

HAYEF: Journal of Education

RESEARCH ARTICLE

Adaptation and Validation of the Parent Engagement in Early Childhood Education Survey for the Turkish Context

Ümit Ünsal KAYA¹ , Hasibe Özlen DEMİRCAN² , Dilek ALTUN³ 

¹Afyon Kocatepe University, School of Foreign Languages, Afyonkarahisar, Türkiye

²Department of Early Childhood Education, Middle East Technical University, Faculty of Education, Ankara, Türkiye

³Department of Child Development, Ankara Yıldırım Beyazıt University, Faculty of Health Sciences, Ankara, Türkiye

Abstract

Parental engagement, characterized by mutual expectations, dialogues about needs, comprehension of communicated messages, and proactive responsiveness, plays a pivotal role in shaping early childhood education outcomes. Collaboration between families and educational institutions is integral within the societal framework where both entities coexist. Recognizing the significance of parental engagement, this study aimed to validate and adapt the “Parent Engagement in Early Childhood Education Survey” to align with the Turkish socio-cultural and linguistic context. The study, conducted in Afyonkarahisar, Türkiye, encompassed seven kindergartens, comprising both private and public institutions. Based on convenience sampling technique, a total of 381 parents of 36–72-month-old children participated, with a predominant presence of females (88.7%). The parents’ ages primarily fell within the range of 31–35 years (40.4%), and a substantial portion held university degrees (47.2%). The confirmed three-factor structure of the adapted survey encompasses knowledge/expectations, trust/communication, and home-based engagement. Importantly, no item modifications were deemed necessary during the adaptation process. Subsequent reliability assessments indicated a commendable internal consistency value for the entire scale ($\alpha = .80$), reaffirming the instrument’s reliability.

Keywords: Parent engagement, early childhood education, Turkish adaptation, PEECE validation

Introduction

Parental engagement, a cornerstone of a child’s educational journey, has been the subject of extensive research across various global contexts. This engagement, termed “aile bağlılığı” in Turkish, is not a monolithic concept but rather encompasses a multifaceted and diverse range of activities and practices (Hayakawa et al., 2013; Van Voorhis et al., 2013). It is influenced by a myriad of sociocultural, economic, and educational factors. Seminal works by Epstein (1995), Fantuzzo et al. (2000), and Hoover-Dempsey & Sandler (1997) have delved into the domains of parental involvement, emphasizing the profound impact of home-based engagement strategies on academic performance (Boonk et al., 2018; Dove et al., 2015; Jeynes, 2012). Demircan (2018) posits that parent engagement can be perceived as a precursor to more formalized parent involvement in educational procedures. It emerges from mutual expectations, fostering dialogues about needs, understanding the perceptions of communicated messages, and taking responsive actions. Furthermore, it underscores the importance of collaboration as an integral facet of the societal framework where both family and school coexist. Yet, despite these insights, the landscape of school-based engagement, especially within socio-economically disadvantaged settings, remains complex and warrants further exploration

(Alameda-Lawson & Lawson, 2016; Fantuzzo et al., 2013; Gonzalez & Jackson, 2013).

The intrinsic significance of parental engagement in a child’s educational process is indisputably profound. The family, often regarded as the most salient and cost-effective mechanism, underpins the sustained development and well-being of a child (Bronfenbrenner, 1974). Echoing this sentiment, research elucidates that interventions targeting a child, devoid of parental engagement, are predisposed to be ephemeral and ineffective (Knoche et al., 2012). It underscores the quintessential nature of family support, emphasizing that the zenith of a school’s pedagogical excellence remains unattainable without anchoring its foundation in a supportive familial milieu. Reinforcing this, parental engagement forges a synergistic liaison between home and school environments, thereby amplifying the assimilation and retention of knowledge and skills, ensuring pedagogical continuity (Barbarin et al., 2010; Clarkin-Phillips & Carr, 2012; Garcia Coll & Magnuson, 2000). Such a cohesive approach finds resonance in numerous global early childhood education programs, which accentuate the cardinality of parent–teacher collaboration for bolstering a child’s educational trajectory (Bartolome et al., 2017; Bredekamp, 2011; MoNE, 2020; Pianta et al., 2012).

This study is a constituent component of Ümit Ünsal Kaya’s doctoral dissertation, supervised by Hasibe Özlen Demircan and co-advised by Dilek Altun, titled “Parental Satisfaction and Engagement in Early Childhood Education: The Mediating Role of Home Literacy Environment.”

Corresponding author: Ümit Ünsal KAYA, E-mail: umitunsalkaya@gmail.com

Cite this article as: Kaya, Ü.Ü., Demircan, H.Ö., & Altun, D. (2024). Adaptation and validation of the parent engagement in early childhood education survey for the Turkish context. *HAYEF: Journal of Education*, 21(3), 244-251.



Further delving into the intricacies of parental engagement, it is discerned to be a potent conduit facilitating cognitive stimulation, caregiver warmth, sensitivity, and mutual responsiveness, attributes consistently correlated with superior cognitive and socio-emotional outcomes (Black et al., 2017; Knerr et al., 2013; Landry et al., 2003; Walker et al., 2007). A plethora of studies, primarily hailing from high-income countries, have evinced positive correlations between multifaceted parental engagement and various early childhood developmental outcomes (e.g., Ferreira et al., 2018; Gutman & Feinstein, 2010; Ma et al., 2016; Sun et al., 2018). Furthermore, the engagement paradigm intricately interweaves with socioeconomic, cultural, and contextual dimensions, potentially rendering discrepancies in engagement definitions and patterns (e.g., Carreón et al., 2005; Greenberg, 2012). Such variances necessitate a nuanced understanding, cognizant of potential dissonances between familial perspectives and institutional expectations. Establishing this foundational knowledge is pivotal, bridging the chasm between diverse parental perspectives and educational institutions and underscoring the necessity for adaptive, inclusive engagement tools, such as the Parent Engagement in Early Childhood Education (PEECE) Survey.

The development of the PEECE survey was a meticulous and collaborative effort spearheaded by Gross et al. (2020) in partnership with urban public schools in the United States, known as City Schools. The primary aim of this initiative was to create an efficient and equitable measurement tool for assessing parental engagement, with a specific focus on urban districts characterized by predominantly low-income and ethnically diverse student populations. In the quest to establish this robust instrument, the research team established three pivotal criteria for identifying meaningful indicators of parental engagement: (a) a clear and demonstrable correlation with students' academic success, (b) the feasibility for widespread implementation among parents, and (c) the potential to generate actionable outcomes that could drive positive changes or improvements within district schools. To ensure the selection of the most pertinent indicators, the Delphi method was employed, involving a diverse panel of ten stakeholders. This panel included parents, educators, researchers, and social workers who rigorously evaluated a pool of 106 potential indicators of parental engagement against the established criteria. Following two rounds of the Delphi survey and a consensus meeting, a refined set of 30 indicators was selected (Bettencourt et al., 2020). These indicators spanned five critical domains: home-based activities, knowledge about a child's learning, parental expectations, quality of home-school communication, and trust and quality in parent-school-teacher relationships. When parents participate in the PEECE survey, they are tasked with rating the applicability of each item on a scale ranging from 1 (never true) to 4 (always true). Notably, the survey was designed with readability in mind, adhering to a fourth-grade reading level according to the Flesch-Kincaid readability formula (Flesch, 1979). Typically, respondents can complete the survey within a brief 2–4-minute timeframe. The PEECE survey, grounded in a sound theoretical framework, is dedicated to addressing three crucial aspects: the academic success of children, the feasibility of parental engagement irrespective of socio-demographic constraints, and the generation of actionable data that can inform targeted parental engagement plans. It is important to note that the reliability of the survey's subscales varies, with the knowledge/expectations and trust/communication subscales demonstrating strong internal consistency (Greatest Lower Bound [GLB]=0.81–0.85), while the Home-based Engagement Subscale exhibits slightly lower reliability (GLB=0.63). In summary, preliminary findings indicate that the PEECE survey serves as an effective and impartial tool for evaluating parental engagement, particularly among socioeconomically disadvantaged and African American parents in the United States. It was meticulously designed with ease of comprehension in mind, catering to English-speaking, ethnically diverse, and low-income families.

Consequently, during the translation process for the Turkish adaptation, great care was taken to preserve these distinctive features of the original survey.

Türkiye's educational landscape, particularly in early childhood education, has undergone significant transformations over the past few decades. The Turkish Ministry of National Education (MoNE) has been at the forefront of these changes, emphasizing the pivotal role of parent involvement in shaping the educational experiences of young learners. Reflecting this commitment, the MoNE introduced a series of curricular reforms and initiated parent involvement programs, marking a paradigm shift in the nation's approach to early childhood education (MoNE, 2020; Yazar et al., 2010). Historically, the concept of parent involvement was formally introduced in the national early childhood curriculum in 2002, advocating for teachers to integrate various parent involvement programs in their classrooms (Yazar et al., 2010). This emphasis was further solidified in 2006 and 2013, with the latter introducing the "integrated family support training guide," offering a plethora of parent involvement activities to bolster children's holistic development (MoNE, 2020). Such initiatives underscore the MoNE's recognition of the symbiotic relationship between home and school environments in fostering optimal child development.

While the term "involvement" (*katılım* in Turkish) has been predominantly used in the Turkish context, research studies have delved deeper into its multifaceted nature, exploring its manifestations across different educational levels. For instance, studies have investigated parent involvement in specific subjects like mathematics (Çeziktürk, 1997), its impact on students' holistic development (Atcı, 2003; Utku, 1999), and the perceptions of various stakeholders, including parents and teachers, towards it (Akkaya, 2007; Bayraktar et al., 2016; Kaya, 2007). Such studies, although insightful, present a more traditional perspective of parental involvement, often neglecting the broader scope of "engagement." Erkan, Uludağ, and Egeli (2016) provided a nuanced understanding of the perceptions surrounding parent involvement in preschool settings. Their findings highlighted the dichotomy in perceptions, with parents associating involvement primarily with in-school support, while educators and administrators viewed it as a more holistic endeavor encompassing both in-school and out-of-school contexts.

It is worth noting that while various scales (e.g. Alisanoğlu et al., 2014; Fantuzzo et al., 2000; Keleş & Dikici Sığırtmaç, 2016; Perry et al., 2002; Sımsıkı & Şendil, 2014) address "involvement," there is a glaring absence of a validated and reliable tool in Türkiye that encapsulates the broader and more intricate concept of "parental engagement." Such an oversight potentially leaves significant aspects of the parent-school interaction unexplored. This evident gap underscores the complexities and multifaceted nature of parent involvement and engagement, emphasizing the need for clear communication and alignment between home and school environments. Given this backdrop, the pressing need for a comprehensive tool like the PEECE in Türkiye becomes palpable. The PEECE survey, with its robust framework and emphasis on capturing the depth and dynamics of parental engagement, offers a promising avenue to bridge the existing gaps in the literature. Recognizing this exigency, the current research embarked on the ambitious task of adapting the PEECE survey to the Turkish context. This adaptation was approached with meticulous precision, ensuring its relevance and comprehensibility for Turkish parents, while preserving the essence and integrity of the original instrument.

This research stands as a testament to the confluence of international and Turkish perspectives on parental engagement. By introducing and adapting the PEECE survey to the Turkish academic landscape, it not only enriches the discourse on parental engagement but also paves the way for deeper investigations into parent engagement patterns among

Turkish parents. The study underscores the significance of the PEECE survey's adaptation, heralding a new era in the realm of education research in Türkiye.

Methods

This study, within its methodological ambit, has sought to marry rigorous academic principles with the necessity for contextual fidelity. The method employed not only anchors itself in globally recognized academic standards but also pivots toward ensuring that the instruments, and findings are congruent with the specific socio-cultural characteristics of the Turkish context. The ensuing sections provide a detailed exposition of the multi-layered processes adopted in the translation, adaptation, and validation of the PEECE survey for the Turkish milieu.

Translation Process

Before initiating the translation process, the requisite permissions were secured from the original survey's authors to facilitate the Turkish translation. The translation underwent several phases to ensure accuracy and fidelity as suggested by Fenn et al. (2020) and Mellinger and Hanson (2021) as can be seen in Figure 1. Initially, the instrument was translated into Turkish by two distinct individuals: one of the study's authors, who holds a degree in English Language Teaching, and a seasoned translator affiliated with Afyon Kocatepe University's Department of Translation and Interpretation. Post translation, both versions were juxtaposed to identify and rectify inconsistencies. This collaborative effort resulted in a consolidated version of the instrument.

Subsequently, an expert in English Language Teaching with a background in translation undertook the task of backtranslating the consolidated version. This back-translated version was then compared with the original to pinpoint and address any disparities. Beyond the back-translation method, the author employed additional strategies to ensure a nuanced and contextually relevant translation. To enhance the instrument's clarity, relevance, and semantic integrity as suggested by Elangovan and Sundaravel (2021), consultations were organized with a panel of five specialists spanning diverse academic domains: three from Early Childhood Education, one from the Turkish Language Department, and one specializing in Measurement and Evaluation. Feedback was also solicited from ten parents of preschool-aged children. Iterative modifications were made based on the insights garnered from these consultations. Upon finalizing the translation, the instrument was reviewed by four parents (two mothers and two fathers) to assess the clarity of the items. This meticulous process culminated in the final version of the instrument, which was then subjected to a validation study to ascertain its reliability and validity in the adapted context.



Figure 1.
The adaptation process of the Parent Engagement in Early Childhood Education Survey.

The original PEECE, crafted by Gross et al. (2022), was grounded in a demographic akin to the one employed in the current research. To ascertain the instrument's reliability, the internal consistency of its items was gauged using the Cronbach alpha coefficient. Concurrently, correlations between each item and the total score were scrutinized to discern item characteristics (Kline, 2016).

Participants and Data Collection

The adaptation research was executed in Afyonkarahisar, covering seven kindergartens—three private and four public. To ensure the ethical integrity of the study, permissions were duly obtained from the Applied Ethics and Research Center at Afyon Kocatepe University (Approval no: 158288, Date: 01.02.2023). Subsequent official endorsements were secured from Afyonkarahisar Provincial Directorate of National Education. With these authorizations in place, collaborations with local schools were established, paving the way for data collection sessions during the 2022–2023 spring semester. Teachers active within these institutions played a vital intermediary role in the recruitment process. Opting for a convenience sampling strategy, data collection was primarily conducted online using Google Forms to minimize environmental impact.

Informed consent was obtained from all participants prior to the commencement of the study, which took place between January 25, 2023, and February 15, 2023. Participation was entirely voluntary, with no personal identifying information collected. Responses were kept confidential, used solely for the research purposes, and were not shared with third parties. Out of the 648 parents approached via the WhatsApp messaging platform, 381, all with children aged between 36 and 72 months, responded and participated. This age bracket was intentionally chosen, given its developmental significance. The demographic specifics of the participating parents are elucidated in Table 1. Through this extensive adaptation process of the PEECE survey, the study not only sought to refine its contextual relevance but also envisioned laying a solid foundation for successive research initiatives in this domain. The goal was to catalyze sustained research momentum by delineating a lucid and adaptable framework pertinent to this vital educational sphere.

Table 1 presents the demographic characteristics of the parents involved in the study. The sample for the study included 381 parents, with a majority being females (88.7%). The parents' ages were mainly in the range of 31–35 years (40.4%), and a significant portion held university degrees (47.2%). Regarding employment, over half were unemployed or homemakers (52.5%).

In Türkiye, persistent inflation challenges have drawn attention to reliable economic data sources. While the latest official statistics came from the Turkish Statistical Institute (TurkStat, 2018), during this study's analysis phase in February 2023 (exchange rate: \$1=TL13.6), experts from Afyon Kocatepe University's economics department recommended utilizing more recent data from the Turkish Housing Development Administration (TOKİ, 2023). Turkish Housing Development Administration's provision of social housing and infrastructure for lower- and middle-income groups substantiates its data as a reference for income classifications. Based on this, individuals with monthly incomes up to TL16,000 are considered lower-income (53.01%), those earning between TL 16,001 and TL 32,000 are middle-income (35.43%), and those with incomes above TL 32,001 are categorized as upper-income (11.54%).

In terms of children, there was an almost equal gender distribution, and most children were aged 66–72 months (39.4%). Pre-school attendance was split almost evenly, with 49.3% having attended. The majority of children (64.3%) attended public schools.

Table 1.
Demographic Characteristics of the Sample of the Adaptation Study

Characteristics	<i>f</i>	%
Parent's gender		
Female	338	88.7
Male	43	11.3
Total	381	100
Parent's age		
22–25	14	3.7
26–30	93	24.4
31–35	154	40.4
36–40	96	25.2
41–45	24	6.3
Parent's educational level		
Elementary school	31	8.1
Secondary school	46	12.1
High school	91	23.9
University	180	47.2
Master's degree	24	6.3
PhD degree	9	2.4
Parent's employment status		
Unemployed/homemaker	200	52.5
Public worker	93	24.4
Private worker/business owner	88	23.1
Place of residence		
City center	333	87.4
Suburbs or the countryside	48	12.6
Household income		
TL16,000 or less	202	53.01
TL16,001–TL32,000	135	35.43
TL32,000 or more	44	11.54
Number of children		
1	121	31.8
2	185	48.6
3	59	15.5
4 or above	16	4.2
Child's gender		
Girl	186	48.8
Boy	195	51.2
Child's age		
36–41 months	40	10.5
42–53 months	79	20.7
54–65 months	112	29.4
66–72 months	150	39.4
Child's previous attendance to pre-school education		
Attended	188	49.3
Not attended	193	50.7
School type		
Private	136	35.7
Public	245	64.3

Note: During the data collection period, the minimum wage in Türkiye was TL 8506.

Results

The process of adapting the PEECE survey into Turkish comprised two primary studies, delineated under the headings of (1) translation and adaptation process and (2) validity and reliability studies. During the translation phase, expert linguists were consulted to ensure the fidelity of the instrument's linguistic elements. For the validity study, Confirmatory Factor Analysis (CFA) was employed as the methodological approach. Notably, Exploratory Factor Analysis (EFA), a commonly used technique in scale adaptation processes, was deliberately not chosen in the sequence of first conducting EFA followed by CFA.

This decision was informed by the understanding that EFA is generally employed when the researcher lacks preconceived notions about factor structures or lacks empirical evidence to substantiate their claims during the development or adaptation of a scale (Finch & West, 1997).

Before deploying statistical evaluations, it is imperative to scrutinize the dataset for anomalies, as recommended by Tabachnick & Fidell (2013). This study's dataset was devoid of missing entries. To maintain an adequate sample size, a minimum threshold of 200 participants was adhered to, as suggested by Kline (2016), with this study surpassing it.

Two diagnostic tests were employed to gauge the data's suitability for further analysis. The Kaiser–Meyer–Olkin (KMO) test's anticipated value should surpass .70, while the Bartlett sphericity test's *p*-value should be less than .05, as outlined by Çömlekçi & Başol (2019) and Keser et al. (2017). The outcomes, presented in Table 2, affirm the data's analytical readiness.

The congruence of the adapted instrument's theoretical framework with its application demographic was assessed using CFA, as per Şeker & Gençdoğan (2014).

Construct validity and the instrument's factor architecture were examined through CFAs. The derived three-factor structure was subjected to CFA on the 381 data points. The standardized coefficient solutions for the Turkish rendition of PEECE survey are depicted in Figure 2.

Multiple fit metrics were evaluated to gauge the model's alignment with the dataset, as illustrated in Table 3. This revealed that the dataset provided a better fit to the model.

Table 3 showcases the model fit metrics for the PEECE model, juxtaposed against acceptable benchmarks. The metrics indicate a commendable fit with the observed data, as corroborated by Çelik & Yılmaz (2013), Çömlekçi & Başol (2019), and Şimşek (2007). The confirmed three-factor structure encompasses: knowledge/expectations (items 1, 2, 4, 7, 11, 12, 14, 15, and 16), trust/communication (items 3, 6, 8, 9, 10, 18, 19, 20, 21, 22, and 24), and home-based engagement (items 5, 13, 17, 23, and 25). No item modifications were deemed necessary.

Reliability metrics were subsequently assessed. The Cronbach's alpha coefficient, indicative of the items' internal consistency, was computed. The current study showed acceptable internal consistency values, with $\alpha = .97$ for knowledge/expectations, $\alpha = .80$ for trust/communication, and $\alpha = .74$ for home-based engagement. The internal consistency value for the whole scale was $\alpha = .80$. The study yielded satisfactory internal consistency metrics, underscoring the instrument's reliability.

In addition, item–total correlations were also calculated to determine the properties of the items. It was observed that the item–total score correlations obtained by item analysis ranged between .311 and .577 (see Table 4).

Table 4 presents the reliability outcomes for the Turkish adaptation of the PEECE instrument. Upon examination of the results, it is

Table 2.
Kaiser–Meyer–Olkin and Bartlett's Test of Sphericity Results

KMO		.900
Bartlett's Test of Sphericity	Approx. chi-square	6121.892
	df	300
	<i>p</i>	.000

Note: KMO = Kaiser–Meyer–Olkin test.

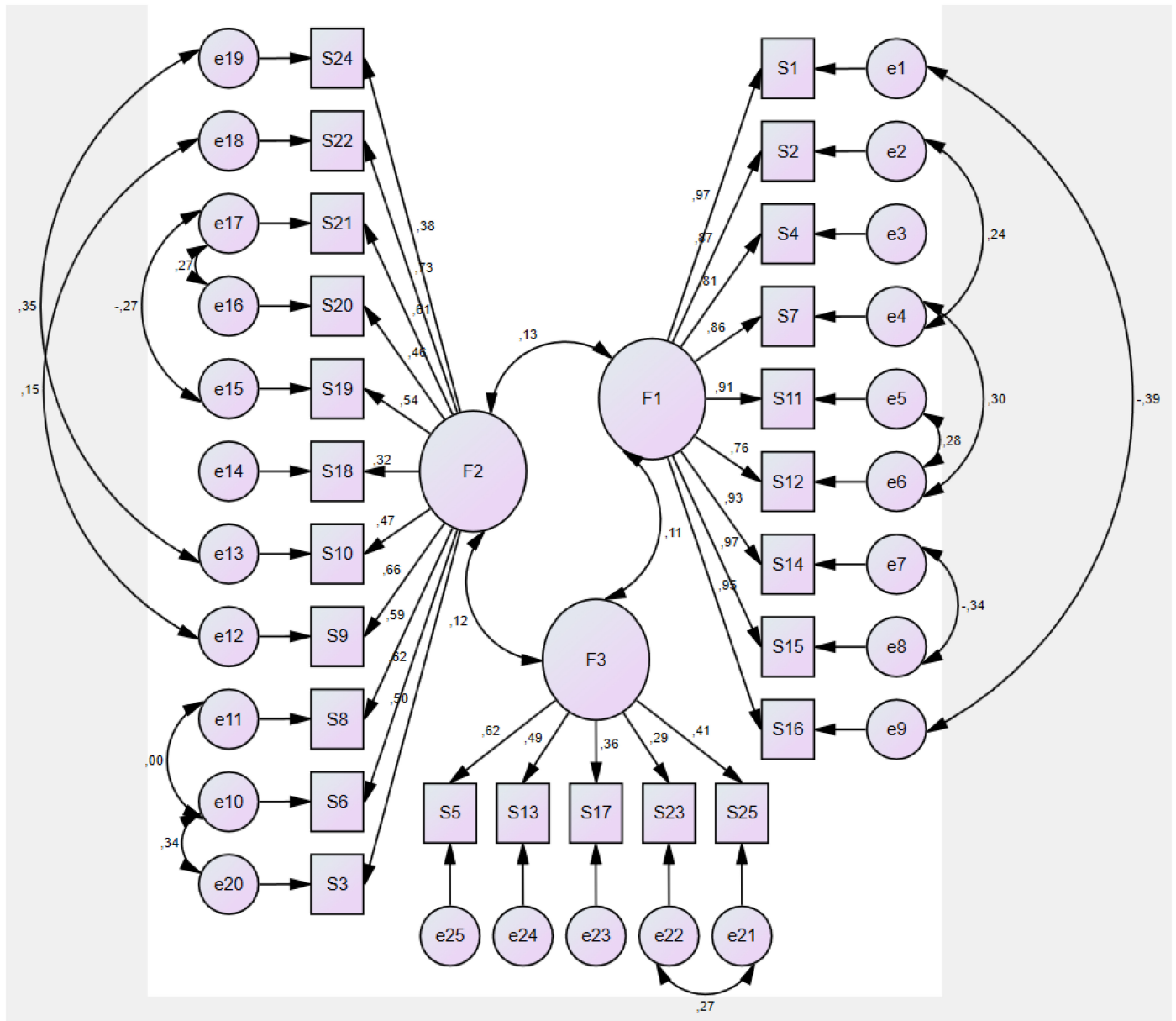


Figure 2. Confirmatory factor analysis results for the Turkish form of Parent Engagement in Early Childhood Education Survey. F1 = Knowledge/expectations; F2 = Trust/communication; F3 = Home-based engagement.

evident that the internal consistency coefficient remains robust and is not adversely impacted by the exclusion of any individual item. This observation underscores the reliability of the 25-item instrument in its current configuration. Furthermore, a deeper analysis revealed that the correlations between individual items and the overall score consistently

exceeded the .30 threshold. Such a finding suggests that each item possesses a strong capacity to discriminate effectively, as posited by DeVaus (2002).

Discussion and Conclusion

In summary, the findings of this study underscore the satisfactory reliability and validity of the Turkish version of the PEECE survey. These results affirm that the questionnaire’s items effectively capture the intended construct and exhibit strong internal correlations within their respective subscales. Consequently, the Turkish adaptation of the PEECE emerges as a valuable instrument for the assessment of parental engagement in early childhood education. Researchers and educational authorities can employ this scale to gauge the extent of parental engagement in their young children’s education, potentially leading to the enhancement of educational programs and facilities, ultimately yielding improved child outcomes. It is imperative to note that future investigations involving diverse samples can further bolster the scale’s reliability and validity.

Table 3.
The Goodness of Fit Indices Values for the Turkish Form of Parent Engagement in Early Childhood Education Survey

Model Fit Index	Acceptable Values	Values of the Turkish Form of PEECE
χ^2/SD	<5	1.312
RMSEA	<.08	.029
NFI	>.90	.946
CFI	>.95	.986
GFI	>.90	.935
AGFI	>.85	.919

Note: PEECE=Parent Engagement in Early Childhood Education Survey.

Table 4.
Item–Total correlations of the Turkish form of Parent Engagement in Early Childhood Education Survey

Items	Corrected Item–Total Correlation	Cronbach’s Alpha If Item Deleted
1	.558	.796
2	.513	.796
3	.386	.799
4	.484	.797
5	.313	.807
6	.483	.793
7	.479	.797
8	.409	.798
9	.385	.799
10	.387	.804
11	.529	.796
12	.440	.798
13	.341	.808
14	.509	.797
15	.577	.795
16	.556	.796
17	.322	.809
18	.362	.808
19	.335	.803
20	.396	.799
21	.425	.798
22	.487	.794
23	.311	.816
24	.386	.804
25	.329	.819

In alignment with the objectives of this study, the incorporation of the PEECE presents a robust framework for evaluating parent engagement in early childhood education in the Turkish context. Originally developed by Gross et al. (2022) in collaboration with City Schools in the United States, the PEECE was crafted to encompass equitable markers of parental engagement, with a particular focus on low-income, racially, and ethnically diverse communities.

The PEECE encompasses several crucial components, including home-based learning activities, parental comprehension of their children’s education, parental aspirations, and the quality of home–school communication. It also considers the quality of relationships among parents, schools, and teachers. These elements are integral to the concept of parental engagement and significantly impact children’s academic achievements.

This comprehensive approach enables a thorough evaluation of parental engagement, transcending socio-demographic boundaries and providing valuable insights into the broader educational landscape. Hence, its integration into this study not only enriches the research scope but also reinforces the theoretical foundation, facilitating a comprehensive exploration of parental engagement within the early childhood education context in Türkiye. The PEECE was thoughtfully designed to be theoretically robust, empirically linked to academic success, and accessible to parents from diverse socio-demographic backgrounds. These characteristics render the PEECE highly relevant to this study, given the diverse Turkish parental populations whose children attend early childhood education centers. Significantly, the PEECE yields actionable data that can be utilized to formulate targeted parent engagement strategies, aligning seamlessly with the research’s aim to enhance early childhood education outcomes in Türkiye.

The process of adapting the PEECE survey into Turkish involved careful attention to preserving the nuances of the original instrument,

ensuring readability, comprehensibility, and applicability within the Turkish context. In this study, the successful validation of the Turkish PEECE was achieved, as evidenced by its three-factor structure and robust reliability coefficients. Specifically, the Cronbach’s alpha values obtained for the knowledge/expectations ($\alpha = .97$), trust/communication ($\alpha = .80$), and home-based engagement ($\alpha = .74$) subscales, as well as the overall scale ($\alpha = .80$), demonstrate a commendable level of internal consistency. This internal consistency is crucial for ensuring the reliability of research outcomes. It is noteworthy that the reliability of the PEECE survey’s subscales may exhibit some variation, with the knowledge/expectations and trust/communication subscales displaying strong internal consistency (GLB=0.81–0.85), while the home-based engagement subscale shows slightly lower reliability (GLB=0.63). These findings suggest that while the overall instrument maintains its reliability when adapted to the Turkish context, specific subscales may exhibit different levels of internal consistency. In summary, preliminary findings from this study indicate that the Turkish version of the PEECE survey serves as an effective and impartial tool for assessing parental engagement, mirroring its original purpose in the United States among socioeconomically disadvantaged and African American parents. The meticulous design of the survey, with a focus on ease of comprehension, makes it suitable for use among English-speaking, ethnically diverse, and low-income families, both in its original and Turkish-adapted forms. The Turkish PEECE’s successful validation and adherence to the principles of the original instrument underscore its utility in cross-cultural research and the exploration of parental engagement within diverse cultural contexts.

For educators, this instrument offers a comprehensive and nuanced perspective on parental engagement, enabling them to develop interventions and programs that are finely tailored to the specific beliefs and inclinations of parents. By understanding the diverse aspects of parental engagement as measured by the PEECE, educators can foster stronger partnerships between parents and schools, ultimately leading to improved educational outcomes for children.

For researchers, the Turkish PEECE serves as a gold standard for exploring the multifaceted landscape of parental engagement in Türkiye. It provides a robust foundation for conducting in-depth studies, facilitating comparative analyses with other cultural contexts, and embarking on longitudinal research endeavors. The availability of this validated instrument opens doors to a wealth of research opportunities, contributing to the advancement of knowledge in the field of early childhood education and parental engagement.

Policymakers and educational strategists can leverage the insights derived from the PEECE to formulate and refine educational policies. For example, by discerning the factors that most influence parental engagement, they might prioritize investments in community outreach programs or implement school-based workshops aimed at bridging the gap between educators and parents. Furthermore, insights from the PEECE can shed light on regional disparities in parental engagement, prompting policy adjustments tailored to specific geographical or demographic contexts. By grounding their decisions in empirical evidence from the PEECE, they can ensure that educational initiatives align with the unique cultural, socio-economic, and educational fabric of Türkiye. This data-driven approach promotes the development of policies that are not only effective but also responsive to the specific needs and aspirations of Turkish families, thereby enhancing the overall quality of early childhood education in the country.

In the Turkish academic landscape, this study presents a significant advancement with the introduction of the culturally and linguistically adapted PEECE survey. Drawing upon the foundational principles of the original survey, the adapted instrument upholds three crucial criteria: (a) a discernible linkage with students’ academic achievements,

(b) the viability for broad-based application among parents, and (c) the capacity to produce tangible results conducive to fostering positive educational shifts. By enhancing our understanding of parental engagement within the Turkish context, the Turkish PEECE promises to be a foundational tool. Envisioned as a pivotal instrument, it is set to galvanize subsequent investigations into parental engagement dynamics in early childhood education, thereby deepening our academic discourse on this essential facet of education within the nation.

Availability of Data and Materials: The data that support the findings of this study are available on request from the corresponding author.

Ethics Committee Approval: Ethics committee approval was received for this study from the ethics committee of Afyon Kocatepe University (Approval no: 158288, Date: 01.02.2023).

Informed Consent: Written informed consent was obtained from the parents who participated in this study.

Peer-review: Externally peer-reviewed.

Author Contributions: Concept – Ü.Ü.K., H.Ö.D.; Design – Ü.Ü.K., H.Ö.D.; Supervision – H.Ö.D., D.A.; Resources – Ü.Ü.K.; Materials – Ü.Ü.K., H.Ö.D.; Data Collection and/or Processing – Ü.Ü.K., D.A.; Analysis and/or Interpretation – Ü.Ü.K., D.A.; Literature Search – Ü.Ü.K.; Writing Manuscript – Ü.Ü.K.; Critical Review – H.Ö.D., D.A.

Declaration of Interests: The authors have no conflict of interest to declare.

Funding: The authors declared that this study has received no financial support.

References

- Akkaya, M. (2007). *Öğretmenlerin ve velilerin okulöncesi eğitim kurumlarında uygulanan aile katılımı çalışmalarına ilişkin görüşleri*. [Master's thesis] Anadolu University.
- Alameda-Lawson, T., & Lawson, M. A. (2019). Ecologies of collective parent engagement in urban education. *Urban Education, 54*(8), 1085–1120. [CrossRef]
- Alisinanoğlu, F., Bay, D. N., & Şimşek, Ö. (2014). Okul öncesi eğitimde okul aile işbirliği ölçeğinin geçerlik ve güvenirlik çalışması. *Ahi Evran Üniversitesi Kırşehir Eğitim Fakültesi Dergisi, 15*(1), 1–13.
- Atcı, Ş. (2003). *İlköğretim IV. sınıf öğrencilerinin yaşadığımız çevre konusundaki öğrenci başarısına aile katılımının etkisi*. [Master's Thesis] İstanbul Üniversitesi.
- Barbarin, O. A., Downer, J., Odom, E., & Head, D. (2010). Home–school differences in beliefs, support, and control during public pre-kindergarten and their link to children's kindergarten readiness. *Early Childhood Research Quarterly, 3*, 358–372. [CrossRef]
- Bartolome, M. T., Mamat, N., & Masnan, A. H. (2017). Parental involvement in the Philippines: A review of literatures. *Southeast Asia Early Childhood Journal, 6*, 41–50. [CrossRef]
- Bayraktar, V., Güven, G., & Temel, Z. F. (2016). Okul öncesi kurumlarda görev yapan öğretmenlerin aile katılım çalışmalarına yönelik tutumlarının incelenmesi. *Kastamonu Eğitim Dergisi, 24*(2), 755–770.
- Bettencourt, A. F., Gross, D., Bower, K., Francis, L., Taylor, K., & Singleton, D. L. (2020). Identifying meaningful indicators of parent engagement in early learning for low income, urban families. *Urban Education*. [CrossRef]
- Black, M. M., Walker, S. P., Fernald, L. C. H., Andersen, C. T., DiGirolamo, A. M., Lu, C., McCoy, D. C., Fink, G., Shawar, Y. R., Shiffman, J., Devercelli, A. E., Wodon, Q. T., Vargas-Barón, E., Grantham-McGregor, S., & Lancet Early Childhood Development Series Steering Committee, Fink, G., Shawar, Y. R., Shiffman, J., Devercelli, A. E., Wodon, Q. T., Vargas-Barón, E., Grantham-McGregor, S., & Lancet Early Childhood Development Series Steering Committee (2017). Early childhood development coming of age: Science through the life course. *Lancet, 389*(10064), 77–90. [CrossRef]
- Boonk, L., Gijsselaers, H. J. M., Ritzen, H., & Brand-Gruwel, S. (2018). A review of the relationship between parental involvement indicators and academic achievement. *Educational Research Review, 24*, 10–30. [CrossRef]
- Bredenkamp, S. (2011). *Effective practices in early childhood education: Building a foundation instructors*. Pearson Education.
- Bronfenbrenner, U. (1974) Is early intervention effective? *Teachers College Record, 76*(2), 279–303.
- Carreón, G. P., Drake, C., & Barton, A. C. (2005). The importance of presence: Immigrant parents' school engagement experiences. *American Educational Research Journal, 42*(3), 465–498. [CrossRef]
- Çelik, H. E., & Yılmaz, V. (2013). *Lisrel 9.1 ile yapısal eşitlik modellemesi*. Anı Yayıncılık.
- Çeziktürk, Ö. (1997). *Needs Assessment for a Training Program of Parents to Promote Increased Parent Involvement in Mathematics Education* [Master's Thesis] Boğaziçi Üniversitesi.
- Clarkin-Phillips, J., & Carr, M. (2012). An affordance network for engagement: Increasing parent and family agency in an early childhood education setting. *European Early Childhood Education Research Journal, 20*(2), 177–187. [CrossRef]
- Çömlekçi, M. F., & Başol, O. (2019). Gençlerin sosyal medya kullanım amaçları ile sosyal medya bağımlılığı ilişkisinin incelenmesi. *Celal Bayar Üniversitesi Sosyal Bilimler Dergisi, 17*(4), 177–188.
- De Vaus, D. A. (2002). *Surveys in social research*. Allen & Unwin.
- Dove, M. K., Neuharth-Pritchett, S., Wright, D. W., & Wallinga, C. (2015). Parental involvement routines and former head start children's literacy outcomes. *Journal of Research in Childhood Education, 29*(2), 173–186. [CrossRef]
- Elangovan, N., & Sundaravel, E. (2021). Method of preparing a document for survey instrument validation by experts. *MethodsX, 8*, 101326. [CrossRef]
- Epstein, J. L. (1995). School/family/community partnerships. *Phi Delta Kappan, 76*(9), 701.
- Erkan, S., Uludağ, G., & Dereli, F. (2016). Okul öncesi öğretmenleri, okul Yöneticileri ve ebeveynlerin aile katılımına ilişkin algılarının incelenmesi. *Kırşehir Eğitim Fakültesi Dergisi, 17*(1), 221–240.
- Fantuzzo, J., Gadsden, V., Li, F., Sproul, F., McDermott, P., Hightower, D., & Minney, A. (2013). Multiple dimensions of family engagement in early childhood education: Evidence for a short form of the family involvement questionnaire. *Early Childhood Research Quarterly, 28*(4), 734–742. [CrossRef]
- Fantuzzo, J., Tighe, E., & Childs, S. (2000). Family involvement questionnaire: A multivariate assessment of family participation in early childhood education. *Journal of Educational Psychology, 92*(2), 367–376. [CrossRef]
- Fenn, J., Tan, C. S., & George, S. (2020). Development, validation and translation of psychological tests. *BJPsych Advances, 26*(5), 306–315. [CrossRef]
- Ferreira, T., Cadima, J., Matias, M., Vieira, J. M., Leal, T., Verschuere, K., & Matos, P. M. (2018). Trajectories of parental engagement in early childhood among dual-earner families: Effects on child self-control. *Developmental Psychology, 54*(4), 731–743. [CrossRef]
- Finch, J. F., & West, S. G. (1997). The investigation of personality structure: Statistical models. *Journal of Research in Personality, 31*(4), 439–485. [CrossRef]
- Flesch, R. (1979). How to write plain English: Let's start with the formula. Retrieved from <http://pages.stern.nyu.edu/~wstarbuc/Writing/Flesch.htm>
- Garcia Coll, C., & Magnuson, K. (2000). Cultural differences as sources of developmental vulnerabilities and resources. In J. P. Shonkoff & S. J. Meisels (Eds.). *Handbook of early childhood intervention* (2nd ed., pp. 94–114). Cambridge University Press.
- González, R. L., & Jackson, C. L. (2013). Engaging with parents: The relationship between school engagement efforts, social class, and learning. *School Effectiveness and School Improvement, 24*(3), 316–335. [CrossRef]
- Greenberg, J. P. (2012). Educational engagement practices of urban immigrant Latina mothers. *Journal of Ethnic and Cultural Diversity in Social Work, 21*(3), 231–248. [CrossRef]
- Gross, D., Bettencourt, A. F., Holmes Finch, W. H., Plesko, C., Paulson, R., & Singleton, D. L. (2022). Developing an equitable measure of parent engagement in early childhood education for urban schools. *Children and Youth Services Review, 141*, 106613. [CrossRef]
- Gross, D., Bettencourt, A. F., Taylor, K., Francis, L., Bower, K., & Singleton, D. L. (2020). What is parent engagement in early learning? Depends who you ask. *Journal of Child and Family Studies, 29*(3), 747–760. [CrossRef]
- Gutman, L. M., & Feinstein, L. (2010). Parenting behaviours and children's development from infancy to early childhood: Changes, continuities and contributions. *Early Child Development and Care, 180*(4), 535–556. [CrossRef]
- Hayakawa, M., Englund, M. M., Warner-Richter, M. N., & Reynolds, A. J. (2013). The longitudinal process of early parent involvement on student achievement: A path analysis. *NHSA Dialog, 16*(1), 103–126.

- Hoover-Dempsey, K. V., & Sandler, H. M. (1997). Why do parents become involved in their children's education? *Review of Educational Research*, 67(1), 3–42. [CrossRef]
- Jeynes, W. (2012). A meta-analysis of the efficacy of different types of parental involvement programs for urban students. *Urban Education*, 47(4), 706–742. [CrossRef]
- Kaya, R. (2007). *The Attitudes of Preschool Teachers Toward Parent Involvement*. [Master's thesis, Middle East Technical University].
- Keleş, O., & Dikici Sığirtmaç, A. (2016). Validity and reliability study of identifying parent involvement strategies scale for pre-school teachers. *Euroasian Academy of Sciences Euroasian Education and Literature Journal*, 6, 49–58.
- Keser, A., Öngen Bilir, B., & Aytaç, S. (2017). Validity and reliability study of the quantitative workload inventory. *Business Labor Industrial Relations Journal*, 19(2), 55–78.
- Kline, R. B. (2016). *Principles and practice of structural equation modeling* (4th ed). Guilford Press.
- Kner, W., Gardner, F., & Cluver, L. (2013). Improving positive parenting skills and reducing harsh and abusive parenting in low-and middle-income countries: A systematic review. *Prevention Science*, 14(4), 352–363. [CrossRef]
- Knoche, L. L., Cline, K. D., & Marvin, C. A. (2012). Fostering collaborative partnership between early childhood professionals and the parents of young children. In R. C. Pianta, W. S. Barnett, L. M. Justice & S. M. Sheridan (Eds.). *Handbook of Early Childhood Education* (pp. 370–392). The Guilford Press.
- Landry, S. H., Smith, K. E., & Swank, P. R. (2003). The importance of parenting during early childhood for school-age development. *Developmental Neuropsychology*, 24(2–3), 559–591. [CrossRef]
- Ma, X., Shen, J., Krenn, H. Y., Hu, S., & Yuan, J. (2016). A meta-analysis of the relationship between learning outcomes and parental involvement during early childhood education and early elementary education. *Educational Psychology Review*, 28(4), 771–801. [CrossRef]
- Mellinger, C. D., & Hanson, T. A. (2021). Methodological considerations for survey research: Validity, reliability, and quantitative analysis. *Linguistica Antverpiensia, New Series – Themes in Translation Studies*, 19. [CrossRef]
49. Ministry of National Education - Türkiye (MoNE) (2020). Integrated family support training guide. Retrieved from involvement. *Journal of Early Childhood Education Research*, 76–99.
- Özlen Demircan, H. Ö. (2018). Okul öncesi eğitimde aile katılımı sistemini genişletmek: Aile “Bağlılığı, ortaklığı, katılımı ve eğitimi”. *İlköğretim Online*, 17(4), 1–19. [CrossRef]
- Perry, M. A., Fantuzzo, J., & Munis, P. (2002). *Family Involvement Questionnaire (FIQ)*. University of Pennsylvania.
- Pianta, R. C., Barnett, W. S., Justice, L. M., & Sheridan, S. M. (Eds.) (2012). *Handbook of early childhood education*. Guilford press. Şeker, H., & Gençdoğan, B. (2014). In *Psikolojide ve eğitimde ölçme aracı geliştirme*. Nobel Akademik Yayıncılık..
- Şimşek, Ö. F. (2007). *Yapısal eşitlik modellemesine giriş*. Ekinoks.
- Sımsıkı, H., & Şendil, G. (2014). Baba katılım Ölçeği'nin (BAKÖ) geliştirilmesi. *Elektronik Sosyal Bilimler Dergisi*, 13(49), 104–123.
- Sun, J., Lau, C., Sincovich, A., & Rao, N. (2018). Socioeconomic status and early child development in East Asia and the Pacific: The protective role of parental engagement in learning activities. *Children and Youth Services Review*, 93, 321–330. [CrossRef]
- Tabachnick, B. G., & Fidell, L. S. (2013). *Using multivariate statistics* (6th ed). Pearson.
- Turkish Housing Development Administration (2023). [Toplu konut İdaresi Başkanlığı-TOKİ]. *Gelir Düzeyine Göre Toplu Konut Başvuru Şartları* [Housing application conditions for lower, middle and upper income groups]. Retrieved from <https://www.toki.gov.tr/basvuru-sartlari>
- Turkish Statistical Institute (2018). [Türkiye İstatistik kurumu (Turkstat)]. *Distribution of annual equivalised household disposable income by quintiles ordered by equivalised household disposable income [Eşdeğer hanehalkı kullanılabilir fert gelirine göre sıralı yüzde 20'lik gruplar itibarıyla yıllık eşdeğer hanehalkı kullanılabilir fert gelirinin dağılımı, 2006–2018]*. Retrieved from <http://www.turkstat.gov.tr/UstMenu.do?metod=temelist>
- Utku, D. Ö. (1999). *The effects of a parental involvement program on the academic and social development of 6th grade children and their parents* [Master's thesis, Middle East Technical University].
- Walker, S. P., Wachs, T. D., Gardner, J. M., Lozoff, B., Wasserman, G. A., Pollitt, E., Carter, J. A., & International Child Development Steering Group (2007). Child development: Risk factors for adverse outcomes in developing countries. *Lancet*, 369(9556), 145–157. [CrossRef]
- Yazar, A., Çelik, M., & Kök, M. (2010). Aile katılımının okul öncesi eğitimde ve 2006 okul öncesi eğitim programındaki yeri. *Atatürk Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, 12(2), 233–243.

Appendix. Erken Çocukluk Eğitimine Aile Bağlılığı Ölçeği (EÇEABÖ)

Aşağıdaki ifadeleri okuyarak size göre en doğru seçeneği daire içine alınız.				
1. Çocuğumun okuldaki başarı durumundan haberdarım.	Her zaman	Bazen	Nadiren	Hiçbir zaman
2. Davranışlarımla ve sözlerimle eğitimin ne kadar önemli olduğunu çocuğumun anlamasını sağlarım.	Her zaman	Bazen	Nadiren	Hiçbir zaman
3. Çocuğumun eğitimi için öğretmenle birlikte çalıştığımızı hissediyorum.	Her zaman	Bazen	Nadiren	Hiçbir zaman
4. Nelerin çocuğumun dikkatini çekeceğini ve onda öğrenme hevesi oluşturacağını biliyorum.	Her zaman	Bazen	Nadiren	Hiçbir zaman
5. Gündelik yaşamda, örneğin alışveriş yaparken nesnelere saydırarak veya renkleri sorarak çocuğumun bir şeyler öğrenmesine yardımcı olurum.	Her zaman	Bazen	Nadiren	Hiçbir zaman
6. Öğretmeni ve ben, çocuğum ile ilgili konularda en etkili iletişimi kurmayı biliyoruz.	Her zaman	Bazen	Nadiren	Hiçbir zaman
7. Çocuğumun okulda neler öğrendiğinden haberdardım.	Her zaman	Bazen	Nadiren	Hiçbir zaman
8. Çocuğuma verilen bir ödevi anlayamadığımda, öğretmenle rahatlıkla iletişime geçebilirim.	Her zaman	Bazen	Nadiren	Hiçbir zaman
9. Çocuğumun öğretmeni ile iletişim kurma talebime öğretmenin en kısa sürede yanıt vereceğini bilirim.	Her zaman	Bazen	Nadiren	Hiçbir zaman
10. Bu okulun anne-babalara değer verdiğinden eminim.	Her zaman	Bazen	Nadiren	Hiçbir zaman
11. Çocuğumla ileride büyüdüğünde ne olmak istediği konusunda konuşurum.	Her zaman	Bazen	Nadiren	Hiçbir zaman
12. Okulun çocuğumdan ne beklediğini biliyorum.	Her zaman	Bazen	Nadiren	Hiçbir zaman
13. Umudunu yitirmiş olsa bile denemeye devam etmesi için çocuğumu cesaretlendiririm.	Her zaman	Bazen	Nadiren	Hiçbir zaman
14. Çocuğumun okulda hangi davranışları sergileyebileceği ile ilgili net beklentilere sahibim.	Her zaman	Bazen	Nadiren	Hiçbir zaman
15. Çocuğumu bir sonraki eğitim aşamasına ne şekilde hazırladığı konusunda öğretmenden bilgi alırım.	Her zaman	Bazen	Nadiren	Hiçbir zaman
16. Hasta olmadığı sürece çocuğumun okula devam etmesi benim için önemlidir.	Her zaman	Bazen	Nadiren	Hiçbir zaman
17. Her akşam olmasa bile gınaşırı çocuğuma okulda gününün nasıl geçtiğini sorarım.	Her zaman	Bazen	Nadiren	Hiçbir zaman
18. Çocuğum evde problem yaşarsa, okulu bu konuda bilgilendirmek konusunda rahat hissederim.	Her zaman	Bazen	Nadiren	Hiçbir zaman
19. Ayda en az iki defa çocuğumun öğretmeni ile iletişim kurarız. (yüz yüze, telefonla ya da mesaj yoluyla)	Her zaman	Bazen	Nadiren	Hiçbir zaman
20. Okul insanda güzel duygular uyandıran hoş bir yerdir.	Her zaman	Bazen	Nadiren	Hiçbir zaman
21. Çocuğumun öğretmenine güvenirim.	Her zaman	Bazen	Nadiren	Hiçbir zaman
22. Çocuğumun desteğe ihtiyacı olduğunda öğretmeni beni bilgilendirir.	Her zaman	Bazen	Nadiren	Hiçbir zaman
23. Çocuğumun gün içerisindeki tablet, tv, bilgisayar gibi ekran başında kalma süresine sınır koyarım.	Her zaman	Bazen	Nadiren	Hiçbir zaman
24. Okuldaki çalışanların çocukları önemseydiğine ve değer verdiğine inanıyorum.	Her zaman	Bazen	Nadiren	Hiçbir zaman
25. Çocuğuma, ben veya evdeki başka bir yetişkin, her gün ya da 2-3 günde bir kitap okur.	Her zaman	Bazen	Nadiren	Hiçbir zaman