

EXAMINING TURKISH PRESCHOOL TEACHERS' KNOWLEDGE AND
BELIEFS IN RELATION TO EARLY LITERACY

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DECLARATION OF ORIGINALITY

I, Şeymanur Sarrafoğlu Çalışkan, certify that

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ABSTRACT

Examining Turkish Preschool Teachers' Knowledge and Beliefs in Relation to Early Literacy

This study aims to examine the knowledge and beliefs of preschool teachers working in Istanbul about early literacy in the 2022-2023 academic year. In this study, correlational research method was used to determine preschool teachers' knowledge level and beliefs about early literacy. "Preschool Teachers' Beliefs on Early Literacy Scale" developed by Sandvik, Van Daal and Ade`r (2014) and adapted into Turkish by Sezgin, Ulus and Aksoy (2018) and "Early Literacy Knowledge Test" developed by Laçin (2022) were used to collect the data. 212 pre-school teachers working in public and private preschools and kindergartens affiliated to the Ministry of National Education (MEB) in Istanbul in the 2022-2023 academic year participated in this study. The results of the study indicate that there is a statistically significant difference between preschool teachers' early literacy knowledge level based on education status, taking any early literacy course at university, institution of employment and taking phonological awareness training. Also, the results indicate that there is a statistically significant difference between preschool teachers' early literacy beliefs based on institution of employment, working age group, feeling sufficient about early literacy, being satisfied as a preschool teacher and taking listening comprehension training. Finally, it is found that preschool teachers' early literacy knowledge level predicts their early literacy beliefs in hierarchical multiple regression analysis. Based on the results of the study, recommendations for future research and practical implications were presented.

ÖZET

Okulöncesi Öğretmenlerinin Erken Okuryazarlık ile İlgili Bilgi ve İnançlarının İncelenmesi

Bu araştırma, okulöncesi öğretmenlerinin erken okuryazarlık ile ilgili bilgi düzeyleri ve erken okuryazarlık inançlarının incelenmesini amaçlamaktadır. Bu çalışmada ilişkisel araştırma metodu kullanılmıştır. Araştırmaya İstanbul ilinde Milli Eğitim Bakanlığı'na (MEB) bağlı özel ve devlet anaokulu, anasınıfları ve kreşlerde çalışan 212 okul öncesi öğretmeni katılmıştır. Ölçme aracı olarak Sezgin, Ulus ve Aksoy (2018) tarafından uyarlanan “Okulöncesi Öğretmenlerinin Erken Okuma Yazmaya İlişkin İnanç Ölçeği” ve Laçın (2022) tarafından geliştirilen “Erken Okuryazarlık Bilgi Testi” kullanılmıştır. Bu çalışma sonucunda eğitim durumu, üniversitede erken okuryazarlığa dair ders alma, çalıştığı kurum ve fonolojik farkındalık becerisine dair eğitim alma değişkenlerine göre okulöncesi öğretmenlerin bilgi düzeylerinde anlamlı farklılık bulunmuştur. Ayrıca, eğitim durumu, çalışılan yaş grubu, erken okuryazarlık alanında kendini yeterli hissetme, okulöncesi öğretmeni olmaktan memnun olma ve dinlediğini anlama becerisine dair eğitim alma değişkenlerine göre okulöncesi öğretmenlerin erken okuryazarlığa dair inançlarında anlamlı farklılık bulunmuştur. Ayrıca, hiyerarşik çoklu regresyon analizinde öğretmenlerin erken okuryazarlık bilgilerinin erken okuryazarlık inançlarını yordadığı bulunmuştur. Araştırmanın sonuçlarına dayanarak gelecek araştırmalar ve saha uygulamaları için öneriler sunulmuştur.

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CHAPTER 1

INTRODUCTION

In this chapter, I will begin with a definition of early literacy and continue with introducing the components of early literacy skills. After I will address the value of early literacy on young children, I will draw attention to the significance of preschool teachers' knowledge and beliefs regarding early literacy. Finally, I will explain the aim of the study and the significance of the study.

Early literacy is defined as the process by which some skills are presented to children before they develop their literacy skills (Whitehurst & Lunigan, 2001). While Gupta (2009) specified early literacy as the process of determining the relationship between the pre-skills children possess with regard to literacy and the prerequisite skills for reading, Bredekamp (2015) explained this term as the knowledge and skills that exist prior to formal literacy, which lead to reading and writing. There are five basic early literacy skills that young children should develop: phonological awareness, print awareness, vocabulary, letter knowledge, and listening comprehension (Casey & Howe, 2002; Laçin, 2022; Neuman, 2014). It is essential for children to develop these skills in their early years so that they can be successful in their academic careers (Dickinson & McCabe, 2001; Neuman & Dickinson, 2018; Soydan & Aral, 2020; Vesay & Gischlar, 2013).

The classroom environment is one of the most critical places for fostering early literacy skills. According to the National Early Literacy Panel (2008), activities in the classroom setting have a substantial impact on children's early literacy skills. It has been discovered that preschool education programs are useful in developing children's early literacy skills (Bailet, Repper, Piasta & Murphy, 2009; Wasik, Bond,

& Hindman, 2006). At this point, the role of the preschool teacher emerges with the goal of encouraging early literacy development (Cunningham, Zibulsky, & Callahan, 2009; Justice, Mashburn, Hamre, & Pianta, 2008). The teacher should be knowledgeable in early literacy, have a good attitude, design the classroom environment with this knowledge and attitude, and use appropriate procedures (Erickson, Hanser, Hatch, & Sanders, 2009). Neuman and Wright (2010) emphasized the vital role of preschool teachers in supporting young children's early literacy development. Moreover, preschool teachers have responsibilities to make a correct assessment for children from different backgrounds, to create a systematic program and to implement it in the classroom environment (Genç-Ersoy, 2021). On the other hand, it has been revealed in studies conducted both in Turkey and abroad that preschool teachers do not have sufficient knowledge in the field of early literacy (Cunningham & Davidson, 2005; Cunningham et al., 2009; Crim, Hawkins, Thornton, Rosof, Copley, & Thomas, 2008; Ergül, Karaman, Akoğlu, Tufan, Sarıca, & Kudret, 2014; Hindman & Wasik, 2008; Moats, & Foorman, 2003; Schachter, Spear, Piasta, Justice, & Logan, 2016). It does not appear possible to gain the requisite abilities in the classroom if teachers do not have enough competency about early literacy. In addition to having sufficient knowledge, teachers should also have positive beliefs about the importance of developing early literacy skills in the classroom environment. According to Marrow (1990), teachers who believe in the significance of early literacy development often include activities related to this area in their classrooms. As Sezgin, Ulus and Aksoy (2018) claimed that the beliefs and opinions of educators about early literacy shape classroom activities. For instance, Lim (2010) found that preschool teachers hold various opinions produce differences

in classroom activities. In other words, preschool teachers construct their classroom environments and plan their work based on their beliefs (Lim, 2010).

1.1 Purpose of the study

The purpose of the study is to examine the knowledge and beliefs of preschool teachers working in Istanbul about early literacy in the 2022-2023 academic year with the prepared data collection instruments. In the findings obtained, it will be investigated whether there is a difference in their knowledge levels between different demographic variables, whether there is a difference in their early literacy beliefs between different demographic variables, and whether there is a relationship between their knowledge levels and early literacy beliefs.

1.2 Significance of the study

It is widely agreed that early literacy skills are essential for later academic success (Dickinson & Neuman, 2003; Hiebert & Raphael, 2013; Soydan & Aral, 2020). A growing body of evidence suggests that early literacy skills generally contribute to the development of literacy skills and children who start to formal education with these skills become proficient readers and writers considerably sooner than those who do not (Altinkaynak & Akman, 2016; Soydan & Aral, 2020). Therefore, preschool teachers have a direct effect on helping children gain early literacy skills in the preschool period (Erickson et al., 2009; Neuman & Cunningham, 2009; Schachter, 2017). According to recent research, it was emphasized that teachers' knowledge and beliefs are related to their classroom practices (Schachter, Spear, Piasta, Justice, & Logan, 2016). In other words, educators should have sufficient competency in this area and have a positive belief in the importance of early literacy

skills in order to strengthen preschool children's early literacy skills. Thus, assessing the competencies and perspectives of preschool teachers on early literacy is of great importance. On the other hand, assessing preschool teachers regarding early literacy research in the world and in Turkey is scarce. While the majority of the studies concentrate on phonological awareness skill, studies that include all aspects of early literacy skills are few in number. Also, most of the studies on examining preschool teachers' competencies and perspectives regarding early literacy skills were conducted with interviews in Turkey. Finally, there is no previous study that examines the relationship between preschool teachers' knowledge and beliefs regarding early literacy closely.

However, this current study will make an important contribution to the national literature in many ways. First of all, the scale used in this current study to measure teachers' knowledge levels is a standardized test covering all components of early literacy skills. Secondly, in addition to preschool teachers' knowledge levels, this current study will also evaluate preschool teachers' beliefs about the importance of early literacy with a Likert scale. Thirdly, this current study will also concentrate on the relationship between preschool teachers' early literacy knowledge level and early literacy beliefs. Moreover, this current study will compare the knowledge and beliefs of teachers in the field of early literacy with previously unexplored demographic variables such as the institution of employment, working age group and the status of taking training for the five components of early literacy. Finally, the results from this current study are expected to guide future research and provide practical implications for the field of education in Turkey.

CHAPTER 2

LITERATURE REVIEW

In this chapter, I will begin with explaining the theoretical framework of this study. Following a discussion of the importance of developing early literacy skills for children, I will provide a more detailed explanation of early literacy skills. I will focus on the five components of early literacy skills: phonological awareness, vocabulary, letter knowledge, print awareness and listening comprehension. My final point will be to clarify the essential points of the role of preschool teachers on supporting early literacy development. In light of the literature, I will concentrate on preschool teachers' knowledge level about early literacy and preschool teachers' beliefs regarding early literacy.

2.1 Theoretical framework

For the current study, sociocultural theory by Vygotsky (1934) and "the process-product approach" by Clark and Peterson (1986) provide valuable theoretical frameworks.

Vygotsky underlines the importance of culture and social environment on children's cognitive development and learning (Lantolf, 2000). In other words, teachers, parents, other adults and peers are the essential factors that influence children's mental growth in this theory. According to Vygotsky, a child's mental functions are shaped by social relationships and need to be influenced by more knowledgeable peers or adults (Morrow, 2001). One of the important concepts that Vygotsky introduced, zone of proximal development (ZPD) is critical in this theory. According to Lantolf (2000), ZPD is described as the difference between the child's

current level of development during the adult's social interactions with the child and the prospective level of growth that can be achieved with the adult's guidance. It was emphasized that the scope of the ZPD should be one level above the child's current level of development, and adult assistance should always be higher than the child's (Erdener, 2009). At this point, another important concept of sociocultural theory is scaffolding which is defined as the gradual decrease of environmental support as the process progresses (Morrow, 2007). In the learning process, this theory highlights that children require a socially rich environment, and it is recommended that adults turn the knowledge and skills they intend to obtain to children as scaffolding and be a model for them (Yıldırım, 2016). Therefore, Vygotsky claims that children's learning begins on an outward and socially mediated dimension and evolves over time to an internal and psychological dimension (Justice & Sofka, 2010). When the concept of early literacy is examined within the framework of sociocultural theory, Vygotsky argues that literacy can develop through activities that vary according to culture and social contexts (Barratt-Pugh, 2000). Children can make progress in this area with various literacy activities in which they actively participate. Accordingly, Vygotsky maintains that the skills that children have in the field of early literacy varies before they begin formal education because of the diverse social and cultural contexts of their environments (Hiebert & Raphael, 2013). Therefore, the role of adults, especially teachers, is essential in developing children's early literacy skills. As adults who spend the most time with children, preschool teachers should provide a socially rich environment for children, frequently include practices on early literacy, and assist and support children when they need it.

Another theoretical approach supporting this current study is "the process-product approach" by Clark and Peterson (1986). This approach explains that

teachers' thought processes and classroom behaviors constitute two important topics of the teaching process. "The process-product approach" centered on describing the links between teachers' classroom behaviors as a teaching process and student outcomes as learning products (Clark & Peterson, 1986). According to this study, it is claimed that behavior of teachers in the classroom can affect the behavior of students in the classroom, and ultimately can affect whether students achieve their goals (Clark & Peterson, 1986). Also, this study emphasizes that teachers' implicit beliefs have an important place in the teaching process (Clark & Peterson, 1986). According to Clark and Peterson (1986), while teachers' theoretical knowledge is an important factor that affects their beliefs, the classroom practices of teachers can be affected by their beliefs. Therefore, the relationship among teacher knowledge, belief and practice is the center of this approach. Considering that the thoughts and beliefs of teachers are reflected in classroom practices and this affects students' in-class success, it is possible to say that preschool teachers' beliefs about the importance of early literacy are of great importance. Therefore, preschool teachers' proficiencies in early literacy and their beliefs on supporting early literacy in the classroom environment should be evaluated since they may also affect classroom practices.

2.2 Early literacy

Reading is a great landmark for children growing up in a literate culture. Reading abilities are a crucial facet of laying the groundwork for children's educational achievement. Before gaining reading and writing abilities, early literacy skills become valuable in the lives of young children. There are many national and international research studies on early literacy. Although there are universal

definitions for the concept of early literacy, changing viewpoints and theoretical approaches to early literacy have emerged over time. Many researchers agree on the benefits that developing children's early literacy skills can bring to children.

2.2.1 The importance of early literacy development for young children

It is very pleasing that the importance given to preschool education has increased in recent years. Undoubtedly, one of the most important reasons for this is the positive contribution of preschool education to the future academic success of the child.

Supporting children in all their development, preparing them for school and helping them start life with equal opportunities are among the main objectives of early childhood education. Early childhood education is critical for developing cognitive, socio-emotional, and psychomotor abilities, as well as the elimination of developmental disabilities in young children (Oral, Yaşar & Tüzün, 2016). The efficacy of preschool education to the future academic success of the child was discussed in a series of studies. In a study aiming to determine whether participation in pre-school education affects children's academic achievement through TEOG scores of students in Turkey, it was concluded that participation in preschool education affects children's academic success in a positive way (Anasız, Ekinçi, & Anasız, 2018). Similar research aiming to investigate the association between preschool attendance and academic success in Turkey during the previous three TIMSS and PISA periods indicated that preschool attendance had a stronger association with academic success for students aged 10 to 11 (Suna & Özer, 2022). While McCoy et al. (2007) found that attending preschool can increase high school graduation rate, Cortázar, Molina, Sélman and Manosalva (2019) addressed the positive impact of early childhood education on 4th grade students' academic

achievement scores. The conclusion based on the long-term effects of early childhood education studies is that those who receive early childhood education exhibit higher school performance than those who do not.

On the other hand, early childhood education must have sufficient qualifications in order to achieve the expected positive effects in students' lives. According to Oral et al. (2016), children in high-quality schools had higher levels of cognitive development and academic performance than children in other schools, both in the short and long term. A quality preschool education provides children with the opportunity to develop their skills in many different areas. Specifically, among the many various skills, early literacy skills are of great importance as it will have a lasting impact on children's future success.

Accumulating evidence indicates that early literacy abilities generally have a beneficial influence on the development of literacy skills, and children who begin primary school with early literacy skills learn to read and write considerably faster (Altınkaynak & Akman, 2016; Soydan & Aral, 2020). As Whitehurst and Lonigan (2001) emphasized that language abilities acquired from infancy constitute the foundation of the literacy learning process that the child will experience in formal education. It is claimed that individuals perceive literacy with a lifetime learning process as their curiosity, mindset, and motivation toward reading and writing skills. Based on the premise that learning to read and write is essential for success in daily life as well as in school, Rohde (2015) suggests allowing children early opportunities to master these skills. Moreover, many scholars have emphasized that reading and academic success in the following years are related to children's early literacy skills, as early literacy skills contribute to the development of literacy skills (Dickinson & Neuman, 2003; Hiebert & Raphael, 2013; Kjedsen et al., 2014; Laçin, 2022; Vesay

& Gischlar, 2013). In the end, becoming literate in adulthood is based on skills developed during the early years of life. In other words, without early literacy skills, children are likely to experience great difficulties in their efforts to learn to read and may fall behind their classmates at school (Ergül, Akoğlu, Tufan, & Kesiktaş, 2013).

As a consequence, it is important to recognize that there is a tremendous attention to focus on demonstrating the considerable contribution of early literacy development at early age into later life.

2.3 Early Literacy Skills

Early literacy skills describe the knowledge, skills and attitudes that children should acquire before they begin formal literacy instruction, that is, in the preschool years (Whiteburst & Lonigan, 1998). Early literacy skills emerge concurrently and are impacted from one another. Although the dimensions of early literacy vary in different sources, the essential early literacy skills have been accepted in the literature (Hill, 2011; Laçin, 2022; Neuman, 2014; Neuman & Dickinson 2001; Soydan & Aral, 2020; Verhoeven, 2005; Whiteburst & Lonigan, 1998) as phonological awareness, vocabulary development, letter knowledge, print awareness, listening comprehension which will be explained in detail below. Although it is rarely highlighted, earlier research has identified visual discrimination skills as one of the early reading skills which will be presented in the last (Dönmez, Abidoğlu, Dinçer, Erdemir ve Gümüşçü, 2000; Johari & Yunus, 2019; Siew, Anderson, Moore, & Tang, 2019; Weveti, 2017; Woodrome & Johnson, 2007).

2.3.1 Vocabulary

One of the critical dimensions of early literacy skills is vocabulary. According to Karaman and Aytar (2016), the knowledge of vocabulary is defined as the sum of words understood when read or listened to or written and spoken. It is thought that the vocabulary size will increase dramatically in the early years of a child's life (some estimate roughly seven words per day) because children will first be able to comprehend words presented to them before they are able to produce them for themselves (Neuman, 2006). It is commonly assumed that vocabulary plays a critical role on children's later reading ability. A basic piece of evidence comes from Storch and Whitehurst (2002), in which they found that vocabulary in early childhood was a predictor of vocabulary development up to grade three. Similarly, when it comes to reading, children with a broad vocabulary and the ability to make connections between complex sentence patterns and matching meanings outperform those who have lower language proficiency (Huttenlocher et al., 2010). In another data set, Yan, Li, Sun, Zhou, Hui and Li (2021) found the significance of early vocabulary knowledge on later reading comprehension by examining Chinese students for three years. Comparatively, the findings of Psyridou, Eklund, Poikkeus, and Torppa (2018) suggested that there is a correlation between early expressive language delays and reading comprehension. Simply put, having retardation in early vocabulary development can negatively affect later reading comprehension which shows a great emphasis on the correlation between early vocabulary skills and later reading success. Numerous other studies documented that children who develop a rich vocabulary during preschool will develop better reading skills (Dickinson & Tabors, 2010; Fricke, Bowyer-Crane, Haley, Hulme, & Snowling, 2013; Marchman &

Fernald, 2008; Nation, Cocksey, Taylor, & Bishop, 2010; National Early Literacy Panel, 2008).

While current research in the field of early literacy emphasizes the contribution of having a large vocabulary to reading skills in the future, there are various understandings by researchers to increase children's vocabulary. According to McKeown and Beck (2014), a cognitive processing approach that underlines the significance of constant and conscious processing was emphasized in order to learn new words and make them permanent. Examining vocabulary development of kindergarteners, the findings of the data supported that frequently reinforcing and practicing word meanings is an efficient way of vocabulary learning (McKeown & Beck, 2014). Similarly, another study (Coyne et al., 2010) concentrating on improving word knowledge in young learners demonstrated that establishing interactions for the meanings of the words in the story after each story read is extremely valuable in expanding children's vocabulary. As a result, the opportunity to be exposed to words multiple times and process them was considered as a common understanding that will broaden children's vocabulary.

With the increased emphasis on enhancing the vocabulary of young children, it is important to examine the efficacy of reading books in order to stress the value of preschool teachers in this subject. There is a widespread agreement that children's vocabulary can be greatly expanded through interactive and shared reading (Justice, Kaderavek, Fan, Sofka, & Hunt, 2009; Marulis & Neuman, 2010; Robbins & Ehri, 1994). According to a systematic review of Wasik, Hindman and Snell (2016) focusing on the research findings related with the relationship between book reading and vocabulary development in young children, it was reported that children were more likely to learn new words when they were included in the discussion about

target words and answered the questions asked by their teachers. Furthermore, during an experimental study (Opel,Ameer, & Aboud, 2009), in which the effects of traditional and interactive reading on preschool children's vocabulary were examined, the results indicated that children in the experimental group who read interactive books had a significant increase in vocabulary memory, whereas children in the control group who read traditional books did not experience a significant increase. The results of the study supported the findings of Cabell et al. (2019) which demonstrated the positive impact of interactive book reading in the classroom on vocabulary knowledge of children. The similar findings of the effect of book reading on vocabulary growth was also discussed in Turkish literature. For instance, Akoğlu, Ergül and Duman (2014) found that the vocabulary of the children in the study group increased as a result of interactive book reading, as shown by the results of the pre- and post-tests. Moreover, Şimşek and Işıkoğlu-Erdoğan (2017) examined kindergarten students in relation to the effect of interactional book reading and they revealed that interactional book reading has a positive effect on the vocabulary growth of the students. Finally, the findings of a recent study (Akça & Tanju Aslışen, 2022) working with children aged 48-66 months concluded that there was a significant difference in the pre-test and post-test vocabulary scores of the children included in the interactive book reading program, in other words, the interactive book reading positively affected the language development of the children involved in the study.

While having vast vocabulary knowledge can be a great advantage for children to become responsive to distinct words according to not only their meanings but also their sounds, having lower vocabularies may limit children's ability to make

these differences. It is therefore closely related to the development of phonological awareness (Neuman, 2014). The next section will discuss phonological awareness.

2.3.2 Phonological awareness

The ability and sensitivity to control the sound structure of verbal language is referred to as phonological awareness (Neuman, 2014). In other words, the ability to comprehend letter-sound relations based on the alphabetic principle in word structure is called phonological awareness (Kjeldsen, Kärnä, Niemi, Olofsson, & Witting, 2014). Simply put, it refers to the ability to receive the sounds of the language as separate from its meaning.

Phonological awareness is regarded as a skill that emerges gradually during the preschool years and must be improved before learning to read (Mohammed, 2014). Phonological awareness is one of the fundamental structural aspects for early literacy skills. Research conducted in different cultures using a variety of methods has shown that the development of phonological awareness is an essential part of the acquisition of reading skills (Adams, 1990; Stahl & Murray, 1994; Ehri, et al., 2001; Yopp & Yopp, 2009). Literature emphasizes the importance of phonological awareness, particularly in the reading step of decoding words (Snow, Burns & Griffin, 1998). Children can learn word decoding faster when they start primary school if this skill is introduced to them as early as possible. For instance, one of the earliest studies surveyed the phonological awareness levels of kindergarten students from the south-eastern United States (Stahl & Murray, 1994). They reported that phonological awareness appears to be crucial to reading, as most children who were not able to master it had not reached pre-reading qualifications. Similarly, Hogan, Catts and Little (2005) examined to what extent phonological awareness assessments

may be useful in predicting reading ability in early childhood. They asserted that kindergarten phonological awareness predicts variance in second-grade word reading in a unique way and documented the importance of phonological awareness skill in early years in order to later reading achievement.

Not surprisingly, the past and recent Turkish literature is coherent with the foreign studies that the development of phonological awareness plays a crucial role in the development of reading skills as well (Kazanoğlu, 2019; Kargın, Güldenoğlu, & Ergül, 2017; Storch & Whitehurst, 2002; Turan & Akoğlu, 2011). The results of these studies demonstrate that developing a phonological awareness at an early age is essential for reading success, especially when decoding words, and by teaching this skill early, children will be better prepared to learn this skill once they enter primary school. For instance, working with 5-year-old children going to kindergarten, Kargın et al. (2017) found that the children included in the study did not show the expected success in phonological awareness skills. In light of the fact that the reading program of our country is based on sound-based sentence methods, they pointed out that phonological awareness skills would be more beneficial for children if they were developed at an early age. Similarly, examining the relationship between reading skills and phonological awareness skills of students at first grade, Erdoğan (2012) identified that students with high phonological awareness skills are more successful in the primary literacy teaching process. Therefore, it has been widely agreed that students' phonological awareness skills before starting school are effective in their reading abilities.

Although phonological awareness is generally expressed as the awareness of sounds in spoken (not written) words, it has a list of skills from simple to complex. However, the skills and tasks that involve phonological awareness have been quite

diverse through the centuries, as can be seen by comparing the past with the present. While deleting syllables and phoneme can be shown as a significant ability regarding phonological awareness (Hogan et al. 2005), more comprehensive studies and lists can be found throughout the literature. A growing consensus of educators in many countries worldwide, divided phonological awareness into three categories as syllable awareness, rhyme awareness, and phoneme awareness (Goswami & Bryant, 2016; Kalburan, 2018; Paulson, 2004; Schuele, Skibbe, & Rao, 2007). Additionally, word awareness is also included in phonological awareness in several sources (Pullen & Justice, 2003; Beauchat, Blamey, Walpole, 2009; Hempenstall, 2015a). During the development of phonological awareness skills, all elements contribute to the learning process and increase the effectiveness of phonological awareness. There is a general developmental sequence that governs the development of phonological awareness. Starting at the word level, phonological awareness tasks gradually progress to smaller parts. In general, tasks can be classified into three categories: low-level, medium-level, and high-level. Skills at the basic level are related to words and sentences, while skills at the higher level are related to parts smaller than syllables (Erdoğan, 2012). According to Schuele et al. (2007), the developmental ranking of phonological awareness skills is indicated as recognizing syllables, recognizing rhymes, recognizing the first sounds, recognizing the last sounds, forming words by combining sounds, separating words into phonemes, and deleting and discarding.

In conclusion, a substantial amount of research suggests that phonological awareness is an essential component of early literacy that predicts future reading success (Acar-Ünalgan, 2021; Adams, 1990; Parpuç, 2016). It is important to note that phonological awareness, which is not a natural ability, must be learned through a variety of experiences (Saracho, 2017). Phonological awareness, which develops

gradually in a developmental order from large units to small units and from simple to complex, is a crucial aspect of preschool early literacy instruction (Schuele & Boudreau, 2008). Therefore, it is undeniable that the role of the educator is increasingly important in the development of this skill, which enables children to establish a connection between oral and written language at a very early age, an essential step in the process of learning to read and write.

2.3.3 Letter Knowledge

Letter knowledge is accepted as one of the critical dimensions of early literacy.

According to Laçın (2022), letter knowledge refers to the understanding that words are made up of letters, that letter sounds are employed when transferring their words to spoken language, and that different words are formed by mixing different letters. Before learning how to read and write successfully, children should understand the alphabet letters in that language. As Jones, Clark and Reutzel (2013) stated that letter knowledge is the information about the names, sounds and symbols (the way they are written) of the letters in the alphabet. Simply put, letter knowledge refers to the ability to recognize the sound of every letter in the alphabet (Soydan & Aral, 2020).

Related research indicated that when children first enter formal education, letter knowledge is one of the most important early literacy skills that enable them to succeed in reading and writing (Adams, 1990; Badian, 1995; Clayton, West, Sears, Hulme, & Lervåg, 2020; Hammill, 2004; Neuman, 2014; Whitehurst & Lonigan, 1998). Numerous studies found that letter knowledge supported in preschool period predicts reading success in formal education (Duncan & Seymour, 2000; Georgiou, Torppa, Manolitsis, Lyytinen, & Parrila, 2012; McCormick, Stoner, & Duncan, 1994; Pennington & Lefly, 2001; Scarborough, 1998). In a recent study of

Vibulpatanavong and Evans (2019) measuring the level of letter knowledge of students for three years, it was found that letter knowledge was the best predictor of reading proficiency in students. Also, a study of preschool children with an average age of 56 months found that children with higher knowledge of letters were more advanced in their writing skills (Molfese, Beswick, Molnar, & Jacobi-Vessels, 2006). Therefore, it can be concluded that supporting letter awareness in children is critical in the development of writing skills and naturally in literacy skills. In another data focusing on bilingual young children, the findings suggested that letter knowledge was one of the most essential skills influencing children's reading ability in the first grade of elementary school (Muter & Diethelm, 2001).

By examining Turkish literature, limited studies were found in accordance with letter knowledge. In the first place, Karakelle (2004) studying with 107 first year students investigated to what extent the letter naming level of children before they started reading predicted their reading fluency after they acquired reading skills. After measurements of letter knowledge at the beginning of the year and reading fluency at the end of the year, it was concluded that knowing the letter names is effective on reading fluency. In the study (Kargin et al., 2017) carried out to establish the early literacy skill profile of kindergarten children, the children were evaluated with two subtests: knowledge of letters in receptive language and knowledge of letters in expressive language. As stated in the study, children were asked to show the letter that was told to them among four letters for letter knowledge in the receptive language, and to name the letter shown to them for expressive letter information. Kargin et al. (2017) reported that the children included in the study had very limited performance in letter knowledge in both categories. Lastly, recent research (Aygün, 2022) focusing on an experimental early literacy program for

students attending kindergarten applied a 10-week early literacy program to the students in the experimental group. According to the results of the study, as in other dimensions of early literacy, a significant difference was observed in the experimental group in the field of letter knowledge. Simply put, it was determined that the students who took part in the program showed progress in the field of letter knowledge.

It is also of the utmost importance to teach preschool children the letter knowledge skill, which falls under the umbrella of early literacy skills. The essential subjects in the development of letter knowledge are the sequence in which letters are taught, the speed of teaching, and the principles to be considered while teaching. According to Jones et al., (2013) and Piasta (2014), it is claimed that children learn the initials of their names more quickly and readily, and that as a result, preschool teachers can begin teaching the most common letters of the names by making a list of the students' names in their classes. Although it is suggested that letter teaching should be done once a week in traditional letter knowledge interventions, some researchers argue that this is not an effective practice (Stahl, 2014). Jones and Reutzel (2012) argues that teaching letters faster and in cycles (teaching a letter every day) will increase the number of letters that students know quickly and can spend more time on other literacy activities. Similarly, recent research (Sunde, Furnes, & Lundetrae, 2020) found that fast-paced letter training (teaching a letter every day) is more beneficial for children with low letter knowledge. Jones and Ruetzel (2012) claim that letter knowledge instruction should include three components: introducing the letter's name and sound, differentiating the letter in the text, and forming the symbol of the letter.

Although there are foreign sources that the knowledge of letters in the preschool period is related to the reading success in the next school years (Neuman, 2014), Turkish sources are limited in this area. The fact that the preschool education program is carried out in our country and the attitudes of preschool teachers towards letter knowledge (Kargin et al., 2017) may explain the lack of research in this area. When the preschool education program prepared by the Ministry of National Education is examined (MEB, 2013), it is seen that there is no gain or indicator regarding the knowledge of letters. Similarly, Ergül et al. (2014) stated that there is a widespread belief among Turkish teachers that letter knowledge should be taught in the first grade of primary school rather than the pre-school time. As a result, more research on letter knowledge in the literature has been done in foreign sources than in Turkish sources.

2.3.4 Print awareness

Print awareness is also another significant component of early literacy skills. According to Murphy (2007), print awareness enables children to sense the general characteristics of written materials and develop a positive attitude towards reading as a result. Also, Bilge (2021) defines print awareness as the child's ability to understand that writing carries a message beyond pictures and verbal language, and that writing is a means of communicating. It is stated in the content that print awareness involves knowing the basic aspects of writing, and that spoken words can be expressed with written symbols, and that reading a written text from left to right and top to bottom increases children's willingness to learn to read and write, which they will face in the future (Kargin et al.2017).

In reviewing the literature on supporting children's success in print awareness during early childhood, there are several foreign studies that can be found. For instance, Storch and Whitehurst (2002) conducted a longitudinal study from kindergarten until fourth grade focusing on early literacy. According to the study, one of the aims was to measure the reading skills of students who had the opportunity to develop print awareness skills in kindergarten in the next school years. Therefore, the results of the study demonstrated that acquiring print awareness in kindergarten plays a key role on their later reading outcome in the first years of formal school. Furthermore, Justice and Sofka (2010) advocated that being educated in an environment that supports print awareness skills in the preschool period has a very positive effect on reading success in the following years. Similarly, additional studies indicated that learning to read is a simple and painless process for youngsters who have a strong base of knowledge about the form and functions of print in early years (Justice, Bowles, & Skibbe., 2006; Tunmer, Herriman et al., 1988; Walpole, Chow, & Justice., 2004). Also, living in a disadvantageous socioeconomic situation and having a developmental disability were found as a factors that threaten children's print awareness development and it was recommended to establish a strong foundation of print awareness in early childhood in several research (Dickinson, Tabors, 2010; McGee, 2014; Morrow, 2007).

In addition to foreign studies, several research concentrating on the acquisition of print awareness in the early years were conducted in Turkish literature. Many studies aiming to measure the knowledge level of preschool students about print awareness have been carried out recently (Bayraktar, 2018; Demir, Doğanay-Bilgi, 2018; Türk, 2018; Kaynak-Ekici, İmir, & Temel, 2020). For instance, in the research on 48-71-month-old children's print awareness and the relationships

between various variables, it was discovered that children who attended pre-school facilities had higher print awareness than those who did not (Türk, 2018). On the other hand, it was revealed that children scored low in sub-dimensions other than book concepts in this test, which consists of the sub-dimensions of writing concepts, book concepts, letter and word concepts. Similarly, in the study conducted with 61-72 months old preschool students, the average score of children's print awareness was found to be low (Şimşek-Çetin, 2014). In addition to studies stating that children attending kindergarten have low print awareness, there are also studies aiming to gain print awareness skills in the preschool period. In the study of Demir and Doğanay-Bilgi (2018), enriched games applied to students with mild mental retardation who continue to preschool education were found to improve students' skills in print awareness. Although studies on the print awareness skill level of preschool children have increased in our country in recent years (Bayraktar, 2013; Bayraktar, 2018; Doğanay-Bilgi, Aslan, & Açıkgöz, 2020; Işıtan & Akoğlu, 2016; Işıtan, Saçkes & Biber, 2020; Karaman, 2013; Kaynak-Ekici et al., 2020; Şimşek-Çetin, & Alisinanoğlu, 2013), there have been very few studies on the effect of preschool print awareness at the primary school level. In the study of Bademci (2016), the print awareness skill levels of 66–72-month-old children were examined based on a variety of variables. The result was found that first grade children who received preschool education scored higher on the subdimensions of print awareness, book concepts, and writing concepts. According to Delican and Ateş (2021) who examined the early literacy skills of students attending the first grade of primary school, students who have previously obtained preschool education show higher competence in print awareness as well as other areas.

When it comes to providing print awareness in the preschool period, it is critical to know and master the sub-dimensions of these concepts. Four aspects of print awareness are described by Justice and Sofka (2010) as “book and print organization, print meaning, letters, and words”. While children's comprehension of how books and some other writings are structured is included in the “book and print organization” dimension, children's knowledge of the purpose of print is closely related to the “print meaning” dimension. Whereas letters are the dimension for children's learning of the role and formation of letters, words are the dimension for children's understanding of the role and formation of written words (Justice & Sofka, 2010). In the study of developing an assessment tool for print awareness skill, which was carried out recently in Turkey, print awareness skill consisted of three parts: direction of print, book concepts and print concepts (Doğanay Bilgi, 2021). The direction of print consists of the following items: “the way the book is held-holding direction, the beginning and end of the text, the reading direction of the text from left to right, the direction of reading the text from top to bottom, the page direction in the reading of the text”; the book includes: “book cover, front and back of the book, title, author, illustrator, publisher information”; the print concepts involve the following items: “the relationship between text and picture, word concept, words that are the same, spaces between words, letter concept and upper/lowercase letters, period and question mark”. In brief, the achievement lists in the preschool years under the umbrella of print awareness abilities are consistent in the literature (Clay, 1979; Ezell, & Justice, 2005; Laçin, 2022; Lassonde, 2007; Lovelace & Stewart, 2007; McGee, 2014; Scanlon, Anderson & Sweeney, 2016; Türk, 2018).

There are numerous research studies available in both foreign and local sources that focus on supporting the development of print awareness skills in

children. Because print awareness does not occur quickly and spontaneously, Lassonde (2007) claimed that these abilities should be explained and taught directly to children. According to related research, learning centers, plays, and shared reading are among the most effective methods of improving print awareness (Demir, Doğanay Bilgi, 2018; Justice & Sofka, 2010; Lassonde, 2007; McGee, 2014; Morrow, 2007; Pullen & Justice, 2003; Scanlon et al., 2016; Türk, 2018). For instance, it was stated that children gain a deeper understanding of print by playing in learning centers enriched with writing instruments (McGee, 2014). In accordance with Justice and Kaderavek (2002), the purpose of shared book reading is for children to become more familiar with writing as adults read a picture book together. Recent research continues to suggest that introducing children to print in the preschool period through picture story books is incredibly helpful in the development of early literacy skills (Akoğlu, Ergül, & Duman, 2014; Erdoğan, Şimşek, & Canbeldek, 2016; Kural & Şimşek, 2022). In brief, it was concluded that giving information about the layout of the book before reading, showing the texts and words in the book during reading, and making explanations about the letters, words and punctuation marks in the book after reading are important applications for the method of shared book reading to enhance print awareness of children in early years (Kural & Şimşek, 2022; Leyva & Smith, 2016; Sim & Berthelsen, 2014).

As a consequence, broad agreement exists that print awareness is one of the fundamental dimensions in early literacy skills (Kargın et al., 2017; Laçın, 2022; Murphy, 2007; Neuman, 2014; Soydan & Aral, 2020). It was suggested that in order to teach children, print awareness, which has many achievement lists related to print order and book layout, children need enriched environment, wide stimuli, and appropriate instructions (Demir, Doğanay Bilgi, 2018; Ezel & Justice, 2005; Justice

& Sofka, 2010; Türk, 2018). Therefore, there is a growing body of research focusing on how to measure print awareness in preschool and how to support it in the school environment, and teachers' competencies given its impact on reading success in the future (Dickinson, Tabors, 2010; McGee, 2014; Storch, Whitehurst, 2002).

2.3.5 Listening comprehension

Several research argued that listening comprehension is one of the essential components of early literacy skills (Aarnoutse, Van Leeuwe & Verhoeven, 2005; Burns, Griffin, Snow, 2004; Kargın et al., 2017; Laçın, 2022; Neuman & Dickinson, 2001; Vesay & Gischlar, 2013; Whitehurst & Lonigan, 1998). According to Gilbertson and Bramlett (1998), the process of recognizing and making meaning of inputs by stimulating the hearing center of the brain with audible impulses is referred to as listening comprehension skill. Based on Rost's (2016) definition of listening, it is characterized as a sophisticated method of interpretation in which listeners compare what they listen with what they previously learned. According to Steinberg (2007), listening comprehension is the capacity to identify another person through the sense of hearing and to understand communication through assigning meaning.

A growing consensus of researchers maintains that early acquisition of listening comprehension skills serves as a precursor for the acquisition of reading skills in later years (Gernsbacher, Varner, & Faust, 1990; Hogan, Adolf, & Alonzo, 2014; Lonigan, Schatschneider, & Westberg, 2008; Wise, Sevcik, Morris, Lovett, & Wolf, 2007). According to Catts and Kamhi (2009) conducting long-term research with students in which they investigated the students' language and reading competencies with different tests, the results showed that students with low reading skills had similar failures in listening comprehension and listening comprehension

skills remained an influence on children's reading comprehension skills throughout their developmental period. Moreover, Kim and Pilcher (2016) analyzed the past theoretical perspectives and experimental literature on the growth and enhancement of listening comprehension and claimed that teaching listening comprehension should be an essential element of literacy education that also involves language and cognitive skills. Finally, in recent research, Wolf, Muijselaar, Boonstra, and de Bree (2019) agreed with the idea that reading ability and listening comprehension skills are related skills. According to the results of this research, it was concluded that a portion of both reading and listening comprehension skills could explain the general comprehension skills of children.

When research on listening comprehension abilities in Turkey are examined, it is noticeable that there has been an increase in this field in recent decades (Doğan & Özçakmak, 2014). According to Emiroğlu and Pınar (2013), it has been demonstrated that listening and reading skills, two of the four basic language skills, are correlated. The study emphasized that children who learn to listen at an early age will have an advantage in learning to read in the future. Furthermore, the importance of listening comprehension skill in early years was demonstrated in a series of studies. Three studies were conducted with kindergarten students by examining their listening comprehension skills (Kargın, Güldenoğlu & Ergül, 2017; Kargın et al., 2017; Sezgin, 2019). According to the first study, which aims to build an early literacy skill profile for kindergarten students, listening skills are noteworthy (Kargın et al., 2017). During the study, students were tested on their listening comprehension skills using a storybook containing 11 sentences and 80 words. Unfortunately, the conclusion reached was that children could not achieve the level of success expected in this field. Preschool teachers' perspectives and the current education program were

suggested as possible causes. In a second study, the research conducted by Kargin et al. (2017) is a noteworthy study examining the relationship between listening comprehension skills and reading skills. The finding of this research investigating the predictor of listening comprehension skills in the preschool age on reading comprehension in the first grade of primary school demonstrated that listening comprehension skill achieving in preschool period is a substantial indicator of reading comprehension at the beginning of the formal education (Kargin et al., 2016). In a third study, early literacy skills were examined in children who attended preschool education and had different hearing abilities (Sezgin, 2019). According to the results of the listening comprehension skill, one of the sub-areas of the study, many of the students both with and without normal hearing required support in this area.

As listening comprehension skills play an important role in preschool and future school learning, researchers wonder what ways can be taken to enhance this ability. By citing examples from previous experimental studies, Kim and Pilcher (2016) explained how teachers can support the development of students in this area through the use of a variety of story-reading strategies by emphasizing that listening comprehension needs long-term planning. For instance, one effective method for teaching listening comprehension is to add inconsistent sentences that do not fit the general course of the story and make the children notice these inconsistencies (Kim & Philips, 2014). Furthermore, in a study conducted among Malaysian preschool children, it was found that listening to stories over the internet improved their listening skills, which can be seen as an effective method teachers can employ in classrooms to improve children's listening comprehension skills (Abidin, PourMohammadi, Souriyavongsa, Tiang & Kim, 2011). Finally, in an experimental

study conducted with kindergarten students in the Netherlands, it was found that children's listening comprehension skills were significantly improved by presenting the story visually with the mind map method after the story was read (Koster, van der Wilt, van Kruistum, & van der Veen, 2017). Thus, the visual mind map method, which is prepared from the questions asked to the children, can be presented as a method for teachers to use during story time in kindergarten to improve their listening comprehension skills.

In closing, it has been revealed by both local and international sources that developing listening comprehension skill, which is a part of early literacy skills, allows children to improve in a variety of domains (Emiroğlu and Pınar, 2013; Kargın et al., 2017; Sezgin, 2019; Vesay & Gischlar, 2013). Listening comprehension skill, which is related to reading comprehension skill, has been the subject of many studies by researchers for a successful school life (Hogan et al, 2014; Kargın et al., 2017; Lonigan et al., 2008; Wise et al., 2007). Studies have been carried out on how listening comprehension skills can be developed in classroom environments, but there are very few studies available in the literature on this matter (Abidin et al 2011; Kim & Pilcher, 2016; Koster et al., 2017).

2.3.6 Visual discrimination skills

Visual discrimination is defined as the ability to distinguish differences between objects based on their color, shape, volume, size, and other characteristics (Dönmez et al., 2000). Children's perception of written items in their environment is an essential benefit in the growing literacy method in the development of early literacy (Kavale & Forness, 2000). Previous studies made the point that preschool children's development of discrimination skills plays a key role in their ability to learn to read

when they start formal education (Gibson, 1965; Kavale & Forness, 2000).

According to Gibson (1965), learning to identify particular characteristics and growing more sensitive to essential features result in improvements in differentiating letter-like shapes in children aged 4 to 8. Therefore, discrimination education to differentiate between similar letters would help children's reading development (Guralnick, 1972). According to Siew et al. (2019), studies that use technology to boost children's visual discrimination skills are becoming more common. For instance, using mobile applications, recent research was carried out with kindergarten children who lacked vocabulary and visual discrimination skills (Siew & Tang, 2018). The result of the study concluded that mobile applications can help children with poor visual discrimination skills. Thus, Siew and Tang (2018) suggest that positive outcomes can be obtained with inexpensive applications for children who need skill development in this area. Moreover, recent research evaluating preschool teachers' in-class practices for early literacy skills found that preschool teachers are not dedicating enough time to the development of visual discrimination skills in the classroom and should be supported in this area (Johari & Yunus, 2019). Finally, Weveti (2017) investigated the impact of preschool teachers on the development of preschool children's visual discrimination skills. It was found that some characteristics of preschool teachers such as their perspectives, education status and professional experience play an important role regarding better visual discrimination skills of young children (Weveti, 2017). Ultimately, while developing children's visual discrimination skills during the preschool period is an effective factor in learning to read when they begin formal education, it is critical that preschool teachers should be competent in this field and support children's visual discrimination skills with a variety of methods.

2.4 The role of home environment in promoting early literacy development

The home literacy environment refers to the home environment, which comprises the written materials offered to the child by the family as well as the related social relationships, and is appropriate for developing the child's literacy abilities (Turan & Topcu, 2018). According to the literature, early literacy skills are greatly influenced by the home environment (Morrow & Gambrell, 2002). Also, Burgess, Hecht and Lonigan (2002) claimed that shared reading activities at home enhance children's reading and language development since early literacy abilities begin to emerge in the preschool period, particularly between the ages of 3-5. It is critical for parents to properly organize the home environment, as regular interaction and a material-rich setting are required for the development of early literacy abilities (Lopez, 2005). Based on the studies on the effectiveness of the structured home environment on the development of literacy, Sénéchal and LeFevre (2002) proposed a model for early literacy development in the home. According to this model, the value of shared book reading activities at home and early parental studies on reading and writing skills was highlighted. In addition to the previous model, Hamilton (2013) developed a more advanced model of the home literacy environment. According to Hamilton (2013), it was found that prior to the richness of the home environment, the socioeconomic structure of the parents, the attitudes of the parents toward literacy, and the reading habits of the parents all impact each other within themselves and have a direct effect on the home early literacy environment during the preschool period. Consequently, in both models, children's literacy development seems to benefit greatly from a structured home environment (Hamilton, 2013; Sénéchal & LeFevre, 2002).

According to Philips and Lonigan (2009), a structured rich home literacy environment can be divided into four categories such as parental attitude and motivation, resources in the home environment, activities in the home environment, and activities planned in the home environment and carried out outside. While the parent's attitude and motivation towards reading seems to be a basic criterion in supporting the child's early literacy skills, the number of reading materials in the home environment is also a significant consideration for the development of these skills of the child. Furthermore, it was stated that shared book reading is one of the primary early literacy activities to be done between parents and children (Burgess et al., 2002). In addition to shared book reading activities, activities such as preparing a shopping list, learning the symbols on the television remote, and writing the name can be listed as activities that support the child's early literacy skills (Ezell & Justice, 2005). Finally, activities that favorably promote early literacy skill development that can be done outside with the child include library trips, going to the theater, and collecting items from stationery shops (Philips & Lonigan, 2009).

There are many studies in the literature focusing on early literacy skills in the home environment in Turkey (Altıparmak, 2010; Arıcı & Tüfekci-Akcan, 2019; Ergül, Sarıca, Akoğlu & Karaman, 2017; Özbek-Ayaz, Güleç & Şahin, 2017). According to Gengeç, Güldenoğlu and Kargın (2022) concentrating on the variables influencing early literacy skills, it was concluded that SES and home literacy activities were effective on the early literacy skills of 60-72 months old children. While this study showed that children from low SES are in the risk group in terms of early literacy skills, it also concluded that the home environment contributes strongly to the development of young children's early literacy skills, as well as providing quality activities and opportunities for them (Gengeç et al., 2022). Furthermore, in a

recent study focusing on children's print awareness skills with parents' regular reading of books to their children at home, it was found that these skills of children were positively affected even when mothers only regularly read quality children's books (Işıtan, Saçkes & Biber, 2020). As a consequence, it should be understood that the home environment plays an important role in the development of early literacy skills, that it should be arranged in a way that maximizes the child's benefits, and that families should be made aware of this.

2.5 The role of preschool teachers in promoting early literacy development

Many studies and intervention programs in the literature have revealed that certain environmental factors support young children's development of early literacy skills. Vasilyeva and Waterfall (2003) emphasizes the importance of an appropriate environment that supports students' language development skills. Specifically, teachers are one of the most essential aspects in students' learning. A number of academics have pointed out that effective teaching and learning require teacher knowledge (Kaise & König, 2019; Liu & Phelps, 2020) because teachers with the required expertise and abilities can assist children in this field (Gitomer & Zisk, 2015). Although there are studies focusing on teachers at different levels, the main interest and curiosity of researchers has been on preschool teachers for exploring language and literacy development because the positive and lasting impact of the experiences gained in the early years on all developmental areas of the child has been proven by numerous intervention programs and studies for decades (Cortázar et al., 2019; Oral, Yaşar & Tüzün, 2016). Accumulating evidence indicated the value of early experiences on subsequent development and the implications that these experiences have on academic achievement (Wasik et al., 2006). Most especially,

researchers and educators have been interested in the pivotal role of preschool teachers on high quality early childhood education programs from previous to present studies of the literature.

Because the pivotal role of preschool teachers on young children's early literacy development is an undeniable fact, there is a growing interest in what the preschool teachers know and what beliefs they have related with early literacy. Broad agreement existed that teacher attitudes and perspectives about theoretical knowledge will have a direct impact on the quality of classroom practice (Hamre et al., 2012; Hyson, Horn, & Winton, 2013; Suh & Fore, 2002). Consequently, preschool teachers, who are vital to children's early literacy development, have been the subject of many studies that investigate their knowledge levels and beliefs (Crim, Hawkins, Thornton, Rosof, Copley, & Thomas, 2008; Cunningham, Zibulsky, & Callahan, 2009; Laçin, 2022; Sandvik, Van Daal, & Ade`r, 2014; Vesay & Gischlar, 2013).

In the next section, past and recent research findings in the area of preschool teachers' early literacy knowledge and beliefs will be discussed.

2.5.1 The knowledge level of preschool teachers about early literacy

In early childhood education, preschool teachers are invaluable for children's acquisition of early literacy skills (National Reading Panel, 2008). In spite of a growing body of research pointing the significance of the preschool teachers to the child's language development, in assessing the literature on preschool teachers' early literacy knowledge, there has not been adequate research done on this subject both within and outside of the country. Nevertheless, a number of domestic and international studies have demonstrated the assessment of teachers' early literacy knowledge levels, with an emphasis on preschool teachers. Three studies were

conducted in measuring whether preschool teachers had necessary knowledge level in early literacy skills by using different tools. In the first study, Crim et al. (2008) examined the basic language knowledge level of preschool teachers especially focusing on phonological awareness in Texas. They used a survey for assessing the teachers about their prior understanding of early literacy knowledge. The results showed that the participants struggled with having sufficient basis based on early literacy (Crim et al., 2008). In the second study, Cunningham et al. (2009) collected a large amount of data as a result of a year of work with preschool teachers on early literacy abilities. According to the findings, it was asserted that preschool teachers lack the theoretical knowledge needed to encourage early literacy. More importantly, when teachers were asked to judge their own knowledge level, it was discovered that they had an exaggerated view of their own knowledge by claiming to have greater knowledge than the actual result (Cunningham et al., 2009). In a third study, the knowledge of the preschool teachers was evaluated with two different measurements in the field of early language and literacy (Schachter, Spear, Piasta, Justice, & Logan, 2016). Although the results of the participants differ considerably, it was discovered that no one correctly completed all of the questions, and the average success rate was 65% in the both tests. Therefore, having evaluated early childhood teachers' knowledge of early literacy, it has been concluded that they lack an adequate understanding of the subject.

In spite of the fact that there are not enough studies on teachers' knowledge levels about early literacy in Turkey, there are studies that are currently available. Ergül, et al. (2014) examined Turkish preschool teachers' knowledge level on early literacy by an interview form. Not surprisingly, the results showed that the majority of teachers were untrained in early literacy, and the practices they employed in the

classroom were unqualified to support early literacy development. A major finding of the study was that more than half of participating teachers misunderstood the definition of early literacy. Therefore, it can be viewed as evidence that teachers lack adequate knowledge in this area. Similarly, Altun and Tantekin Erden (2016) found that most pre-service teachers were not sufficiently knowledgeable about early literacy based on an examination of their opinions about the concept of early literacy. However, it was notable that these studies consisted of qualitative questions prepared by the researchers themselves. The need for a valid and reliable tool to assess preschool educators' early literacy competence is clear in our society. According to an examination of the tools used to measure the knowledge level of preschool teachers in Turkey, only one knowledge test has been developed recently by Laçın (2022). In this knowledge test, preschool teachers were assessed in five sub-areas of early literacy, as well as their basic early literacy competencies. Additionally, the fact that the knowledge levels of the teachers were separated into three different groups as successful, unsuccessful, and in need of information based on the test result might be considered as an advantage for the interpretation of the results. By highlighting the areas where preschool teachers trail behind, it can be viewed as a helpful measurement tool to the development of critical support education programs.

2.5.1.1 Background factors that relate to preschool teachers' knowledge level about early literacy

Several studies in the literature have indicated that preschool teachers lack early literacy skills because they hardly ever received early literacy training in their education programs (Dickinson & Caswell, 2007; Ergül et al., 2014; Hsieh, Hemmeter, McCollum ve Ostrosky, 2009; Lin & Magnuson, 2018; Neuman & Cunningham, 2009; Vesay & Gischlar, 2013; Weadman, Serry, & Snow, 2021).

According to Altun and Tantekin Erden (2016), it was stated that the majority of the 3rd and 4th grade students studying in the teaching program did not take any courses related to early literacy. In this regard, it is also worth noting that the knowledge levels of the teacher candidates taking part in the study were found unsatisfactory. Similarly, the findings from Çalış (2021) revealed that almost all of teachers did not receive any training on supporting early literacy skills as part of their in-service training programs, both before and throughout their employment. Therefore, it may be stated that whether or not early literacy courses are included in relevant university programs may have an impact on the knowledge level of teachers in this field and teacher training programs in education faculties of universities can play a cultivating role on receiving early literacy skills.

Aside from having necessary competence during university education, there are numerous options for teachers to refresh their knowledge and develop themselves outside of the university. Delving more into the area of the teacher training type of early literacy, Vesay and Gischlar (2013) carried out a study of preschool teacher knowledge in early literacy by administering a survey assessing how teachers acquired the knowledge supporting early literacy skills of young children. While the survey consisted of five different categories about the way acquiring the knowledge such as preservice work, on the job training, professional development, self-taught and mentoring, it is conducted by dividing early literacy skills into sub categories as phonological awareness, vocabulary, listening and reading comprehension, and phonics. The findings from the study asserted that professional development was the most common type of teacher training, while mentoring was the least common type of teacher training (Vesay & Gischlar, 2013). However, the research of Hindman and Wasik (2011) showed that the mentoring model used in the study was effective in

increasing the knowledge level of teachers, which may indicate that making individual arrangements for teachers can be a useful technique in supporting them. Lin and Magnuson (2018) claimed that preschool teachers who participated in the study ended up choosing pre-service education less frequently when learning about early literacy. Therefore, these studies reiterate the need to examine the quality of preservice education regarding early literacy instruction. For instance, Weadman et al., (2021) administered a survey assessing the quality of pre-service training of preschool teachers in Australia with the belief that teachers should begin their career having the necessary theoretical knowledge from preservice training. The findings indicated that a considerable variation appears to exist in the curriculum that preschool teachers are taught in preservice training which means that a common standard course for prospective teachers on early literacy does not exist. Finally, the results of the literature pointed to the variety of teacher training models in early literacy instruction and suggested conducting exploratory studies focusing on how teachers acquired the necessary knowledge and skills in early literacy for future studies in order to sustain a successful instruction.

While studies demonstrated that enough knowledge and skills about early literacy are not learned in university (Crim et al., 2008), Ergül et al., (2014) stated that the level of understanding of teachers varies depending on the sort of university from which they graduated. It was discovered that teachers who graduated from open education faculties and two-year universities had lower knowledge levels than those who graduated from formal education (Ergül et al., 2014). According to Hindman and Wasik (2011), the results showed that among the preschool teachers who participated in the study, those with higher education levels had a higher level of knowledge. Similarly, in the study of König et al., (2022), it was found that teachers

with a master's degree performed better on the knowledge test than teachers with a bachelor's degree. Hence, it can be considered that teachers with associate and bachelor's degrees have distinct levels of knowledge, while teachers with bachelor's and higher education may enter the classroom better prepared. However, Lin and Magnuson (2018) stated that the education level of teachers did not estimate instructional quality in the classroom.

The assumption can be made that as teachers gain experience, they acquire more knowledge and become more competent and equipped within their own profession. However, when the knowledge levels of preschool teachers according to their teaching experience were examined in the literature, it is possible to obtain unexpected results. For example, Hindman and Wasik (2011) did not find any significant relationship between them. Similarly, Joshi and Wijekumar (2019) stated that there was not found any relation between primary teachers' literacy knowledge and the number of teaching experience years. Moreover, in some studies, it was found even teachers with a high level of teaching experience did not have basic knowledge of early literacy (Cunningham, Perry, Stanovich, & Stanovich, 2004; Joshi, Binks, Hougren, Dahlgren, Ocker-Dean, & Smith, 2009; Stark, Snow, Eadie, & Goldfeld, 2016). According to Schachter et al. (2016), a negative relationship was found between teaching experience and the quantity of literacy teaching instruction. On the other hand, some studies also demonstrated that more experienced teachers were more proficient in literacy instruction (Berliner, 1986; Rivkin, Hanushek, & Kain, 2005). In conclusion, there were no clear results demonstrating a significant association between teachers' knowledge level in early literacy and their teaching experience (Cunningham et al., 2004; Hindman & Wasik, 2011; Schachter et al., 2016).

According to studies conducted based on the socioeconomic state of the region in which the teaching school is located, it was found that teachers working in high SES schools had higher competencies on early literacy than teachers in low SES schools (Çakmak & Yılmaz, 2009; Ergül et al., 2014; Parlakyıldız & Yıldızbaş, 2004). It was suggested that one of the reasons for this is because teachers with extensive experience and good assignment scores choose high-income schools, and therefore such a distinction may occur (Ergül et al., 2014). After this result, it is also a matter of curiosity whether there is a differentiation in the knowledge levels of teachers working in private and public schools. Although it is expected that teachers in private schools have higher levels of competence, given parents' expectations and better in-school resources (Çakmak & Yılmaz, 2009; Parlakyıldız & Yıldızbaş, 2004), no definitive study has been found in this regard.

Finally, in researches on teachers' self-evaluations about whether they have sufficient knowledge about early literacy skills, it has been seen that teachers evaluate themselves as having high proficiency while they had low level of knowledge level (Carson & Bayetto, 2018; Fisher, Bruce, & Greive, 2007; Gischlar & Vesay, 2014). Therefore, it is possible to state that teachers may overstate their knowledge of early literacy in the literature. In contrast, findings from Altun and Tantekin Erden (2016) reported that most pre-service teachers felt that they knew very little about this subject, and none of them believed they knew it well. In sum, there are discrepancies concerning the connection between teachers' self-evaluations and their knowledge level.

2.5.2 Preschool teachers' beliefs about early literacy

Emphasizing the significance of preschool teachers in supporting children's early literacy skills, the competency of teachers in this field has been noticed in both foreign and local literature and has started to gain popularity in recent years. In addition to knowledge, another interesting research subject is what teachers perceive and what assumptions they have about supporting early literacy skills in preschool. Many scholars highlighted that everything a teacher does in the classroom is influenced by what they believe (Breffni, 2011; Cash et al., 2015; Cunningham et al., 2009; Hamre et al., 2012; Han & Neuharth-Pritchett, 2010; Hawken, Johnston, & McDonnell, 2005; Jung & Jin, 2014; Pianta et al., 2014; Sandvik, Daal, & Ader, 2014). According to Sezgin, Ulus and Aksoy (2018), a teacher's everyday decisions affect what should be taught in the classroom and what children need to succeed in the next level of their education so it was stated that the beliefs of preschool teachers were highly related with rich classroom practices. While Mills and Clyde (1991) emphasized that kindergarten teachers need to have a high level of knowledge in this field in order to incorporate early literacy studies into classroom practices, Marrow (1990) stated that early literacy development depended on the belief of preschool teachers that a variety of activities would support it.

Researchers have studied teachers' beliefs regarding early literacy in the literature (Berthelsen & Brownlee, 2007; Foote, Smith, & Ellis, 2004; Hindman & Wasik, 2008; Lim, 2010; Poole-Christian, 2009; Sandvik et al., 2014; Schachter et al., 2016). Examining the relationship between Norwegian teachers' beliefs and their classroom practices, Sandvik et al. (2014) found that teachers who filled out the belief scale had a slightly above-average positive belief in the importance of early literacy. However, teachers' early literacy practices seemed to become inconsistent

with their beliefs as well as the lack of time they devote to these practices in the classroom. Consistent with prior works (Hindman & Wasik, 2008; Sandvik et al., 2014), Schachter et al. (2016) indicated that preschool teachers had a generally positive attitude towards strategies and practices aimed at improving children's early literacy skills.

Few studies have examined preschool teachers' beliefs about early literacy in Turkey (Altun & Tantekin-Erden, 2016; Aypak-Caba, 2022; Çakmak & Yılmaz, 2009; Erdoğan, Altınkaynak & Erdoğan, 2013; Ergül et al., 2014; Sezgin et al., 2018; Öğretir-Özçelik, 2018; Tuğluk, Kök, Koçyiğit, Kaya, & Gençdoğan, 2008). The findings of Altun and Tantekin-Erden (2016) revealed that the vast majority of preservice teachers agreed on the importance of early literacy skills in preschool education, while 22% of them stated that these skills should not be included in preschool since they are beyond the development of children who are still of playing age. Similarly, the perspectives of preschool teachers and pre-service teachers regarding literacy preparation studies were found positive in the findings of Öğretir-Özçelik (2018). Finally, Çalış (2021) concluded from individual interviews with teachers that teachers perceived early literacy skills as studies for teaching reading and writing, so they were anxious about learning them incorrectly. Thus, it was remarked that preschoolers had a false belief that gaining these skills will make it difficult for them to succeed in primary school later in life. Nevertheless, it is obvious that the studies carried out on the views and beliefs of preschool teachers about early literacy in Turkey consist of questionnaires prepared by the researchers and individual interviews. Although it is possible to find standardized belief scales in foreign sources, the tools used to measure preschool teachers' beliefs on early literacy in Turkish studies vary according to the researcher. However, Sezgin et al.

(2018) made one of the important contributions to the literature by adapting the belief scale developed by Sandvik et al. (2014) into Turkish. Considering that the data on teachers' beliefs in Turkey are mostly obtained through interviews (Altun & Tantekin Erden, 2016; Öğretir-Özçelik, 2018) it is assumed that this adapted scale will contribute positively to the literature and facilitate the interpretation of the data. Eventually, in light of the past and recent research on early literacy, it is valuable for young children to have early literacy skills in the preschool stage so that they will be able to achieve academic success later on. Because preschool teachers are directly responsible for helping children develop early literacy skills during the preschool years it is considered highly essential to determine beliefs of preschool teachers about early literacy.

2.5.2.1 Background factors that relate to preschool teachers' beliefs about early literacy

A lack of research has also been conducted on the connection between teacher backgrounds and their beliefs on early literacy. The focal points of the variables included in the previous studies were mostly teachers' educational status and experience (Burgess, Lungren, Lloyd, & Pianta, 2001; Epstein, 1999; Hindman & Wasik, 2008; Jung & Jin, 2014; Smith & Shepard, 1988). Findings from Smith and Shepard (1988) showed that there was no link between preschool teachers' education and their attitudes toward early literacy. Similarly, findings from Aypak-Caba (2022) concluded that there was no statistically significant difference between the early literacy beliefs of teachers who received early literacy education and those who did not. On the other part, Burgess et al. (2001) suggested that early literacy beliefs were more positive among master's degree teachers than among bachelor's degree

teachers. Similarly, McMullen and Alat (2002) and Snider and Fu (1990) asserted that a higher education level has been associated with a more positive approach to a child's language development. These findings may be construed to mean that teachers with higher education levels have greater knowledge levels and may be more positive in terms of internalizing and embracing what they know.

In addition to the educational status of the teachers, their professional experience periods were also analyzed in very few studies in which their beliefs were investigated, as well as in numerous teacher-focused studies. For example, it was concluded that preschool teachers with high experience were more sensitive and accepting of the principles related to preschool education, which means that teachers may have a more willing attitude to practices in the classroom. Similarly, Hindman and Wasik (2008) suggested a high correlation between more experienced teachers and more positive belief on the vocabulary sub-scale. In a recent study, Öğretir-Özçelik (2018) stated that teachers had a more positive perspective on the importance of early literacy skills than pre-service teachers which highlighted the importance of having more experience.

The literature showed that there are no differences in beliefs about early literacy skills among teachers working in four, five, and six age groups (Sezgin et al., 2018). Considering that early literacy acquisition starts with birth and the most critical years are the preschool period, it is possible to state that teachers should focus on these studies in all age groups, not in the last months, so that the child does not have problems in reading and writing when he starts and continues formal education.

The literature showed that teachers working in kindergartens affiliated with private schools were found to have significantly higher scores on the belief subscale

of the role of preschool than those working in independent kindergartens (Sezgin et al., 2018).

The literature showed that teachers working in schools with low socio-economic status had lower beliefs about “the role of preschool teacher” and “the role of preschool” on early literacy skills than teachers working in middle and high SES schools (Sezgin et al., 2018; Sun, Lee & Ginsburg, 2007). Similarly, Çakmak and Yılmaz (2009) stated that teachers working in the higher SES schools had higher early literacy knowledge and the low level of knowledge of the teachers working in the low SES region may affect their beliefs negatively.

According to Sezgin et al. (2018), it was concluded that teachers who answered "I am undecided" had significantly lower beliefs than those who were "decisive" in terms of feeling competent about early literacy skills. In addition, considering whether the preschool teachers feel competent in applying early literacy skills, Çalış (2021) stated that most of the teachers feel competent and these people have a positive perspective on the field of early literacy. Thus, teachers' self-efficacy may be a significant factor of determining their beliefs regarding literacy activities in the preschool classroom.

2.5.3 The relationship between beliefs and knowledge about early literacy

It is possible to make a statement that teachers' levels of knowledge can influence their opinions and values regarding a particular subject. In other words, there may be a connection between teachers' professional qualifications and their attitudes and perspectives on owning and applying this knowledge. Although there are a few research examining the knowledge and belief of teachers related with early literacy in the same study (Cash, Cabell, Hamre, DeCoster, & Pianta, 2015; Hindman &

Wasik, 2008; Pianta et al., 2014; Schachter et al., 2016), there is no current study focusing on the relationship between these two variables. For example, Hindman and Wasik (2008) who examined the beliefs of a small group of preschool teachers about early literacy, emphasized that beliefs encompass teachers' knowledge as well. Accordingly, knowledge and belief were combined and treated only as terms of belief in this study. Results suggested that while most of the teachers commonly acknowledged research-based appropriate methods for developing early literacy skills of students, their practical knowledge was discovered to be superior to their theoretical knowledge which indicated the need for professional development for teachers. Therefore, it was argued that preschool teachers needed to improve their understanding about how to facilitate students' literacy skills, which influenced their beliefs and classroom activities (Hindman & Wasik, 2008). Similarly, Cunningham, Zibulsky and Callahan (2009) argued that a teacher's content knowledge about literacy impacts the practices and beliefs they adopt in the classroom. While the study of Pianta et al. (2014) indirectly emphasized the teachers' beliefs, which consisted of the knowledge levels indicated by the answers given by the teachers after watching the short films and the observations made in the classroom, the direct relationship between the two concepts was not studied. However, the researchers supported the idea that an important link exists between knowledge, skills for determining good strategy, and classroom practice. Hence, based on the findings of this study, it is possible that there is a connection between educators' knowledge levels and their beliefs. Similar to previous research (Hindman & Wasik, 2008; Pianta et al., 2014), Cash et al. (2015) and Schachter et al. (2016) also concentrated on both teacher knowledge and their beliefs regarding early literacy. Yet the researchers did not analyze the connection between teachers' knowledge and beliefs,

but rather compared these two variables separately with different variables. For example, Cash et al. (2015) investigated these two variables with students' educational domain and while they found no correlation between teachers' belief and students' development, they found positive correlation between teachers' knowledge and students' development in vocabulary. Accordingly, it was revealed that knowledge plays a more crucial role than beliefs when it comes to teaching. Interestingly, similar with Sandvik et al. (2014), Schachter et al. (2016) found negative correlation between beliefs and teachers' practice and it was suggested that teachers may respond according to what is expected of them instead of stating their true thoughts, which creates inconsistency with the application. Consequently, despite the fact that there were studies that focus on teachers' knowledge and beliefs about early literacy in one study, none of these studies examined the relationship between knowledge and beliefs (Cash, Cabell, Hamre, DeCoster, & Pianta, 2015; Hindman & Wasik, 2008; Pianta et al., 2014; Schachter et al., 2016).

According to the previous studies conducted in Turkey, only a few studies examine teachers' knowledge level and beliefs about early literacy individually (Çakmak & Yılmaz, 2009; Ergül et al., 2014; Parlakyıldız & Yıldızbaş, 2004; Öğretir-Özçelik, 2018; Sezgin et al., 2018), but no study examines these two concepts together. However, Altun and Tantekin-Erden (2016) suggested that the pre-service teachers who stated that they had negative belief on the importance of early literacy skills in the preschool period did not have knowledge about the theoretical background and content of this concept. Therefore, it can be predicted that the teachers' lack of a positive approach to the importance of early literacy may be related to the lack of knowledge in this area. Also, the findings from Sezgin et al. (2018) suggested that preschool teachers who did not feel competent about early

literacy skills had lower belief scores about the importance of this area, and thus, teachers' lack of knowledge might influence their beliefs. Yet, a valid analysis study examining the impact of teachers' knowledge levels on their beliefs is not available in the literature. Ultimately, further research on the beliefs of teachers and their degree of knowledge related with early literacy is required.

2.6 Research questions

In light of the research review, the following questions were developed to investigate preschool teachers' knowledge level and beliefs in accordance with early literacy:

- i. Is there a statistically significant difference in the early literacy knowledge level of preschool teachers regarding the demographic variables?
- ii. Is there a statistically significant difference in the beliefs of preschool teachers about early literacy skills regarding the demographic variables?
- iii. Does the early literacy knowledge level of preschool teachers predict the beliefs of preschool teachers about early literacy skills when the demographic variables are controlled?

CHAPTER 3

RESEARCH DESIGN AND METHODOLOGY

In this chapter, I will go through in detail the participants, measurement tools, research design, procedure, and data analysis.

3.1 Participants

The participants of this study were preschool teachers working in public and private kindergartens and preschools affiliated to the Ministry of National Education (MEB) in the province of Istanbul in the 2022-2023 academic year. Data was collected by a convenience sampling method. The research was carried out in this context with volunteers from preschool teachers working in the province of Istanbul.

The sample of the study consisted of 212 preschool teachers. Most of the participants were women (n=208, 98.1%). In this study, 76.9% participants were under the age of 35, (n=163), and only 23.1% participants were in the age range of 36-50 (n=49).

According to education status, 52.4% participants had associate's degree (n=111), 43.4 participants had bachelor's degree (n=92), and only 4.2% participants had Master's degree (n=9), 63.2% participants graduated from formal education (n=134) and 36.8% participants graduated from open education (n=78), 63.7% participants graduated from child development (n=135), 30.7% participants graduated from preschool education (n=65), and only 5.7% participants graduated from non-area (n=12).

According to professional experience, most of the preschool teachers had 1-5 years of experience (n=103, 48.6%), 25.9% had 6-10 years of experience (n=55),

17.9% had 11-15 years of experience (n=38), while preschool teacher of 16-20 years and 20 years and above experience had the least percentages (n=8, 3.8%). Moreover, most of the participants worked at private school (n=151, 71.2%), while 28.8% participants worked at state school (n=61), 41.5% teachers worked in the age group of 4 (n=88), 34% teachers worked in the age group of 5 (n=72), and 24.5% teachers worked in the age group of 6 (n=52).

In this study, preschool teachers reported that most of the teachers did not take any course on early literacy in university (n=151, 71.2%). In terms of taking any training in professional life regarding the five components of early literacy (phonological awareness, vocabulary, letter knowledge, print/book awareness, listening comprehension), preschool teachers reported that most of them did not take any training for all components. 50% of teachers in phonological awareness, 57.1% of teachers in vocabulary, 56.6% of teachers in letter knowledge, 46.7% of teachers in print/book awareness, and 49.7% of teachers in listening comprehension answered as never for taking any training in professional life regarding early literacy.

In this study, 58.5% of preschool teachers read articles/books on early literacy (n=124), while 41.5% of preschool teachers did not read articles/books on early literacy (n=88). Furthermore, preschool teachers reported that 43.9% of them were not sure about feeling sufficient about early literacy skills (n=93), 42% of them felt sufficient (n=89), while 14.2% of them did not feel sufficient (n=30). Moreover, 92% of the participants were satisfied as a preschool teacher (n=195), 6.1% of them were not sure (n=13), and only 1.9% participants were not satisfied with being a preschool teacher (n=4). Lastly, according to socio-economic status, 63.2% of preschool teachers evaluated the region where they teach as medium (n=134), 28.3% of them evaluated it as high (n=60), while only 8.5% of them evaluated it as low

(n=18). The detailed information about the demographic characteristics of the sample was presented in Table 1.

Table 1. Demographic Characteristics of the Sample

Characteristics		n	%
Age	25 years and under	74	34.9
	26-30	54	25.5
	31-35	35	16.5
	36-40	28	13.2
	41-45	16	7.5
	46-50	5	2.4
Education status	Associate's degree	111	52.4
	Bachelor's degree	92	43.4
	Master's degree	9	4.2
Type of university graduated	Formal education	134	63.2
	Open education	78	36.8
Department graduated	Preschool Education	65	30.7
	Child Development	135	63.7
	Non-area	12	5.7
Professional experience	1-5 years	103	48.6
	6-10 years	55	25.9
	11-15 years	38	17.9
	16-20 years	8	3.8
	21 years and above	8	3.8
Working age group	Age 4	88	41.5
	Age 5	72	34.0
	Age 6	52	24.5
Taking any course on early literacy in university	Yes	61	28.8
	No	151	71.2
Feeling sufficient about early literacy	Yes	89	42.0
	No	30	14.2
	Not sure	93	43.9

3.2 Measures

The research data were collected using Demographic Information Form, "Preschool Teachers' Beliefs on Early Literacy Scale" and "Early Literacy Knowledge Test".

3.2.1 Demographic information form

This form was prepared by the researcher and the advisor to collect information about the demographic characteristics of the participants. It included age, gender, education status (associate, bachelor, master, doctorate), type of university graduated (formal education, distance education), graduated department (preschool education, child development, out of area), professional experience, institution of employment (state school, private school), and the age group currently working (4 years, 5 years, 6 years).

In order to learn the past experiences of the participants on early literacy skills, there were questions including whether the participants received any training in this field at the university and their educational backgrounds in 5 areas that constitute the sub-categories of early literacy skills in their professional lives. Finally, questions were asked to get information about the professional satisfaction of the preschool teachers participating in the study and the socio-economic status of the institution they work in.

3.2.2 The early literacy knowledge test

Knowledge tests are the most appropriate method that can be used to measure the knowledge of a group on a particular subject (Baykul, 2015). According to Turgut and Baykul (2012), multiple choice tests are often used to measure knowledge about

a particular topic most accurately. For this purpose, a knowledge test with multiple-choice question type was used within the scope of the research.

The Early Literacy Knowledge Test, which is used to determine the knowledge levels of preschool teachers about early literacy, was developed by Laçin (2022). According to Laçin (2022), the Classical Test theory developed by Linn (1989) was taken as a basis for developing the Early Literacy Knowledge Test. This scale includes 27 items. The KR 20 reliability coefficient of the original scale obtained from this 27-item test was found to be .71. According to the results of the item analysis for this test, the test is valid, and according to the KR20 reliability calculations, it is a reliable knowledge test (Laçin, 2022). In this study, a reliability analysis was performed and the reliability coefficient Cronbach's alpha was found to be 0.69. According to Özdamar (2002) and Tavşanel (2002), the Cronbach Alpha coefficient between .60 and .79 indicates that it is notably reliable, and between .80 and 1.00 it is highly reliable. Also, Nunnally (1978) stated that alpha values considered sufficient for the new scales can be slightly higher than 0.60. Furthermore, Child (1970) considered the Cronbach Alpha value greater than 0.60 for the reliability of the scales as a sign of having enough reliability. In this sense, it was determined that the alpha value of this test was acceptable because it was above the reliability numbers.

After the scope and content of early literacy was determined by examining the previous studies on early literacy, multiple-choice questions were formed on the subfields of early literacy. When the content of the questions in the test was examined, it was stated that it consists of three types of questions: the basic concepts of early literacy, how these skills support reading, and how these skills should be supported in practice (Laçin, 2022).

This 27-item test has six subscales such as general early literacy, letter knowledge, phonological awareness, vocabulary, print awareness, listening comprehension. Items 1, 3, 9, 14, 17 and 26 are General Early Literacy subscale's items. Items 7, 16, 22 are Letter Knowledge subscale's items. Items 2, 6, 11, 20, 21, 24 and 25 are Phonological Awareness subscale's items. Items 12, 18, 19 and 23 are Vocabulary subscale's items. Items 5, 10 and 15 are Print Awareness subscale's items. Items 4, 8, 13 and 27 are Listening Comprehension subscale's items. Each subscale has three main titles. These are "The basic concepts", "Relation with Reading" and "How It is Supported".

The number of options for each question in the test is limited to five. The test is scored with "1" points for correct answers and "0" points for incorrect answers. Those who have 19 or more correct answers in the test were categorized "successful" with sufficient early literacy knowledge level, and those who have 8 correct or less correct answers were categorized "unsuccessful". Those with 9-18 correct answers were categorized as "in need of information".

3.2.3 Preschool teachers' beliefs on early literacy scale

"Preschool Literacy Survey" was developed by Sandvik, Van Daal, and Ade'r (2014) and used by Sezgin et al. (2018), includes questions about determining teacher beliefs and practices about early literacy skills in the classroom. In this study, only the belief scale was used. There are questions in the "Belief" section of the scale on determining the teacher's beliefs about early literacy skills in the classroom.

The Cronbach's alpha internal consistency coefficient of the original scale is as follows; From the beliefs of the preschool teacher, the role of the preschool teacher is 0.80, the role of the preschool is 0.69 and the effect of early literacy skills

on Literacy Achievement is 0.72 (Sandvik, Van Daal, & Ade`r, 2014). The scale was translated into Turkish by two language experts, opinions were taken by 11 field experts to determine the scope validity of the scale, and a pre-pilot study was conducted with 20 teachers for language validity after the scale was arranged. The final form of the scale was provided when the language validity was established. The Cronbach's alpha internal consistency coefficient of the Turkish scale is as follows; From the beliefs of the preschool teacher, the role of the preschool teacher is 0.85, the role of the preschool is 0.75 and the effect of early literacy skills on Literacy Achievement is 0.83 (Sezgin, Ulus, & Aksoy, 2018). According to Tezbaşaran (1997), an appropriate reliability coefficient in a Likert type scale should be as close to 1 as possible (Sezgin et al., 2018). Therefore, Sezgin and her friends (2018) stated that the measurement tool utilized for the research is reliable. In this study, reliability analysis was performed to test the reliability of “Preschool Teachers' Beliefs on Early Literacy Scale” for the given sample, and the reliability coefficient Cronbach’s alpha was found to be 0.91. Since Cronbach’s Alpha value should be as close to 1 as possible, it can be said that this scale has a high level of reliability in measuring the beliefs on early literacy of the sample in this study.

This scale is a 6-point Likert scale. “Totally Disagree”, “Mostly Disagree”, “Slightly Disagree”, “Slightly Agree”, “Mostly Agree” and “Totally Agree” are the options of the scale.

The scale, which consists of 26 items, has three sub-dimensions. These are The Role of Preschool Teacher, The Role of Preschool and The Effect of Early Literacy Skills on Literacy Achievement. Items 1, 2, 3, 4, 5, 6, 7, 8 and 9 are The Role of Preschool Teacher subscale’s items. Items 10, 11, 12, 13, 14, 15, 16, 17, 18

and 19 are The Role of Preschool subscale's items. Items 20, 21, 22, 23, 24, 25 and 26 are The Effect of Early Literacy Skills on Literacy Achievement subscale's items.

3.3 Design

This study has a correlational design conducting to investigate the relationship between preschool teachers' knowledge level and their beliefs about early literacy. Secondly, to examine the difference in preschool teachers' knowledge level and their early literacy beliefs, the demographics of preschool teachers were compared.

3.4 Procedure

Firstly, the ethics approval from the Ethics Committee of Bogazici University (Appendix A) and permission from T. R. Istanbul Governorship Provincial Directorate of National Education [T. C. İstanbul Valiliği İl Millî Eğitim Müdürlüğü] (Appendix B) were obtained for the research Project. Secondly, before collecting the data, an informed consent form was taken from participants [Appendix C (English) & D (Turkish)]. The data were collected from pre-school teachers working in public and private kindergartens and preschools affiliated to the Ministry of National Education (MEB) in the province of Istanbul in the 2022-2023 academic year by visiting the schools. For preschool teachers who agreed to participate in the research, demographic information form [Appendix E (English) & F (Turkish)], Early Literacy Knowledge Test and Preschool Teachers' Beliefs on Early Literacy Scale were completed by volunteer teachers. Participants were encouraged to feel more comfortable since it was announced that there would be no time limit for teachers filling the surveys. Participants were informed that they could withdraw from the research at any time and that their answers would not be used in this case, and it was

shared that the backward information would be deleted as soon as they were withdrawn. Participants were informed that it would take a maximum of 15 minutes to complete the surveys given. In total, 212 preschool teachers participated in the study.

3.5 Data analysis

The Statistical Packages for Social Sciences (SPSS v. 26) was used to analyze the current data. A total of 212 preschool teachers participated in the study and answered all questions. There were no missing values in the data set.

3.5.1 Descriptive statistics

At the beginning, the means and standard deviations of the scores on the variables of interest that are perceived total early literacy knowledge level, total early literacy beliefs, the role of preschool teacher subscale, the role of preschool, effect on future literacy achievement according to preschool teachers were examined. Furthermore, the Pearson's r (Correlation Coefficient) was computed to determine the relationship between perceived early literacy knowledge level and early literacy beliefs of preschool teachers.

3.5.2 Inferential statistics

The assumptions of the hierarchical multiple regression analysis (i.e homoscedasticity, multicollinearity, outliers and normality), independent sample t -tests and analysis of variance (ANOVA) were examined prior to performing the analysis.

Büyüköztürk (2011) stated that VIF (Variance Inflation Factor) values below 10 indicate that there is no multicollinearity. According to the results of the multicollinearity, it was found that the tolerance and VIF values in the study were below 10 and the data met the assumptions of collinearity in predicting early literacy beliefs. Therefore, it was claimed that there was no multicollinearity problem. Findings for multicollinearity statistics are presented in Table 2.

Table 2. Multicollinearity Statistics for Early Literacy Beliefs

Collinearity Statistics	<i>Tolerance</i>	VIF
Age	.588	1.701
Education status	.591	1.693
Institution of employment	.618	1.619
Professional experience	.599	1.669
Working age group	.853	1.172
Taking course in university	.825	1.213
Feeling sufficient	.945	1.058
Being satisfied as a preschool teacher	.941	1.063
Early Literacy Knowledge	.819	1.221

Note. Dependent Variable: Early Literacy Beliefs

As a result of the normality analysis with 212 data, the skewness and kurtosis values ranged between -2 and +2, so early literacy knowledge test, preschool teachers' beliefs on early literacy scale and demographic variables were normally

distributed (George & Mallery, 2019). Findings for normality analysis for study variables are presented in Table 3.

Table 3. Normality Analysis for Study Variables

Variables	Skewness	Kurtosis
Early Literacy Knowledge	-.154	-.561
Early Literacy Beliefs	-1.009	.167
Age	.755	-.417
Education status	.589	-.614
Professional experience	1.172	.806
Institution of employment	-.944	-1.119
Working age group	.315	-1.357
Taking early literacy course in university	-.944	-1.119
Training in phonological awareness	.597	-1.158
Training in print awareness	.570	-1.119
Training in listening comprehension	.630	-1.124
Training in vocabulary	.958	-.626
Training in letter knowledge	1.066	-.367
Reading article on early literacy	.347	-1.698
Feeling sufficient on early literacy	-.038	-1.649
Being satisfied as a preschool teacher	1.365	1.709
Socioeconomic status	-.027	-.266

The following is an explanation of the statistical approach used to answer the research questions:

- i. Is there a statistically significant difference in the early literacy knowledge level of preschool teachers regarding the demographic variables?

For this question, independent sample t-tests and analysis of variance (ANOVA) were conducted for the total knowledge score of preschool teachers as the outcome variables. The early literacy knowledge level of preschool teachers was compared based on demographic variables of preschool teachers.

- ii. Is there a statistically significant difference in the beliefs of preschool teachers about early literacy skills regarding the demographic variables?

For this question, independent sample t-tests and analysis of variance (ANOVA) were conducted for early literacy beliefs as the outcome variables. The early literacy beliefs of preschool teachers were compared based on demographic variables of preschool teachers.

- iii. Does the early literacy knowledge level of preschool teachers predict the beliefs of preschool teachers about early literacy skills when the demographic variables are controlled?

For this question, a two-step hierarchical multiple regression analysis was conducted with total early literacy beliefs as the outcome variables. Age, education status, institution of employment, professional experience, working age group, taking course in university, feeling sufficient and being satisfied as a preschool teacher as control variables were entered at step 1 of the regression. At step 2, total early literacy knowledge score of preschool teachers was entered. As a consequence, a two

set of regression analyses were conducted to predict early literacy beliefs of preschool teachers based on the total knowledge level of preschool teachers by controlling for the effects of age, education status, institution of employment, professional experience, working age group, taking course in university, feeling sufficient and being satisfied as a preschool teacher.

CHAPTER 4

RESULTS

In this chapter, the results of the analysis of the data collected in this research will be examined. The descriptive and inferential results for the Early Literacy Knowledge Test and Preschool Teachers' Beliefs on Early Literacy Scale answered by the participants will be presented.

4.1 Descriptive analysis of the early literacy knowledge test

According to the test which consisted of 27 questions in total, the participants who had 19 or more correct answers were categorized as “successful”, those who had correct answers between 9-18 were categorized as “in need of information”, and those who had 8 or less correct answers were categorized as “unsuccessful” in having sufficient early literacy knowledge level.

In the current study, while most of the teachers were in the category of in need of information in this field (n = 156, %73.6), only 9.4% of teachers were in the category of successful in early knowledge level (n=20). Descriptive findings on the early literacy knowledge level of preschool teachers are presented in Table 4.

Table 4. Mean, Standard Deviation and Minimum/Maximum Scores of Early Literacy Knowledge ($N = 212$).

	N	%	Min	Max	M	SD
Unsuccessful (0-8)	36	17	4.00	8.00	6.2778	1.42651
In need of information (9-18)	156	73.6	9.00	18.00	13.5192	2.59397
Successful (19-27)	20	9.4	19.00	23.00	20.1000	1.11921
Total	212	100	4.00	23.00	12.9104	4.25118

4.2 Comparison of the early literacy knowledge test by demographics of preschool teachers

In respect to the research question, it was investigated whether the knowledge test scores of preschool teachers differ or not depending on demographics of preschool teachers. Independent Samples-T test was performed to compare the differences of the university of graduation, the institution where they work, taking early literacy courses throughout the university, and the reading magazines/books/articles about early literacy among their knowledge test scores.

Results of the independent t test analysis showed that there was no statistically significant difference between preschool teachers graduated from formal education ($M = 13.28$, $SD = 4.58$) and preschool teachers graduated from open education ($M = 12.26$, $SD = 4.58$) for total knowledge test scores ($t = 1.68$, $p > .05$). However, there was a statistically significant difference between preschool teachers working at state school ($M = 15.16$, $SD = 4.31$) and preschool teachers working at private school ($M = 12.00$, $SD = 3.88$) for total knowledge test scores ($t = 5.20$, $p < .01$). The findings suggested that the knowledge score of preschool teachers working at private school was significantly lower than the knowledge score of

preschool teachers working at state school. Also, there was statistically significant difference between preschool teachers who took a course on early literacy in university ($M = 14.73$, $SD = 4.61$) and those who did not ($M = 12.17$, $SD = 3.87$) for total knowledge test scores ($t = 4.126$, $p < .01$). The findings suggested that the knowledge score of preschool teachers who took a course on early literacy in university was significantly higher than the knowledge score of preschool teachers who did not take a course on early literacy in university. Moreover, there was no statistically significant difference between preschool teachers who read journals/books/articles on early literacy ($M = 12.93$, $SD = 4.53$) and preschool teachers who did not ($M = 12.87$, $SD = 3.83$) for total knowledge test scores ($t = .102$, $p > .05$). The findings on the early literacy knowledge level of preschool teachers are presented in Table 5.

Table 5. Comparison of Early Literacy Knowledge Test by University Graduation, Institution of Employment, Taking any Early Literacy Course in University, and Reading Articles on Early Literacy

		N	M	SD	<i>t</i>	df	<i>p</i>
Early Literacy Knowledge Test	Formal education	134	13.28	4.58	1.68	212	.073
	Open education	78	12.26	3.53			
	State school	61	15.16	4.31	5.20**	212	.000
	Private school	151	12.00	3.88			
	Taking course						
	Yes	61	14.73	4.61	4.126**	212	.000
	No	151	12.17	3.87			
	Reading article						
	Yes	124	12.93	4.53	.102	212	.919
	No	88	12.87	3.83			

*= $p < .05$ **= $p < .01$

One way ANOVA was performed to compare the differences of the variables of age, education status, professional experience, working age group, feeling sufficient about early literacy, being satisfied as a preschool teacher, socio-economic status, and taking any training in professional life regarding the five components of early literacy (phonological awareness, vocabulary, letter knowledge, print/book awareness, listening comprehension) among their knowledge test scores. A one-way ANOVA revealed that there was no statistically significant difference found in total knowledge score between the age of preschool teachers ($F(5,206) = [2.061]$, $p = .072$). Findings related to comparison of the early literacy knowledge scores of preschool teachers by age of preschool teachers are presented in Table 6.

Table 6. Comparison of Early Literacy Knowledge Test by Age of Preschool Teachers

		N	Total Knowledge Score
Age	<i>F</i> -value		2.061
	Sum of squares		181.699
	Mean square		36.340
	25 years and under	74	11.78
	26-30	54	13.33
	31-35	35	13.40
	36-40	28	13.67
	41-45	16	14.62
	46-50	5	11.80

*= $p < .05$ **= $p < .01$

According to findings of the current study, there was a statistically significant difference found in total knowledge score between at least two groups when it came to their education status ($F(2,209) = [17.817]$, $p < .01$). According to the results of

the Tukey HSD Test, the total knowledge score was significantly different between those who had associate degree and those who had bachelor's degree ($p < .01$, 95% C.I. = [3.9617, 1.3337]). Moreover, it was found that the total knowledge score of preschool teachers was significantly different between associate degree and master's degree ($p < .01$, 95% C.I. = [9.2811, 2.8210]). The results suggest that preschool teachers who have a high level of education tend to be more knowledgeable on early literacy and vice versa. Findings related to comparison of the early literacy knowledge scores of preschool teachers by education status of preschool teachers are presented in Table 7.

Table 7. Comparison of Early Literacy Knowledge Test by Education Status of Preschool Teachers

		N	Total Knowledge Score
Education status	<i>F</i> -value		17.817**
	Sum of squares		555.458
	Mean square		277.729
	Associate's degree	111	11.50
	Bachelor's degree	92	14.15
	Master's degree	9	17.55

*= $p < .05$ **= $p < .01$

Also, there was not any statistically significant difference found in the total knowledge score between professional experiences of preschool teachers ($F(4,207) = [1.655]$, $p > .05$). Findings related to comparison of the early literacy knowledge scores of preschool teachers by professional experience of preschool teachers are presented in Table 8.

Table 8. Comparison of Early Literacy Knowledge Test by Professional Experience of Preschool Teachers

	N	Total Knowledge Score
Professional experience		
<i>F</i> -value		1.655
Sum of squares		118.163
Mean square		29.541
1-5 years	103	12.33
6-10 years	55	12.85
11-15 years	38	14.21
16-20 years	8	14.50
21 years and above	8	12.87

*= $p < .05$ **= $p < .01$

Likewise, there was no significant difference in total knowledge score between working age groups ($F(2,209) = [2.213]$, $p > .05$). Findings related to comparison of the early literacy knowledge scores of preschool teachers by the working age of preschool teachers are presented in Table 9.

Table 9. Comparison of Early Literacy Knowledge Test by Working Age Group of Preschool Teachers

	N	Total Knowledge Score
Working age group		
<i>F</i> -value		2.213
Sum of squares		79.089
Mean square		39.544
Age 4	88	12.31
Age 5	72	13.72
Age 6	52	12.78

*= $p < .05$ **= $p < .01$

Moreover, there was no statistically significant difference in total knowledge score between feeling sufficient about early literacy ($F(2,209) = [1.930]$, $p > .05$). Findings related to comparison of the early literacy knowledge scores of preschool

teachers by variables of feeling sufficient about early literacy is presented in Table 10.

Table 10. Comparison of Early Literacy Knowledge Test by Feeling Sufficient about Early Literacy of Preschool Teachers

	N	Total Knowledge Score
Feeling sufficient about early literacy		
<i>F</i> -value		1.930
Sum of squares		69.153
Mean square		34.577
Yes	89	13.07
No	30	14.06
Not sure	93	12.37

*= $p < .05$ ** = $p < .01$

There was no statistically significant difference in total knowledge score between being satisfied as a preschool teacher ($F(2,209) = [1.105], p > .05$) Findings related to comparison of the early literacy knowledge scores of preschool teachers by variables of being satisfied is presented in Table 11.

Table 11. Comparison of Early Literacy Knowledge Test by Being Satisfied as a Preschool Teacher

	N	Total Knowledge Score
Being satisfied as a preschool teacher	<i>F</i> -value	.105
	Sum of squares	3.829
	Mean square	1.915
	Yes	195
	No	4
	Not sure	13

*= $p < .05$ ** = $p < .01$

There was no statistically significant difference in total knowledge score between socio-economic status ($F(2,209) = [1.265]$, $p > .05$). Findings related to comparison of the early literacy knowledge scores of preschool teachers by the variable of socioeconomic status is presented in Table 12.

Table 12. Comparison of Early Literacy Knowledge Test by Socioeconomic Status of Preschool Teachers

	N	Total Knowledge Score
Socioeconomic status	<i>F</i> -value	1.265
	Sum of squares	45.604
	Mean square	22.802
	Low SES	18
	Medium SES	134
	High SES	60

*= $p < .05$ ** = $p < .01$

There was no statistically significant difference in total knowledge score between taking any training in professional life regarding vocabulary ($F(5,206) = [1.041], p > .05$). Findings related to comparison of the early literacy knowledge scores of preschool teachers by training in vocabulary of preschool teachers is presented in Table 13.

Table 13. Comparison of Early Literacy Knowledge Test by Taking Any Training in Professional Life Regarding Vocabulary of Preschool Teachers

		N	Total Knowledge Score
Vocabulary	<i>F</i> -value		1.041
	Sum of squares		94.017
	Mean square		18.803
	Never	121	12.7934
	Pre-service training	20	12.9500
	In-service training	22	14.1364
	Professional development	16	11.1875
	Individual learning	30	13.4667
	Mentoring	3	12.0000

*= $p < .05$ ** = $p < .01$

There was no statistically significant difference in total knowledge score between taking any training in professional life regarding print awareness ($F(5,206) = [.905], p > .05$). Findings related to comparison of the early literacy knowledge scores of preschool teachers by training in vocabulary and print awareness of preschool teachers is presented in Table 14.

Table 14. Comparison of Early Literacy Knowledge Test by Taking Any Training in Professional Life Regarding Print Awareness of Preschool Teachers

	N	Total Knowledge Score
Print awareness	<i>F</i> -value	.905
	Sum of squares	81.936
	Mean square	16.387
	Never	99
	Pre-service training	21
	In-service training	29
	Professional development	26
	Individual learning	34
	Mentoring	3

*= $p < .05$ ** = $p < .01$

Similarly, there was no statistically significant difference in total knowledge score between taking any training in professional life regarding letter knowledge ($F(5,206) = [1.488], p > .05$), Findings related to comparison of the early literacy knowledge scores of preschool teachers training in letter knowledge of preschool teachers are presented in Table 15.

Table 15. Comparison of Early Literacy Knowledge Test by Taking Any Training in Professional Life Regarding Letter Knowledge of Preschool Teachers

	N	Total Knowledge Score
Letter knowledge		
<i>F</i> -value		1.488
Sum of squares		132.896
Mean square		26.579
Never	120	12.6583
Pre-service training	28	12.9286
In-service training	20	13.6500
Professional development	13	11.8462
Individual learning	29	14.2414
Mentoring	2	8.0000

*= $p < .05$ ** = $p < .01$

Similarly, there was no statistically significant difference in total knowledge score between taking any training in professional life regarding listening comprehension ($F(5,206) = [1.463], p > .05$). Findings related to comparison of the early literacy knowledge scores of preschool teachers training in listening comprehension of preschool teachers are presented in Table 16.

Table 16. Comparison of Early Literacy Knowledge Test by Taking Any Training in Professional Life Regarding Listening Comprehension of Preschool Teachers

	N	Total Knowledge Score
Listening comprehension	<i>F</i> -value	1.463
	Sum of squares	130.757
	Mean square	26.151
	Never	105
	Pre-service training	18
	In-service training	28
	Professional development	28
	Individual learning	30
	Mentoring	3

*= $p < .05$ ** = $p < .01$

There was a statistically significant difference found in total knowledge score between at least two groups when it came to taking any training in professional life regarding phonological awareness ($F(5,206) = [3.686]$, $p < .05$). The results of Tukey HSD Test indicate that the total knowledge score was significantly different between those who had professional development and those who had individual learning ($p < .05$, 95% C.I. = [6.8243, .6412]). The results suggest that preschool teachers who had individual learning on phonological awareness tend to be more knowledgeable on early literacy than those who had professional development on phonological awareness. Findings related to comparison of the early literacy knowledge scores of preschool teachers training in phonological awareness of preschool teachers are presented in Table 17.

Table 17. Comparison of Early Literacy Knowledge Test by Taking Any Training in Professional Life Regarding Phonological Awareness of Preschool Teachers

	N	Total Knowledge Score
Phonological awareness	<i>F</i> -value	3.686**
	Sum of squares	313.147
	Mean square	62.629
	Never	106
	Pre-service training	14
	In-service training	30
	Professional development	31
	Individual learning	28
	Mentoring	3

*= $p < .05$ ** = $p < .01$

4.3 Descriptive analysis for preschool teachers' beliefs on early literacy scale

"Preschool Teachers' Beliefs on Early Literacy Scale is a 6-point Likert scale.

"Totally Disagree", "Mostly Disagree", "Slightly Disagree", "Slightly Agree",

"Mostly Agree" and "Totally Agree" are the options. A high score on the scale

indicates positive beliefs about early literacy, while a low score indicates negative beliefs.

The role of the preschool teacher, the role of preschool, and the effect of early literacy skills on literacy achievement are the three subscales of Preschool Teachers' Beliefs on Early Literacy Scale. Means, and standard deviations of Preschool Teachers' Beliefs on Early Literacy Scale involving its subscales are identified in Table 18.

Table 18. Mean, and Standard Deviation Scores of Early Literacy Belief Scale ($N = 212$).

	N	M	SD
Total Belief Score	212	4.8095	.77688
The role of the preschool teacher	212	4.5718	.97432
The role of the preschool	212	4.9179	.77206
The effect of early literacy skills on literacy achievement	212	4.9602	.93820

4.4 Comparison of preschool teachers' beliefs on early literacy scale by demographics of preschool teachers

Regarding the research question, it was investigated whether the belief scores of preschool teachers differ or not depending on demographics of preschool teachers. Independent Samples-T test was performed to compare the differences of the university of graduation, the institution where they work, taking early literacy courses throughout the university, and the reading journals/books/articles about early literacy among their belief scores. According to findings of the current study, there was no statistically significant difference between preschool teachers graduated from formal education ($M = 4.81$, $SD = .771$) and preschool teachers graduated from open education ($M = 4.79$, $SD = .790$) for total belief scores ($t = .574$, $p > .05$). There was no statistically significant difference between preschool teachers graduated from formal education ($M = 4.60$, $SD = .980$) and preschool teachers graduated from open education ($M = 4.52$, $SD = .968$) for the role of preschool teacher subscale ($t = 1.68$, $p > .05$). There was no statistically significant difference between preschool teachers graduated from formal education ($M = 4.81$, $SD = .774$) and preschool teachers

graduated from open education ($M = 4.93$, $SD = .772$) for the role of preschool subscale ($t = .184$, $p > .05$). Lastly, there was no statistically significant difference between preschool teachers graduated from formal education ($M = 4.81$, $SD = .905$) and preschool teachers graduated from open education ($M = 4.94$, $SD = .997$) for the effect of early literacy skills on literacy achievement subscale ($t = .179$, $p > .05$). Findings related to the comparison of preschool teachers' belief scores by their university of graduation is presented in Table 19.

Tablo 19. Independent Samples-T test for Types of University Graduated and Early Literacy Belief Scale

		N	X	SD	<i>t</i>	df	<i>p</i>
Total Belief Scale	Formal education	134	4.81	.771	.237	212	.813
	Open education	78	4.79	.790			
The role of the preschool teacher	Formal education	134	4.60	.980	.574	212	.566
	Open education	78	4.52	.968			
The role of the preschool	Formal education	134	4.81	.774	.184	212	.854
	Open education	78	4.93	.772			
The effect of early literacy skills on literacy achievement	Formal education	134	4.81	.905	.179	212	.858
	Open education	78	4.94	.997			

*= $p < .05$ **= $p < .01$

Findings based on comparing preschool teachers' belief scores by institution of employment showed that there was not any statistically significant difference between preschool teachers worked at state school ($M = 4.68$, $SD = .688$) and preschool teachers worked at private school ($M = 4.85$, $SD = .807$) for total belief scores ($t = 1.43$, $p > .05$). However, there was a statistically significant difference between preschool teachers worked at state school ($M = 4.34$, $SD = .874$) and preschool teachers worked at private school ($M = 4.66$, $SD = 1.000$) for the role of preschool teacher subscale scores ($t = 2.14$, $p < .05$). The findings suggested that the role of preschool teacher subscale scores of preschool teachers who worked at private school were significantly higher than the role of preschool teacher subscale scores of preschool teachers who worked at state school. Also, according to results there was not any significant difference between preschool teachers worked at state school ($M = 4.81$, $SD = .722$) and preschool teachers worked at private school ($M = 4.95$, $SD = .790$) for the role of preschool subscale scores ($t = 1.19$, $p > .05$). Likewise, there was not any significant difference between preschool teachers worked at state school ($M = 4.94$, $SD = .773$) and preschool teachers worked at private school ($M = 4.96$, $SD = .999$) for the effect of early literacy on literacy achievement subscale scores ($t = .139$, $p > .05$). Findings related to the comparison of preschool teachers' belief scores by their institution of employment is presented in Table 20.

Table 20. Independent Samples-T test for Institution of Employment and Early Literacy Belief Scale

		N	X	SD	<i>t</i>	df	<i>p</i>
Total Belief Scores	State school	61	4.68	.688	1.43	212	.154
	Private school	151	4.85	.807			
The role of the preschool teacher	State school	61	4.34	.874	2.14	212	.033*
	Private school	151	4.66	1.000			
The role of the preschool	State school	61	4.81	.722	1.19	212	.232
	Private school	151	4.95	.790			
The effect of early literacy skills on literacy achievement	State school	61	4.94	.773	.139	212	.890
	Private school	151	4.96	.999			

*= $p < .05$ **= $p < .01$

Results of the independent t test analysis showed that there was no statistically significant difference between preschool teachers who took a course on early literacy in university ($M = 4.84$, $SD = .800$) and those who did not ($M = 4.79$, $SD = .769$) for total belief scores ($t = .458$, $p > .05$). There was no statistically significant difference between preschool teachers who took a course on early literacy in university ($M = 4.63$, $SD = 1.01$ and those who did not ($M = 4.54$, $SD = .960$) with regard to the role of preschool teacher ($t = .606$, $p > .05$). Also, there was no statistically significant difference between preschool teachers who took a course on early literacy in university ($M = 4.89$, $SD = .782$) and those who did not ($M = 4.92$, $SD = .770$) with regard to the role of preschool ($t = .312$, $p > .05$). Lastly, there was no statistically significant difference between preschool teachers who took a course on early literacy in university ($M = 5.05$, $SD = .930$) and those who did not ($M =$

4.92, $SD = .941$) with regard to the effect of early literacy skills on literacy achievement ($t = .970$, $p > .05$). Findings related to the comparison of preschool teachers' belief scores by taking a course on early literacy in university is presented in Table 21.

Table 21. Independent Samples-T test for taking a course on early literacy in university and Early Literacy Belief Scale

		N	X	SD	<i>t</i>	df	<i>p</i>
Total Belief Scores	Yes	61	4.84	.800	.458	212	.647
	No	151	4.79	.769			
The role of the preschool teacher	Yes	61	4.63	1.01	.606	212	.545
	No	151	4.54	.960			
The role of the preschool	Yes	61	4.89	.782	.312	212	.755
	No	151	4.92	.770			
The effect of early literacy skills on literacy achievement	Yes	61	5.05	.930	.970	212	.333
	No	151	4.92	.941			

*= $p < .05$ ** = $p < .01$

Findings based on comparing preschool teachers' belief scores by reading journals/books/articles on early literacy showed that there was no statistically significant difference between preschool teachers who read journals/books/articles on early literacy ($M = 4.86$, $SD = .795$) and those who did not ($M = 4.73$, $SD = .748$) for total belief scores ($t = 1.22$, $p > .05$). Moreover, there was no statistically significant difference between preschool teachers who read journals/books/articles on early literacy ($M = 4.62$, $SD = 1.009$) and those who did not ($M = 4.49$, $SD = .923$) with regard to the role of preschool teacher ($t = .967$, $p > .05$). There was no statistically significant difference between preschool teachers who read journals/books/articles on early literacy ($M = 4.94$, $SD = .817$) and those who did not

($M = 4.88$, $SD = .706$) with regard to the role of preschool ($t = .591$, $p > .05$). Lastly, there was no statistically significant difference between preschool teachers who read journals/books/articles on early literacy ($M = 5.05$, $SD = .891$) and those who did not ($M = 4.82$, $SD = .989$) with regard to the effect of early literacy on literacy achievement ($t = 1.781$, $p > .05$). Findings related to the comparison of preschool teachers' belief scores by reading journals/books/articles on early literacy is presented in Table 22.

Table 22. Independent Samples-T Test for Reading Journals/Books/Articles and Early Literacy Belief Scale

		N	X	SD	<i>t</i>	df	<i>p</i>
Total Belief	Yes	124	4.86	.795	1.22	212	.222
Scores	No	88	4.73	.748			
The role of	Yes	124	4.62	1.009	.967	212	.334
the preschool	No	88	4.49	.923			
teacher							
The role of	Yes	124	4.94	.817	.591	212	.555
the preschool	No	88	4.88	.706			
The effect of	Yes	124	5.05	.891	1.781	212	.076
early literacy	No	88	4.82	.989			
skills on							
literacy							
achievement							

*= $p < .05$ ** = $p < .01$

One way ANOVA was performed to compare the differences of the variables of age, education status, professional experience, working age group, feeling sufficient about early literacy, being satisfied as a preschool teacher, socio-economic status, and taking any training in professional life regarding the five components of early literacy (phonological awareness, vocabulary, letter knowledge, print/book

awareness, listening comprehension) among their total belief scores and three belief subscales.

Accordingly, there was not any statistically significant difference found in age groups and total belief score ($F(5,206) = [.808]$, $p > .05$), the role of preschool teacher ($F(5,206) = [.437]$, $p > .05$), the role of preschool ($F(5,206) = [.600]$, $p > .05$) and the effect of early literacy on literacy achievement ($F(5,206) = [1.377]$, $p > .05$). Findings related to the comparison of preschool teachers' belief scores by age of preschool teachers is presented in Table 23.

Table 23. Comparison of Early Literacy Belief Scale by Age of Preschool Teachers

	N	Total Belief Score	The role of preschool teacher	The role of preschool	The effect of early literacy on literacy achievement
Age	<i>F</i> -value	.808	.437	.600	1.377
	Sum of squares	2.451	2.104	1.806	6.005
	Mean square	.490	.421	.361	1.201
25 years and under	74	4.7666	4.5871	4.8689	4.8514
26-30	54	4.7066	4.4527	4.8593	4.8148
31-35	35	4.8538	4.5397	4.9371	5.1388
36-40	28	4.9725	4.7024	5.0464	5.2143
41-45	16	5.0288	4.7847	5.1375	5.1875
46-50	5	4.6308	4.4444	4.7200	4.7429

*= $p < .05$ ** = $p < .01$

Findings based on comparing the preschool teachers' beliefs by the education status of them showed that education status had no relation with any of preschool

teachers' belief scales. Findings related to the comparison of preschool teachers' belief scores by education status of preschool teachers is presented in Table 24.

Table 24. Comparison of Early Literacy Belief Scale by Education Status of Preschool Teachers

	N	Total Belief Score	The role of preschool teacher	The role of preschool	The effect of early literacy on literacy achievement
Education status					
<i>F</i> -value		.276	.116	.340	.254
Sum of squares		.336	.221	.408	.450
Mean square		.168	.111	.204	.225
Associate's degree	111	4.8021	4.5746	4.9072	4.9447
Bachelor's degree	92	4.8353	4.5833	4.9489	4.9969
Master's degree	9	4.6368	4.4198	4.7333	4.7778

*= $p < .05$ ** = $p < .01$

Furthermore, there was not any statistically significant difference found in professional experience and total belief score ($F(4,207) = [.922]$, $p > .05$), the role of preschool teacher ($F(4,207) = [.506]$, $p > .05$), the role of preschool ($F(4,207) = [.921]$, $p > .05$) and the effect of early literacy on literacy achievement ($F(4,207) = [1.128]$, $p > .05$). Findings related to the comparison of preschool teachers' belief scores by professional experience of preschool teachers is presented in Table 25.

Table 25. Comparison of Early Literacy Belief Scale by Professional Experience of Preschool Teachers

	N	Total Belief Score	The role of preschool teacher	The role of preschool	The effect of early literacy on literacy achievement
Professional experience	<i>F</i> -value	.922	.506	.921	1.128
	Sum of squares	2.228	1.939	2.200	3.961
	Mean square	.557	.485	.550	.990
	1-5 years	103	4.7565	4.5254	4.8835
	6-10 years	55	4.7860	4.5657	4.8764
	11-15 years	38	4.9676	4.7339	5.0105
	16-20 years	8	4.6154	4.3056	4.7750
					4.7857

*= $p < .05$ ** = $p < .01$

On the other hand, there was a statistically significant difference found in the mean value of the effect of early literacy on literacy achievement subscale between at least two groups when it came to the working age groups ($F(2,209) = [7.150]$, $p < .01$). Based on the result from Tukey HSD Test, the mean value of the effect of early literacy on literacy achievement subscale was significantly different between the preschool teachers who worked at age 4 group and who worked at age 5 group ($p < .01$, 95% C.I. = $[-.8547, -.1705]$). Also, Tukey HSD Test showed that the mean value of the effect of early literacy on literacy achievement subscale was significantly different between the preschool teachers who worked at age 4 group and who worked at age 6 group ($p < .01$, 95% C.I. = $[-.8019, -.0488]$). The findings suggested that

preschool teachers working at the age 5 group and age 6 group are more likely to have positive beliefs on the effect of early literacy on literacy achievement than preschool teachers working at age 4 group. Findings related to the comparison of preschool teachers' belief scores by working age group of preschool teachers is presented in Table 26.

Table 26. Comparison of Early Literacy Belief Scale by Working Age Group of Preschool Teachers

		N	Total Belief Score	The role of preschool teacher	The role of preschool	The effect of early literacy on literacy achievement
Working age group	<i>F</i> -value		3.504	2.569	1.428	7.150**
	Sum of squares		4.132	4.806	1.696	11.893
	Mean square		2.066	2.403	.848	5.947
	Age 4	88	4.6438	4.4129	4.8250	4.6818
	Age 5	72	4.9290	4.6080	5.0319	5.1944
	Age 6	52	4.9246	4.7906	4.9173	5.1071

*= $p < .05$ ** = $p < .01$

According to findings of the current study, there was not any statistically significant difference found in taking any training in professional life regarding phonological awareness and total belief score ($F(5,206) = [1.010]$, $p > .05$), the role of preschool teacher ($F(5,206) = [1.155]$, $p > .05$), the role of preschool ($F(5,206) = [.591]$, $p > .05$) and the effect of early literacy on literacy achievement ($F(5,206) = [.928]$, $p > .05$). Findings related to the comparison of preschool teachers' belief

scores by training in phonological awareness of preschool teachers is presented in Table 27.

Table 27. Comparison of Early Literacy Belief Scale by Taking Any Training in Professional Life Regarding Phonological Awareness of Preschool Teachers

	N	Total Belief Score	The role of preschool teacher	The role of preschool	The effect of early literacy on literacy achievement
Phonological awareness		1.010	1.155	.591	.928
<i>F</i> -value					
Sum of squares		3.047	5.461	1.778	4.089
Mean square		.609	1.092	.356	.818
Never	106	4.7101	4.4549	4.8462	4.8437
Pre-service training	14	5.0769	4.9127	5.1571	5.1735
In-service training	30	4.9859	4.8111	5.0167	5.1667
Professional development	31	4.8127	4.5627	4.9097	4.9954
Individual learning	28	4.8558	4.5476	4.9821	5.0714

*= $p < .05$ ** = $p < .01$

Likewise, there was not any statistically significant difference found in taking any training in professional life regarding print/book awareness and total belief score ($F(5,206) = [.923]$, $p > .05$), the role of preschool teacher ($F(5,206) = [.830]$, $p > .05$), the role of preschool ($F(5,206) = [.813]$, $p > .05$) and the effect of early literacy on literacy achievement ($F(5,206) = [1.152]$, $p > .05$). Findings related to the

comparison of preschool teachers' belief scores by training in print awareness of preschool teachers is presented in Table 28.

Table 28. Comparison of Early Literacy Belief Scale by Taking Any Training in Professional Life Regarding Print Awareness of Preschool Teachers

		N	Total Belief Score	The role of preschool teacher	The role of preschool	The effect of early literacy on literacy achievement
Print awareness	<i>F</i> -value		.923	.830	.813	1.152
	Sum of squares		2.792	3.955	2.433	5.053
	Mean square		.558	.791	.487	1.011
Never		99	4.7191	4.4747	4.8404	4.8600
Pre-service training		21	4.8571	4.7196	4.9571	4.8912
In-service training		29	4.9602	4.7663	5.0241	5.1182

*= $p < .05$ ** = $p < .01$

Moreover, there was not any statistically significant difference found in taking any training in professional life regarding vocabulary and total belief score ($F(5,206) = [1.378]$, $p = .234$), the role of preschool teacher ($F(5,206) = [1.531]$, $p > .05$), the role of preschool ($F(5,206) = [1.375]$, $p > .05$) and the effect of early literacy on literacy achievement ($F(5,206) = [1.199]$, $p > .05$). Findings related to the comparison of preschool teachers' belief scores by training in vocabulary of preschool teachers is presented in Table 29.

Table 29. Comparison of Early Literacy Belief Scale by Taking Any Training in Professional Life Regarding Vocabulary of Preschool Teachers

	N	Total Belief Score	The role of preschool teacher	The role of preschool	The effect of early literacy on literacy achievement
Vocabulary					
<i>F</i> -value		1.378	1.531	1.375	1.199
Sum of squares		4.122	7.178	4.063	5.253
Mean square		.824	1.436	.813	1.051
Never	121	4.7479	4.4683	4.8727	4.9292
Pre-service training	20	5.1288	4.9833	5.2550	5.1357
In-service training	22	4.8969	4.7879	4.9500	4.9610
Professional development	16	4.5505	4.4653	4.6313	4.5446
Individual learning	30	4.8962	4.5481	4.9967	5.2000
Mentoring	3	5.0385	5.2222	5.0000	4.8571

*= $p < .05$ ** = $p < .01$

Lastly, there was not any statistically significant difference found in taking any training in professional life regarding letter knowledge and total belief score ($F(5,206) = [1.085]$, $p > .05$), the role of preschool teacher ($F(5,206) = [1.864]$, $p > .05$), the role of preschool ($F(5,206) = [.833]$, $p > .05$) and the effect of early literacy on literacy achievement ($F(5,206) = [.548]$, $p > .05$). Findings related to the comparison of preschool teachers' belief scores by training in letter knowledge of preschool teachers is presented in Table 30.

Table 30. Comparison of Early Literacy Belief Scale by Taking Any Training in Professional Life Regarding Letter Knowledge of Preschool Teachers

	N	Total Belief Score	The role of preschool teacher	The role of preschool	The effect of early literacy on literacy achievement
Letter knowledge	F-value	1.085	1.864	.833	.548
	Sum of squares	3.267	8.668	2.492	2.439
	Mean square	.653	1.734	.498	.488
	Never	120	4.7071	4.4278	4.8333
	Pre-service training	28	4.9986	4.8611	5.1250
	In-service training	20	4.9827	4.8556	5.0000
	Professional development	13	4.9704	4.8462	5.0231
	Individual learning	29	4.8541	4.5172	4.9759
	Mentoring	2	4.8846	5.333	4.7500

*= $p < .05$ ** = $p < .01$

However, there was a statistically significant difference found in total belief score between at least two groups when it came to taking any training in professional life regarding listening comprehension ($F(5,206) = [2.533]$, $p < .05$). The results of Tukey HSD Test indicate that the total belief score was significantly different between those who had professional development and those who had individual learning ($p < .05$, 95% C.I. = [-1.1693, -.0155]). The results suggest that preschool teachers who had individual learning on listening comprehension tend to have more positive beliefs on early literacy than those who had professional development on

listening comprehension. Also, there was a statistically significant difference found in the role of preschool teacher subscale between at least two groups when it came to taking any training in professional life regarding listening comprehension ($F(5,206) = [3.548], p < .01$). Tukey HSD Test found that the role of preschool teacher subscale score was significantly different between those who had pre-service training and those who had professional development ($p < .05$, 95% C.I. = [.0578, 1.7024]), those who had in-service training and those who had professional development ($p < .05$, 95% C.I. = [.0543, 1.5092]), those who had individual learning and those who had professional development ($p < .05$, 95% C.I. = [.0821, 1.5126]). Findings related to the comparison of preschool teachers' belief scores by training in listening comprehension of preschool teachers is presented in Table 31.

According to findings of the current study, there was no statistically significant difference in feeling sufficient about early literacy and total belief score ($F(2,209) = [2.074], p > .05$), the role of preschool teacher ($F(2,209) = [1.844], p > .05$) and the effect of early literacy on literacy achievement ($F(2,209) = [.626], p > .05$). However, there was a statistically significant difference in feeling sufficient about early literacy and the role of preschool subscale score ($F(2,209) = [3.166], p < .05$). Based on the result from Tukey HSD Test, the mean value of the role of preschool subscale was significantly different between preschool teachers who did not feel sufficient about early literacy and who were not sure ($p < .05$, 95% C.I. = [-.7661, -.0085]). Findings related to the comparison of preschool teachers' belief scores by feeling sufficient about early literacy of preschool teachers is presented in Table 32.

Table 31. Comparison of Early Literacy Belief Scale by Taking Any Training in Professional Life Regarding Listening Comprehension of Preschool Teachers

		N	Total Belief Score	The role of preschool teacher	The role of preschool	The effect of early literacy on literacy achievem ent
Listening comprehension	<i>F</i> -value		2.533*	3.548**	1.478	1.296
	Sum of squares		7.375	15.882	4.355	5.664
	Mean square		1.475	3.176	.871	1.133
	Never	10	4.7725	4.4931	4.8819	4.9755
	Pre-service training	18	5.0726	4.9198	5.2111	5.0714
	In-service training	28	4.9231	4.8214	4.9643	4.9949
	Professional development	28	4.4217	4.0397	4.6536	4.5816
	Individual learning	30	5.0141	4.8370	5.0633	5.1714
	Mentoring	3	5.0385	5.2222	5.0000	4.8571

*= $p < .05$ **= $p < .01$

Table 32. Comparison of Early Literacy Belief Scale by Feeling sufficient about Early Literacy of Preschool Teachers

		N	Total Belief Score	The role of preschool teacher	The role of preschool	The effect of early literacy on literacy achievement
Feeling sufficient about early literacy	<i>F</i> -value		2.074	1.844	3.166*	.626
	Sum of squares		2.479	3.472	3.698	1.105
	Mean square		1.239	1.736	1.849	.553
	Yes	89	4.8397	4.6417	4.9618	4.9127
	No	30	4.5449	4.2593	4.5933	4.8429
	Not sure	93	4.8660	4.6057	4.9806	5.0369

* = $p < .05$ ** = $p < .01$

Moreover, while there was no statistically significant difference in being satisfied as a preschool teacher and the role of preschool teacher ($F(2,209) = [1.907], p > .05$), there was a statistically significant difference in being satisfied as a preschool teacher and total belief score ($F(2,209) = [5.030], p < .01$), the role of preschool ($F(2,209) = [4.312], p < .05$), and the effect of early literacy on literacy achievement ($F(2,209) = [7.027], p < .01$). According to results of Tukey HSD Test, the mean value of total belief score was significantly different between saying yes and saying no in being satisfied as a preschool teacher ($p < .05$, 95% C.I. = [.0517, 1.8699]). The findings suggested that preschool teachers who were satisfied with being a preschool teacher are more likely to have positive beliefs on early literacy than preschool teachers who were not satisfied with being a preschool teacher. Also,

Tukey HSD Test found that the mean value of the effect of early literacy on literacy achievement subscale score was significantly different between saying yes and saying no in being satisfied as a preschool teacher ($p < .05$, 95% C.I. = [.1884, 2.3644]). Tukey HSD Test found that the mean value of the effect of early literacy on literacy achievement subscale score was significantly different between saying yes and saying not sure in being satisfied as a preschool teacher ($p < .05$, 95% C.I. = [.0687, 1.3027]). The findings suggested that preschool teachers who were satisfied with being a preschool teacher are more likely to have positive beliefs on the effect of early literacy subscale than preschool teachers who were not satisfied with being a preschool teacher, and preschool teachers who were satisfied with being a preschool teacher are more likely to have positive beliefs on the effect of early literacy subscale than preschool teachers who were not sure. Findings related to the comparison of preschool teachers' belief scores by being satisfied as a preschool teacher of preschool teachers is presented in Table 33.

Table 33. Comparison of Early Literacy Belief Scale by the Variable of Being Satisfied as a Preschool Teacher

	N	Total Belief Score	The role of preschool teacher	The role of preschool	The effect of early literacy on literacy achievement
Being satisfied as a preschool teacher	<i>F</i> -value	5.030**	1.907*	4.312	7.027**
	Sum of squares	5.848	3.591	4.984	11.702
	Mean square	2.924	1.795	2.492	5.851
	Yes 195	4.8550	4.6040	4.9610	5.0264
	No 4	3.8942	3.7500	4.1250	3.7500
	Not sure 13	4.4083	4.3419	4.5154	4.3407

*= $p < .05$ **= $p < .01$

4.5 Bivariate correlations among the study variables

The associations between the variables (early literacy knowledge score and early literacy beliefs) were examined by using the Pearson Product-Moment Correlation Coefficient.

There was a weak but significant positive correlation between early literacy knowledge level and early literacy beliefs in preschool teachers ($r = .17, p < .05, N = 212$). Therefore, the result suggests that preschool teachers who score higher on the early literacy knowledge test reported more positive beliefs about early literacy (see Table 34).

Table 34. Bivariate Correlations Among the Study Variables

	Early Literacy Knowledge Score	Early Literacy Beliefs
Early Literacy Knowledge Score	1	.171*
Early Literacy Beliefs		1

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

4.6 Hierarchical multiple regression analyses with early literacy beliefs as an

outcome variable and total early literacy knowledge level as a predictor variable Regarding the research question, it is examined whether preschool teachers' knowledge level predicts their beliefs about early literacy or not when the demographics were controlled. Therefore, hierarchical multiple regression analyses were carried out to examine the possible associations between preschool teachers' total knowledge score and their early literacy beliefs with demographics of preschool

teachers as control variables. A two-stage hierarchical multiple regression was conducted with early literacy beliefs as the dependent variable. Preschool teachers' demographics (age, education status, institution of employment, professional experience, working age group, taking course in university, feeling sufficient, being satisfied), were entered at step one as control variables and explain 10% of the variance in early literacy beliefs, and the result is significant, $F(8, 203) = 2.91, p < .01$. The unique contributions of institutions of employment, working age group and being satisfied as a preschool teacher were found in the first step of regression.

After controlling for the demographic variables of preschool teachers, total knowledge scores of preschool teachers were entered at step two. After being entered, the total variance explained by the model becomes 14%, $F(9, 202) = 3.70, p < .001$. According to the results of hierarchical multiple regressions, the predictor variable, which is total early literacy knowledge level of preschool teachers, explained an additional 4% of variance on early literacy beliefs of preschool teachers, $\Delta R^2 = .04, \Delta F(1, 202) = 8.95, p < .001$.

In sum, the significant and positive associations of total knowledge score indicates that as the early literacy knowledge score of preschool teachers increases, early literacy beliefs of preschool teachers increase. Hierarchical multiple regression analysis findings for variables predicting early literacy beliefs are presented in Table 35.

Table 35. Hierarchical Multiple Regression Analysis of Early Literacy Beliefs

Variables	<i>B</i>	<i>SE B</i>	β	R^2	ΔR^2	<i>p</i>
Step 1: Control variables				.10**	.10**	.004
Age	.20	.14	.13			.144
Education status	.10	.13	.06			.500
Institution of employment	.30	.14	.18*			.034
Professional experience	-.09	.13	-.06			.508
Working age group	.33	.11	.21**			.004
Taking course in university	-.01	.12	-.01			.908
Feeling sufficient	.04	.11	.03			.717
Being satisfied	-.55	.20	-.20**			.005
Step 2				.14**	.04**	.000
Total knowledge score	.04	.01	.22**			.003

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

Note. Dependent variable: Early literacy beliefs

CHAPTER 5

DISCUSSION

In the current study, the main aim was to determine preschool teachers' knowledge levels and beliefs about early literacy skills. Furthermore, it was aimed to investigate the relationships between preschool teachers' knowledge levels and their beliefs about early literacy skills. In order to achieve this goal, first, the findings regarding the comparison of total knowledge levels of preschool teachers about early literacy by the demographic variables were elaborated. Secondly, the findings regarding the comparison of preschool teachers' early literacy beliefs were reported. Finally, prediction of preschool teachers' early literacy beliefs was specified by controlling demographics of preschool teachers. Ultimately, in this chapter, the results of the present study, as revealed by the analyses, will be discussed within the framework of the relevant literature. After that the suggestions are directed both at researchers working in this field and educators in related departments of the university, people in the Ministry of National Education, and administrators and education coordinators in private schools.

5.1 Discussion based on research questions

5.1.1 The comparison of early literacy knowledge levels by demographics of preschool teachers

Is there a statistically significant difference in the early literacy knowledge level of preschool teachers regarding the demographic variables?

The current study demonstrated that the preschool teachers participating in the study had a very low level of knowledge about early literacy. When the success

rates of the teachers in the knowledge test consisting of 27 multiple-choice questions are taken into account, the results obtained reveal that the majority of the teachers need information in this field, unfortunately. However, it was found that just a small number of the preschool teachers received enough points to be regarded as successful in the test, indicating that they have significant knowledge in this area. Yet, the result of the current study is not unexpected that the majority of teachers lack necessary knowledge in this field and perform poorly on the test. Consistent with the findings of the current study, previous research has also found that preschool teachers lack adequate early literacy knowledge and they need professional support. It is indicated that preschool teachers do not have a sufficient understanding of early literacy (Crim et al., 2008). Also, according to Schachter et al. (2016), a considerable proportion of teachers lack adequate knowledge of early literacy. Similar findings are likely, particularly when looking at studies conducted in Turkey. For example, according to Ergül et al. (2014), many teachers lacked early literacy training, and the strategies they used in the classroom did not promote early literacy development. The lack of sufficient knowledge among preschool teachers can be explained by a number of factors. However, in order to proceed to these reasons, it is essential to examine the results obtained from comparing the demographic characteristics of teachers with their knowledge levels, and within the framework of the results, the possible reasons for the low level of knowledge among teachers and the possible solutions to this problem will be discussed now.

The result of the study indicates that the level of knowledge of associate degree preschool teachers was significantly lower than those of bachelor's and master's degree preschool teachers. When the years of education are compared, the knowledge level of the instructors with more education is higher than the knowledge

level of the teachers with less education; on the contrary, this is a conclusion we expect. Previous findings on comparing teachers' qualifications regarding early literacy are consistent with the current study (Ergül et al., 2014; Hindman & Wasik, 2011) that higher-educated preschool teachers knew more than their less-educated counterparts. Also, the results of this study are in agreement with those of a recent study on the content knowledge of preschool teachers (König et al., 2022) where researchers focus on the measurement of knowledge on early literacy divided into different categories. As consistent with the results of the study of König et al. (2022), the teachers with the highest average score are in the group with a master's degree. This finding of the study can be explained with the differences in the learning opportunities they had been exposed to during their teacher education. König et al. (2022) also made the similar explanation that teachers with a bachelor's degree may have had more chances to study about the subject because they have a longer educational life than teachers with an associate degree, allowing them to be more proficient in the field of early literacy. Although there is a consistent outcome that teachers with more advanced degrees are more competent and teachers with master degree had more advanced knowledge than those with having less education, there was no significant difference in total knowledge level between bachelor's degree and master's degree teachers in the current study. An explanation on insignificant result between bachelor's degree and master's degree regarding the teachers' total knowledge score may relate to the low number of preschool teachers having master degree among the teachers participating in the current research. Another explanation for the insignificant result on bachelor's degree and master's degree may relate to the contents of teacher training universities, similar to the result of a recent study which showed that there was no correlation between having bachelor's degree and

classroom instructional quality (Lin & Magnuson, 2018). As mentioned in previous studies, since the content and quality differences in teacher training programs can affect the knowledge level of the teacher, even if teachers have a higher education diploma, if they do not see a sufficient quality curriculum, they may not have sufficient knowledge and this may negatively affect their teaching skills in the classroom (Lin & Magnuson, 2018; Whitebook et al., 2012). As a result, based on the findings of previous studies and current research, it may be concluded that the education level of teachers is related to their having sufficient professional equipment in terms of early literacy, and teachers with higher education diplomas should be supported.

The current study indicates that the total knowledge scores were significantly different between preschool teachers who worked at state schools versus those at private schools. In other words, the knowledge level of preschool teachers working in private schools is significantly lower than those working in public schools. These results could be explained with the differences in previous education backgrounds of preschool teachers. According to the current research data, it can be said that the past education experiences of the teachers may be the reason for such a difference, since most of the teachers working in private schools have associate degrees and teachers working in public schools have mostly bachelor's degrees. Also, this study's findings can be interpreted as follows: pre-school teachers in public schools are determined by a specific assignment system, and in order to do so, they must pass the field knowledge exams successfully, so their content knowledge dominance can be higher than that of teachers in private schools. Studying teachers' early literacy skills in Turkey reveals that there is no study supporting this finding.

The result of the study indicates that whether or not preschool teachers take early literacy courses during university education leads to a significant difference in teachers' knowledge level. Therefore, it was found that preschool teachers who stated that they took a course on early literacy at the university scored significantly higher than those who did not. In addition to this finding, one of the conclusions that is both concerning and worth noting is that a big proportion of the preschool teachers in this study reported that they did not attend any early literacy courses at university. This may imply that informing teachers about the concept of early literacy in pre-service education has a critical importance in their professional lives. Teachers who have not met the subject of early literacy or been exposed to course content relating to the subject in their educational careers before entering the profession may struggle to compensate for this gap in their professional lives. The finding for the importance of taking any course relating with early literacy in university on preschool teachers' competency from the current study exactly match the findings in some studies (Ergül et al., 2014; Lin & Magnuson, 2018; Weadman et al., 2021) in that the early literacy instruction they received during their university education failed to meet the needs of preschool teachers. Examining preschool education programs in universities in Australia within the framework of early literacy, Weadman et al. (2021) found that curricula in universities differ greatly from one another and that teachers do not have a systematic structure throughout the country to prepare them for the concept of early literacy. The results obtained in this present study support the research arguing that the establishment of early literacy skills of preschool teachers at university significantly increases the conceptual understanding and equipment of them to support early literacy skills of children in this class when the teacher has a classroom of his/her own (Vesay & Gischlar, 2013; Weadman et al., 2021). Overall, early

literacy skills courses are not common in preschool undergraduate programs or child development associate degree programs, and the teachers who take these courses possess significantly greater knowledge than those who do not. Therefore, the results of the current study parallels past and recent research which highlight the importance of early literacy courses in university on developing preschool teachers' theoretical competence before starting their career (Ergül et al., 2014; Vesay & Gischlar, 2013; Weadman et al., 2021).

In the present study, it was not found any significant difference between the variable of reading articles on early literacy and preschool teachers' early literacy knowledge level. One of the assumptions related to the insignificant result could be that most of the preschool teachers included in the study did not take any course on early literacy at the university, and teachers may have difficulty in reaching the right resources to improve themselves in this field. The source material on early literacy that teachers choose may not be of adequate quality to expand the depth of their knowledge. Another explanation for this insignificant result is that even though preschool teachers individually read adequately, they may not receive sufficient education in this field at university or that they may not be included in adequate training programs to support this field in their professional life. An increasing body of literature highlights the need of conducting trainings to improve the qualifications of teachers who have graduated and begun their professional careers, as well as to improve the content of teacher training programs (Hall-Kenyon, Bullough, MacKay, & Marshall, 2014; Lin & Magnuson, 2018; O'Leary, Cockburn, Powell, & Diamond, 2010; Son, Kwon, Jeon, & Hong, 2013). According to the findings of the current study, it was found that half of the teachers in the five areas of early literacy had not received any training in their professional life. The amount of people who have not

received training in this particular field throughout their professional lives is alarming. When it is seen that the majority of people working as preschool teachers do not participate in a professional education on early literacy, it is not surprising that most of the teachers have a low level of knowledge as a result of the study, which is obviously an expected result. On the other hand, this result is not consistent with the findings of Vesay and Gischlar (2013). According to them, almost all preschool teachers received training on each component of early literacy. Considering that this current study and the study of Vesay and Gischlar (2013) were conducted with teachers with different demographic characteristics in different countries, it can be concluded that each country has its own education system and therefore such an inconsistent result can be obtained.

Furthermore, in this present study, the results showed significant differences between taking training regarding phonological awareness in professional life and preschool teachers' knowledge level. In other words, it was found that preschool teachers learning individually about phonological awareness performed better than preschool teachers joining seminars and courses. It is an expected result when the literature is examined that there is a significant difference in the early literacy knowledge levels of the preschool teachers who received training on phonological awareness (Spencer et al., 2008; Weadmen et al., 2021). Consistent with the findings of the current study, recent research stated that the vast majority of preschool teachers do not have an educational background in phonological awareness and do not have sufficient knowledge of this skill (Fettah-Metinol, 2021). Meanwhile, it is interesting to note that preschool teachers who do individual learning score higher in the knowledge test than those who are professionally trained. One of the possible reasons for that could be the quality of courses and seminars that teachers attend.

There are many factors to be taken into consideration when developing quality professional education for preschool teachers, including a holistic approach, a well-planned program, mastery of the content of the country's education system, and mastery of theoretical infrastructure. (Melnyk, Maksymchuk, Gurevych, Kalenskyi, Dovbnya, Groshovenko, & Filonenko, 2021). Surprisingly, there were no significant differences in other areas of early literacy and preschool teachers' early literacy knowledge level in the current study. In this sense, a similar statement can be made that the quality and the quantity of professional training regarding early literacy may have an effect on the results. The other assumption related with the inconsistent result could be that preschool teachers who report receiving early literacy training and scoring similar to those who have never been educated may have not internalized the training sufficiently. According to research conducted in Turkey, the majority of teachers have a negative attitude about in-service training (Karasolak, Tanrıseven, & Konokman, 2012). Therefore, it may be difficult for teachers to internalize what they have learned and apply it in their professional lives if they do not have the desire that these training will be beneficial no matter how much training they receive, which supports the result obtained from this current study.

Additionally, the current results showed that there was no significant difference between preschool teachers' early literacy knowledge level based on their professional experience. One possible explanation for the lack of a substantial difference in knowledge level between young and middle-aged teachers is that young teachers represent the majority of the teachers in the study. On the other hand, in the previous and present literature, the relationship between professional experience and teachers' theoretical knowledge levels has produced contradictory results. Consistent with the findings of the current study, Joshi and Wijekumar (2019), which examined

teachers' early literacy competencies, stated that teachers' professional experiences did not lead to a significant difference. Also, according to Stark et al., (2016), which conducted on early literacy skills of teachers in Australia, although they expected that preschool teachers' knowledge level would increase with the increase in their professional experience, they found the opposite. A possible explanation for the insignificant finding on professional experience and theoretical competencies might be that the importance of early literacy skills has recently increased and become popular (Cunningham et al., 2004). In other words, it is assumed that more experienced teachers' professional training in their educational backgrounds or professional jobs do not involve early literacy, and hence there may not be substantial difference in their knowledge level. In addition, Rivkin et al. (2005) concluded that teacher competency grew in the first few years, but this rise was not as significant in the subsequent years. In addition to the consistency of the results gained from this study with prior studies, it is a concerning finding that teachers' proficiency does not increase with experience. As a result, as previously indicated, well-planned in-service training may be required not only for new instructors but also for experienced teachers.

The result of the study indicates that there was no significant difference in preschool teachers' early literacy knowledge level in terms of feeling sufficient regarding early literacy skills. In other words, while half of the teachers participating in the study found themselves competent in this field, there was no significant difference between the teachers who did not find themselves competent in this field, according to their level of knowledge. This current result is consistent with the literature that although teachers evaluate themselves as having high proficiency, they have a lower level of knowledge than they stated (Carson & Bayetto, 2018;

Cunningham et al., 2009). It could be possible that teachers overstate their self-evaluations and are unable to evaluate themselves objectively. According to Carson and Bayetto (2018), who examined preschool teachers' proficiency in phonological awareness skills, there is a discrepancy between self-evaluation reports in which teachers estimate their own knowledge level and real knowledge level reports. This current finding and past findings may be concerning for improving preschool teachers' knowledge level because if teachers perceive they are competent in this field despite their lack of competence, further effort may be required to raise teachers' knowledge level. There is a possibility that the results are such because there is not enough observation and feedback provided to the teachers in the classroom. As a result, teachers may not think they need additional support because they see themselves as competent in a certain field and do not make an effort to improve themselves (Cunningham et al., 2009). In this situation, those who assume they are knowledgeable may not feel the need to participate in training in this field, resulting in low levels of knowledge.

The result of the study indicates that there was no significant difference in the socioeconomic status (SES) of the schools where preschool teachers work between their knowledge levels on early literacy. Conversely, Ergül et al. (2014) indicated that preschool teachers working at high SES and low SES schools have higher knowledge than those working at medium SES. According to Ergül et al. (2014), teachers in lower SES schools may be mainly newly graduated teachers, therefore their expertise may be more current. Moreover, although teachers in middle school have extensive professional experience, they may lack the desired depth of knowledge due to a lack of in-service training (Dickinson, 2002). Overall, the insignificant result of the current study might be explained by the fact that the

socioeconomic status selection made by the teachers in the current study. Therefore, such an insignificant result may have been obtained because teachers working in the same school may perceive the socio-economic situation of the environment where the institution they work in differently.

5.1.2 The comparison of belief scores by demographics of preschool teachers

Is there a statistically significant difference in the beliefs of preschool teachers about early literacy skills regarding the demographic variables?

In the present study, it was found that the preschool teachers were generally positive about both the total scale and subscales of early literacy beliefs. In other words, the majority of the teachers who took part in the study believed in the importance of early literacy skills, stating that the role of both preschool teachers and preschool education is critical for early literacy development, and they have a positive belief that early literacy skills taught in preschool will support children's future literacy skills. This current finding is consistent with the study of Sandvik et al. (2014) which examined the beliefs and practices of Norwegian preschool teachers on early literacy. They indicated that teachers who took part in the survey showed higher-than-average positive attitudes toward the value of early literacy in the preschool context.

The result of the study indicates that preschool teachers working in private schools have more positive belief in the role of preschool teacher on early literacy. As consistent with the current study, Sezgin et al. (2018) found that the belief scores of preschool teachers working in private schools were significantly higher than those working in public kindergartens. Among the possible explanations for why preschool teachers in private schools have a more positive mentality is that private schools may

provide more in-service training and seminars for teachers, and private school parents may have high expectations for teachers. Therefore, it can be explained that although the knowledge levels of the preschool teachers working in private schools were found lower, they had more positive perspective because the training they receive may affect their awareness positively rather than increasing their proficiency in the field of early literacy.

The result of the study indicates that there was no significant difference in preschool teachers' early literacy beliefs in terms of education status. In other words, all teachers, regardless of whether they hold an associate, bachelor's, or master degree, share very similar positive beliefs. Previous research concluded a similar result with the current study that there is no significant correlation between education status and preschool teachers' perspectives on early literacy (Smith & Shepard, 1988). This current finding can be very promising for future research because, while teachers' knowledge levels vary depending on their educational status, they have similar views on the importance of early literacy for the preschool period, which can be considered a good starting point for increasing teachers' knowledge levels. Also, although teachers' educational backgrounds vary, in-service training, professional learning outside of school, or individual learning may have contributed to their positive beliefs about early literacy. Despite this, evaluating the literature reveals research with varying results. Burgess et al. (2001) and McMullen and Alat (2002) indicated that teachers with higher degrees of education believe in the value of early literacy in preschool more strongly. It can be assumed that because higher education levels provide more comprehensive knowledge, more informed teachers may inevitably understand the value of early literacy and have a more positive belief. Overall, multiple inferences can be drawn based on the results. On the other hand, as

Sandvik et al. (2014) emphasized that this insignificant result can be explained with the fact that preschool teachers have a positive perspective regardless of education level due to the recent emphasis on early literacy.

According to the variable of taking any early literacy course at university and preschool teachers' early literacy beliefs, no significant difference was found in the current study. As consistent with the current study, according to Caba (2022) who focused on preschool teachers' opinions on early literacy skills, there is no statistically significant difference between teachers who got early literacy education and those who did not. On the other hand, Sezgin et al. (2018) stated that the belief scores of teachers who had never received any training on early literacy were lower than those who did. Therefore, it may be the quality and scope of the professional training that teachers have received in this area, as well as differences in how they are utilized in practice, that account for the appearance of diverse outcomes that support and contradict the findings of the current study.

The result of the study indicates that there was no significant difference found in relation with preschool teachers' professional experience and their early literacy beliefs. This result is inconsistent with the study of Bay and Alisinanoğlu (2008) and the study of Hindman and Wasik (2008). However, the number of participants was small and the schools where various training programs are implemented were selected in the study of Hindman and Wasik (2008). Also, Bay and Alisinanoğlu (2008) found a significant difference in preschool teachers' beliefs only between 6-10 years of experience and 11-20 years of experience. Therefore, compared to the previous study, the high number of new graduates and the low number of experienced teachers in the current study might be the reason for this insignificant result.

The result of the current study indicates that there was a significant difference in relation with working age groups and their early literacy beliefs. The findings showed that preschool teachers in the 5-year-old and 6-year-old groups believe in the impact of early literacy on children's future literacy success more than preschool teachers in the 4-year-old group. The current study's findings are believed to be highly significant for future studies and implications in related fields, and they should be discussed in terms of both the literature and the Turkish education system. According to MEB (2013), in preschool education, children are not taught to read and write; rather, they are provided with the pre-skills necessary to quickly learn to read and write in primary school. Also, in an examination of the preschool education curriculum provided by the ministry of national education, it is observed that the targets set for children between 60 and 72 months old differ from those set for younger children. Among children aged 5-6, the gains in early literacy skills, particularly phonological awareness, are more evident (MEB, 2013). Therefore, preschool teachers in the 5 and 6 age groups may believe that children should acquire the necessary early literacy skills before beginning first grade more than preschool teachers in the 4-age group because younger children have more time for primary school, while older children have less time to begin primary school. This could be because of their way of thinking. On the other hand, Sezgin et al. (2018) did not find any significant difference among working age groups and preschool teachers' beliefs. According to them, teachers should not wait until the last months of preschool in order to support children's early literacy skills, emphasizing that the most critical years for early literacy acquisition are zero to five years old. It is important to stress that preschool teachers should focus on this issue at every age group, so children do not have literacy problems when they start formal education (Sezgin et al, 2018).

Ultimately, the findings of this current study suggest that teachers of 5 and 6 age groups can be more aware because the preschool education curriculum emphasizes early literacy skills for children who are mostly older. In light of the results of this study, teachers in the younger age group should be trained in how to support early literacy skills during the preschool years.

According to the current study, there was a significant difference in taking training regarding listening comprehension between preschool teachers' early literacy beliefs. The results showed that preschool teachers who take pre-service training, in-service training and individual learning have significantly higher belief scores than preschool teachers who take professional development (courses/seminars). As Caba (2022) emphasized that preschool teachers may not benefit from their professional trainings in this area as efficiently as they should in the current study. Therefore, based on such findings, it seems reasonable to conclude that teachers' professional development courses and seminars need to be addressed in terms of quality, content, frequency, and methodology. Lin and Magnuson (2018) believe that well-planned and methodically conducted early literacy programs can raise preschool teachers' awareness and improve their classroom performance regardless of their educational level. Professional training that is not designed in accordance with the demands of teachers, on the other hand, may not have a favorable influence on teachers, and as a result of this current study, other methods of getting knowledge may be prioritized over professional trainings.

The result of the study indicates that there was no significant difference in the socioeconomic status (SES) of the schools where preschool teachers work between their early literacy beliefs. This result is inconsistent with the study of Sezgin et al. (2018). According to their findings, preschool teachers working in low SES schools

had lower beliefs about the role of preschool teacher and the role of preschool on early literacy skills than those working in middle and high SES schools. As it was mentioned before, the possible reason for the insignificant result in the current study may be that preschool teachers have different perceptions of the socio-economic situation of the region where the schools they work in the demographic form.

Additionally, the result of the current study indicates that there was a significant difference found in being satisfied as a preschool teacher between preschool teachers' early literacy beliefs. The results showed that preschool teachers who were satisfied with their profession outperformed those who were dissatisfied or uncertain on this subject on both the total belief score and the subscales of the role of preschool and the future achievement of early literacy. This result is consistent with Erbaş (2021) and Pakarinen et al. (2010). Also, Bilgin (1996) underlines the significance of teachers having a positive attitude toward their career in order to effectively perform their professional responsibilities. When teachers are happy in their professions, it reflects well on their performance and may promote a more child-centered approach to children in the classroom (Cumming, 2017; Hur, Jeon, & Buettner, 2015) while professional burnout in teachers can have a negative impact on the development of the children under their care in the classroom (Pakarinen et al., 2010). Therefore, preschool teachers' job satisfaction is regarded to be an essential factor in their ideas about promoting children's early literacy development in the classroom. Teachers' satisfaction with their profession, as well as the factors that negatively affect them, can be examined to reduce the teachers' stress levels and make them more satisfied with the profession (Erdiller & Doğan, 2015).

Finally, the present study found a significant difference in feeling sufficient about early literacy skills between preschool teachers' early literacy beliefs. The

current results showed that preschool teachers who believe they are not competent in the field of early literacy score lower on the role of preschool subscale than those who are not sure that they are competent. As expected, the results obtained are in agreement with the literature (Sezgin et al., 2018). A possible explanation for this result is that when teachers feel competent in a certain area, they may also hold positive views about it (Hindman & Wasik, 2008). When teachers do not see themselves knowledgeable about what early literacy skills are, how they should give children these skills, and how these skills can affect children's literacy success in primary education, teachers' perspectives on the effect of preschool, the role of preschool teacher, and early literacy development on academic achievement in early literacy skills are likely to be lower.

5.1.3 The relationship between preschool teachers' knowledge level and their beliefs related early literacy

Does the early literacy knowledge level of preschool teachers predict the beliefs of preschool teachers about early literacy skills when the demographic variables are controlled?

This present study revealed that early literacy knowledge level of preschool teachers was significantly related with their early literacy beliefs. The bivariate correlation analyses demonstrated that there was a weak but positive correlation between early literacy knowledge and early literacy beliefs of preschool teachers. In addition to this, it was found that preschool teachers' early literacy knowledge level is indicative of their early literacy beliefs. This implies that preschool teachers who had higher early literacy knowledge level had more positive early literacy beliefs. Therefore, controlling the demographic variables (age, education status, institution of

employment, professional experience, working age group, taking early literacy courses in university, feeling sufficient, being satisfied), it suggests that early literacy knowledge of preschool teachers predict early literacy beliefs of them.

As a result, in view of the significant results obtained from this current study, it can be interpreted that preschool teachers ignore the importance of developing early literacy skills during the preschool period and demonstrate negative attitudes toward them due to their lack of knowledge regarding early literacy skills. As well, preschool teachers who are sufficiently and comprehensively knowledgeable about early literacy skills are more likely to appreciate the importance of these skills during the preschool years, believe in the role of the preschool teacher, and understand that the literacy process will be much easier once children acquire these skills.

According to previous literature, some studies, albeit limited, support the results obtained in this study, which argue that teachers' knowledge about early literacy plays a significant role in their perspectives on early literacy beliefs (Cunningham et al., 2009; Hindman & Wasik, 2008; Pianta et al., 2014). According to Hindman and Wasik (2008), a significant relationship was found between preschool teachers' early literacy beliefs and teachers' knowledge levels of vocabulary and print awareness, which are some of the components of early literacy skills. Recent research examined the views of pre-service teachers on early literacy using qualitative research and both the lack of knowledge about early literacy in a certain majority of teacher candidates and negative beliefs about the importance of early literacy in the preschool period were found in a certain part of the teacher candidates (Altun & Tantekin-Erden, 2016). Nevertheless, no relational analysis was conducted between the participants' knowledge level and their beliefs in that study. Moreover, Sezgin et al. (2018) suggest that the knowledge level of the instructors

could influence their opinions about this area in the study where they found that preschool teachers who stated that they received early literacy education believed in the value of early literacy more than those who did not receive education.

5.2 Conclusion

To summarize, this current study demonstrates preschool teachers' early literacy knowledge level, early literacy beliefs and the relationship between preschool teachers' early literacy knowledge level and early literacy beliefs in Turkey.

Regarding the first question of the present study, preschool teachers have very low level of early literacy knowledge in line with previous studies (Crim et al., 2008; Ergül et al., 2014; Laçın & Güldenoğlu, 2022; Lin & Magnuson, 2018; Vesay & Gischlar, 2013; Weadman, Serry, & Snow, 2021). Education status, institution of employment, taking early literacy courses in university and taking training regarding phonological awareness were found statistically significant variables in comparing preschool teachers' knowledge level. However, age, professional experience, feeling sufficient about early literacy skills, and socio-economic status of the schools were not found as statistically significant variables in the present study.

Regarding the second question of the present study, preschool teachers, on above-average, believe children develop early literacy skills during the preschool years, as these skills are important for their future education. Institution of employment, working age groups, taking training regarding listening comprehension, being satisfied as a preschool teacher, feeling sufficient about early literacy skills were found as statistically significant variables in comparing preschool teachers' early literacy beliefs. However, education status, taking any early literacy course in

university, and professional experience were not found as statistically significant variables in the present study.

Regarding the third question of the present study, statistically significant positive relationship was found between early literacy knowledge and early literacy beliefs. According to the results, early literacy knowledge level of preschool teachers predicts early literacy beliefs of preschool teachers when the demographic variables of age, education status, institution of employment, professional experience, working age group, taking early literacy course in university, being satisfied as a preschool teacher, and feeling sufficient about early literacy skills were controlled. Briefly, it was found that preschool teachers who are more knowledgeable about early literacy skills are more likely to establish a positive attitude toward fostering early literacy skills in the classroom. Overall, it was concluded that since preschool teachers lack sufficient knowledge about early literacy skills, it is found that teachers' developing positive attitudes towards early literacy skills and creating a classroom environment that supports students' early literacy skills with this attitude are related to increasing their knowledge level.

Finally, sociocultural theory by Vygotsky emphasizes that children should be supported by rich literacy practices by a more knowledgeable peer or adult than themselves in the social construction of literacy in the teaching process. Accordingly, preschool teachers should have sufficient knowledge to measure children's current developmental level and help them to reach a higher level of development regarding early literacy. However, the early literacy knowledge level of preschool teachers was found low in the current study. Therefore, it can be concluded that strengthening the knowledge of preschool teachers about early literacy is critical in order to properly support children in the classroom environment. Also, the current study found that

preschool teachers' early literacy knowledge predicts their early literacy beliefs which supported "the process-product approach" by Clark and Peterson (1986). On the other hand, the results of the current study suggested that there may be other factors that affect teachers' beliefs apart from the level of knowledge. Thus, the presence of different variables that influence teachers' beliefs, such as the interactions they have with students, may benefit from more research.

5.3 Limitations of the study and recommendations for the future research

Firstly, a convenient sampling method was used for gathering the data in the current study and the sample of the study consisted of preschool teachers working in İstanbul. Therefore, the findings cannot be generalized to all preschool teachers working in Turkey. Future studies will need more representative samples, so preschool teachers from different regions of Turkey can be included. In current study, a statistically significant difference was not found in socio-economic status regarding both total knowledge and early literacy beliefs. Therefore, researchers could focus on preschool teachers who work in schools having different socioeconomic status in the future studies. Moreover, this study solely collected data from preschool teachers to assess their early literacy knowledge and beliefs. This study did not assess preschool teacher candidates' knowledge or beliefs. The current study might be broadened in future studies by testing the knowledge levels and beliefs of preschool teacher candidates and comparing the two groups. Also, the number of preschool teachers who had professional experience between 1 and 5 years were quite high in the current study and this is regarded to be essential for future research, especially those considering focusing on newly graduated or less experienced teachers. In light of the increasing popularity and importance of early

literacy in recent years, further research is recommended to examine how early literacy knowledge is and how early literacy beliefs are held by teachers who have just graduated from education faculties or are beginning their careers.

Data about preschool teachers' total knowledge level are limited to the characteristics measured by The Early Literacy Knowledge Test (Laçin, 2022). This scale, which is Turkey's only multiple-choice knowledge test for measuring preschool teachers' knowledge levels on early literacy, may be implemented in more studies, contributing to the few studies on preschool teachers' knowledge levels on early literacy in the literature by comparing the results acquired from this study. In addition, this test in the research was designed to measure theoretical knowledge, so it is limited to evaluating teachers' in-class practice skills. Because there is a strong association between teachers' classroom practices and students' acquisition of necessary abilities, future research may evaluate whether or not this knowledge is reflected in classroom practice, in addition to evaluating teachers' theoretical knowledge.

Data about preschool teachers' early literacy beliefs are limited to the characteristics measured by Preschool Teachers' Beliefs on Early Literacy Scale (Sezgin et al., 2018). Information associated with the teachers' knowledge levels and beliefs were obtained only by using measurement tools based on their own responses. As part of future research, different techniques may be used along with the scale, such as observation and interview. However, there is no study comparing the knowledge levels and beliefs of teachers at different grade levels or preschool teachers in the subject of early literacy in the past literature, both in Turkey and in international sources. Therefore, this study guides researchers who want to investigate the profiles of preschool teachers on early literacy and fills a significant

gap in the literature. On the other hand, the low percentage of preschool teachers' knowledge level predicting belief indicates that there may be other factors affecting preschool teachers' early literacy beliefs in the current study. Accordingly, it is recommended to conduct research on different variables that may affect preschool teachers' perspectives on the importance of early literacy skills. Beside all of these, because it was beyond the scope of this study, the second portion of the scale that measures preschool teachers' beliefs about early literacy, teachers' beliefs about their classroom practices linked to early literacy was not employed. By incorporating the second part of the scale into future studies, a much more comprehensive study of the early literacy profile of preschool teachers can be provided, and thus the detailed data obtained for preschool teachers in Turkey can contribute to the further progress of researchers in this field, expanding the literature, and creating supportive foundations for intervention programs based on the findings in this area.

Moreover, this current study was quantitative research and analyzed a large sample with selected scales. Based on the findings of this study, it is suggested that after collecting data from large samples, future research can produce smaller samples from the large samples and gather additional information through different methodologies. By examining preschool teachers' knowledge levels and beliefs using a variety of scales, individual interviews and classroom observations can be conducted, and in-depth analysis can be done by forming a smaller group of those teachers who have different levels of knowledge and beliefs regarding early literacy. Thus, it can be important future research for the literature by examining the relationship or effect of teachers' knowledge levels and beliefs with their practices in the classroom environment.

Finally, it is recommended to create new scales that can analyze preschool teachers' knowledge levels by considering the scope of the components of early literacy skills. It may be useful for future research to develop a more comprehensive scale that focuses on measuring teachers' knowledge about early literacy skills, along with what they know about how to teach these skills to students in the classroom environment.

5.4 Practical implications for the field of education

This study may provide several practical implications for lecturers working in the preschool teaching department of universities, Ministry of National Education employees dealing with teacher training, and administrators and education coordinators working in private schools.

Within the scope of this study, it was concluded that preschool teachers have a low level of knowledge in early literacy. These results show that importance should be given to increase the theoretical knowledge of preschool teachers about early literacy for those who work both in state schools and private schools. The Ministry of National Education holds seminars at the start of each school year for preschool teachers who work in public schools. These seminars may be utilized to help teachers improve their theoretical understanding. Furthermore, Employees from the Ministry of Education should design sustainable sessions of teacher training in the five subsections of early literacy. Also, the Ministry of Education should establish cooperation with universities and create quality programs.

In light of the results of the present study, preschool teachers working in private school have less theoretical competence than those working in state school. Also, the findings of the current study show that preschool teachers having associate

degrees have less early literacy knowledge level than those having bachelor's degree. Since it is seen in the demographic distribution of the study that most of the teachers working in private schools are associate degree graduates, it is recommended that all these results are obtained, the qualifications of teachers working in private schools regarding early literacy skills should be reviewed immediately and the necessary educational support should be provided by the school administration. As such, it is highly recommended that teachers' capabilities in this field can be improved by distributing in-service trainings for teachers working in private schools equitably throughout the year. Additional intervention programs may be organized by the support of private school administrators in order for teachers working in private schools to have sufficient knowledge and awareness in this field. However, while preparing intervention programs, one of the objectives of these programs should be to ensure that teachers are informed about in-class practices as well as in-service training to increase their theoretical knowledge. In addition, it is suggested to evaluate the effectiveness of early literacy intervention programs or in-service programs applied to preschool teachers with both in-class observations and theoretical knowledge measurements at regular intervals. On the other hand, examining international research before developing successful intervention programs for preschool teachers can be beneficial for designing such training programs. For instance, by implementing a one semester intervention program for preschool teachers on early literacy skills, Powel, Diamond, Burchinal and Koehler (2010) aimed to assess the influence of this program on children. As a result of the training received by the teachers, an improvement was found in the early literacy skills of the students in the classroom (Powel et al., 2010). Moreover, Kraft, Blazar and Hogan (2017) analyzed sixty studies on teacher training programs and found successful

programs on both instruction and child achievement. In addition to collective programs aimed at increasing the competence of teachers, evaluations of individual teacher coaching were also presented (Kraft et al., 2017). Ultimately, in order to create effective intervention programs for the strengthening of early literacy skills for preschool teachers, different strategies can be applied by examining the programs verified in the literature.

Considering the results of the research, it is seen that not only associate degree preschool teachers but also bachelor's degree preschool teachers have weaknesses in the field of early literacy. Based on this concerning finding, it is strongly recommended that the curriculum of the preschool teaching department and child development department should be reviewed by university professors in terms of early literacy. Furthermore, when the demographic results of the research are examined, it is seen that the number of teachers who stated that they did not take any course in the university on early literacy is quite high, and for this reason, it is strongly suggested to closely examine the contents of the compulsory and elective courses in the preschool education programs at the university. In light of the results from the previous and present study, it can be beneficial to add compulsory or elective courses on early literacy skills by examining the curricula of the relevant programs of the university aiming to train preschool teachers, to increase the knowledge and beliefs of preschool teachers in this area. Therefore, it is believed that improved teaching programs that contain early literacy skills will directly benefit preschool teacher candidates' topic understanding, enable them to begin their professional lives more prepared, and indirectly support children's early literacy development.

APPENDIX A

ETHICS COMMITTEE APPROVAL

Evrak Tarih ve Sayısı: 24.10.2022-94099

T.C.
BOĞAZİÇİ ÜNİVERSİTESİ
SOSYAL VE BEŞERİ BİLİMLER YÜKSEK LİSANS VE DOKTORA TEZLERİ ETİK İNCELEME
KOMİSYONU
TOPLANTI KARAR TUTANAĞI

Toplantı Sayısı : 35
Toplantı Tarihi : 19.10.2022
Toplantı Saati : 10:00
Toplantı Yeri : Zoom Sanal Toplantı
Bulunanlar : Prof. Dr. Feyza Çorapçı, Doç. Dr. Arhan S. Ertan, Doç. Dr. Senem Yıldız, Dr. Öğr. Üyesi
Yasemin Sohtorik İlkmen, Dr. Öğr. Üyesi Ayşegül Metindoğan, Dr. Öğr. Üyesi Harun
Muratoğulları
Bulunmayanlar :

Şeymanur Sarrafoğlu Çalışkan
Temel Eğitim

Sayın Araştırmacı,

"Okulöncesi Öğretmenlerinin Erken Okuryazarlık ile İlgili Bilgi ve İnançlarının İncelenmesi" başlıklı projeniz ile ilgili olarak yaptığımız SBB-EAK 2022/73 sayılı başvuru komisyonumuz tarafından 19 Ekim 2022 tarihli toplantıda incelenmiş ve uygun bulunmuştur.

Bu karar üyelerin toplantıya çevrimiçi olarak katılımı ve oy birliği ile alınmıştır. Onay mektubu üye ve raportör olarak Yasemin Sohtorik İlkmen tarafından toplantıya katılan bütün üyeler adına e-imzalanmıştır.

Saygılarımızla, bilgilerinizi rica ederiz.

Dr. Öğr. Üyesi Yasemin
SOHTORİK İLKMEN
ÜYE

e-imzalıdır
Dr. Öğr. Üyesi Yasemin Sohtorik
İlkmen
Öğretim Üyesi
Raportör

SOBETİK 35 19.10.2022

Bu belge, güvenli elektronik imza ile imzalanmıştır.

APPENDIX B

RESEARCH PERMISSION FORM FROM T. R. ISTANBUL GOVERNORSHIP

PROVINCIAL DIRECTORATE OF NATIONAL EDUCATION



T.C.
İSTANBUL VALİLİĞİ
İl Millî Eğitim Müdürlüğü

Sayı : E-59090411-20-68423065
Konu : Anket ve Araştırma İzni (Şeymanur
SARRAFOĞLU ÇALIŞKAN)

16/01/2023

VALİLİK MAKAMINA

İlgi : a) Yenilik ve Eğitim Teknolojileri Genel Müdürlüğünün 21.01.2020 tarihli ve 2020/2 sayılı genelgesi.
b) Boğaziçi Üniversitesinin 06.12.2022 tarihli ve E-60914867-044-100720 sayılı yazısı.
c) Müdürlüğümüz Araştırma ve Anket Komisyonunun 19.12.2022 tarihli tutanağı.

Araştırma Konusu : Okul Öncesi Öğretmenlerinin Erken Okuryazarlık ile İlgili Bilgi ve
İnançlarının İncelenmesi
Araştırma Türü : Anket
Araştırma Yeri : İstanbul
Araştırma Yapılacak Kişiler : Okul Öncesi Öğretmenleri
Araştırmanın Süresi : 2022 - 2023 Eğitim - Öğretim Yılı

Yukarıda bilgileri verilen araştırmanın; 6698 sayılı Kişisel Verilerin Korunması Kanununa aykırı veri istenmemesi, öğrenci velilerinden açık rıza onayı alınması, Covid-19 tedbirlerinin araştırmacı ve ilgili kurum idarelerince alınması, bilimsel amaç dışında kullanılmaması, bir örneği Müdürlüğümüzde muhafaza edilen mühürlü ve imzalı veri toplama araçlarının kurumlarınıza araştırmacı tarafından ulaştırılarak uygulanması, katılımcıların gönüllülük esasına göre seçilmesi, araştırma sonuç raporunun kamuoyuyla paylaşılması ve araştırma bittikten sonra 2 (iki) hafta içerisinde Müdürlüğümüze gönderilmesi, okul idarelerinin denetim, gözetim ve sorumluluğunda, eğitim ve öğretimi aksatmayacak şekilde, ilgi (a) genelge esasları dâhilinde uygulanması kaydıyla Müdürlüğümüzce uygun görülmektedir.

Makamınızca da uygun görüldüğü takdirde olurlarınıza arz ederim.

Levent YAZICI
İl Millî Eğitim Müdürü

OLUR
Dr. Hasan Hüseyin CAN
Vali a.
Vali Yardımcısı

Ek:
1- İlgi (b) Yazı ve Ekleri (4 Sayfa)
2- İlgi (c) Tutanak (1 Sayfa)

Bu belge güvenli elektronik imza ile imzalanmıştır.

Adres : Binbirdirek Mah. İmran Öktem Cad. No: 1 Sultanahmet Fatih İstanbul Belge Doğrulama : <https://www.turkiye.gov.tr/meb-ebys>
Telefon : 0212 384 36 30 Bilgi İçin : Aydın BALTA
E-posta : stratejigelistirme34@meb.gov.tr Unvanı : VHKİ
Kep Adresi : meb@hs01.kep.tr İnternet Adresi : <http://istanbul.meb.gov.tr/>

Bu evrak güvenli elektronik imza ile imzalanmıştır. <https://evraksorgu.meb.gov.tr> adresinden 4b10-fe0b-3918-a72e-17b1 kodu ile teyit edilebilir.

APPENDIX C

INFORMED CONSENT FORM (ENGLISH)

Institution supporting the research: Boğaziçi University

Name of the Study: Examination of Preschool Teachers' Knowledge and Beliefs about Early Literacy

Project Manager: Dr. Faculty Member Nalan Babür

E mail address:

Phone:

Name of the researcher: Şeymanur Sarrafoglu Çalışkan

E-mail address:

Phone:

Dear Teacher,

I am a thesis student at Boğaziçi University, Institute of Social Sciences, Early Childhood Education Master's Program. I am conducting scientific research on teachers' views on early literacy. The aim of this study is to examine the views of pre-school teachers working in Istanbul in the 2022-2023 academic year on the concept of early literacy.

I would like to inform you about my research. If you want to participate in the research after reading the information below, please sign this form.

This research will help us better understand preschool teachers' views on early literacy and contribute to the relevant literature. If you agree to participate in the research, I request you to fill out this questionnaire on early literacy. It will take you at most 15 minutes to fill out the questionnaire.

This research is conducted for a scientific purpose and the confidentiality of participant information is essential. Participation in the research is completely optional. You have the right to withdraw from the study at any stage of the study without giving any reason.

If you would like to receive additional information about the research project, please contact Boğaziçi University, Department of Basic Educational Sciences. Please contact Faculty Member Nalan Babür. Address: Boğaziçi University, ETA-B Building 404, 34342 Bebek, Istanbul). You can consult Boğaziçi University Social and Human Sciences Master's and Doctoral Thesis Ethics Review Committee (SOBETİK) regarding your rights regarding research.

Participation in the survey will be online or face-to-face. Please indicate below which method you would prefer:

Online: ☐ Face to face: ☐

If you agree to participate in this research project, please sign this form.

In these circumstances, I agree to participate in the research in question voluntarily, without any pressure or coercion.

Signature of the Participant:

APPENDIX D

INFORMED CONSENT FORM (TURKISH)

Araştırmayı destekleyen kurum: Boğaziçi Üniversitesi
Araştırmanın adı: Okulöncesi Öğretmenlerinin Erken Okuryazarlık ile İlgili Bilgi ve İnançlarının İncelenmesi
Proje Yürütücüsü: Dr. Öğretim Üyesi Nalan Babür
E-mail adresi:
Telefonu:
Araştırmacının adı: Şeymanur Sarrafoğlu Çalışkan
E-mail adresi:
Telefonu:

Sayın Öğretmen,

Boğaziçi Üniversitesi Sosyal Bilimler Enstitüsü Erken Çocukluk Eğitimi Yüksek Lisans Programı'nda tez öğrencisiyim. Öğretmenlerin erken okuryazarlık hakkındaki görüşleri üzerine bilimsel bir araştırma yürütmekteyim. Bu çalışmanın amacı, 2022-2023 eğitim-öğretim yılında İstanbul ilinde görev yapan okul öncesi öğretmenlerinin erken okuryazarlık kavramına dair görüşlerini incelemektir.

Araştırmam hakkında sizi bilgilendirmek istiyorum. Aşağıdaki bilgileri okuduktan sonra araştırmaya katılmak isterseniz, lütfen bu formu imzalayınız.

Bu araştırma, okul öncesi öğretmenlerinin erken okuryazarlık hakkındaki görüşlerini daha iyi anlamamıza ve ilgili alan yazına katkıda bulunmamıza yardımcı olacaktır. Araştırmaya katılmayı kabul ettiğiniz takdirde, erken okuryazarlık ile ilgili bu anketi doldurmanızı rica ediyorum. Anketi doldurmak en çok 15 dakikanızı alacaktır.

Bu araştırma bilimsel bir amaçla yapılmaktadır ve katılımcı bilgilerinin gizliliği esastır. Araştırmaya katılmak tamamen isteğe bağlıdır. Çalışmanın herhangi bir aşamasında herhangi bir sebep göstermeden araştırmadan çekilme hakkına sahipsiniz.

Araştırma projesi hakkında ek bilgi almak istediğiniz takdirde lütfen Boğaziçi Üniversitesi Temel Eğitim Bilimleri Bölümü Dr. Öğretim Üyesi Nalan Babür ile temasa geçiniz. Adres: Boğaziçi Üniversitesi, ETA-B Binası 404, 34342 Bebek, İstanbul). Araştırmayla ilgili haklarınız konusunda, Boğaziçi Üniversitesi Sosyal ve Beşeri Bilimler Yüksek Lisans ve Doktora Tezleri Etik İnceleme Komisyonu'na (SOBETİK) danışabilirsiniz.

Ankete katılım çevrimiçi ya da yüz yüze olacaktır. Lütfen hangi yöntemi tercih edeceğinizi aşağıda belirtiniz:

Çevrimiçi: ☐ Yüz yüze: ☐

Eğer bu araştırma projesine katılmayı kabul ediyorsanız, lütfen bu formu imzalayın.

Bu koşullarda söz konusu araştırmaya kendi isteğimle, hiçbir baskı ve zorlama olmaksızın katılmayı kabul ediyorum.

Katılımcının İmzası:

APPENDIX E

DEMOGRAPHIC INFORMATION FORM (ENGLISH)

Dear preschool teacher, the following information will be used for scientific research. Therefore;

- 1. You do not need to write your name*
- 2. The information will not be shared with third parties depending on the privacy policy.*

Thank you for participating in the research.

Age	25 years and under () 26-30 () 31-35 () 36-40 () 41-45 () 46-50 () 51 and above ()
Gender	
Education status	Associate degree () Bachelor's degree () Master () PhD ()
University you graduated from:	Formal () Open Education ()
Department you graduated	Preschool Education () Child Development () Out of range ()
If out-of-area, explain the department name:	
Professional experience (Year)	1-5 years () 6-10 years () 11-15 years () 16-20 years () 21 years and above ()
Institution of employment	State School () Private School ()
Your current working age group	4 years () 5 years () 6 years ()
Did you take any course on early literacy during your university education?	Yes () No ()

What training did you receive on Phonological Awareness during your professional life ?	Never () Pre-service training () Inservice training Professional development () Individual learning () Mentoring()
What training did you receive about Print/Book Awareness during your professional life?	Never () Pre-service training () Inservice training Professional development () Individual learning () Mentoring()
What training did you receive regarding Listening Comprehension during your professional life?	Never () Pre-service training () Inservice training Professional development () Individual learning () Mentoring()
What training did you receive in the field of Vocabulary during your professional life?	Never () Pre-service training () Inservice training Professional development () Individual learning () Mentoring()
What training did you receive in the field of Letter knowledge during your professional life?	Never () Pre-service training () Inservice training Professional development () Individual learning () Mentoring()
Do you read magazines/books/articles on early literacy?	Yes () No ()
Do you find yourself sufficient about early literacy skills?	Yes () Not sure () No ()
Are you satisfied with being a preschool teacher?	Yes () Not sure () No ()
What is the socioeconomic situation of the neighborhood where you teach?	Low () Medium () High ()

APPENDIX F

DEMOGRAPHIC INFORMATION FORM (TURKISH)

Sayın Okulöncesi eğitim öğretmeni, aşağıdaki bilgiler bilimsel bir araştırma için kullanılacaktır. Bu nedenle;

3. *İsminizi yazmanız gerekli değildir.*
4. *Bilgiler gizlilik ilkesine bağlı olarak üçüncü kişiler ile paylaşılmayacaktır.*

Araştırmaya katıldığınız için teşekkür ederiz

Yaş	25 yaş ve altı () 26-30 () 31-35 () 36-40 () 41-45 () 46-50 () 51 ve üzeri ()
Cinsiyet	
Eğitim durumunuz	Ön lisans () Lisans () Yüksek Lisans () Doktora ()
Mezun olduğunuz üniversite:	Örgün () Açık öğretim ()
Mezun olduğunuz bölüm	Okulöncesi () Çocuk Gelişimi () Alan dışı ()
Alan dışı ise bölüm adını açıklayınız:	
Mesleki deneyiminiz (Yıl)	1-5 yıl () 6-10 yıl () 11- 15 yıl () 16-20 yıl () 21 yıl ve üstü ()
Görev yaptığınız kurum	Devlet Okulu () Özel Okul ()
Şu anda görev yaptığınız sınıf düzeyi/yaş grubu	4 yaş () 5 yaş () 6 yaş ()
Üniversite eğitiminiz boyunca erken okuryazarlığa ilişkin herhangi bir ders aldınız mı?	Evet () Hayır ()

Mesleki yaşantınız boyunca Ses Bilgisel Farkındalık ile ilgili hangi eğitimi aldınız?	Hiç () Hizmet öncesi eğitim () Hizmet içi eğitim () Kurs/Seminer () Bireysel öğrenme () Mentör eşliğinde öğrenme ()
Mesleki yaşantınız boyunca Yazı/Kitap Farkındalığı ile ilgili hangi eğitimi aldınız?	Hiç () Hizmet öncesi eğitim () Hizmet içi eğitim () Kurs/Seminer () Bireysel öğrenme () Mentör eşliğinde öğrenme ()
Mesleki yaşantınız boyunca Dinlediğini Anlama Becerisi ile ilgili hangi eğitimi aldınız?	Hiç () Hizmet öncesi eğitim () Hizmet içi eğitim () Kurs/Seminer () Bireysel öğrenme () Mentör eşliğinde öğrenme ()
Mesleki yaşantınız boyunca Sözcük Bilgisi alanı ile ilgili hangi eğitimi aldınız?	Hiç () Hizmet öncesi eğitim () Hizmet içi eğitim () Kurs/Seminer () Bireysel öğrenme () Mentör eşliğinde öğrenme ()
Mesleki yaşantınız boyunca Harf Bilgisi alanı ile ilgili hangi eğitimi aldınız?	Hiç () Hizmet öncesi eğitim () Hizmet içi eğitim () Kurs/Seminer () Bireysel öğrenme () Mentör eşliğinde öğrenme ()
Erken okuryazarlığa ilişkin dergi/kitap/makale okur musunuz?	Evet () Hayır ()
Erken okuma yazma becerileri ile ilgili kendinizi yeterli buluyor musunuz?	Evet () Kararsızım () Hayır ()
Okul öncesi öğretmeni olmaktan memnun musunuz?	Evet () Kararsızım () Hayır ()
Öğretmenlik yaptığınız bölge, ilçe veya mahallenin sosyo-ekonomik durumunu nasıl değerlendiriyorsunuz?	Düşük () Orta () Yüksek ()

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