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The Effects of Early Childhood Classroom Size and Duration on Development of Children‡

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ABSTRACT

Purpose: The numbers of early childhood education programs are dramatically increasing throughout Turkey, and the regulations to ensure quality are frequently changing. A very limited number of studies have examined the quality of Turkish ECE programs on children's development. Therefore, the purpose of this study is to identify the effects of classroom size and duration on the development of children.

Research Methods: This is a relational survey study that was realized with 836 children attending 55 public early childhood programs in Denizli. These children were selected through a cluster sampling method. Data were collected through the "Ankara Developmental Screening Inventory" and "Informational questionnaire." Data were analyzed using repeated ANOVAs, factorial ANOVA (2X4) and independent t-test techniques.

Findings: This research revealed that there were statistically significant interactions between children's development and the structural quality components of classroom size and duration of education. Our findings showed that classrooms containing 20 to 24 children had higher developmental scores than other groups. Additionally, the results indicated that children enrolled in full-day programs scored higher on the language and cognitive development subscale and total ADSI.

Implications for Research and Practice: The findings revealed that the children attending full-day programs with classroom sizes averaging 20 to 24 differed significantly from the children in other groups. This suggests that full-day programs have positive effects on children's development; therefore, it is important to increase the number of full-day programs in Turkey.

‡ This study is based on the master's thesis of the first author and was presented at the 3rd International Eurasian Educational Research Congress in Mugla, 31 May–2 June, 2016.

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Introduction

Recent changes in society, including the rapid rise in the female labor force and the decrease in safe play areas within neighborhoods have resulted in an increasing need for early childhood education. In aiming to increase the enrollment rate in early childhood education to developed countries, particularly the European Community and OECD countries, Turkey has improved its rate by 40% but continues to falls behind (Ministry of National Education [MoNE], 2014). Although it is very important to take measurable steps to improve national early childhood education, this alone is not sufficient to support the learning and development of young children. Providing high quality early childhood services is essential; therefore, there is an urgent need for an increase in the number of schools as well as the quality of services these schools provide for children (Ivrendi & Isikoglu Erdogan, 2015; Zembat, 2007).

A substantial body of research stated that the quality of early childhood education programs improves the developmental levels of children attending them (Burchinal, Vandergrift, Pianta & Mashburn, 2010; Duyar, 2010; Feyman, 2006; Sylva, Siraj-Blatchford, Taggart, Sammons, Melhuish, Elliot & Totsika, 2006). Since the early 1980s, research employing a rigorous and sophisticated longitudinal methodology has shown that high quality early childhood education improves a child's overall development (Ishimine & Tayler, 2014). Specifically, Barnett (2008) stated that higher program quality is associated with larger gains in cognitive and language abilities. Several other studies indicate significant correlations between the quality of programs and children's cognitive, language, socio-emotional and psycho-motor developments, early academic skills, and school readiness levels (Burchinal et al., 2010; Pianta, Barnett, Burchinal & Thornburg, 2009). A recent study documented that classroom quality was associated with better academic performance (Rudasill, Hawley, LoCasale-Crouch & Buhs, 2017).

Similarly, a number of studies have revealed that high-quality early childhood education improved the academic success of children later in life. High quality early childhood education has especially long-term positive effects on the primary school years as it promotes children's social and academic skills (Broekhuizena, Akena, Dubasa, Mulder & Lesemanb, 2015; Mokrova, Broekhuizen & Burchinal, 2015). In the longitudinal study by Sylva et al., (2006), a sample of 2,857 three-year-olds in 141 programs in the United Kingdom were evaluated two times at the ages of three and five. The results of this study showed that high quality educational environments are significant predictors of children's cognitive/linguistic progress. In a similar study, Dearing, McCartney and Taylor (2009) examined the relationship between the quality of programs and school readiness as well as the mathematic and reading success of 1,364 low-income children in middle childhood. Their results showed that receiving a high quality education during infancy and early childhood appeared to promote achievement indirectly via early school readiness skills. Therefore, it is important to aim to improve both quality and quantity of such programs in order to achieve higher benefits for early childhood education.

The common approach to defining quality is through two highly interrelated components: structural quality and process quality (Howes, Burchinal, Pianta, Bryant, Early, Clifford & Barbarin, 2008; Ishimine & Tayler, 2014; Peisner-Feinberg & Yazejian, 2010). Structural quality refers to objective aspects of the early childhood environment that are often regulated by government, such as the classroom size (number of children in a group) and teacher–child ratio, teacher's formal education, experience and specialized training in early childhood education or related fields, and aspects of the facility that houses the programs, such as the amount of floor space per child. The second component, process quality, refers primarily to how children experience classrooms. This includes their interactions with the adults who care for them and their exposure to materials and activities that enhance learning (Howes et al., 2008; Ishimine & Tayler, 2014; Peisner-Feinberg & Yazejian, 2010).

Previous studies examining the relationship between structural quality and children's development have investigated attributes such as duration of education, teacher–child ratio, class size, and teacher qualifications. These studies have indicated that the duration of education had significant effects on a child's development and learning (Brownell, Nickel, Chateau, Martens, Taylor, Crockett, Katz, Sarkar, Burland & Gohand, 2015; Gunindi, 2011; Nowak, Nichols & Coutts, 2009; Ozguluk, 2006). However, studies comparing full-day and half-day kindergarten programs have provided varied and complex results. In a recent longitudinal study, Brownell et al. (2015) found that attending a full-day early childhood program had long-term academic benefits for children living in low-income areas. Economically disadvantaged and at-risk children in full-day kindergarten programs are often found to have higher academic achievement than those in half-day programs (Nowak et al., 2009). On the other hand, attending child care on a full-day basis has been found to have no effect on children's school readiness and motor skills (Felfe & Zierow, 2015). Similarly, Leow and Wen (2017) found that there was no relationship between duration of education and children's social development and academic skills in Head Start programs.

Regarding classroom size, previous research has also reported mixed results. Depending on the age of the children, smaller classroom size is positively correlated with child–teacher interaction (Skalická, Belsky, Stenseng & Wichstrøm, 2015) and the quality of the classroom (Isikoglu, 2007). However, Millesi and Gamoran (2006) discovered no evidence of class-size effects on student achievement in either reading or mathematics in kindergarten. In a meta-analysis, Vermeer, van IJzendoorn, Cárcamo and Harrison (2016) stated that program quality was not associated with group size. Similarly, another meta-analysis reported that class size showed nonlinear relationships with children's cognitive skills (Bowne, Magnuson, Schindler, Duncan & Yoshikawa, 2017). These research findings on class size were inconsistent. It is expected that children in a smaller class receive more teacher attention and that results in greater learning. It is obvious that there is a need for more research to support the claims about the duration of education and classroom size.

Examining the current situation in public early childhood education institutions in Turkey reveals that these programs serve mainly half-day services with an average class size of 20 children (MoNE, 2015). The Ministry of National Education (MoNE) recently published a regulation that stated "There will be 6 hours of non-stop education per day" (MoNE, 2015). Therefore, the public early childhood programs serve only half-day services in order to increase the number of children attending these schools. Recently, Canbeldek and Isikoglu Erdogan (2016) found that 81.5% of the early childhood schools in Denizli province serve half-day programs, with one session in the morning and one in the afternoon. Similarly, the MoNE regulations state that class attendance not be less than 10 and not more than 20. Otherwise, it is stated that additional branches should be opened or merged (MoNE, 2014). Based on these regulations, it is possible to conclude that the majority of the early childhood programs serve half-days and an average of 20 children per classroom.

Contrary to these current regulations in Turkey, research findings recommend that full-day programs do appear to produce long-term improvements in children's learning (Barnett, 2008; Brownell et al., 2015). While significant research has been conducted on the effects of duration and classroom size, there is little research on the current outcomes in the Turkish cultural context, and these studies are limited in terms of sample size. Thus, there is a need for study designs that allow for strong causal inferences with larger sampling. The following study addresses these gaps using a larger sample and focusing on classroom size and duration. Based on previous work related to the quality of early childhood education, the present study aims to identify the effects of classroom size and duration on the development of children. This study also aimed to shed light on the following research questions:

1. Is there a significant relationship between classroom size and the developmental levels of children?
2. Is there a significant relationship between the duration of programs and developmental levels of children?

Method

Research Design

A relational survey model was used in this study, which aimed to determine the relationship between classroom size, duration of program, and the developmental levels of children (Karasar, 2013).

Research Sample

The population of the study consisted of 8,141 children attending the public early childhood programs affiliated with the Denizli Directorate for National Education (MoNE, 2012). One thousand children attending 22 independent preschools and 38 kindergartens affiliated with primary or secondary schools were selected through a disproportionate cluster sampling method in order to represent this population. In this sampling method, each cluster in the population has an equal chance to be

selected for the sample (Karasar, 2013). After receiving legal permissions, each school was contacted by phone and informed of the purpose of the study, and an appropriate period of time was requested for data collection. As a result of this process, 55 classrooms and the 55 teachers leading these classes were included in the study.

The analysis sample consisted of 836 children (427 girls, 409 boys). The children ranged in age from 48 to 72 months and 742 of them were 5 years old. Most of the children, 681 (81.5%), were attending half-day programs. Additionally, more than 36% of the children were in classrooms consisting of 16 to 19 children. While 18.5% of children were attending classrooms of a small size (less than 15 children), 14% were in large classrooms consisting of more than 25 children.

Research Instrument and Procedure

Two instruments were used in this study. One was "Ankara Development Screening Inventory" (ADSI) developed by Savasir, Sezgin and Erol (1994). ADSI evaluates the development and skills of children aged between 0–6 years generally in line with the information obtained from their parents or teachers. The inventory had four subscales: (1) language and cognitive, (2) small motor, (3) large motor and (4) self-care with internal consistency ranging from 0.80 to 0.99 (Savasir, Sezgin & Erol, 1998). The second instrument was a questionnaire used to measure the structural quality of early childhood programs. The questionnaire had 14 open-ended questions including the age group and number of children in the classroom, the size of the classroom, the duration of education, and the socio-economic level of the neighborhood where the institution is located. These questions were filled out by the researcher through interviews with classroom teachers and principals.

After receiving legal permission, the researcher visited the schools that agreed to participate in the research. During the visits, the researcher completed the questionnaire based on initial interviews with the teachers and principals. At the same time, the teachers were provided with information about ADSI and they were asked to fill out an ADSI for each child in their classroom. Then, the completed ADSIs were gathered by the researcher on a suitable date specified by the teachers.

Validity and Reliability

The validity and reliability of two instruments used in this study were ensured before the data collection process. The first instrument, ADSI, is a well-known standard measurement tool, and its validity and reliability is established. The internal consistency for ADSI consistency ranged from 0.80 to 0.99 (Savasir, Sezgin & Erol, 1998). For the 14 open-ended questions, we asked three expert early childhood professionals to review the questions to provide evidence for the face and content validity, and 97.85% agreement was calculated from the experts' feedbacks.

Data Analysis

The data were coded, loaded, and analyzed on "SPSS 18.0" statistical package program. The study's mean scores and standard deviation values were calculated. In

order to examine the effects of classroom size and duration on children's development, we used repeated ANOVAs, factorial ANOVA (2X4), and independent t-test analyses.

Results

In order to examine the relationships among classroom size and children's developmental levels, one-way ANOVA tests were used. These results are presented in Table 1.

Table 1

The Relationship Between Classroom Size and Children's Development

	Class Size	***N***	***M***	***SD***	***F***	***p***	***Post hoc***
Language and cognitive development	10–15	155	58.3	3.11	25.86	.000	20–24 children < all other class sizes
	16–19	306	58.4	3.56			
	20–24	258	60.4	3.23			
	25 +	117	23.5	1.71			
Small motor development	10–15	155	23,3	1,92	33,03	,000	20–24 children < all other class sizes
	16–19	306	23,4	2,01			
	20–24	258	24,7	1,39			
	25 +	117	23,5	1,71			
Large motor Development	10–15	155	23.8	.396	21.26	.000	20–24 children < 16–19 and 25+
	16–19	306	23.7	.627			
	20–24	258	23.9	.213			
	25 +	117	23.6	.588			
Self-Care	10–15	155	37.4	1.55	4.96	.002	20–24 children < 16–19 and 25+
	16–19	306	37.2	1.71			
	20–24	258	37.7	1.26			
	25 +	117	37.2	2.13			
ADSI Total	10–15	155	142.9	5.41	31.84	.000	20–24 children < all other class sizes
	16–19	306	142.8	6.26			
	20–24	258	146.9	4.81			
	25 +	117	141.9	7.08			

The ANOVA results indicated that there was a statically significant relationship between all subscales and the total of ADSI and classroom size (F_{242}= 31.847; p<.001). To further understand the relationships among the four classroom size groups, follow-up tests were conducted using the Tukey method. These results showed that children in classroom size of 20–24 had higher scores on ADSI than the rest of the

children attending larger or smaller classrooms. These findings showed that the classroom size had significant effects on children's development.

To examine the relationship between duration and children's developmental levels, independent sample t-tests were conducted. These results are presented in Table 2.

Table 2

The Relationship Between Duration of Education and Children's Development

	Half day			**Full day**				
	N	***M***	***SD***	***N***	***M***	***SD***	**t**	***p***
Lang&cognitive dev.	681	58.64	3.65	155	60.04	3.227	-4.393	.000*
Small motor development	681	23.80	1.899	155	24.07	1.795	-1.592	.112
Large motor development	681	23.79	.503	155	24.07	.409	-1.299	.194
Self-Care	681	37.41	1.673	155	37.58	1.485	-1.161	.246
ADSI Total	681	143.64	6.183	155	145.54	5.746	-3.486	.001*

*p<0.001

The results revealed that there were only two statistically significant relationships between duration, language/cognitive development subscale (t_{834}= -4, 39; p <0.001), and total ADSI scores (t_{834} = -3, 48, p<0.001). There was no statistically significant relationship between the duration and other subscales of the ADSI.

A factorial ANOVA (2X4) with follow-ups using the Tukey procedure (alpha = .05) was performed to examine the effects of classroom size and duration on the children's development level. The factorial ANOVA is suitable when one wants to study the effect of two independent categorical variables on the dependent variable. Table 3 showed the means and standard deviations for the conditions of the design.

Table 3

Descriptive Statistics on Variables of Classroom Size and Duration

	Half day			**Full day**			**Total**		
	N	***M***	***SD***	***N***	***M***	***SD***	***N***	***M***	***SS***
10–15 children	144	142.74	5.371	11	145.64	5.537	155	142.94	5.417
16–19 children	212	142.15	6.253	94	144.47	6.035	306	142.86	6.269
20–24 children	208	146.75	4.841	50	147.52	4.709	258	146.90	4.816
25 and above	117	141.92	7.085	-	-	-	117	141.92	7.085

Table 4

Factorial ANOVA Results on Classroom Size and Duration of Education

Source of Variance	*Sum of Squares*	*df*	*Mean Square*	*F*	*p*
Classroom size	1842.46	3	614.15	18.29	.000**
Duration	259.33	1	259.33	7.72	.006*
Class * Duration	72.87	2	36.43	1.08	.34
Error	27828.376	829	33.57		
Total	31525.96	835			

*p<0.01 **p<0.001

The results of Table 4 revealed that classroom size (F (3, $_{833}$) = 18.29, p<0.001) and duration of education (F (1, $_{835}$) = 7.72, p<0.01) had statistically significant effects on children's development. However, together they did not produce a statistically significant relationship on children's development level F (2, $_{835}$) =1.08, p>0.05). In other words, there was not a main effect of classroom size and duration of education (See Figure 1).

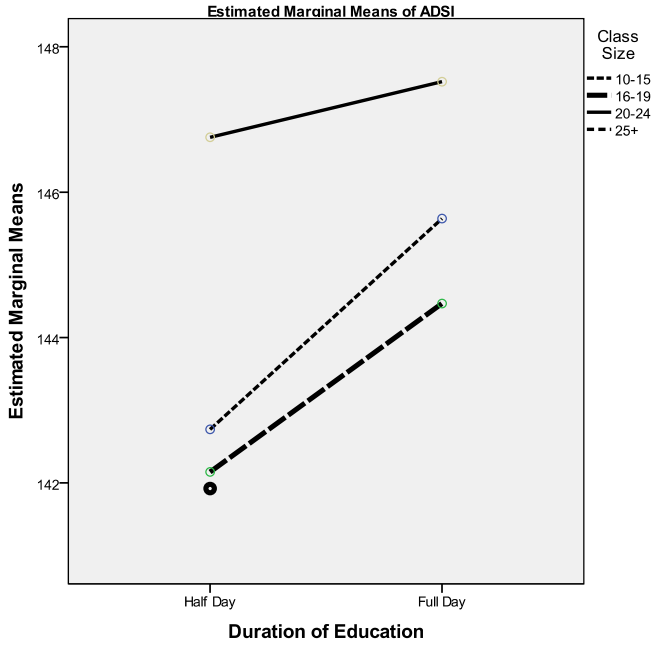

Figure 1. Interaction of Classroom Size and Duration of Education on Development Levels of Children

The effects of duration of education on classroom size are represented by three lines on the graph. On the lower line, classrooms containing 16–19 children had the lowest mean scores on ADSI either regardless of whether they were attending full- or half-day education programs. The highest line representing the classroom size of 20–24 children received the highest means regardless of whether they were attending half-day or full-day education programs.

Discussion and Conclusions

The present study examined the effects of early childhood quality on children's development. We focused on two components of structural quality: classroom size and duration of education. In line with our hypotheses, there are statistically significant interactions between children's development and the structural quality components of classroom size and duration of education. The results also showed that children attending the full-day programs with classroom sizes averaging 20 to 24 differed significantly from the children in other groups. These findings are discussed below in greater detail.

In terms of classroom size, our findings showed that classrooms containing 20 to 24 children had higher developmental scores than other groups. In other words, we found that the children in small or large classrooms had lower developmental scores than children in classrooms containing 20 to 24 children, which is a general classroom size in Turkey. Smaller classes and higher staff to child ratios are commonly expected to be better for young children, allowing more individual attention, reducing the time and effort devoted to classroom management, and reducing the number of stressful interactions. While some previous research has revealed the importance of smaller classroom size (Isikoglu, 2007; Micozkadioglu & Berument, 2011; Skalická et al., 2015) and others found no significant effects of class-size on children's learning and development (Howes et al., 2008), the present study has demonstrated a significant relationship between classroom size and developmental levels of children with the difference being in favor of large classroom size. This unexpected result can be interpreted in several ways: To begin with, it may be due to the cultural factors in our sample, including the fact that a class of 20 children is accepted as a normal classroom size. Also, the present study examined the effect of classroom size with a large data set. An experimental study in which class size has been altered for research purposes may produce more comprehensive results for the lower developmental scores in classrooms of a small size. Lastly, teacher sensitivity may be another factor that is more related than classroom size on children's development (Vermeer et al., 2016). Unfortunately, the design of the present study does not allow for the examination of the role that teacher sensitivity may play. Therefore, future research should examine the potential effects of various components of quality including teacher sensitivity.

In addition, the results of this study showed that the children attending full- day early childhood programs had higher developmental scores than the children attending half-day programs. Specifically, the present study showed that children

enrolled in full-day programs scored higher on the language and cognitive development subscale. These findings support previous research studies that found positive effects from full-day programs (Brownell et al., 2015; Clark, 2001; Nowak et al., 2009; Ozguluk, 2006; Robin, Frede & Barnett, 2006). Consequently, this finding may suggest that full-day programs have positive effects on children's development; therefore, it is important to increase the number of full-day programs in Turkey. Bearing in mind the lack of valuable resources for young children—such as play grounds, children's libraries, or museums in Turkey—the evidence from this research suggests that attending full-day programs will be beneficial for children.

Even though this research identified many important findings and implications, it has some limitations. Primarily, this study reached a limited number of children in one city, and it did not allow us to generalize findings across Turkey. Future research needs to be conducted with a bigger sample size across all seven regions of Turkey. Secondly, this study focused on the two components of structural quality of early childhood programs; however, future research could explore other components of quality.

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Erken Çocukluk Eğitiminde Sınıf Büyüklüğünün Ve Eğitim Süresinin Çocuk Gelişimi Üzerindeki Etkileri

Atıf

Canbeldek, M. & Erdogan, N. I. (2017). The effects of early childhood classroom size and duration on development of children. *Eurasian Journal of Educational Research*, 68, 257-271, http://dx.doi.org/10.14689/ejer.2017.68.14

Özet

Problem Durumu: Çocuğun doğumdan ilkokula başlayıncaya kadar olan yaşantılarını içeren erken çocukluk eğitim dönemi çocuk açısından kritik bir dönemdir. Günümüzde meydana gelen kadınlarında çalışma hayatında daha çok yer alması ve çocuklar için güvenli oyun alanlarının azalması gibi toplumsal değişimler erken çocukluk eğitim kurumlarına olan ihtiyacı artırmıştır. Erken çocukluk eğitiminin verildiği okul öncesi eğitim kurumlarının sayısı ise Türkiye'de hızla artmaktadır. Erken çocukluk eğitimini iyileştirmek için niceliksel adımların atılması oldukça önemlidir. Ancak bu adımlar çocukların daha iyi öğrenmesi ve gelişimlerini destekleyebilmek açısından yeterli olmamaktadır. Bu nedenle okul sayısının arttırılmasının yanı sıra çocuklara kaliteli erken çocukluk eğitim hizmetinin sunulması ve mevcut bulunan okulların kalite düzeylerinin arttırılması acil bir ihtiyaçtır. Yapılan pek çok araştırma erken çocukluk eğitim programlarının kalitesinin bu programlara devam eden çocukların gelişim düzeylerini olumlu yönde etkilediğini ortaya koymuştur. Yüksek kaliteli erken çocukluk eğitimi, ayrıca çocukların sosyal ve akademik becerilerini geliştirdiği için ilkokul yıllarında ve

sonrası dahil olmak üzere uzun vadeli olumlu etkilere de sahiptir. Erken çocukluk döneminde kaliteyi açıklamaya yönelik araştırmacılar farklı tanımlamalar ortaya koysa da genel olarak kalitenin yapısal ve işlevsel kalitenin etkileşimi ve birleşimi ile gerçekleştiği üzerinde uzlaşmışlardır. Erken çocukluk döneminde kalitenin bileşenlerinden, yapısal kalitenin unsurları olarak sınıf büyüklüğü, öğretmen-çocuk oranı, öğretmenin eğitim düzeyi, hizmet yılı belirtilebilir. İkinci bileşen, işlevsel kalite ise, çocukların onlara bakan yetişkinlerle etkileşimlerini ve öğrenmeyi arttıran materyal ve faaliyetlerle etkileşimde bulunmayı içermektedir. Yapısal kalite unsurları ile çocukların gelişimi, başarı düzeyleri arasındaki ilişkiyi inceleyen çeşitli araştırmalar gerçekleştirilmiştir. Yapılan araştırmalarda yapısal kalite unsurlarından eğitim süresi ve sınıf mevcudunun da çocukların gelişim düzeylerini etkilediği sonucuna ulaşıldığı belirtilmiştir. Erken çocukluk eğitiminin kalitesinde ve çocukların gelişiminde önemli olan sınıf mevcudu ve eğitim süresinin etkilerinin bilimsel olarak incelenmesi, alan ve bu konuda karar alacak kurumlar için önemli bir ihtiyaçtır. Alan yazın taramalarında ülkemizde, okul öncesi eğitimde eğitim süresi ve sınıf mevcudu ile çocukların gelişim düzeyleri arasındaki ilişkiyi inceleyen sınırlı sayıda ve küçük örnekleme sahip araştırmalar olduğu saptanmıştır. Erken çocukluk eğitiminde, eğitim süresi ve sınıf mevcudu ile çocukların gelişim düzeyi ilişkisini inceleyen büyük örneklemli araştırma sayısının sınırlı olması ise bu araştırmanın önemini artırmaktadır.

Araştırmanın Amacı: Bu çalışmanın amacı, erken çocukluk eğitiminde yapısal kalite unsurlarından olan sınıf büyüklüğünün ve eğitim süresinin çocuk gelişimi üzerindeki etkilerini belirlemektir.

Araştırmanın Yöntemi: Erken çocukluk döneminde okul kalitesinin çocuk gelişimine etkisini inceleyen bu araştırma da ilişkisel tarama modeli kullanılmıştır. Araştırmaya Denizli İl Milli Eğitim Müdürlüğüne bağlı 55 okul öncesi eğitimi sınıfı ve bu okullarda eğitim görmekte olan beş- altı yaşındaki 836 çocuk küme örnekleme yöntemi ile seçilmiştir. Araştırma verileri "Ankara Gelişim Tarama Envanteri (AGTE)" ve "Okul Öncesi Eğitim Kurumu Yapısal Kalitesi İçin Bilgi Formu" kullanılarak toplanmıştır. Okul Öncesi Eğitim Kurumu Yapısal Kalitesi İçin Bilgi Formu; okul öncesi eğitim kurumunun yapısal kalitesini ölçmek için 14 adet açık uçlu soru sorudan oluşmaktadır. Bu sorular arasında eğitim süresi, öğretmenin mezun olduğu lise türü, mezun olduğu okul, hizmet yılı, sınıftaki çocukların yaş grubu ve sayısı, sınıfın büyüklüğü, kurumun bulunduğu yerin sosyo-ekonomik düzeyi gibi sorular yer almaktadır. Bu sorular araştırmacı tarafından sınıf öğretmenlerine ve okul idaresine sorularak doldurulmuştur. Verilerin toplanabilmesi için yasal izin alınmış ve örnekleme dahil olan okulların yöneticilerine telefon ya da birebir görüşme yoluyla araştırma hakkında bilgi verilmiş ve yaş grubu uygun olan sınıfların gözlenebilmesi için öğretmen ve yöneticiler bilgilendirilmiş, katılmayı kabul eden okullara ziyaretler planlanmıştır. Ardından kurumlardaki öğretmenlerle görüşülerek, gerçekleştirilecek uygulamanın amacı ve nasıl olacağı anlatılmıştır. AGTE' nin nasıl doldurulacağı konusunda öğretmenlere uygulamalı şekilde bilgi verilmiş ve onlardan sınıflarındaki her bir çocuk için AGTE'yi doldurmaları istenmiştir. Öğretmenlerle birlikte belirlenen uygun bir tarihte doldurulan ölçekler

araştırmacı tarafından geri alınmıştır. Araştırma sonucunda elde edilen veriler, "SPSS 18.0" istatistik paket programına kodlanarak yüklenmiş ve analiz edilmiştir. Çalışma verilerinin analizinde, bağımsız t-testi, tek yönlü ANOVA ve faktörel ANOVA (2X4) teknikleri kullanılmıştır.

Araştırmanın Bulguları: Yapılan araştırma, yapısal kalite unsurlarından sınıfta bulunan çocuk sayısı ve eğitim süresi ile çocukların gelişimleri arasında istatistiksel olarak anlamlı ilişki olduğunu ortaya koymuştur. Araştırmanın bulguları, 20- 24 arasında çocuk bulunan sınıflarda eğitim gören çocukların diğer gruplarda eğitim gören çocuklardan daha yüksek gelişim puanı aldığını göstermiştir. Araştırmada, tam gün erken çocukluk eğitimi programlarına devam eden çocukların dil-bilişsel gelişim alt boyutu puanları ile toplam AGTE puanlarının yarım gün erken çocukluk eğitimi programına devam eden çocuklardan daha yüksek olduğu bulunmuştur. Ayrıca eğitim süresi ve sınıf mevcudunun çocukların gelişim puanına birlikte olan etkisi incelendiğinde ise anlamlı ortak bir etkinin olmadığı belirlenmiştir.

Araştırmanın Sonuçları ve Önerileri: Araştırma sonuçları, sınıfta bulunan çocuk sayısı 20- 24 arasında eğitim kurumlarına devam eden çocukların gelişim puanlarının diğer gruplardaki çocuklardan anlamlı derecede farklı olduğunu ortaya koymuştur. Ayrıca tam gün erken çocukluk eğitim programlarının çocuk gelişimi üzerinde olumlu etkileri olduğunu göstermektedir. Bu nedenle Türkiye'de tam gün program sayısını arttırılması önemlidir. Erken çocukluk döneminde çocukların kaliteli erken çocukluk eğitimi programlarına devam etmeleri onların gelişimlerini destekleyecektir. Özellikle sosyo-ekonomik şartları elverişsiz ortamlarda büyüyen çocukların yaşamlarının başından itibaren dezavantaj yaşamaları ve gelişimsel olarak kritik dönemde gerekli becerileri kazanmaları için kaliteli tam gün okul öncesi eğitimi oldukça yararlı olacaktır. Konuyla ilgili çalışacak araştırmacılara yönelik olarak da araştırmaların farklı il ve bölgelerde daha çok sayıda çocukla yapılması önerilmektedir. Ayrıca, okul öncesi eğitimin kalitesi ve çocukların gelişim düzeyleri düzenli ve kurumsal olarak ölçülmeli ve kalite düzeyi düşük olan okullar için acil önlemler alınmalıdır. Erken çocukluk eğitimi veren kurumlarda mutlaka sistemli ve bilimsel kalite değerlendirme sistemlerinin oluşturulması önerilmektedir.

Anahtar Sözcükler: Erken çocukluk eğitiminin kalitesi, yapısal kalite, grup büyüklüğü, tam gün.