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The Reliability and Validity of the Home Early Literacy Environment Scale (HELE)

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Research Article

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ABSTRACT

Considering the benefits of the home literacy environment for children, this study aims to develop a tool to measure early literacy opportunities provided by families to their children. As a result of the Exploratory Factor Analysis, the eigenvalue of the scale is composed of four factors and 11 items, and it represents 21.73 %of the total variance in the first factor, 20.75%of the second factor, 16.65%of the third factor and 15.33 of the fourth factor. The total variance in the four factors reveals approximately 74.47%of it—Cronbach (α) reliability values of factors range between .73 and .88. The reliability value for the general scale is identified as .72. The results show that this scale is a reliable measurement tool to identify the views of families in the home literacy environment. After carrying out validity and reliability studies, we calculated cut-off scores for the scale. The lowest score might be eight, while the highest score might be 32 received from this scale. Accordingly, we found out that 8-15 points are insufficient, while 16-23 is average and 24-32 insufficient for the home literacy environment.

Keywords: Early literacy, home environment, home literacy environment, scale development, preschoolers

Erken Okuryazarlık Ev Ortamı Ölçeği (EROY-EV)'nin Geçerlik ve Güvenirlik Çalışması

ÖZ

Erken okuryazarlık ev ortamının çocuklar için faydalarının büyük olduğu bilinmektedir. Bu durum göz önüne alındığında, bu çalışmanın amacı ailelerin çocuklarına sağladığı erken okuryazarlık fırsatlarını değerlendirmek için bir araç geliştirmektir. Ölçeğin yapı geçerliği çalışması için yapılan AFA sonucunda ölçeğin 4 boyut ve 11 maddeden oluştuğu görülmüştür. Tüm faktörlerinin varyansın %74,47'sini açıkladığı belirlenmiş olup, "Ebeveyn İnançları" faktörü toplam varyansın %21,73'ünü, "Yazı İlgisi" faktörü %20,75'ini, "Kitap Okuma Sıklığı" %16,65'ini ve "Okuryazarlık Öğretimi" faktörü de %15,33'ünü açıkladığı belirlenmiştir. Ölçeğin alt boyutlarının Cronbach α güvenirlik değerlerinin .73 ve .88 arasında değiştiği görülmektedir. Ölçeğin geneline ait güvenirlik değerinin .72 olduğu belirlenmiştir. Elde edilen değerler, bu ölçeğin ev ortamında erken okuryazarlığa ilişkin aile görüşlerini belirlemede güvenilir bir ölçme aracı olduğunu ortaya koymaktadır. Ayrıca, Erken Okuryazarlık Ev Ortamı Ölçeği (EROY-EV)'nin ölçüt geçerliğinin belirlenmesi amacıyla Ev Erken Okuryazarlık Ortamı Ölçeği (EVOK)'nden elde edilen puan ile arasındaki toplam korelasyon hesaplanmıştır ve her iki ölçek arasındaki toplam korelasyon değeri .72 olarak bulunmuştur. Ölçek için kesme puanları hesaplanmış olup, alınabilecek en düşük puan 8, en yüksek puan ise 32'dir. Buna göre 8-15 puan aralığı yetersiz, 16-23 puan aralığı orta ve 24-32 puan aralığı ise yeterli bir ev erken okuryazarlık ortamı olarak belirlenmiştir.

Anahtar Kelimeler: Erken okuryazarlık, ev ortamı, ev okuryazarlığı ortamı, ölçek geliştirme, okul öncesi çocuklar

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Introduction

Within the progress in the early childhood field, findings from recent studies have shown that reading and writing skills of a human, which are vital for society, start to develop in the early years of life. Parents are the most critical persons in children's lives since they are the first teachers to their children. Besides, they establish the most immediate environment that shapes and contributes to children's development and learning (Rodriguez & Tamis-Lemonda, 2011). Zucker and Grant (2007) suggest that the idea, i.e. evaluation of children's homes is necessary regarding the literacy environment, based on the Ecological System Approach developed by Bronfenbrenner (1979). According to the ecological system approach, all circles that surround children, from the closest (micro; e.g. home, classroom) to the furthest (macro; e.g. cultural context) contribute to their development. Therefore, in the last five decades, scholars have focused on how literacy environments in homes where children grow up impact early childhood literacy (Son & Morrison, 2010). Evaluation of the home literacy environment has critical importance to support children's emergent literacy skills. Thus, the information in terms of how families support their children's (both typically developing and at-risk) literacy skills can be provided. In addition, evaluation of home literacy is also vital to guide the interventions aiming to raise the awareness of families regarding support for children's literacy skills (Haney & Hill, 2004).

Theoretical Framework

Although there is not a strong consensus on the definition of home literacy environment, it is described as the environment in which families provided for their children to support the prerequisite behaviors and skills that are significant for reading, writing and language development of children (Niklas & Schneider, 2013). Studies conducted, draw attention to the links between home literacy environment experiences and the development of language skills and academic skills in the early years of primary schools. Accordingly, these results prove the importance of supporting early literacy in the home environment (Hart & Risley, 2003; Robbins & Ehri, 1994). The research demonstrated that the attainment of reading skills has a close connection with the characteristics of families. The predictor roles of literacy environment at home, expectations from the child, and the parents' approach to education on children's literacy development have been emphasized (Petrill, et al., 2005).

Home literacy environment is a multifactorial and complex environment, both in a physical and social context. The routine duties and responsibilities of family members are their ongoing work. Families might be confused about how they provide early literacy experiences for their children together with these responsibilities, and how they can become role models for their children. These are the social parts of the house. On the other hand, having written materials for both children and themselves, and keeping these materials in the places where children can easily see and reach are the physical parts of the house (Gonzales, 2011). Parents can read books together with their children, teach them new words, count them in everyday activities (e.g. shopping list preparation), teach them rhymed songs and poems, and arrange some activities (e.g. drawing, painting, copying and keeping children's books, magazines, and pastels) at home. Therefore, they create a qualified environment to support children's early literacy skills (Foy & Mann, 2003). Moreover, there are many empirical pieces of evidence supporting that the factors regarding children's environment (home or family life) are more effective compared to the factors related to school in respect to achieving literacy success (Sénéchal et al., 1998).

Family members usually shape children's social environment, and that social structure maintains in the home environment. Therefore, a child experiences a significant part of his/her early literacy experiences in the home environment and learns both observing more experienced adults by participating in the activities carried out together (Van Steensel, 2006). This approach reminds us Vygotsky's theory in terms of being expertise in a skill or behavior by participating in an activity together with a person who is more experienced and sophisticated than him/her (McDevitt & Ellis Ormrod, 2010).

Parents of preschool children have a high responsibility when their children develop behaviors for reading skills. Introducing written materials to children and enabling them to develop a sense of commitment to these materials might be examples of this responsibility. As we mentioned above, children can learn most of the behaviors by observing, and they are always observing their parents' behaviors, since they see them as role models and as a source of knowledge. At this stage, having materials, such as newspapers and books, and reading these materials at home will awaken children's interests. When they observe this behavior in their parents, they will show enthusiasm for the specific activity (Keleş, 2006). This behavior is the most significant model that shows the parents' enthusiasm for reading. De Jong and Leseman (2001) concluded that there is a positive correlation between the richness of the home literacy environment, lexical information, word reading, language comprehension, reading comprehension and problem-solving skills.

Furthermore, even though there are not many examples of it in Türkiye, it is quite important to regularly visit the children's libraries to increase their interest in reading. Children who are growing up in rich home literacy environments, learn to read more quickly. Families who give priority to reading have more expectations about the development of their children's reading and writing skills. When someone read to them, children will realize that the language of the books is different from the daily language they are accustomed to hearing until now, and they can learn from these books what they are curious about. They can also be more aware of the letters and words (Turan & Ege, 2003).

The family is the most crucial factor in child development. Children's education begins in the family environment, and parents are their first teachers. When a child is born, his/her family grows them up, and childcare is not limited to the physical care to meet their basic needs. In the preschool period, children learn many things by observing their parents, who are their role models in this specific period (Çakmak & Yılmaz, 2009). Aram and Levin (2001) found out that literacy materials and activities applied in the home environment during the preschool period have positive effects on children in terms of developing their reading and writing skills of words, lexical awareness and print awareness.

Moreover, there is a high positive correlation between mother-child interaction and children's reading and writing skills. Another study, carried out by Lamme et al. (2004), found that reading books starting from a young age contributes to children's enjoyment of listening and reading books for different purposes in the following years. However, the home literacy environment should be measured first to understand how it impacts the next stages of language and literacy development of children (Gonzales et al., 2011). This study aims to develop a tool to measure early literacy opportunities provided by families to their children by taking into consideration the benefits of the home literacy environment for children.

Method

This work is a scale development study. We report all stages followed to develop a home early literacy environment scale and the features of participants below.

Participants

Scale forms were delivered to the 300 parents to determine the quality of literacy opportunities presented by families to their 36-72 months children in the home environment. We recruited these parents via three nurseries and nursery classes in the structure of a primary school selected randomly in the midtown of Ankara. With the removal of the scales that were not filled in properly and not returned, usable data were collected from 119 participants and analyzes were conducted.

84%(n=100) of 119 parents answered the scales are mothers, while 16%(n=19) are fathers. It is deduced that the average age of parents is 33.56 (ss=5.16, range=21-45) for mothers, and it is 36.29 (ss=5.09, range=25-51) for fathers. Regarding the education level of mothers, 0.8%(n=1) of mothers are illiterate, 5.9%(n=7) of them graduated from primary school, 7.6%(n=9) of them have a secondary school degree, 21.8%(n=26) of them received high school education, 52.9%(n=63) of them have an associate or bachelor degree, and 10.9%of them have a postgraduate degree. In terms of the education level of fathers, all fathers are literate, 5%(n=6) of them graduated from primary school, 8.4%(n=10) of them graduated from the secondary school, 21.8%(n=26) of them received high school education, 44.5%(n=53) of them have an associate or bachelor degree and 20.2%(n=24) of them have a

postgraduate degree. 23.5%(n = 26) of the families earn below 2000 Turkish liras, 34.5%(n = 41) between 2001 and 5000 liras, and the remaining 42%(n = 50) 5000 liras or over in a month, the average income is almost 4000 Turkish liras. Additionally, the average number of children in the families is 1.7 (ss=0.73, range= 1-4).

Scale Development Process

In the first phase, we reviewed national and international studies including early literacy concepts in detail and observable behaviors consisting of the early literacy opportunities provided by families in the home environment (Boudreau, 2005; DeBaryshe & Binder, 1994; Dynia et al., 2014; Griffin & Morrison, 1997). During this process, we saw that there are numerous measurement tools used in this field, but these tools recently developed abroad are shorter. Therefore, we considered that developing a practical scale for parents to response in a short time can be more useful. We created an item pool with 11 items in total as the first step. To ensure the face and language validity of the scale, we then got experts' opinions. Experts suggested that all items were okay. Factor analysis showed that the items' factor loadings were above .70 and that each item loaded on only one factor. Therefore, we did not remove any item from the scale.

The expressions in the scale are rated in 4 points Likert-type. Participants rated the items between 1 (never), 2 (a few times in a month), 3 (a few times in a week), and 4 (once in a day) in the first eight items, while they rated the last three items between 1 (strongly agree), 2 (agree), 3 (disagree) and 4 (strongly disagree). Accordingly, rates are given from positive to negative, respectively as 4,3,2,1. Also, there are no reverse items on the scale.

Data Collection

Before starting the study, we obtained legal permissions from the Ministry of National Education, Social Security Institution Nursery, the State Hydraulic Works Nursery, and the Ministry of Tourism Nursery by exchanging necessary official correspondences.

The scales were made available to 300 families of children who continue different preschool institutions representing low, middle and high socioeconomic situations (SES), located in the midtown of Ankara through interviews with the directors of these institutions. The principal researcher asked families to fill these forms (including instructions about how to respond at the beginning) at home and send them to class teachers with their children. In the case of illiterate parents, the principal researcher conducted a face-to-face interview with these parents. The principal researcher collected and analyzed the data by using a total of 119 participants' forms, which was approximately 35%of all distributed scales (Non-completed scales were removed from the main data as well). The data collection took place from April to September 2015.
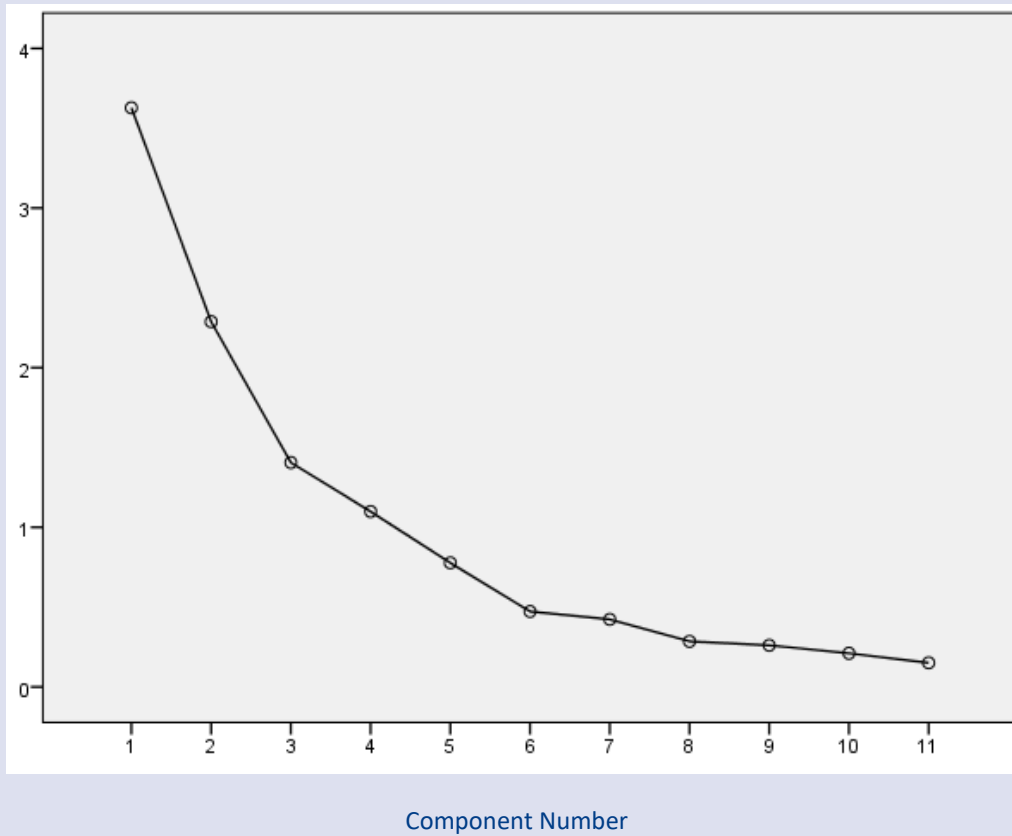
Component Number
Figure 1. Scree Plot of Home Literacy Environment

Data Analysis

The data were analyzed using SPSS 20.00 package program. Exploratory factor analysis (EFA) and a test of Cronbach α were employed in the development process of the Home Early Literacy Environment scale. As the first step of the analysis, we conducted both Kaiser Mayer Olkin (KMO), and Bartlett Sphericity tests to understand the eligibility of data for the factor analysis. We, then, carried out an EFA to assess the construct validity of, and the number of factors on the scale. We also calculated the Cronbach alpha coefficient to determine the reliability of both all factors and the whole scale. Furthermore, to determine the criterion validity of this scale, the total correlation between the half of the data collected and the scores obtained from the Home Early Literacy Environment Questionnaire, a reliable and valid questionnaire for kindergarteners, was developed by Sarıca et al. (2014) are calculated. The main reason for the preference for this scale is that there is only one scale measuring home early literacy environment in Türkiye, which is also the aim of this study. Results of EFA show that there are four factors explaining 54.81%of the total variance: 1) Reading [17.53%], 2) Writing [13.87%], 3) Phonological and writing awareness [12.99%], and 4) reading books together [10.43%].

Results

Validity

Content Validity. For the scope validity of the scale, we consulted the appropriateness of its scope and linguistic

clarity of the language to five child development and education experts and one measurement and evaluation expert. In this process, each expert was asked to evaluate the items according to not only their appropriateness of the research scope and linguistic clarity but also to make the necessary changes, if it is necessary. The responses received showed that items are appropriate for the developed scale.

Structure Validation / Exploratory Factor Analysis. There are different views on the sample size to carry out factor analysis for scale development studies in the literature (Alpar, 2012; Tavşancıl, 2010). However, the most common view is to include participants 5 or 10 times more than the number of items on the scale (Tavşancıl, 2010). By taking into consideration the number of items (11) and the number of participants (119), we met the underlined scale development condition in this study. For the construct validity, we conducted EFA to determine the factor loads of the items in the scale. We also carried out both Kaiser Mayer Olkin (KMO), and Bartlett Sphericity tests to understand the eligibility of data for the factor analysis. KMO value should be at least 60, and the Bartlett Sphericity test should be meaningful to conduct EFA (Büyüköztürk, 2011). In this study, not only KMO value is 0.65, but also the results of the Bartlett test are significant ($x2 =583.96$; p=0,00). Since the result of the chi-square test statistic is meaningful, we interpreted that the data has a multivariate normal distribution (Tavşancıl, 2010). As a result of the EFA, the eigenvalues of the scale revealed that the scale consists of 4 factors. Figure 1 shows the eigenvalues of the items in the scale.

Table 1. Item factor loads for home early literacy environment scale

Items	Families' Literacy Beliefs	Print Interest	Frequency of Reading Books	Literacy Teaching
11	.920	-.007	-.007	.129
10	.885	.059	.013	.123
9	.833	.038	.077	-.153
1	-.021	.790	.140	.013
2	-.061	.731	.058	.087
7	.111	.713	-.036	.204
8	.099	.704	-.054	.292
3	.111	-.024	.938	.065
4	.083	.122	.929	.019
5	.027	.210	-.065	.853
6	-.144	.236	.186	.881

Table 2. Reliability results for factors of the home early literacy environment scale

	Factor 1	Factor 2	Factor 3	Factor 4	All scale
	Families' Literacy Beliefs	Print Interest	Frequency of Reading Books	Literacy Teaching	
Cronbach alpha value	.862	.739	.880	.790	.720

We used varimax rotation to maximize the sum of the variance of the squared loadings of items (Allen, 2017). Results also showed that the first factor explained 21.73 %of the total variance, while the explained variance was 20.75%in the second factor, 16.65%in the third factor and 15.33 in the fourth factor. The total variance in the four factors reveals approximately 74.47%of it. Table 1 demonstrates the factor loading values of the items in the scale.

1. Families' Literacy Beliefs. The first factor is labeled as "Families' Literacy Beliefs", including three items. These items are; "I enjoy reading a book together with my child", 'Reading a book together with my child enables my child to learn reading.', "Reading a book together with my child enables my child to learn Turkish" and factor loads change between 0.83 and 0.90.

2. Print Interest. The second factor is labeled as "Print Interest" and includes four items. These items are "How often does your child ask family members how to write their names?", "How often does your child ask how to read words around them?" "How often do you ask your child to write words in the book?", and factor loads change between 0.70 and 0.73.

3. Frequency of Reading Books. The third factor is labeled "Frequency of Reading Books" and includes two items. These items are: "How often do you read books to your child?", and "How often does your child ask you to read them something?" and factor load changes between 0.92 and 0.93.

4. Literacy Teaching. The fourth factor is labeled "Literacy Teaching" and includes two items. These items are: "How often your child pretends that s/he is reading books, newspapers, and so on?" and "How often do you try to teach letters of the alphabet while reading books?", and factor load changes between 0.85 and 0.88.

Table 1 shows that the factor loads of items change between 0.70 and 0.93. Factor loading values which are equal to or more than 0.45 are sufficient to include them in the scale (Büyüköztürk, 2011).

Criterion Validity. Furthermore, to determine the criterion validity of this scale, we calculated the total correlation between the half of the data collected and the points obtained from the Home Early Literacy Environment Questionnaire developed by Sarıca et al. (2014). We found that the total correlation value is 0.72. Accordingly, there is a medium level of a significant relationship between both scales.

Reliability

We calculated Cronbach's alpha internal consistency coefficient (α) to determine the reliability of the Home Early Literacy Environment Scale. Table 2 demonstrates Cronbach's alpha coefficients calculated for each factor of the scale.

Therefore, the Cronbach (α) reliability value of factors changes between 73 and 88. The reliability value for the general scale is identified as .72. It is sufficient to have a Cronbach α reliability value equal to or more than .70 in the literature (Büyüköztürk, 2011). The results show that this scale is a reliable measurement tool to identify the views of families on early literacy in the home environment.

Scoring of the Scale

After carrying out validity and reliability studies, we calculated cut-off scores for the scale within the borderline group method. As the "Families' Literacy Beliefs" factor has a different structure, we did not include it in the calculations. We carried out analyses with eight items and three factors. We measured the home early literacy environment with 4-point Likert-type scales. Therefore, the lowest score received from this section is 8, while the highest score is 32.

Table 3. Score and percentages of families

	Literacy Environment	N	%
Presence of the home literacy environment for families	Insufficient	16	13,4
	Moderate	81	68,1
	Sufficient	22	18,5
	Total	119	100

Accordingly, we determined that 8-15 points are insufficient, while 16-23 is average and 24-32 sufficient for the home literacy environment. The cut-off points were determined using arithmetic mean and standard deviation. That is to say, the higher score on the scale, the higher quality of the home literacy environment.

According to Table 3, 13.4%(n=16) of families are insufficient, 68.1%(n=81) are on average and 18.5%(n=22) are sufficient in providing home literacy environments for their children.

Discussion, Conclusion and Suggestions

This study aims to develop a scale tool for determining the home literacy environments of children between 4 and 6. To achieve this objective, after carrying out our validity and reliability studies conducted for HELE Scale, we observed that the scale reliably measures the home literacy environments. Moreover, the coefficients of factors are satisfactory, which means items in all factors have consistency with each other. By taking into consideration all these findings, the measurement tool is quite convenient for assessing the home literacy environments. The internal consistency level of the "Home Early Literacy Environment Questionnaire" developed by Sarıca et al. (2014), the "Activities Related to Literacy" scale developed by Bennett et al. (2002) and the scale developed by Griffin and Morrison (2002) to assess home literacy environment, are also high. On the contrary, the internal consistencies of some items are low in the inventory developed by Boudreau (2005) for the same purposes. The point that distinguishes our work from these scales is the small number of items and practical use. In addition, without any need of observing the home literacy environment by others, it is essential for the usability of it for families' to determine the problems according to their points of view.

Various studies proved that home literacy environments affect children's reading-writing skills together with language and their academic skills (Bennett et al., 2002; Burgess et al., 2002; Evans et al., 2000; Johnson et al., 2008; Leseman & De Jong, 1998; Payne et al., 1994; Walker et al. 1994). Considering this fact, it is quite significant to determine the home literacy environment of children with this kind of scale (Gonzales et al., 2011). Therefore, by determining the status of the home literacy environment, appropriate interventions (e.g. shared book reading) can be implemented when necessary. Accordingly, possible problems that may arise in the future might be prevented. Aram and Levin (2001) searched the effects of shared home reading activities and home literacy environment on early literacy skills in terms of literacy material and the environment in their study with 41 children and mothers with low income and preschool education. It finds out that a rich home environment regarding literacy materials and that reading activities made with families have positive effects on the improvement of phonological awareness and print awareness and developmental skills of children in reading and writing of words. Similarly, literacy activities carried out with families have positive effects on the development of children's reading and writing skills. For example, literacy behaviors of 70 children in the lower and middle socioeconomic levels had increased when they interacted more with literacy materials (Korat, 2005). In a similar vein, a study examined the relationship between family environment and children's language as well as literacy skills among 143 families and preschool children (Bennett et al., 2002). Results showed that the family environment has a significant effect on children's language and literacy skills. Another study conducted by Turan and Akoğlu (2014) compared phonological awareness levels and early literacy opportunities provided by families to typically developing children versus children with a language disorder. As a result of this study, home literacy environment provided to children with language disorders and phonological awareness of these children is insufficient compared to the other group. Considering the results of these studies, determining the home literacy environment of children and interfering with it when it is necessary is very important to contribute to the academic life of these students in the future.

The strength of the scale is that the factors of the Home Early Literacy Environment Scale (HELE) developed in this study offer norm values for parents. The literacy environment offered by parents is also evaluated separately in factors based on these norm values. Another Home Early Literacy Environment Questionnaire evaluated the home literacy environment with subscores as in our study is HLE developed by Sarıca et al. (2014). The critical point that distinguishes our work from Sarıca et al. (2014) study is the shorter response time. In recent years, the scales used abroad for this purpose have a solid structure that can be responded to in a short time (Dynia et al., 2014). A short version of the scale might be preferable, considering illiterate families in particular. The parents who will answer this scale can identify the home literacy environment according to the scores received from this scale, so they may try to strengthen the environment accordingly. Also, home literacy environments might be compared between the different socioeconomic statuses of children and disadvantaged groups (Justice et al., 2016; Karaahmetoğlu, 2015). By

conducting longitudinal studies that use this scale, children's reading and writing skills or proficiency in different academic skills in the coming years might be compared in the Türkiye sample in terms of the preschool home early literacy environment. Preschool teachers can collect information from families and can determine the home literacy environment of their students through this scale. Accordingly, teachers can provide support to families, or if their students' home literacy environment is insufficient, they can make their classroom even more productive regarding literacy materials. In addition to determining the home literacy environment through this scale, early literacy environments in classrooms and schools can also be evaluated by interviewing teachers or making classroom observations. Besides, the relationship between the home literacy environment and the early literacy skills of children can be examined (Sawyer et al., 2014).

As a result of validity and reliability analysis, we believe that the scale consisting of 11 items and four factors will contribute to the field in terms of evaluating the home literacy environment for children aged 36-72 months. However, it does not provide comprehensive information about the home early literacy environment, which is the most prominent limitation of the scale despite being a practical tool. Families, teachers and researchers who want to obtain more comprehensive information about the home early literacy environment can receive more detailed information in different ways such as through interviews and observation.

Genişletilmiş Özet

Giriş

Erken okuryazarlık ev ortamı, tanımında kesin bir görüş birliğine varılamamakla birlikte "ailenin, okuma, yazma ve dil gelişimi için önemli olan önkoşul davranış ve becerilerin desteklenmesi için çocuklarına sundukları ortam" şeklinde açıklanmaktadır (Niklas ve Schneider, 2013). Yapılan araştırmalarda, ev ortamında gerçekleşen erken okuryazarlık yaşantılarıyla dil gelişimi arasındaki ve bununla birlikte erken dil gelişimi ile ilkokulun ilk yıllarındaki akademik beceriler arasındaki bağlantılar dikkat çekmekte, sözü edilen sonuçlar erken okuryazarlığın ev ortamında desteklenmesine yönelik önemli nedenleri göz önüne koymaktadır (Hart ve Risley, 2003; Robbins ve Ehri, 1994).

Okuryazarlık ev ortamı, hem fiziksel hem de sosyal anlamda çok boyutlu ve karmaşık bir ortam olarak ortaya çıkmaktadır. Aile üyelerinin rutin görev ve sorumlulukları, bu sorumluluklarla beraber çocuk için ayırdıkları zamanda çocuğa nasıl erken okuryazarlık yaşantıları sağladıkları ya da sağlamadıkları, çocuğun bireysel okuryazarlık faaliyetlerine dahil olarak dolaylı şekilde çocuğa nasıl model oldukları ya da olmadıkları ev ortamının sosyal yönünü içerirken, aile üyelerinin evde hem kendileri hem de çocuk için yazılı materyal bulundurmaları ve bu materyalleri çocuğun istediği zaman görüp ulaşabileceği yerlerde bulundurmaları ise ortamın fiziksel yönünü içermektedir (Gonzales, 2011). Ebeveynlerin çocuklarıyla birlikte kitap okumaları, çocuklara yeni sözcükler öğretmeleri, alışveriş listesi hazırlama gibi etkinliklere çocuklarını dahil etmeleri, çocuklara kafiyeli şarkı ve şiirler öğretmeleri, karalama, çizim, resim ve kopyalama gibi etkinlikler düzenlemeleri, evde çocuk kitapları, dergi ve boya kalemleri gibi materyaller bulundurarak okuryazarlık yönünden nitelikli bir çevre oluşturmaları çocukların erken okuryazarlık becerilerini destekler (Foy ve Mann, 2003).

Pek çok davranışı görerek öğrenen okul öncesi dönem çocukları, bilgi kaynağı olarak algıladıkları ve kendilerine model aldıkları ailelerini sürekli gözlemlerler. Bu dönemde ebeveynlere, çocuğun okumaya yönelik becerileri kazanmasına ilişkin davranışların ortaya çıkmasıyla birlikte ciddi sorumluluk düşmektedir. Bahsedilen bu sorumluluk, okul öncesi dönemdeki çocuğu yazısı bulunan materyallerle tanıştırmak ve bu materyallere bağlılık geliştirmesini sağlamak olarak açıklanabilir. Erken okuryazarlık ev ortamının çocuğa sağladığı yararlar göz önüne alındığında, bu araştırmanın amacı, ebeveynlerin ev ortamında çocuklarına sağladıkları erken okuryazarlık fırsatlarının sıklığını ölçen bir araç geliştirmektir.

Yöntem

Bu araştırma bir ölçek geliştirme çalışmasıdır. Bu amaçla yapılan literatür taramaları sonucunda ev ortamı erken okuryazarlık fırsatlarını içine alan toplam 11 maddelik bir madde havuzu oluşturularak ölçeğin ilk şekli verilmiştir. Ölçek için gerekli uzman görüşleri alınmış, uzmanların belirtmiş oldukları görüşlere göre ölçek yeniden gözden geçirilmiş ve 4'lü likert tipinde derecelendirilerek son hali verilmiştir. 4-6 yaş arasındaki çocuğu olan 119 ebeveynden ölçek sorularını yanıtlamaları istenmiştir.

Erken Okuryazarlık Ev Ortamı Ölçeği (EROY-EV)'nin analizine başlarken, verilerin faktör analizi için uygun olup olmadığı Kaiser Mayer Olkin (KMO) ve Barlett Sphericity testi ile değerlendirilmiştir. Ölçeğin yapı geçerliliğini ortaya koymak amacıyla Açımlayıcı Faktör Analizi (AFA) kullanılmıştır. Ölçeğin hem alt boyutları ve hem de ölçeğin tümüne ait güvenirlik için Cronbach alfa katsayısı hesaplanmıştır.

Bulgular

Ölçeğin yapı geçerliği çalışması için ölçekte yer alan maddelerin faktör yüklerinin belirlenerek boyutlanması amacıyla AFA yapılmıştır. Verilerin faktör analizine uygunluğu için öncelikle KMO katsayısı ve Barlett Sphericity testi hesaplanmıştır. Verilere AFA yapılabilmesi için KMO değerinin en az .60 olması ve Barlett Sphericity testinin anlamlı çıkması gerekmektedir (Büyüköztürk, 2011). Bu çalışmada hem KMO değeri .65 hem de Barlett testi sonuçlarının anlamlı (x2 =583,96; p=0,00) çıktığı görülmüştür.

Yapılan AFA sonucunda ölçeğin özdeğerinin 1'den büyük 4 boyuttan oluştuğu, birinci alt boyutun (ebeveyn inançları) toplam varyansın %21,73'ünü, ikinci alt boyutun (yazı ilgisi) %20,75'ini, üçüncü alt boyutun (kitap okuma sıklığı) %16,65'ini ve dördüncü alt boyutun (okuryazarlık

öğretimi) ise %15,33'ünü açıkladığı belirlenmiştir. Bu dört boyut ölçekteki toplam varyansın yaklaşık %74,47'sini açıklamaktadır. Ayrıca ölçeğin genelinde maddelerin faktör yüklerinin .70 ile .93 arasında değiştiği görülmektedir.

Cronbach α güvenirlik değerlerinin birinci alt boyutta .86, ikinci alt boyutta .73, üçüncü alt boyutta .88 ve dördüncü alt boyutta .79 olduğu görülmektedir. Ölçeğin geneline ait güvenirlik değerinin .72 olduğu belirlenmiştir. Elde edilen değerler, bu ölçeğin ev ortamında erken okuryazarlığa ilişkin aile görüşlerini belirlemede güvenilir bir ölçme aracı olduğunu ortaya koymaktadır.

Yapılan geçerlik ve güvenirlik çalışmalarının ardından ölçek için kesme puanları hesaplanmıştır. "Ebeveyn Okuryazarlık İnançları" alt boyutu farklı bir yapıda olduğu için hesaplamalara dahil edilmemiş, analizler 8 madde ve 3 faktör üzerinden yapılmıştır. Ölçeğin puanlaması 4lü likert tipinde olduğundan, bu kısımdan alınabilecek en düşük puan 8, en yüksek puan ise 32'dir. Buna göre 8-15 puan aralığı yetersiz, 16-23 puan aralığı orta ve 24-32 puan aralığı ise yeterli bir ev erken okuryazarlık ortamı olarak belirlenmiştir. Araştırmaya katılan çocukların ailelerinin %13,4'ünün (n=16) yetersiz, %68,1'inin (n=81) orta ve %18,5'inin (n=22) yeterli okuryazarlık ortamı sağladıkları görülmektedir.

Tartışma ve Sonuç

EROY-EV için yapılan geçerlik ve güvenirlik çalışmaları sonrasında ölçeğin ev erken okuryazarlık ortamını geçerli ve güvenilir şekilde ölçtüğü görülmüştür. Ayrıca alt boyutların katsayılarının da tatmin edici seviyede olduğu görülmüştür. Bu da bütün alt boyutlarda bulunan maddelerin birbirleriyle tutarlılık gösterdiğini ortaya koymaktadır. Tüm bu bulgular göz önüne alındığında, geliştirilen ölçme aracının erken okuryazarlık ev ortamını değerlendirmek için uygun bir araç olduğu düşünülmektedir.

Bunun yanı sıra erken okuryazarlık ev ortamının başkaları tarafından gözlenmesine dayanmaksızın, görüşmeler yoluyla standart olmayan şekillerde belirlenmesine gerek duyulmadan, soruların kendi bakış açılarına göre aileler tarafından yanıtlanıyor olması kullanışlılık açısından ayrıca önemli görülmektedir.

Geliştirilen bu ölçek erken okuryazarlık ev ortamı hakkında kısa sürede ve pratik kullanım sağlamaktadır. Yapılan geçerlik ve güvenirlik analizleri sonucunda toplam 11 madde ve 4 alt faktörden oluşan ölçeğin, 36-72 ay aralığındaki çocukların erken okuryazarlık ev ortamlarının değerlendirilmesi açısından alana katkı sağlayacağı düşünülmektedir.

Öneri

Bu araştırmada geliştirilen EROY-EV'in alt boyutlarından elde edilen puanların, ebeveynlerin bu alt boyut açısından yeterli ya da yetersiz ortam sağlama durumlarına ilişkin norm değerleri sunuyor olması, geliştirilen ölçeğin güçlü yönlerindendir. Bu ölçeği yanıtlayacak ebeveynlerin ölçekten aldıkları puanın sonucuna bakarak, çocuklarına sundukları okuryazarlık ortamlarının durumu saptanabilir ve gerekli durumlarda öğretmenler ve uzmanlar tarafından öneriler verilerek, ailelerin ev ortamını erken okuryazarlık açısından güçlendirmeleri sağlanabilir. Ek olarak farklı sosyo-ekonomik düzey ya da engel grupları arasında erken okuryazarlık ev ortamları karşılaştırılabilir.

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References

Allen, M. (Ed.). (2017). *The SAGE encyclopedia of communication research methods.* Sage Publications.

Alpar, R. (2012). *Spor, sağlık ve eğitim bilimlerinden örneklerle uygulamalı istatistik ve geçerlik-güvenirlik.* Detay Publishing.

Aram, D., & Levin, I. (2001). Mother–child joint writing in low SES: Socio-cultural factors, maternal mediation, and emergent literacy. *Cognitive Development, 16*(3), 831-852. https://doi.org/10.1016/S0885-2014(01)00067-3

Bennett, K. K., Weigel, D. J., & Martin, S. S. (2002). Children's acquisition of early literacy skills: examining family contributions. *Early Childhood Research Quarterly, 17*(3), 295–317. https://doi.org/10.1016/S0885-2006(02)00166-7

Boudreau, D. (2005). Use of parent questionnaire in emergent and early literacy assessment of preschool children. *Language, Speech, and Hearing Services in Schools, 36*(1), 33-47. https://doi.org/10.1044/0161-1461(2005/004)

Bronfenbrenner, U. (1979). *The ecology of human development: experiments by nature and design.* Harvard University Press.

Burgess, S. R., Hecht, S. A., & Lonigan, C. J. (2002). Relations of the home literacy environment (HLE) to the development of reading-related abilities: A one-year longitudinal study. *Reading Research Quarterly, 37*(4), 408-426.

Büyüköztürk, Ş. (2011). *Sosyal bilimler için veri analizi el kitabı.* Pegem Academy Publishing.

Çakmak, T., & Yılmaz, B. (2009). Okul öncesi dönem çocuklarının okuma alışkanlığına hazırlık durumları üzerine bir araştırma: Hacettepe Üniversitesi Beytepe Anaokulu örneği. *The Journal of Turkish Librarianship, 23*(3), 489 – 509.

DeBaryshe, B. D., & Binder, J. C. (1994). Development of an instrument for measuring parental beliefs about reading aloud to young children. *Perceptual and Motor Skills, 78* (3suppl), 1303-1311.

De Jong, P. F., & Leseman, P. P. (2001). Lasting effects of home literacy on reading achievement in school. *Journal of School Psychology, 39*(5), 389-414. https://doi.org/10.1016/S0022-4405(01)00080-2

Dynia, J. M., Lawton, K., Logan, J. A., & Justice, L. M. (2014). Comparing emergent-literacy skills and home-literacy environment of children with autism and their peers. *Topics in Early Childhood Special Education, 34*(3), 142-153. https://doi.org/10.1177/0271121414536784

Evans, M. A., Shaw, D., & Bell, M. (2000). Home literacy activities and their influence on early literacy skills. *Canadian Journal of Experimental Psychology/Revue Canadienne de Psychologie Expérimentale, 54*(2), 65–75. https://doi.org/ 10.1037/h0087330

Foy, J. G., & Mann, V. (2003). Home literacy environment and phonological awareness in preschool children: Differential effects for rhyme and phoneme awareness. *Applied Psycholinguistics, 24,* 59-88. https://doi.org/10.1017/ S0142716403000043

Gonzales, J. E., Taylor, A. B., McCormick, A. S., Villareal, V., Kim, M., & Perez, E., et al. (2011). Exploring the underlying factor structure of the home literacy environment (HLE) in the English and Spanish versions of the Familia Inventory: A cautionary tale. *Early Childhood Research Quarterly, 26*(4), 475-483. https://doi.org/10.1016/j.ecresq.2010.12.001

Griffin, E. A., & Morrison, F. J. (1997). The unique contribution of home literacy environment to differences in early literacy skills. *Early Child Development and Care, 127*(1), 233-243. https://doi.org/10.1080/0300443971270119

Haney M. & Hill J. (2004). Relationships between parent-teaching activities and emergent literacy in preschool children. *Early Child Development and Care, 174*(3), 215-228. https://doi.org/10.1080/0300443032000153543

Hart, B., & Risley, T. R. (2003). The early catastrophe. *Education Review, 17*(1), 110-118.

Johnson, A. D., Martin, A., Brooks-Gunn, J., & Petrill, S. A. (2008). Order in the house! Associations among household chaos, the home literacy environment, maternal reading ability, and children's early reading. *Merrill-Palmer quarterly (Wayne State University Press), 54*(4), 445. https://doi.org/10.1353/mpq.0.0009

Justice, L. M., Logan, J. A., Işıtan, S., & Saçkes, M. (2016). The home-literacy environment of young children with disabilities. *Early Childhood Research Quarterly, 37*(4), 131-139. https://doi.org/10.1016/j.ecresq.2016.05.002

Karaahmetoğlu, B., & Turan, F. (2020). Investigation of parental early literacy beliefs and early literacy home environment of the children with developmental disability and typical development. *Hacettepe University Journal of Education, 35*(2), 243-254. https:// doi: 10.16986/huje.2019051687

Karaahmetoğlu, B. (2015). *Gelişimsel yetersizliği olan ve normal gelişim gösteren çocukların ailelerin erken okuryazarlığa ilişkin inançları ile erken okuryazarlık ev ortamı arasındaki ilişkinin incelenmesi.* [Published master's thesis]. Hacettepe University, Institute of Health Sciences.

Keleş, Ö. (2006). İlköğretim 4 ve 5. sınıf öğrencilerinde kitap okuma alışkanlığının incelenmesi [Unpublished master's thesis]. Gazi University, Institute of Educational Sciences.

Korat, O. (2005). Contextual and non-contextual knowledge in emergent literacy development: A comparison between children from low SES and middle SES communities. *Early Childhood Research Quarterly, 20*(2), 220-238. https://doi.org/10.1016/j.ecresq.2005.04.009

Lamme, L. L., Sabis-Burns, D., & Gould, J. (2004). Project booktalk: Library books and lap reading in childcare homes. *Early Childhood Education Journal, 32*(1), 45-50.

Leseman, P. P., & De Jong, P. F. (1998). Home literacy: Opportunity, instruction, cooperation and social-emotional quality predicting early reading achievement. *Reading Research Quarterly, 33*(3), 294-318. https://doi.org/ 10.1598/RRQ.33.3.3

McDevitt, T. M., & Ellis Ormrod, J. (2010). *Child development and education*. Pearson Education Inc.

Niklas, F., & Schneider, W. (2013). Home literacy environment and the beginning of reading and spelling. *Contemporary Educational Psychology, 38*(1), 40-50. https://doi.org/10.1016/j.cedpsych.2012.10.001

Payne, A. C., Whitehurst, G. J., & Angell, A. L. (1994). The role of home literacy environment in the development of language ability in preschool children from low-income families. *Early Childhood Research Quarterly, 9*(3-4), 427-440. https://doi.org/10.1016/0885-2006(94)90018-3

Petrill, S. A., Deater-Deckard, K., Schatschneider, C., & Davis, C. (2005). Measured environmental influences on early reading: Evidence from an adoption study. *Scientific Studies of Reading, 9*(3), 237-259. https://doi.org/10.1207/s1532799xssr0903_4

Robbins, C., & Ehri, L. C. (1994). Reading storybooks to kindergartners helps them learn new vocabulary words. *Journal of Educational Psychology, 86*(1), 54-64. https://doi.org/10.1037/0022-0663.86.1.54

Rodriguez, E. T., & Tamis-LeMonda, C. S. (2011). Trajectories of the home learning environment across the first 5 years: Associations with children's vocabulary and literacy skills at prekindergarten. *Child Development, 82*(4), 1058-1075. https://doi.org/10.1111/j.1467-8624.2011.01614.x

Sarıca, A. D., Ergül, C., Akoğlu, G., Deniz, K. Z., Karaman, G., Bahap- Kudret, Z., &Tufan, M. (2014). The reliability and validity of the home early literacy environment questionnaire. *International Online Journal of Educational Sciences, 6*(2), 444-459.

Sawyer, B. E., Justice, L. M., Guo, Y., Logan, J. A., Petrill, S. A., Glenn-Applegate, K., Kaderavek, J. N., & Pentimonti, J. M. (2014). Relations among home literacy environment, child characteristics and print knowledge for preschool children with language impairment. *Journal of Research in Reading, 37*(1), 65-83. https://doi.org/10.1111/jrir.12008

Sénéchal, M., Lefevre, J. A., Thomas, E. M., & Daley, K. E. (1998). Differential effects of home literacy experiences on the development of oral and written language. *Reading Research Quarterly, 33*(1), 96-116. https://doi.org/10.1598/RRQ.33.1.5

Son, S. H., & Morrison, F. J. (2010). The nature and impact of changes in home learning environment on development of language and academic skills in preschool children. *Developmental Psychology, 46*(5), 1103-1118. https://doi.org/10.1037

Tavşancıl, E. (2010). *Tutumların ölçülmesi ve SPSS ile veri analizi*. Nobel Publishing.

Turan, F., & Akoğlu, G. (2014). Home literacy environment and phonological awareness skills in preschool children. *Hacettepe University Journal of Education, 29*(3), 153-166.

Turan, F., & Ege, P. (2003). Dil sorunu olan çocuklar için bütüncül dil yaklaşımı. *Ankara University Faculty of Educational Sciences Journal of Special Education, 4*(1), 31-43.

Van Steensel, R. (2006). Relations between socio-cultural factors, the home literacy environment and children's literacy development in the first years of primary education. *Journal of Research in Reading, 29*(4), 367-382. https://doi.org/10.1111/j.1467-9817.2006.00301.x

Walker, D., Greenwood, C., Hart, B., & Carta, J. (1994). Prediction of school outcomes based on early language production and socio-economic factors. *Child Development, 65*(2), 606-62. https://doi.org/10.1111/j.1467-8624.1994.tb00771.x

Zucker, T. A. & Grant, S. L. (2007). Assessing home supports for literacy. K. L. Pence (Ed.). *In Assessment in emergent literacy* (pp. 81-187). Plural Publishing.