skills, their mother's age and educational level. It also examines whether preschool teachers' emotional intelligence differs with respect to age, educational level, years of experience, and self-reported skills and whether mothers' emotional intelligence differs with respect to age and educational level. Finally, it explores the possible relationship between the emotional skills of 66–72-month-old children and their preschool teachers and mothers. Quantitative research method was employed in this present study. The research questions stated below were used in order to gather in-depth information about the emotional skills of 66–72-month-old children, emotional intelligence of preschool teachers and emotional intelligence of mothers:

**R.Q.1.** What are the levels of 66–72-month-old children's emotional skills (overall and under each dimensions: identification of emotions, understanding of emotions, and expressing of emotions)?

**R.Q.1.a.** Do the emotional skill scores of 66–72-month-old children differ with respect to their gender, family income, preschool teachers' and mothers' background information?

**R.Q.2.** What are the levels of the emotional intelligence (overall and under each dimensions: intrapersonal, interpersonal, stress management, adaptability, and general mood) of preschool teachers and mothers?

**R.Q.2.a.** Do the emotional intelligence (overall and under each dimensions: intrapersonal, interpersonal, stress management, adaptability, and general mood) of preschool teachers differ with respect to their age, educational level, years of experience, and self-reported skills?

**R.Q.2.b.** Do the emotional intelligence (overall and under each dimensions: intrapersonal, interpersonal, stress management, adaptability, and general mood) of mothers differ with respect to their age and educational level?

**R.Q.3.** How well do the overall emotional intelligence levels of preschool teachers and mothers predict overall emotional skills of 66–72-month-old children?

### **5.1. Emotional Skills of 66–72-Month-Old Children**

One of the purposes of this study was to examine the emotional skills (overall and in each dimension: identification of emotions, understanding of emotions, and expressing emotions) of 66–72-month-old children. The findings of the present study indicated that 66–72-month-old children had the highest mean emotional skills score; in fact, the mean was close to the highest possible score on the test. In other words, according to these findings, 66–72-month-old children are very aware of their own and others' emotions and are able to identify, understand, and express emotions. The children's scores in the different dimensions were also compared. The participant 66–72-month-old children had the highest mean score in understanding emotions; in other words, their emotional skills consist of two main aspects: understanding their own and others' emotions (Harris & Saarni, 1989). The children's lowest mean score was in identifying emotions; in other words, they are less able to recognize what emotions mean than to understand and express emotions. Denham (2007) stated that the heart of emotional skills is understanding emotions. Furthermore, expressing and experiencing emotions contribute to understanding them, and understanding emotions also contributes to these other two skills. This might be why the children in this study scored higher in

understanding and expressing emotions than in identifying emotions. It has also been found that children are able to understand their own and others' emotions easily (Çelik, Tuğrul, & Yalçın, 2002) in another study that recognized understanding emotions as an emotional skill. This could be why the children scored highest in understanding emotions in the present study.

In this current study, there was a significant difference between the emotional skills of female and male children. According to Davis (1995), females are generally more capable than males of identifying and controlling emotions. Additionally, according to this current study, the female children had higher mean emotional skills scores than the male children. The literature contains parallel findings to this one. For example, the results of this study are supported by the findings of Bosacci and Moore (2004), who found a significant difference between the emotional skills of female and male children. Other studies (Durmuşoğlu-Saltalı & Arslan, 2011; Durmuşoğlu-Saltalı & Arslan, 2012) have found that six-year-old females score higher than six-year-old males at identifying emotions, understanding emotions, expressing emotions, and total emotional skills. However, some previous findings are not consistent with the current study. According to Arı and Seçer (2004), there was no significant difference in children's ability to identify emotions with respect to their gender.

Another study (Malatesta & Haviland, 1982) found that mothers encourage their children to regulate their emotions differently with respect to gender. Although there are few gender differences in the types and frequencies of facial expressions used by very young children, female children show more interest than male children and mothers respond to female children's emotions differently than to those of male children. The differences between the emotional intelligence of females and males can be biologically explained (Ciarrochi, Chan, & Caputi, 2000). However, these gender differences in emotional intelligence can also be explained as an effect of culture. Society, and especially parents, have different expectations of male and female children. While female children are expected to be good at expressing emotions, in male children, a failure to express emotions is held up as a model of manliness (Naghavi & Redzuan, 2011).



This study also found that children's emotional skills varied significantly in respect to family income. Children from families with a higher income had higher emotional skills scores. According to another study by Brooks-Gunn and Duncan (1997), children from families with a lower income suffer from emotional problems more often than children from higher-income families. Brooks-Gunn and Duncan also found that family income can significantly influence a child's well-being. The higher mean emotional skills scores of children with a higher family income in the current study may be explained by differences in opportunity. When family income increases, individuals have more access to educational, social, and cultural opportunities that help develop their emotional intelligence (Aşan & Özyer, 2003).

Other studies (Güllüce & İşcan, 2010; Pamukoğlu, 2004) have also found differences in emotional intelligence with respect to age. These studies found that as age increases, an individual's emotional intelligence also increases. However, Öztürk (2006) stated that an individual's emotional intelligence evolves as a result of personal effort, rather than developing with age. Furthermore, an individual's environment can also positively affect the development of emotional intelligence. The current study found that children's emotional skills varied significantly with respect to their preschool teacher's age: Children with younger preschool teachers had higher emotional skills scores. The reason for this might be, as Öztürk pointed out, that emotional intelligence can increase through social experiences, relationships, seminars or courses on emotional intelligence, or knowledge obtained from literature on emotional intelligence, rather than automatically increasing with age.

This study also found that children's emotional skills varied significantly in relation to their preschool teacher's educational level. The mean scores in this study showed that the children whose preschool teachers had a bachelor's degree had higher emotional skills scores. According to previous studies (Cingisiz & Murat, 2010; Yılmaz & Şahin, 2004), emotional intelligence increases as an individual's level of education increases. According to Denham et al. (2012), preschool teachers have a significant impact on children's emotional skills. Teachers' understanding of their own emotional skills can

impact their ability to create a classroom environment which enhances children's social-emotional development (Zinsser et al., 2015).

This study also found that children's emotional skills differed significantly in relation to their preschool teacher's amount of experience. The mean scores in the current study indicated that the children with less experienced preschool teachers had higher emotional skills scores. In a study by Yerli (2009), the emotional intelligence scores of participating administrators with 1 – 5 years of experience were higher than those of participating administrators with 11 – 20 years of experience and the scores of those with 21 years of experience or more. Similarly, in the current study, children whose preschool teachers had 11 years of experience or less had higher emotional skills scores than children whose preschool teachers had 11.01 – 16 years of experience and than those whose preschool teachers had 16.01 years of experience or more. In this study, the higher emotional skills scores of children with less experienced preschool teachers might indicate that preschool teachers' emotional intelligence affects the emotional skills of children aged 66 to 72 months, which is one of the findings of the current study.

Bandura (1994) defines teachers' self-efficacy as the degree of a teacher's beliefs that they can influence their students' performance. According to Gibb (2002), a teacher's effectiveness in teaching activities is influenced by their views of their own self-efficacy. The findings of the current study parallel this finding. In the current study, children's emotional skills scores varied significantly in relation to their preschool teachers' self-reported emotional skills. In other words, children whose preschool teachers described themselves as very competent in emotional skills had higher emotional intelligence scores than children whose preschool teachers described their own emotional skills as competent or moderately competent. Previous studies have found that children's emotional skills are related to their teachers' feelings of efficacy in developing children's emotional skills (Penrose, Perry, & Bell, 2007; Perry & Ball, 2008); this could explain the findings of the current study.

The present study found no significant relationship between the mothers' age and their children's emotional skills. However, Akaydın (2015) found a statistically significant

variation in children's emotional intelligence in relation to their mother's age. The means scores of that study showed that children whose mothers were 41 or older had higher levels of emotional skill (Akduman & Akaydin, 2016). However, in the current study, only 14 of the participating mothers were 41 or older. This could explain why the children's emotional skills did not relate significantly to their mother's age in this study.

In the current study, children's emotional skills varied significantly in relation to their mothers' educational levels. This result supports the findings of Arı and Seer (2004) and Yurdakavuştu (2011), but the findings of İkız and Kırtıl-Görmez (2010) were not consistent with the current study. They found no significant relationship between the emotional intelligence of secondary school students and their mothers' educational level. However, Arı and Seer (2004) indicated that mothers' educational levels influenced children's ability to identify emotions. Yurdakavuştu (2011) also found a significant relationship between the emotional intelligence of elementary school students and their mothers' educational level.

## **5.2. Emotional Intelligence of Preschool Teachers and Mothers**

One of the purposes of the present study was to investigate the emotional intelligence (overall and in each dimension: intrapersonal, interpersonal, stress management, adaptability, and general mood) of preschool teachers. Of the dimensions (intrapersonal, interpersonal, stress management, adaptability, and general mood) of the EQ-i, preschool teachers had the highest mean scores in general mood, interpersonal, and intrapersonal. In other words, preschool teachers are generally optimistic and happy. They are able to understand others' feelings and to establish relationships with others, and they are socially responsible. They are also aware of their own emotions, strengths, and weaknesses. According to Gardner (2000), intrapersonal and interpersonal intelligence are as important as the cognitive elements of intelligence. Collinson (1996) presented a comprehensive description of the factors that define an exemplary teacher inside and outside the classroom. According to this model, exemplary teachers emphasize the sustained development of three types of knowledge, one of which is intrapersonal knowledge. Justice and Espinoza (2007) also

pointed out that teachers need very strong intrapersonal, since teachers with low self-esteem might experience stress when any little thing goes wrong with their students, their colleagues, or themselves. Other studies have also found a positive correlation between emotional intelligence and life satisfaction/happiness (Austin, Saklofske, & Egan, 2005; Palmer, Donaldson, & Stough, 2002; Saklofske, Austin, & Minski, 2003). A negative correlation has also been found between emotional intelligence and a tendency towards depression (Dawda & Hart, 2000; Saklofske et al., 2003; Schutte et al., 1998).

Of the dimensions of emotional intelligence (intrapersonal, interpersonal, stress management, adaptability, and general mood), the participant preschool teachers in the current study had the lowest mean scores in stress management and adaptability. In other words, preschool teachers are not always able to cope with stressful situations, and they cannot handle changing conditions easily. Preschool teachers who must constantly interact with pupils, parents, administrators, and other teachers and who (unlike some other types of teachers) cannot take breaks may experience psychological problems such as stress and work intensity (Toplu, 2012). Teaching is a stressful occupation (Nelson, Low, & Nelson, 2005; Zoraloğlu, 1998). In one study on teachers in Turkey, workload, uncertainty, school management, parental pressure, the application of educational policies, parent and student indifference, and physical environment and work-related conditions were identified as causes of stress (Zoraloğlu, 1998). Fielding and Gall (1982) pointed out that teachers in public schools have more work-related stress. The ultimate tragedy of teacher stress leading to physical or mental illness is called teacher burnout (Eskridge & Coker, 1985). According to several studies (Uçman, 1990; Ataklı, 1999; Balcı, 2000), teachers in Turkey are experiencing deterioration in their mental health; teachers in Turkey receive little respect in society because of economic difficulties. Furthermore, the difficulties they encounter in their daily lives can reflect on their careers. Specifically, Turkish teachers deal with crowded classes, low wages, a lack of opportunities for self-improvement, and limited professional support, all of which increase the risk of teacher burnout (Akçamete, Kaner, & Sucuoğlu, 2001). These problems could explain

the findings of this study, specifically the participating preschool teachers' lower scores in stress management.

Adaptability is essential to effective teaching (Borko & Livingston, 1989). In today's fast-changing world, the values of society and, in particular, of the educational system in general, are constantly changing. In this process of change, schools' values can conflict with those of teachers (Taşdan, 2010). These constant changes in the modern world may make it difficult for teachers to adapt to changing conditions.

This current study also aimed to examine the emotional intelligence (overall and in each dimension: intrapersonal, interpersonal, stress management, adaptability, and general mood) of mothers. Of the dimensions of the EQ-i, mothers' highest scores were in interpersonal, general mood, and adaptability. In other words, the participant mothers are aware of others' emotions. They are socially responsible and can establish relationships easily. They are optimistic and happy, and they are able to adapt to changing circumstances. Emotional intelligence and life satisfaction are very important variables that affect each other. In addition to these, a sense of humor affects an individual's positivity, meaningfulness, happiness, and psychological and physical well-being (Tümekaya, Hamarta, Deniz, Çelik, & Aybek, 2008). The high general mood scores of the participating mothers may be due to a strong sense of humor and high life satisfaction. A previous study found that individuals with high levels of emotional intelligence communicate positively with others and experience fewer problems with their friends (Lopes, Salovey, & Straus, 2003), which supports the findings of the current study.

Of the dimensions of emotional intelligence (intrapersonal, interpersonal, stress management, adaptability, and general mood), the participant mothers had the lowest scores in stress management and intrapersonal. It can be inferred that mothers are not able to easily cope with stressful situations, are not sufficiently aware of their own emotions, strengths, and weaknesses, and have low self-regard. Individuals with high self-esteem can deal with stressful situations easily; they also have high stress tolerance and can effectively manage their own emotions in stressful conditions (Kliwer & Sandler, 1992). Personal beliefs such as self-efficacy are very important

to assess environmental demands. Individuals see every external demand as a threat or a challenge, and individuals with high self-efficacy beliefs are more likely to view demands as a challenge (Pintrich & De Groot, 1990). It can be inferred that self-efficacy and stress are closely related concepts. Therefore, if self-efficacy decreases, stress management skills also decrease, which could explain the results of the current study.

In the present study, preschool teachers' mean emotional intelligence scores varied significantly with respect to age. This result is consistent with previous studies. The research of Reiff, Hatzes, Bramel, and Gibbon (2001) and Mayer, Caruso, and Salovey (1999) indicated that there is a significant relationship between age and mean emotional intelligence scores. However, the findings of other studies are not consistent with those of the present study. Öztürk (2006) and Öztürk and Deniz (2008) found no significant relationship between age and preschool teachers' mean emotional intelligence scores. Similarly, Akgül (2011) found no significant relationship between the emotional intelligence of primary school teachers and their age. Yılmaz (2004) also found no significant relationship between the mean emotional intelligence scores of pre-service preschool teachers and their age.

Furthermore, this study found that the emotional intelligence scores of younger preschool teachers were higher than those of the other age groups. Previous studies have found parallel results. Kızıl (2014) found that older teachers (51+ years old) had lower levels of emotional intelligence than the other age groups (20–30 years old and 31–40 years old). Aşan and Özyer (2003) also found students' emotional intelligence scores decreased as their age increased. However, the findings of some studies contradict those of the present study. Derksen et al. (2002) and Bar-On and Parker (2000) found that as age increases, emotional intelligence increases.

On the other hand, this study found no significant relationship between mothers' mean emotional intelligence scores and their age. Previous studies have found similar results. Özdemir and Özdemir (2007) found no significant relationship between the emotional intelligence of academic and administrative staff and their age. Ünlü,

Özcihan, Özbaş, and Bakiner (2014) also found no significant difference between workers' emotional intelligence and their age.

The current study found a significant relationship between mothers' and preschool teachers' mean emotional intelligence scores and their level of education. The findings of some previous studies are not consistent with this. Akgül (2011) found no significant relationship between teachers' emotional intelligence and their level of education. Similarly, Acar (2001) found no significant relationship between administrators' mean emotional intelligence scores and level of education; this study divided the participants into high school graduates and those with a bachelor's degree or masters' degree.

The current study found a significant relationship between preschool teachers' mean emotional intelligence scores and their years of work experience. Balcı, Yılmaz, Odacı, and Kalkan (2003) and Kılıç-Özmen (2009) also found a significant relationship between emotional intelligence and years of experience. However, the findings of other studies do not support this finding of the present study. For example, Güler (2006) found no a significant relationship between the emotional intelligence of elementary school teachers and their experience.

Another study of secondary school teachers also found no significant relationship between the dimensions of emotional intelligence (intrapersonal, interpersonal, stress management, adaptability, and general mood) and years of experience (Yancı, 2011). The current study also found that preschool teachers with less experience had higher emotional intelligence scores than those with more experience. Other studies have had parallel findings. Yerli (2009) found that the emotional intelligence of administrators declines as experience increases. In Yerli's study (2009), the emotional intelligence scores of administrators with 1–5 years of experience were higher than the scores of administrators with 11–20 years of experience and of those with 21 or more years of experience . However, the results of other studies contradict this finding. Stein and Book (2011) suggested that people reach emotional maturity through experience over time. By this logic, as years of work experience increase, it is expected that the personal experience will increase, and therefore emotional intelligence will increase

as well. But it can be inferred that this finding was derived from the sample group, as the individuals determine their own lives (Öztürk, 2006).

The current study also found a significant relationship between preschool teachers' mean emotional intelligence scores and their self-reported emotional skills. According to Chan (2004), a belief in self-efficacy plays a significant role in predicting an individuals' emotional intelligence. Based on the findings of the current study, it can be inferred the preschool teachers who described themselves as very competent were also more emotionally intelligent than those who described themselves as competent or moderately competent. According to Jennings and Greenberg (2009), teachers who are socially and emotionally competent have high levels of self-awareness and also have a realistic understanding of their talents and can identify their strengths and weaknesses.

### **5.3. The Predictive Effect of Preschool Teachers' and Mothers' Emotional Intelligence on Emotional Skills of 66–72-Month-Old Children**

The results of multiple regression analysis showed that emotional intelligence of preschool teachers has a statistically significant correlation with and predictive impact on children's emotional skills. Furthermore, the multiple regression analysis revealed that mothers' emotional intelligence has a statistically significant correlation with and predictive impact on children's emotional skills. The findings of the current study corroborate the review by Morris, Silk, Steinberg, Myers, and Robinson (2007): Children's families, neighborhoods, schools, peers, and culture play a role in their emotional development.

The correlation between the emotional intelligence of preschool teachers and the emotional skills of 66–72-month-old children suggests that children whose preschool teachers have high levels of emotional intelligence are expected to have high levels of emotional skills. According to Ersay (2007), preschool teachers' emotional intelligence affects how they react to children's emotions. Ersay found that preschool teachers who lacked awareness of their own emotions mostly ignored children's emotions. Less frequently, they matched children's positive emotions or tried to



change the children's negative emotions into positive ones. Perry and Ball (2008) also found that teachers with low levels of emotional intelligence are unable to use emotional skills; they may be unable to control their emotions, which will adversely affect their effectiveness as a teacher. However, teaching as a practice is emotional. According to Poyraz and Dere (2003), it is important to create activities and an environment that support children's emotional development. Preschool teachers have an important role in children's emotional development and can support it by creating and enhancing the learning environment (Voinea & Damian, 2014). Furthermore, findings about the socialization of emotions, a vital factor in children's emotional development (Saarni, 1999), highlight the role of teachers, which plays out in how they teach children to express emotions in the classroom environment (Ahn, 2003). It can be inferred that preschool teachers with higher levels of emotional intelligence can enhance the learning environment by creating activities that help develop children's emotional skills.

In addition, the correlation between mothers' emotional intelligence and the emotional skills of 66–72-month-old children that children whose mothers who have high levels of emotional intelligence are also expected to have high levels of emotional skills. According to Alpan (2006), the interaction between children and their parents is vital to the development of the child's emotional skills. Additionally, according to Denham and Kochanoff (2002), parents with high levels of emotional intelligence—in other words, who are emotionally competent—are much better at socializing their children to develop emotional skills. Goleman (2005) suggests that the effect of parenting on emotional competence begins in the cradle and our first school for emotional learning is our family. A family's emotional communication supports children's early emotional development, and the more time mothers spend with very young children teaching emotional communication, the better those children's emotional understanding later in life (Denham, Zoller, & Couchoud, 1994). Parents support children's emotional development through three mechanisms: modelling expression of emotions, regarding children's emotions, and teaching children about emotions (Eisenberg, Cumberland, & Spinrad, 1998). Each of these mechanisms may affect children's expression of emotions, understanding of emotions, and emotional

regulation, as well as their social functioning (Denham, 2007). Akaydın (2015) added that children form the basis of their emotional intelligence by observing how their parents express and manage their emotions, how they use expressions and gestures, and how they manage their tone of voice. Mothers use affective language in everyday conversation even with very young infants (Malatesta & Haviland, 1982). In daily conversations, parents can point out specific emotions in others, clarify the causes and consequences of emotions, and help children regulate their emotions and understand their own and others' emotions. So, young children whose parents encourage talking about emotional experiences are more able to communicate their own emotions and understand those of others. As a result, these children may have high emotional skills and social competence (Eisenberg et al., 1998).

#### **5.4. Implications of the Study**

The current study examined the emotional skills of 66–72-month-old children and some factors that may affect the emotional skills of 66–72-month-old children: the child's gender, family income, the preschool teacher's educational level, years of experience, and self-reported skills; and the mother's age and educational level. This study also examined the effect of preschool teachers' emotional intelligence on children's emotional skills, along with factors that may affect preschool teachers' emotional intelligence: age, educational level, years of experience, and self-reported skills. Finally, the study looked at the effect of mothers' emotional intelligence on children's emotional skills and factors that may affect mothers' emotional intelligence: age and educational level. The findings of this may suggest some ways preschool teachers and mothers can improve children's emotional skills and their own emotional intelligence. These findings also imply some recommendations for teacher education programs and family education programs and possible policies for the Turkish Ministry of National Education.

According to the findings of this study, the correlation between the emotional intelligence of preschool teachers and the emotional skills of the children aged 66 to 72 months shows that children whose preschool teachers have high emotional intelligence are also expected to have high levels of emotional skills. Therefore, in

order to enhance the emotional intelligence of pre-service preschool teachers, emotional intelligence courses can be added as required or elective courses to all teacher training programs in higher education.

Furthermore, MoNE could arrange in-service trainings on emotional intelligence to enhance in-service preschool teachers' knowledge of and experience with emotional intelligence and to inform teachers of their vital role in the development of children's emotional skills. Such trainings would also support the development of in-service preschool teachers' emotional development.

This study also found a correlation between mothers' emotional intelligence and the emotional skills of 66–72-month-old children, suggesting that children whose mothers have high emotional intelligence are also expected to have high levels of emotional skills. Therefore, MoNE could also arrange educational programs for mothers on the topic of children's emotional skills.

The findings of this study also show that 66–72-month-old children had high levels of emotional skills. The highest mean score for the participating children was in understanding emotions, and their lowest mean scores were in identifying emotions. According to Elias et al. (1997), children's emotional intelligence can be developed through special education programs that focus on emotional skills such as identifying emotions, understanding emotions, and expressing emotions. Therefore, an emotional intelligence program to enhance children's emotional skills could be created and implemented in all schools operated by MoNE.

### **5.5. Recommendations for Future Research**

The present study included 126 children aged 66 to 72 months and enrolled in public preschools and primary elementary schools operated by MoNE in the Çankaya, Yenimahalle, and Etimesgut districts of Ankara. The study also included the participating children's mothers and preschool teachers. This study was limited to this sample only. Therefore, further research might use an expanded sample of children enrolled in private or public preschools and primary elementary schools, as well as

preschools in different districts of Ankara and in different cities in Turkey, along with their mothers and preschool teachers.

The data in this study were collected only from 66–72-month-old children, their preschool teachers, and their mothers. Collecting data from children of different ages and their preschool teachers and mothers could result in different findings. Therefore, further studies can be conducted with children of different age groups, along with their preschool teachers and mothers.

In addition to mothers, fathers could be included in future studies on the emotional skills of children and the emotional intelligence of their parents. Further studies could also examine whether children's emotional skills differ with respect to their parents' background information. Other topics of interest include the possible relationship between children's emotional skills and those of their parents and the predictive effect of parent's emotional intelligence on children's emotional skills. Further studies could also compare the emotional skills of children who received a preschool education and those who did not.

The data in this study were obtained by conducting the ACES with 66–72-month-old children. The Turkish version of this data collection instrument could be adapted for use with children of different ages. A scale could also be developed to investigate children's emotional skills, and different scales could be used in further studies to gather information about children's emotional skills. Therefore, further studies might use ACES with children of different ages, and data could also be collected from 66–72-month-old children or of different ages using a different scale.

Ulutaş (2005) and Saltalı (2010) examined the effects of emotional training programs on the emotional skills of six-year-old children enrolled in kindergarten using different scales. Different emotional training programs for pre-service preschool teachers, preschool teachers, families, and children could be developed. Further studies could also investigate whether emotional training programs support the emotional intelligence of families and of pre-service and in-service preschool teachers and the emotional skills of children.

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## APPENDICES

### APPENDIX A: DEMOGRAPHIC INFORMATION FORM FOR PRESCHOOL TEACHERS

#### SOSYO-DEMOGRAFİK VERİ FORMU (ÖĞRETMEN FORMU)

- 1- Cinsiyetiniz  
 Kadın  
 Erkek
- 2- Doğum yılınız .....
- 3- Öğrenim durumunuz  
 Lise Mezunu  
 2 Yıllık Yüksekokul Mezunu  
 Lisans Mezunu  
 Yüksek Lisans Mezunu  
 Doktora Mezunu  
 Diğer .....
- 4- Kaç yıldır öğretmenlik yapmaktasınız? .....
- 5- Çocukların duygusal becerilerini geliştirmek için sınıf ortamında kullandığımız strateji ya da stratejiler nelerdir? .....
- 6- Çocukların duygusal becerileri/zekaları ile ilgili herhangi bir eğitim/kurs/seminer aldınız mı? Yanıtınız evet ise katıldığımız eğitim programının adını ve hangi kurum tarafından verildiğini yazınız.....  
.....  
.....
- 7- Çocukların duygusal becerilerini geliştirme konusunda kendinizi ne derecede yeterli görüyorsunuz?  
 Çok Yetersiz  
 Yetersiz  
 Kısmen Yeterli  
 Yeterli  
 Çok Yeterli

## APPENDIX B: DEMOGRAPHIC INFORMATION FORM FOR MOTHERS

### SOSYO-DEMOGRAFİK VERİ FORMU (VELİ FORMU)

- 1- Çocuğumuzun Cinsiyeti  
 Erkek  
 Kız
- 2- Medeni Durumunuz  
 Evli  
 Bekar  
 Boşanmış  
 Dul  
 Diğer.....
- 3- Daha önce herhangi bir aile eğitim programına katıldınız mı? Yanıtınız evet ise; katıldığınız eğitim programının adını ve hangi kurum tarafından verildiğini yazınız.....
- 4- Çocuğumuzun duygusal beceri/duygusal zeka gelişimini desteklemenizde size yol gösterici eğitim/kurs/seminerlere katıldınız mı? Yanıtınız evet ise; katıldığınız eğitim programının adını ve hangi kurum tarafından verildiğini yazınız.....
- 5- Doğum Yılıız.....
- 6- Öğrenim Durumunuz  
 Okur-Yazar değil  
 Okur-Yazar Olup Bir Okul Bitirmeyen  
 İlkokul Mezunu  
 İlköğretim Mezunu  
 Ortaokul Mezunu  
 Lise Mezunu  
 2 Yıllık Yüksekokul Mezunu  
 Lisans Mezunu  
 Yüksek Lisans Mezunu  
 Doktora Mezunu  
 Diğer.....
- 7- Ailenizin Toplam Geliri.....

## APPENDIX C: BAR-ON EMOTIONAL QUOTIENT INVENTORY

### BAR – ON DUYGUSAL ZEKA ANKETİ

Sayın katılımcı, aşağıdaki ifadelere vereceğiniz cevapları 1’den 5’e kadar sıralanan

**1- Kesinlikle katılmıyorum, 2- Katılmıyorum, 3- Kararsızım,**

**4- Katılıyorum, 5- Tamamen katılıyorum**

açıklamalarından birini seçerek (X) işareti ile belirtmeniz gerekiyor. İfadelerin doğru veya yanlışlığı yoktur. Bu nedenle ifadeyi okuduğunuzda aklınıza gelen ilk cevap sizin tutumunuzu en iyi yansıtan olacaktır.

	1	2	3	4	5
1. Zorluklarla baş edebilme yaklaşımım adım adım ilerlemektir.					
2. Duygularımı göstermek benim için oldukça kolaydır.					
3. Çok fazla strese dayanamam.					
4. Hayallerimden çok çabuk sıyrılabilir ve o anki durumun gerçekliğine kolayca dönebilirim.					
5. Zaman zaman ortaya çıkan tersliklere rağmen, genellikle işlerin düzeleceğine inanırım.					

**APPENDIX D: ASSESSMENT OF CHILDREN’S EMOTIONAL SKILLS  
TEST (ACES)**

DUYGULARI TANIMA TESTİ ÖRNEK MADDE



ANLAMA TESTİ ÖRNEK MADDELER	Mutlu	Üzgün	Kızgın	Korkmuş	Hiçbiri
Melda yaptığı resmi boyamayı henüz bitirmişti. Sen ona resminin çok güzel olduğunu söyledin. Sence Melda mutlu mu, üzgün mü, kızgın mı, korkmuş mu hisseder?					
Emel'in evinde baktığı çok sevimli bir kedi yavrusu vardı. Bir gün kedi yavrusu evden gitti ve bir daha geri dönmedi. Sence Emel mutlu mu, üzgün mü, kızgın mı, korkmuş mu hisseder?					

İFADE ETME TESTİ ÖRNEK MADDELER	Mutlu	Üzgün	Kızgın	Korkmuş	Hiçbiri
Ali teneffüste topla oynamayı sevmesine rağmen o gün teneffüste topla oynamak yerine yalnız başına bir köşede oturuyordu. Başını öne eğmişti. Sence Ali mutlu mu, üzgün mü, kızgın mı, korkmuş mu hisseder?					
Sen arkadaşlarınla oyun oynuyordun. Evlerinin camından sizi gören Alp "bekleyin bende geliyorum" dedi ve birkaç dakika sonra koşarak geldiğini gördün. Sence Alp sizinle oynayacağı için mutlu mu, üzgün mü, kızgın mı, korkmuş mu hisseder?					



## APPENDIX E. TURKISH SUMMARY / TÜRKÇE ÖZET

### 1. GİRİŞ

Günümüzde bireyler çocukların duygusal eğitimlerini şansa bırakmakta ve bu da çocuklar için daha yıkıcı sonuçlar doğurmaktadır (Goleman, 2005). Öyle ki toplumun karşılaştığı sorunların çoğu doğrudan duygusal cehalet ile ilgili olduğu belirtilmiştir (Payne, 1986). Bu nedenle, hızla gelişen ve değişen bir dünyada, bireyler arasındaki asıl sorun kişilerin duygularını zekaları ile birleştirmesi noktasında ortaya çıkmaktadır (Goleman, 2005). Dolayısıyla duygular ve zeka arasındaki ilişki sosyolojik açıdan ele alındığında duygusal ve bilişsel süreçlerin birbirinden ayrılamayacağı savunulmaktadır (Caine & Caine, 1991; Çakar & Arbaki 2004). Genç bireylerin hayatlarında karşılaştıkları çeşitli güçlüklerle baş etmeye yönelik bir kaynak olan duygusal beceriler, birbirlerinden ayrı gelişmez ve gelişmeleri bilişsel gelişimle yakından ilgili olarak görülür (Saarni, 2011).

Aristoteles "Herkes öfkelenebilir. Bu kolaydır. Ancak doğru kişiye, doğru ölçüde, doğru zamanda, doğru nedenle ve doğru şekilde öfkelenmek, işte bu kolay değildir." demiştir (Goleman, 2005, s. 1/23). Bu söz aracılığıyla, duygusal zekayı başkalarının duygularının farkında olma, başkalarının duygularını anlama, empati ve benlik kontrolü gibi duygusal becerilere sahip olma şeklinde tanımlamıştır (Aksaraylı & Özgen, 2008). Gardner (1987) ise duygusal zekayı problem çözme veya en az bir kültürel ortamda değerli olabilecek bir ürün yaratma becerisi olarak tanımlamıştır. İnsan davranışlarını, sadece zeka başlıklı çalışmalarla açıklamak zorlaştığında, duygusal zeka başlıklı çalışmalarda artış olmuştur. Buna ek olarak, bireylerin hayattaki başarılarını belirlemek için IQ testleri gibi geleneksel araçlar başarının sadece 20%'sini açıklayabildiği ortaya koyulduğunda (Goleman, 2005), duyguları tanımak, kullanmak, anlamak ve problemleri çözmek ve davranış düzenleme için kendilerine

ve başkalarına ait duyguları yönetmeyi içine alan zihinsel bir süreç olarak tanımlanan duygusal zeka (Mayer & Salovey, 1997; Salovey & Mayer, 1990) gerçek hayatta kimin başarılı olabileceğini belirlemek için bir kaynak olarak görülmeye başlanmıştır (Dulewicz & Higgs, 2000).

Duygusal zeka kavramı, mantıksal-matematiksel zeka, sözel-dilsel zeka, müziksel-ritmik zeka, görsel-mekânsal zeka, bedensel-kinestetik zeka, kişilerarası zeka ve kişisel-içsel zekadan oluşan Çoklu Zeka Teorisi'nde (Gardner, 1983) kullanılsa da (Gardner & Hatch, 1989), kişilerarası zeka ve kişisel-içsel zeka daha sonraki duygusal zeka modellerinin temeli olarak görülmektedir (Schuette ve diğerleri, 1998). Dahası, bu çok yönlü zeka vizyonu, çocuğun yetenek ve potansiyelini değerlendirmek için normal IQ testinden daha zengin bir resim sunmuştur (Goleman, 2005).

Duygusal zeka terimi, ilk olarak 1990 yılında Yale Üniversitesi'nden Peter Salovey ve New Hampshire Üniversitesi'nden Jack Mayer (Mayer, Di Paolo, & Salovey, 1990; Salovey & Mayer, 1990; Yeşilyaprak, 2001) tarafından toplumda iyi işleyen faktörleri araştırırken kullanılmıştır (Mayer & Salovey, 1997). Bununla birlikte, duygusal zeka terimi, 1995 yılında Daniel Goleman tarafından yazılan ve okulların sadece akademik yeterliliğin değil aynı zamanda sosyal ve duygusal yeterliliğin temellerinin kazandırıldığı kurumlar haline geldiğinde çocukların gerçek yaşam için daha donanımlı hale geleceklerini savunan (Lantieri & Goleman, 2014) Duygusal Zeka adlı kitap aracılığıyla herkes tarafından bilinen, tüm dünyada popüler bir terim haline gelmiştir (Bar-On, 2006; Mayer, Roberts, & Barsade, 2008; Schutte ve diğerleri, 1998). Çocukların IQ düzeyleri deneyim ve eğitim yoluyla bile fazla değiştirilemezken (Goleman, 2005), bu sosyal ve duygusal yeterlilikler eğitim yoluyla geliştirilebilmektedir (Goleman, 2005; Shapiro, 2004; Weisinger, 1998).

Duygular kararlarımızı ve davranışlarımızı önemli derecede etkiler (Ulutaş & Ömeroğlu, 2007) ve bebeklik döneminde bebeğin çevreye uyum sağlamasında motive edici ve iletişimsel görevleri vardır (Ashiabi, 2000). Sosyo-kültürel bir varlık olarak bireyler doğdukları andan itibaren buldukları çevreye uyum sağlamaya çalışmaktadırlar (Yaban & Yükselen, 2007). Ayrıca bu uyum sürecinde bireyler,

duygularını anlama, kontrol etme ve ifade etmelerini ve aynı zamanda diğerlerinin duygularını tanımlamalarını gerektiren birçok durumla karşı karşıyadırlar (Başal, 2004). Sosyalleşme süreci, bebek ile bakımını sağlayan birey arasındaki ilişki ile başlar, çocuğun büyümesi ve gelişimi boyunca diğer yetişkinler ve akranlarıyla olan ilişkiler ile devam eder ve bu süreç boyunca çocuk sosyal çevrede birçok problemle karşı karşıya kalmaktadır. Bu problemleri çözmek için, çocuğun başkalarıyla iletişim kurabilmesi, kendi duygularını ve başkalarının duygularını doğru anlayabilmesi gibi becerileri geliştirmesini gerektirir (Yaban & Yükselen, 2007).

Duyguları tanıma, anlama ve ifade etme gibi birden fazla beceriden oluşan duygusal becerilerin erken çocukluk döneminde çocuklar tarafından kazanılması gerekmektedir (Saarni, 1999). Köksal (2007) ve Yurdakavuştu (2012), bu becerilerin yaş, cinsiyet, aile ve kültür gibi kişilerin özelliklerinden ziyade mevcut koşullardan etkilendiğini belirtirken; Ulutaş (2005), mizaç, beyin gelişimi, yaş, cinsiyet, model olma ve kültürün duygusal beceri gelişimini etkileyebileceğini savunmuştur. Duygusal yüz ifadelerini okuma becerisi olan duyguları tanıma yeteneği, çocukların sosyal ve duygusal gelişiminde önemli bir rol oynayan sözsüz bir beceri olarak tanımlanırken (Boyatzis, Chazan, & Ting, 1993); duyguları anlama becerisi aynı zamanda duyguları tanıma, duygusal deneyimlerin nedenlerini algılama ve birbirleriyle olan ilişkilerini de anlamayı gerektirir (Bohnert, Crnic, & Lim, 2003). Bir diğer duygusal beceri olan duyguları ifade etme becerisi ise bireyin duygularını başkalarının anlayabileceği bir şekilde uygun yüz ifadesi ve ses tonu vb. davranışsal ifadeler kullanarak ifade edebilme yeteneği olarak tanımlanmıştır (Gross, John, & Richards, 2000).

Duygular insan yaşamını önemli derecede etkiler, öyle ki yüksek IQ düzeyine sahip bireyler yaşamlarında her zaman başarılı olamayabilirler. Günümüzde IQ düzeyi aksine, gelişmiş olan duygusal zeka insan yaşamındaki başarının anahtarıdır (Yücel & Saka-İlgin, 2016). Dolayısıyla, bireylerin sosyal yaşamlarında başarılı olabilmeleri için duygusal zekanın duyguları anlama, duyguları ifade etme ve empati yeteneği gibi boyutlarını edinmeleri gerekmektedir (Shapiro, 2004; Goleman, 2005). Dahası, bir bireyin temel değerleri ve özelliklerinin her şeyden önce IQ seviyesinden değil, duygusal yeterliliklerinden kaynaklandığı savunulmaktadır (Cooper & Sawaf, 1997).

Bu nedenle, yüksek duygusal zekaya sahip olan bireyler hem duygularını kontrol etmede ve hem de sorunlarla başa çıkmada daha başarılı ve duygusal farkındalıkları yüksek bireylerdir (Matthews, Zeidner, & Roberts, 2002).

Duygular, bireyin çevresi ile kurduğu ilişki hakkında bilgi verir ve bu ilişki çocukların genel büyüme ve gelişimleri üzerinde önemli bir etkiye sahip olduğu için bu ilişki içindeki değişiklikler özellikle çocukları önemli ölçüde etkileyebilir (Lazarus, 1991). Çocukların duygusal iyi olma durumu yaşadıkları çevrenin sosyal ve duygusal özellikleriyle yakından ilişkilidir (Shonkoff ve diğerleri, 2004).

Çocuğa bakım veren kişi ile çocuk arasında kurulan ilişki, çocuğun duygusal hayatının başladığı ilk bağlam olarak görülmektedir (Saarni, 2011). Bazı duygusal beceriler çocuk tarafından doğuştan getirilmesine rağmen, çocuğun çevresindeki diğer bireyler duygusal becerilerin gelişmesine katkıda bulunmaktadır (Vaughn ve diğerleri, 1992). Bu nedenle aileler, çocuklarına duygusal becerilerini gelişimlerine paralel olarak kullanma fırsatı verecek uygun davranışları sergileyerek iyi bir rol model olmalıdırlar (Shapiro, 2004).

Tüm okul sistemleri öğrencilerin her yönüyle potansiyelinin gelişimini teşvik etmeyi amaçlarken, bu amacın gerçekleşmesinde öğretmenin eğiliminin önemli bir rol oynadığından ve bu eğilimin öğrenme hedeflerinin başarısını veya başarısızlığını belirlediğinden kuşku yoktur (Iheanyi, 2015). Bu sebeple çocukların duygusal gelişiminde sadece ebeveynler değil okul öncesi öğretmenleri de öğrenme ortamını güçlendirerek çocuk gelişiminde önemli bir rol oynamaktadır (Voinea & Damian, 2014). Öğretmenlerin çocuklara duygular konusunda verdiği eğitim ve duygular üzerinde konuşup bu konuda tartışma ortamı yaratması, çocukların kendilerini daha iyi anlamalarını sağlayabilir ve daha iyi hissetme, duygularını ifade etme ve düzenleme yollarını bulma konusunda destekleyebilir (Denham, Bassett, & Zinsser, 2012). Bu nedenle öğretmenler hem akademik hem de sosyo-duygusal öğrenimin desteklendiği ve kolaylaştırıldığı bir sınıf ortamı oluşturmalıdırlar (Evertson & Weinstein, 2006). Öyle ki, öğretmenler duyguların değerine inandıklarında ve çocukların duygularına

ilgi gösterdiklerinde, çocukların kendi duygusal yeterliklerinde güç sahibi olabilecekleri bir sınıf ortamı oluştururlar (Hyson, 1994).

### **1.1. Çalışmanın Amacı**

Bu çalışma dört temel amaçtan oluşmuştur. İlk olarak 66-72 aylık çocukların duygusal becerilerini ve okul öncesi öğretmenlerinin ve annelerinin duygusal zekalarını belirlemek amaçlanmıştır. Ek olarak, 66-72 aylık çocukların duygusal becerileri ile okul öncesi öğretmenlerinin ve annelerinin duygusal zekaları arasındaki ilişkiyi incelemek amaçlanmıştır. Ayrıca 66-72 aylık çocukların duygusal becerilerinin cinsiyet, aile geliri, okul öncesi öğretmenlerinin yaşı, eğitim düzeyi, deneyim yılı, çocukların duygusal becerilerini geliştirmeye ilişkin becerilerine yönelik öz-değerlendirmeleri ve annelerinin yaşı ve eğitim düzeyine göre, okul öncesi öğretmenlerinin duygusal zekalarının yaş, eğitim durumu, deneyim yılı ve çocukların duygusal becerilerini geliştirmeye yönelik öz-değerlendirmelerine göre ve annelerinin duygusal zeka düzeylerinin yaş ve eğitim durumuna göre anlamlı bir değişim gösterip göstermediğini incelemek amaçlanmıştır. Son olarak bu çalışma aracılığıyla 66-72 aylık çocukların duygusal becerileri üzerinde okul öncesi öğretmenlerinin ve annelerinin duygusal zeka düzeylerinin yordayıcı bir etkisinin olup olmadığını incelemek amaçlanmıştır.

Bu amaçlar doğrultusunda aşağıdaki araştırma soruları belirlenmiştir:

1. 66-72 aylık çocukların duygusal becerileri ne düzeydedir?

1.a. 66-72 aylık çocukların duygusal beceri puanları cinsiyet, aile geliri, okul öncesi öğretmenlerinin yaşı, eğitim düzeyi, deneyim yılı, çocukların duygusal becerilerini geliştirmeye ilişkin becerilerine yönelik öz değerlendirme ve annelerinin yaşı ve eğitim düzeyine göre anlamlı bir şekilde farklılaşmakta mıdır?

2. Okul öncesi öğretmenlerin ve annelerin duygusal zekaları ne düzeydedir?

2.a. Okul öncesi öğretmenlerin duygusal zekaları yaş, eğitim düzeyi, deneyim yılı ve çocukların duygusal becerilerini geliştirmeye ilişkin becerilerine yönelik öz değerlendirmelerine göre anlamlı bir şekilde farklılaşmakta mıdır?

2.b. Annelerin duygusal zekaları yaş ve eğitim düzeyine göre anlamlı bir şekilde farklılaşmakta mıdır?

3. Okul öncesi öğretmenlerin ve annelerin duygusal zekalarının 66-72 aylık çocukların duygusal becerilerini istatistiksel olarak yordayıcı etkisi nedir?

## **1.2. Çalışmanın Önemi**

Duygusal becerilerin gelişimi doğumdan itibaren başlar ve erken çocukluk döneminde hızla ilerleme gösterir. Araştırmalar erken çocukluk döneminde bu yönde alınan eğitimin çocuğun kendisinin ve başkalarının duygularını anlama, duygularını yönetme ve pozitif davranışlar geliştirmesi üzerinde olumlu bir etkisi olduğunu göstermiştir (Denham ve diğerleri, 2003). Ek olarak, çocukların duygusal becerilerinin gelişiminin yalnızca karakter gelişiminde değil aynı zamanda akademik öğrenmelerinde de önemli bir rol oynayabileceği belirtilmiştir (Bagdi & Vacca, 2005; Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011; Izard ve diğerleri, 2001; Trentacosta & Izard, 2007). Yaşamın ilk yılları, çocukların sosyal ve duygusal gelişimi için kritik bir dönem olarak görülmektedir. Bu kritik dönemde, çocukların duygusal becerilerini etkileyen en önemli faktör, çocuğun ailesinin olduğu düşünülür. Ebeveynlerin duygusal zekası ile ilgili yapılan çalışmalar göz önüne alındığında, ebeveynler ve çocukları arasında paylaşılan olumlu duygusal deneyimlerin, bebeklerde ve çocuklarda sosyal ve duygusal gelişimin temelini oluşturan bir yapı taşı olarak görüldüğü sonucu çıkarılmaktadır (Bagdi & Vacca, 2005). Çocukların kendi duyguları hakkında bilgi sahibi olmalarının bir yolu, duygularını ifade ettiklerinde ebeveynlerinden aldıkları tepkiyi gözlemleyip duyguları hakkında bir sonuca varmaktır (Halberstadt, Fox, & Jones, 1993). Ayrıca duygularını kontrol etme ve yönetme becerisine sahip ebeveynlerin çocukları ebeveynlerini izleyerek duygularını nasıl düzenlemeleri gerektiğini öğrenirler. Duygusal düzenleme stratejileri konusunda sözel yönergeler kullanan, çocuklarına yakın ve hassas ebeveynler, çocukların stresle başa çıkma

kapasitelerini güçlendirirler (Colman, Hardy, Albert, Raffaelli, & Crockett, 2006). Bu nedenle annelerin duygusal zeka düzeylerini daha geniş bir perspektifle incelemek ve duygusal zeka düzeylerinin çocuklarının duygusal becerileri üzerindeki etkilerini belirleyerek anneler arasında duygusal zeka ve duygusal becerinin önemi konusunda farkındalık yaratmak amacıyla annelerin duygusal zeka düzeylerinin ve etkileyen faktörlerin araştırılması önem arz etmektedir.

Öğretmenler öğrencilerinin duygusal becerilerini geliştirmek için öncelikle kendi duygusal zekalarının bilincinde olmalıdırlar (Kaufhold & Johanson, 2005). Sosyal ve duygusal açıdan yetkin öğretmenler, öğrencileri ile onları destekleyici ve cesaretlendirici ilişkiler geliştirerek, derslerini planlarken öğrencilerin güçlü yanlarını ve yeteneklerini dikkate alarak, öğrencilerin motivasyonlarını artırmak için davranış ilkeleri oluşturup uygulayarak, öğrenciler çatışma halinde olduklarında onları işbirliğine teşvik ederek çocuklar için iyi bir rol model olurlar (Jennings & Greenberg, 2009). Okul öncesi öğretmenlerin duygusal zekaları çocukların duygularına verdikleri tepkileri belirlemekte ve çocukların duygusal becerilerini etkileyen bir faktör olarak görülmektedir (Ersay, 2007). Ayrıca, duygusal zeka düzeyi düşük olan okul öncesi öğretmenlerinin duygusal becerileri sınıf ortamında kullanma becerisine sahip olmadığı ve dolayısıyla öğretmen olarak çocuklar üzerindeki etkinliklerinin etkilediği tespit edilmiştir (Perry & Ball, 2007). Okul öncesi öğretmenleri tarafından sınıfta uygulanan eğitim programları ve ailelerin ev ortamında çocuklarıyla iletişim kurma şekilleri, çocuğun sağlıklı duygusal beceriler geliştirmesine zemin hazırlayacaktır (Akaydın, 2015). Bu nedenle, öğretmenler benlik bilinci, duygu yönetimi, motivasyon, empati ve sosyal ilişkiler gibi duygusal yeterlilikleri çocuklara kazandırmak için uygun aktiviteler planlamalıdırlar (Yeşilyaprak, 2001). Bu sebeptendir ki, okul öncesi öğretmenlerin duygusal zeka düzeylerini ve etkileyen faktörleri daha geniş bir perspektifle incelemek ve duygusal zeka düzeylerinin çocukların duygusal becerilerinin gelişimdeki etkileri hakkında okul öncesi öğretmenlerin farkındalıklarını artırmanın önemli olduğu düşünülmektedir.

Bu nedenle, bu çalışma, çocukların duygusal gelişimlerinin şimdiki ve gelecekteki yaşamları için önemini ortaya koymayı ve çocukların duygusal becerilerinin gelişimini

etkileyen faktörler ve IQ yerine duygusal zekanın önemi hakkında okul öncesi öğretmenleri ve anneler arasında daha fazla farkındalık yaratmayı amaçlamaktadır.

Literatürdeki Türkiye’de duygusal zeka alanında yapılan çalışmalar incelendiğinde çocuklar, okul öncesi öğretmenleri ve annelerine aynı çalışmada yer veren araştırmalara rastlanamamıştır. Duygusal becerilerle ilgili okul öncesi dönem çocuklarıyla yapılan çalışmalar çoğunlukla duygusal eğitim programının çocukların duygusal becerileri üzerine etkilerini araştırmayı ve çocukların duygusal becerilerinde olası farklılıkları ailelerinin demografik özelliklerine göre araştırmayı amaçlamaktadır. Duygusal zeka alanında yetişkinlerle yapılan çalışmalar ise, çoğunlukla bireylerin duygusal zekalarındaki olası farklılıkları demografik bilgilere göre belirlemeyi amaçlamaktadır. Ayrıca bu çalışma, önceki çalışmalardan farklı olarak çocukların duygusal becerilerini etkileyen faktörleri, yalnızca okul öncesi öğretmenler ve çocukları ya da sadece anneler ve çocukları değil çocukları, okul öncesi öğretmenleri ve anneleri aynı çalışmaya dahil ederek çocukların duygusal becerilerinin geliştirilmesinde okul öncesi öğretmenlerin mi yoksa annelerin mi daha etkili olduğunu daha geniş bir perspektifle sunmayı amaçlamaktadır.

## **2. YÖNTEM**

### **2.1. Örneklem**

Türkiye’deki tüm 66-72 aylık çocuklar, bu çocukların okul öncesi öğretmenleri ve anneleri bu çalışmanın hedef popülasyonunu oluştururken, Ankara ilindeki Milli Eğitim Bakanlığı’na bağlı devlet okullarına kayıtlı olan 66-72 aylık çocuklar, bu çocukların okul öncesi öğretmenleri ve anneleri erişilebilir popülasyonu oluşturmaktadır. Çalışmanın örneklemini ise, Ankara ilinin Çankaya, Yenimahalle ve Etimesgut ilçelerindeki devlet okullarına kayıtlı 126 adet 66-72 aylık çocuk, bu çocukların okul öncesi öğretmenleri ve anneleri oluşturmaktadır.



## 2.2. Veri Toplama Araçları

Çalışmanın verileri araştırmacı tarafından geliştirilen okul öncesi öğretmenleri için demografik bilgi formu ve anneler için demografik bilgi formu, Bar-On (1997) tarafından geliştirilen ve Türkçe'ye uyarlaması Acar (2001) tarafından yapılan *Bar-On Duygusal Zeka Anketi* (EQ-i), Schultz ve Izard (1998) tarafından geliştirilen ve Türkçe'ye uyarlaması Saltalı ve ark. (2009) tarafından yapılan *Altı Yaş Çocuklarının Duygusal Becerilerinin Değerlendirmesi Testi* (ACES) olmak üzere dört farklı veri toplama aracı kullanılarak elde edilmiştir. Çalışmada kullanılan veri toplama araçları ve araştırmanın değişkenleri Tablo 2.1'de açıklanmıştır.

**Tablo 2.1***Çalışmada Kullanılan Veri Toplama Araçları ve Araştırmanın Değişkenleri*

<i>Veri Toplama Araçları</i>	<i>Değişkenler</i>
Okul Öncesi Öğretmenleri için Demografik Bilgi Formu	Cinsiyet Yaş Eğitim düzeyi Deneyim yılı Çocukların duygusal becerilerini geliştirmek için sınıf ortamında kullanılan stratejiler Çocukların duygusal becerilerine yönelik alınan eğitim/kurs/seminer bilgisi Çocukların duygusal becerilerini geliştirmeye ilişkin becerilerine yönelik öz değerlendirme
Anneler için Demografik Bilgi Formu	66-72 aylık çocuklarının cinsiyeti Yaş Medeni durum Eğitim düzeyi Aile geliri Aile eğitim programlarına katılım bilgisi Çocukların duygusal becerilerine yönelik alınan eğitim/kurs/seminer bilgisi
Bar-On Duygusal Zeka Anketi (EQ-i) (Bar-On, 1997)	Kişisel Beceriler Kişiler Arası Beceriler Uyumluluk Boyutu Stresle Başa Çıkma Boyutu Genel Ruh Durumu Boyutu
Altı Yaş Çocuklarının Duygusal Becerilerinin Değerlendirilmesi Testi (ACES) (Schultz & Izard, 1998)	Duyguları Tanıma Duyguları Anlama Duyguları İfade Etme

### 2.3. Veri Analiz Süreci

Çalışmada toplanan veriler nicel araştırma yöntemleri ile analiz edilmiştir. İlk olarak 66-72 aylık çocukların duygusal becerilerini ve okul öncesi öğretmenlerinin ve annelerinin duygusal zeka düzeylerini belirlemek için betimleyici istatistiksel analizler yapılmıştır.

66-72 aylık çocukların duygusal becerilerinin (duyguları tanıma, duyguları anlama, duyguları ifade etme) cinsiyet, aile geliri, okul öncesi öğretmenlerinin yaşı, eğitim düzeyi, deneyim yılı, çocukların duygusal becerilerini geliştirmeye ilişkin becerilerine yönelik öz-değerlendirmeleri ve annelerinin yaşı ve eğitim düzeyine göre, okul öncesi öğretmenlerinin duygusal zekalarının (kişisel beceriler, kişiler arası beceriler, uyumluluk boyutu, stresle başa çıkma boyutu ve genel ruh durumu boyutu) yaş, eğitim durumu, deneyim yılı ve çocukların duygusal becerinini geliştirmeye yönelik öz-değerlendirmelerine göre ve annelerinin duygusal zeka düzeylerinin (kişisel beceriler, kişiler arası beceriler, uyumluluk boyutu, stresle başa çıkma boyutu ve genel ruh durumu boyutu) yaş ve eğitim durumuna göre anlamlı bir değişim gösterip göstermediğini incelemek için çıkarımsal istatistiksel analizlerden MANOVA kullanılmıştır.

66-72 aylık çocukların toplam duygusal beceri puanlarının cinsiyetlerine göre ve annelerinin toplam duygusal zeka puanlarının eğitim durumlarına göre anlamlı bir değişim gösterip göstermediğini incelemek için çıkarımsal istatistiksel analizlerden bağımsız gruplar t-testi kullanılırken, 66-72 aylık çocukların toplam duygusal beceri puanlarının aile geliri, okul öncesi öğretmenlerinin yaşı, eğitim düzeyi, deneyim yılı, çocukların duygusal becerilerini geliştirmeye ilişkin becerilerine yönelik öz-değerlendirmeleri ve annelerinin yaşı ve eğitim düzeyine göre, okul öncesi öğretmenlerinin toplam duygusal zeka puanlarının yaş, eğitim durumu, deneyim yılı ve çocukların duygusal becerinini geliştirmeye yönelik öz-değerlendirmelerine göre ve annelerinin toplam duygusal zeka paunlarının yaşa göre anlamlı bir değişim gösterip göstermediğini incelemek için çıkarımsal istatistiksel analizlerden ANOVA kullanılmıştır.

### 3. BULGULAR

66-72 aylık çocukların Altı Yaş Çocuklarının Duygusal Becerilerinin Değerlendirilmesi Testi'nden (ACES) elde edilen ortalamaları doğrultusunda yüksek düzeyde duygusal becerilere ( $M=26.37$ ) sahip oldukları belirlenmiştir. Testin alt boyutları incelendiğinde ise; 66-72 aylık çocukların en yüksek puanı duyguları anlama boyutundan ( $M=9.12$ ), en düşük puanı ise duyguları tanıma boyutundan ( $M=8.35$ ) aldıkları bulunmuştur. Çalışmanın sonuçlarına göre, 66-72 aylık çocukların duygusal beceri puanlarının cinsiyetlerine, aile gelirlerine, okul öncesi öğretmenlerinin yaşına, eğitim durumuna, deneyim yılına, çocukların duygusal becerilerini geliştirmeye ilişkin becerilerine yönelik öz-değerlendirmelerine ve annelerinin eğitim durumuna göre istatistiksel olarak farklılaştığı; ancak 66-72 aylık çocukların duygusal beceri düzeylerinin annelerinin yaşlarına göre istatistiksel olarak farklılaşmadığı bulunmuştur.

Bar-On Duygusal Zeka Anketi'nden elde edilen verilerle göre, okul öncesi öğretmenlerin yüksek duygusal zeka düzeyine sahip oldukları belirlenmiştir. Anketin alt boyutları incelendiğinde okul öncesi öğretmenlerin en yüksek puanları sırasıyla genel ruh durumu ( $M=57.26$ ), kişiler arası beceriler ( $M=84.89$ ) ve kişisel beceriler ( $M=136.33$ ) boyutlarından, en düşük puanları ise stresle başa çıkma ( $M=58.21$ ) ve uyumluluk ( $M=66.28$ ) boyutlarından aldıkları bulunmuştur. Çalışmanın sonuçlarına göre, okul öncesi öğretmenlerin duygusal zeka puanlarının yaş, eğitim durumu, deneyim yılı ve çocukların duygusal becerilerini geliştirmeye ilişkin becerilerine yönelik öz-değerlendirmelerine göre istatistiksel olarak farklılaştığı bulunmuştur.

66-72 aylık çocukların annelerine uygulanan Bar-On Duygusal Zeka Anketi'nden elde edilen verilere göre, annelerin yüksek duygusal zeka düzeyine sahip oldukları belirlenmiştir. Anketin alt boyutlarından alınan ortalama puanlar incelendiğinde ise; annelerin en yüksek puanları sırasıyla kişiler arası beceriler ( $M=77.30$ ), genel ruh durumu ( $M=50.04$ ) ve uyumluluk ( $M=59.07$ ) boyutlarından, en düşük puanları ise stresle başa çıkma ( $M=49.30$ ) ve kişisel beceriler ( $M=109.72$ ) boyutlarından aldıkları bulunmuştur. Çalışmanın sonuçlarına göre, annelerin duygusal zeka puanlarının yaşa

göre istatistiksel olarak farklılaşmadığı; ancak eğitim durumlarına göre istatistiksel olarak farklılaştığı bulunmuştur.

Son olarak, çoklu regresyon analizi sonuçları okul öncesi öğretmenlerin ve annelerin duygusal zekalarının 66-72 aylık çocukların duygusal becerileri üzerinde istatistiksel olarak yordayıcı etkisi olduğunu göstermiştir. Ayrıca okul öncesi öğretmenlerin duygusal zekalarının 66-72 aylık çocukların duygusal becerileri üzerinde annelerin duygusal zekalarından istatistiksel olarak daha yüksek yordayıcı etkisi olduğu bulunmuştur.

#### 4. TARTIŞMA ve ÖNERİLER

Davis (1995), kadınların genellikle erkeklerden daha fazla duyguları tanıma ve kontrol etme yeteneğine sahip olduklarını belirtmiştir. Kadınların ve erkeklerin duygusal zekaları arasındaki bu fark biyolojik olarak açıklanabilir (Ciarro, Chan, & Caputi, 2000). Bununla birlikte, duygusal zekadaki bu cinsiyet farklılıkları kültürün etkisi olarak da açıklanabilir. Toplum ve özellikle ebeveynlerin, erkek ve kız çocuklarından farklı beklentileri vardır. Kız çocuklarının duyguları ifade etmede başarılı olmaları beklenirken, erkek çocuklarda duyguların ifade edilmesindeki yetersizlik erkeklik modelinin bir getirisi olarak görülmektedir (Naghavi & Redzuan, 2011). Brooks-Gunn ve Duncan (1997), düşük gelire sahip ailelerin çocuklarının daha yüksek gelire sahip ailelerin çocuklarına göre daha fazla duygusal problemler yaşadığını ve aile gelirinin çocuğun refah düzeyini önemli ölçüde etkilediğini belirtmiştir. Aşan ve Özyer (2003) ise, aile geliri arttığında bireylerin duygusal zekalarını geliştirebilecek eğitimsel, sosyal ve kültürel fırsatlara daha kolay erişebilecekleri üzerinde durmuştur. Öztürk (2006), bir kişinin duygusal zekasının yaşla gelişmek yerine kişisel çabanın bir sonucu olarak geliştiğini ve bireyin yaşadığı ortamın duygusal zekasını pozitif yönde etkileyebileceğini savunmuştur. Önceki çalışmalar, çocukların duygusal becerilerinin öğretmenlerin çocukların duygusal becerilerini geliştirmedeki etkililikleri ile ilgili öz-yeterlik algıları ile ilişkili olduğunu göstermiştir (Penrose & Perry, 2007; Perry & Ball, 2008). Bandura (1994), öğretmenlerin kendi öz-yeterliklerini bir öğretmenin öğrencilerinin performansını etkileyebilecekleri inanç derecesi olarak tanımlar. Gibb

(2002)'ye göre ise, bir öğretmenin öğretim etkinliklerinde etkinliği kendi öz-yeterliklerine yönelik görüşleri tarafından etkilenir. Literatürdeki çalışmalar incelendiğinde annelerin eğitim düzeyinin çocukların duygusal becerilerini etkilediğine yönelik sonuçlar bulunmaktadır (Arı & Seçer, 2004; Yurdakavuştu, 2011).

Gardner (2000), kişisel ve kişilerarası zekanın, zekanın bilişsel unsurları kadar önemli olduğunun önemini vurgulamıştır. Justice ve Espinoza (2007) da benlik algısı düşük olan öğretmenlerin, öğrencileri ve meslektaşları veya kendileri ile ilgili herhangi küçük bir şey ters gittiğinde stres yaşayabileceklerini bu sebeple öğretmenlerin çok güçlü kişisel becerilere sahip olması gerektiğini savunmuşlardır. Yapılan çalışmalar yetişkinlerin duygusal zeka düzeyleri ile yaşam doyumları/mutlu olma durumları arasında pozitif bir ilişki olduğunu (Austin, Saklofske, & Egan, 2005; Palmer, Donaldson, & Stough, 2002; Saklofske, Austin, & Minski, 2003) ve yetişkin bireylerin duygusal zeka düzeyleri ile depresyon eğilimleri arasında negatif yönde bir ilişki olduğunu (Dawda & Hart, 2000; Saklofske ve diğerleri, 2003; Schutte ve diğerleri, 1998) ortaya çıkarmıştır.

Öğretmenlik stresli bir meslek olarak görülmektedir (Nelson, Low, & Nelson, 2005; Zoraloğlu, 1998). Türkiye'de öğretmenler üzerinde yapılan bir çalışmada, iş yükü, belirsizlik, okul yönetimi, ebeveyn baskısı, eğitim politikalarının uygulanmasındaki belirsizlik, eğitimdeki ebeveyn ve öğrenci kayıtsızlığı, fiziksel çevre ve iş ile ilgili koşullar stresin nedenleri olarak belirlenmiştir (Zoraloğlu, 1998). Fielding ve Gall (1982), devlet okullarındaki öğretmenlerin işle ilgili daha fazla strese sahip olduklarını belirtmiştir. Fiziksel veya zihinsel hastalıklara sebep olan stresinin sonucu öğretmen tükenmişliği olarak adlandırılır (Eskridge & Coker, 1985). Kalabalık sınıflar, düşük ücret, kendilerini geliştirme fırsatlarının eksikliği ve sınırlı mesleki destek Türk öğretmenlerinin tükenme riskini arttırmaktadır (Akçamete, Kaner, & Sucuoğlu, 2001).

Duygusal zeka ve yaşam doyumunu birbirlerini etkileyen çok önemli değişkenlerdir. Buna ek olarak, mizah duygusu bireyin mutlu olma durumunu ve psikolojik ve fiziksel iyi olma durumunu etkiler (Tümkaya, Hamarta, Deniz, Çelik, & Aybek, 2008). Lopes, Salovey ve Straus (2003), yüksek duygusal zeka düzeyine sahip bireylerin başkalarıyla

olumlu iletişim kurduğunu ve arkadaşlarıyla daha az sorun yaşadıklarını tespit etmişlerdir. Jennings ve Greenberg (2009) ise, sosyal ve duygusal açıdan yetkin öğretmenleri, kendinilerini, yeteneklerini tanımlayabilen, güçlü ve zayıf yönlerinin farkında olan bireyler olarak tanımlamışlardır.

Çocukların aileleri, yaşadıkları mahalleleri, okulları, akranları ve kültürleri duygusal gelişimlerinde rol oynar (Morris, Silk, Steinber, Myers, & Robinson, 2007). Okul öncesi öğretmenlerin duygusal zeka düzeyleri çocukların duygularına karşı nasıl tepki vereceklerini etkiler. Kendi duygularıyla ilgili farkındalığı olmayan öğretmenlerin çoğunlukla çocukların duygularını görmezden geldikleri ve çocukların olumsuz duygularını olumlu duygulara çevirme yönünde daha az çaba sarf ettikleri gözlenmiştir (Ersay, 2007). Perry ve Ball (2008) ise, düşük duygusal zeka düzeyine sahip öğretmenlerin duygusal becerilerini kullanamadıklarını ortaya çıkarmışlardır. Bununla birlikte öğretmek duygusal bir süreçtir bu sebeple çocukların duygusal gelişimini destekleyen faaliyetler ve ortamlar yaratmak önemlidir (Poyraz & Dere, 2003). Bu da öğrenme ortamlarını yaratan ve geliştiren bireyler olarak okul öncesi öğretmenlerin çocukların duygusal gelişiminde önemli role sahip oldukları sonucuna götürebilir (Voinea & Damian, 2014). Ayrıca çocukların duygusal gelişiminde önemli bir faktör olan duyguların sosyalleştirilmesi hususundaki bulgular öğretmen rollerinin önemini vurgulamaktadır (Ahn, 2003).

Alpan (2006), çocuklarla ebeveynleri arasındaki etkileşimin çocuğun duygusal becerilerinin gelişiminde önemli bir yere sahip olduğunu belirtmektedir. Buna ek olarak, Denham ve Kochanoff (2002) ise yüksek duygusal zeka düzeyine sahip ebeveynlerin çocukların duygusal becerilerini geliştirme konusunda çok daha iyi olduklarını savunmaktadır. Goleman (2005), ebeveynlerin çocukların duygusal yeterlikleri üzerindeki etkilerinin beşikten başladığını ve ilk duygusal öğrenim okulumuzun ailemiz olduğunu ileri sürmektedir. Öyle ki, bir ailenin çocukla olan duygusal iletişimi, çocukların erken duygusal gelişimini destekler ve duygusal iletişime önem veren anneler ile çocuklarının paylaştıkları zaman artıkça çocukların duyguları anlama düzeylerinin ileriki yaşamda çok daha iyi olduğu tespit edilmiştir (Denham, Zoller, & Couchoud, 1994). Bu nedenle, ebeveynleri duygusal

deneyimlerden bahsetmeyi teşvik eden küçük çocuklar, kendi duygularını daha iyi ifade edebilir ve başkalarının duygularını daha kolay anlayabilir. Sonuç olarak, bu çocuklar yüksek duygusal becerilere ve sosyal yeterliğe sahip olabilir (Eisenberg ve diğerleri, 1998).

#### **4.1. İleriki Çalışmalara Yönelik Öneriler**

Bu çalışma, Ankara ilinin Çankaya, Yenimahalle ve Etimesgut ilçelerindeki devlet anaokullarında öğrenim görmekte olan 126 adet 66-72 aylık çocuktan, okul öncesi öğretmenlerinden ve annelerinden veri toplanarak yapılmıştır. İleriki çalışmalar daha genellenebilir sonuçlar elde etmek amacıyla daha çok sayıda çocuğun, okul öncesi öğretmenin ve annenin katılımıyla Türkiye'nin farklı illerinde uygulanabilir. Çalışmada katılımcı 66-72 aylık çocukların duygusal becerileri Altı Yaş Çocuklarının Duygusal Becerilerinin Değerlendirilmesi Testi kullanılarak elde edilmiştir. Gelecek çalışmalar daha farklı yaş gruplarıyla ve daha farklı ölçme araçları kullanılarak gerçekleştirilebilir. Gelecek çalışmalarda babalar da çalışmaya dahil edilerek babaların demografik özelliklerinin ve duygusal zeka düzeylerinin çocukların duygusal beceri düzeylerinde yaratabileceği olası farklılıklar tespit edilip çocuğun duygusal becerileri üzerinde okul öncesi öğretmenlerinin mi, annelerinin mi yoksa babalarının mı daha çok yordayıcı etkisi olduğu belirlenebilir.



## APPENDIX F: ETHICS COMMITTEE APPROVAL

UYGULAMALI ETİK ARAŞTIRMA MERKEZİ  
APPLIED ETHICS RESEARCH CENTER



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06 NİSAN 2016

Gönderilen: Doç. Dr. Refika ÖLGAN

İlköğretim Bölümü

Gönderen: Prof. Dr. Canan SÜMER

İnsan Araştırmaları Kurulu Başkanı

İlgili: Etik Onayı

Sayın Doç. Dr. Refika ÖLGAN'ın danışmanlığını yaptığı yüksek lisans öğrencisi Tuğçe Esra USLU'nun "72 aylık çocukların duygusal beceri düzeyleri ile annelerin ve okul öncesi öğretmenlerin duygusal zeka düzeyleri arasındaki ilişkinin incelenmesi" başlıklı araştırması İnsan Araştırmaları Komisyonu tarafından uygun görülerek gerekli onay 2016-EGT-024 protokol numarası ile 14.03.2016-11.06.2016 tarihleri arasında geçerli olmak üzere verilmiştir.

Bilgilerinize saygılarımla sunarım.

Prof. Dr. Canan SÜMER

Uygulamalı Etik Araştırma Merkezi  
İnsan Araştırmaları Kurulu Başkanı

Prof. Dr. Meliha ALTUNİŞİK

İnsan Araştırmaları Kurulu

Üyesi

Prof. Dr. Mehmet UTKU

İnsan Araştırmaları Kurulu

Üyesi

Prof. Dr. Ayhan SOL

İnsan Araştırmaları Kurulu

Üyesi

Yrd. Doç. Dr. Pınar KAYGAN

İnsan Araştırmaları Kurulu

Üyesi

## APPENDIX G: TEZ FOTOKOPİSİ İZİN FORMU

### ENSTİTÜ

Fen Bilimleri Enstitüsü	<input type="checkbox"/>
Sosyal Bilimler Enstitüsü	<input checked="" type="checkbox"/>
Uygulamalı Matematik Enstitüsü	<input type="checkbox"/>
Enformatik Enstitüsü	<input type="checkbox"/>
Deniz Bilimleri Enstitüsü	<input type="checkbox"/>

### YAZARIN

Soyadı : TERZİOĞLU  
Adı : TUĞÇE ESRA  
Bölümü : Okul Öncesi Eğitimi

**TEZİN ADI** (İngilizce) : Relationship Between Emotional Skills of Preschoolers and Emotional Intelligence of Their Teachers and Mothers

**TEZİN TÜRÜ** : Yüksek Lisans  Doktora

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

**TEZİN KÜTÜPHANEYE TESLİM TARİHİ:**