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A comprehensive School Readiness Assessment Tool (SRAT) for preschool children

Selçuk Şirin
New York University, Education, and Human Development Applied Psychology Department, New York, USA, sirins@nyu.edu
Tülin Güler-Yıldız
Hacettepe University, Department of Early Childhood Education, Ankara, Türkiye, tguler@hacettepe.edu.tr
Rüyam Canan Tuğberk
New York University, Education, and Human Development Applied Psychology Department, New York, USA, rct292@nyu.edu

ABSTRACT This study was designed to determine the psychometric properties of the School Readiness Assessment Tool (SRAT), a new measurement tool for assessing school readiness. The measure aims to assess preschool children's school readiness by estimating their academic, motor, social, emotional, and self-regulation skills. Both academic and motor skills are assessed through direct child observation while teacher ratings evaluate social-emotional and self-regulation skills. 228 children attending preschool participated in the study's first phase and 185 children in the second phase. The results show that the items of the new measurement tool had sufficient internal consistency. Both study phases also showed strong evidence of face (content) and construct validity (i.e., convergent and concurrent validity). Overall, the results show that SRAT is a promising new measure for school readiness among preschoolers in Türkiye. In addition to the evidence from randomized control trials, studies should be conducted to determine its psychometric properties with diverse samples, such as rural children and children not enrolled in preschool education.

Keywords: *Scale development, School readiness, School Readiness Assessment Tool (SRAT), Self-regulation, Social-emotional readiness*

Okul öncesi dönemdeki çocuklar için kapsamlı bir Okula Hazırlık Değerlendirme Aracı (OHDA)

ÖZ Bu çalışma, okula hazırbulunuşluğun değerlendirilmesinde yeni bir ölçme aracı olan Okula Hazırlık Değerlendirme Aracı (OHDA)'nın psikometrik özelliklerini belirlemek için tasarlanmıştır. Bu araç, okul öncesi dönemdeki çocukların akademik, motor, sosyal-duygusal ve öz düzenleme becerilerini tahmin ederek okula hazır bulunuşluklarını değerlendirmeyi amaçlamaktadır. Hem akademik hem de motor beceriler çocuğun doğrudan gözlemlenmesiyle değerlendirilirken, sosyal-duygusal ve öz düzenleme becerileri öğretmen derecelendirmeleriyle değerlendirilir. Araştırmanın ilk aşamasına okul öncesi eğitime devam eden 228 çocuk ikinci aşamasına ise 185 çocuk katılmıştır. Sonuçlar, yeni ölçme aracının maddelerinin yeterli iç tutarlılığa sahip olduğunu göstermektedir. Ayrıca çalışmanın her iki aşamasında da görünüş (içerik) ve yapı geçerliliği (yani yakınsak ve eşzamanlı geçerlilik) konusunda güçlü kanıtlar mevcuttur. Genel olarak sonuçlar, OHDA'nın Türkiye'deki okul öncesi çocuklar arasında okula hazır bulunuşluk açısından umut verici yeni bir ölçme aracı olduğunu göstermektedir. Rastgele kontrol çalışmalarından elde edilen kanıtların yanı sıra kırsal kesimdeki çocuklar ve okul öncesi eğitime almayan çocuklar gibi çeşitli örneklemlerle psikometrik niteliklerini belirlemek için çalışmalar yapılmalıdır.

Anahtar Sözcükler: *Okula hazırbulunuşluk, Okula Hazırlık Değerlendirme Aracı (OHDA), Ölçek geliştirme, Öz düzenleme, Sosyal-duygusal hazırbulunuşluk*

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INTRODUCTION

A highly qualified preschool education provides the groundwork for a child to be ready for elementary school and to adapt to school without experiencing any emotional difficulties. Preschool education aims to lay the groundwork for learning in elementary school classrooms. Hence, early childhood education assumes a crucial role in preparing the child for subsequent educational phases across various disciplines (Güler Yıldız, 2022). The difficulties children may face in adapting to any level of education or moving to a higher level of education as well as the challenges in developing a sense of belonging can prevent them from effectively benefiting from the education provided. It is shown that children who can be part of a large group, have high concentration skills, are self-sufficient, and take responsibility are more ready for school adaptation (Chi et al., 2018; Mudrick et al., 2020).

School readiness typically refers to the acquisition of fundamental behavioral and academic skills essential for a child's success within the educational setting (Pianta et al., 2007; Williams et al., 2019). Several studies indicate a significant correlation between school readiness and subsequent academic achievement (Dockett & Perry, 1999; Hair et al., 2006; United Nations Children's Fund-UNICEF, 2012). Enumerates essential markers of school readiness, including rhythmic counting to 20, proper pencil grip, shoelace tying, color recognition, emotional concept comprehension, visual identification, and sustained attention (Broström, 2000). In Western contexts, readiness extends to include skills such as following instructions, adhering to classroom rules, possessing basic writing abilities, and visual perception skills (McTurk et al., 2011).

Children are expected to think and plan consciously before moving on to elementary school, focusing on their goals and ignoring distractions. The ability to consciously recall the information required by the educational program, delay gratification, and control aggressive behavior and emotions to act positively are also important skills needed to transition and readily adapt to elementary school (Bodrova & Leong, 2017), and many studies have underscored the influence of these 'self-regulation skills' on school readiness are noteworthy (Blair & Raver, 2015; Duncan & Magnuson, 2011; Hamre & Pianta, 2001; Tekin & Koçyiğit, 2020; Uyanık et al., 2021).

The Relation Between School Readiness and Self-Regulation Skills

Self-regulation is a foundational component in achieving academic success, transcending traditional academic skills like reading, writing, arithmetic, and numeracy, enabling children to master their emotions, behaviors, and cognitive processes (McClelland & Cameron, 2011). Self-regulation refers to children's capacity to effectively oversee their emotional, cognitive, and motivational reactions, thereby playing a crucial role in enhancing social, emotional, cognitive, and academic development (Blair, 2002; Blair & Diamond, 2008). This entails refining a child's skill in managing their emotions, thoughts, and actions, empowering them to engage in constructive, goal-oriented, and intentional behaviors. In the earliest years of life, emotional and cognitive self-regulation develops in an integrated manner, as both are essential for behavioral self-regulation (Bronson et al., 1990).

Extensive research has underscored the profound connection between self-regulation and various facets of school readiness from the earliest stages of life, including social competencies, academic accomplishments, the ability to learn independently, problem-solving aptitudes, engagement in play, and the quality of peer interactions (Blair & Razza, 2007; Ertürk Kara, 2017; Tekin & Koçyiğit, 2020; Uyanık et al., 2021). A child well-versed in self-regulation approaches actions with intentionality, reflecting before engaging rather than reacting impulsively (Bodrova & Leong, 2017).

In the realm of early childhood education, the nurturing of self-regulation skills is pivotal not just for immediate school readiness, but also for sustained academic growth (Ertürk Kara et al., 2018; Schmitt et al, 2015) The intertwined nature of self-regulation and school readiness reflects complex developmental trajectories influenced by both biological and environmental factors. Furthermore, self-regulation is a crucial component of resilience, mitigating the impacts of socioeconomic disparities on

school readiness (Blair & Raver, 2015). Hence, a holistic evaluation of school readiness must also incorporate the assessment of self-regulation skills to ensure a well-rounded approach to educational preparedness.

In a recent meta-analysis encompassing 57 studies involving 15,760 children aged 36 to 96 months, it was revealed that both cognitive and behavioral facets of self-regulation are linked to academic achievement in mathematics, language, and literacy, as well as social competency, albeit to differing extents (Geng et al., 2024). This study underscores the role of self-regulation as one of the key moderating factors determining children's developmental outcomes, revealing the interrelations of its components with various domains of child development. Due to these impacts of self-regulation on school readiness, self-regulation skills have also been included in the School Readiness Assessment Tool (SRAT) developed in this study.

School Readiness Scales Developed Around the World

School readiness varies by multiple factors, such as the child's measurable skills, as well as socioeconomic status, parental education level, native language, race, the child's gender, and age. Comprehensive assessments during early childhood, alongside performance measurements, have been shown to offer a deeper evaluation of school readiness by identifying the child's current life circumstances, developmental needs, and areas of improvement (Snow & Van Hemel, 2008). Therefore, various countries around the world utilize different school readiness programs and assessment tools to facilitate the transition from preschool to elementary school. In the United States, the Peabody Picture Vocabulary Test and the Woodcock-Johnson III Tests are among the most frequently used school readiness scales (Dunn & Dunn, 1997). The Peabody Picture Vocabulary Test predicts vocabulary related to receptive and expressive language skills. Offering a broader scope compared to the Peabody Test, the Woodcock-Johnson III comprises 22 subtests comprising Letter-Word Identification, Mathematics Ability, Sound Awareness, and Applied Problems (Woodcock et al., 2001). The Revised Bracken Basic Concept Scale (Bracken, 1998) and the Bracken School Readiness Assessment (Bracken, 2002) are widely used measurement tools that are applied one-on-one with the child.

Due to the common emphasis on the behavioral dimension of school readiness, the Child Observation Record (COR) and the Social Skills Rating System (SSRS) are also used to supplement these assessments. The COR enables assessors to observe, record, and rate small children in nine behaviorally significant areas of development. Similarly, the SSRS provides a comprehensive representation of various social behaviors, including empathy, self-control, and cooperation (Schweinhart et al.,1993). Although less commonly used, the Desired Results Developmental Profile (DDRP) is one of the most comprehensive assessment tools in terms of scope. Implemented within Head Start programs, this inventory evaluates children's school readiness across seven domains: cognitive, personal and social, literacy, language, mathematical, physical, and health. The DDRP is considered to be an effective tool for evaluating school readiness among children who are developing normatively from preschool to primary school (Sutter et al., 2017).

School Readiness Scales Used in Türkiye

In Türkiye, several school readiness scales that are used are largely adapted from English, but there are a few scales specifically developed for Turkish children. One of the adapted scales, the Metropolitan School Maturity Scale, is still widely used today. Developed in 1969 by Hildreth, Griffits, and McGauvran, it is one of the most utilized tests for measuring school readiness skills (Nurss & McGauvran 1974). This performance test consists of sentences, understanding words, general knowledge, numbers, matching, and copying sub-tests. The Turkish adaptation study was conducted by Oktay in 1983 and has since been used by various researchers.

However, assessments developed by Turkish scholars reveal important additional dimensions that researchers and practitioners can use to support children’s school readiness. The School Readiness Scale

- Short Form is a school readiness scale with a .91 reliability index and collects data from mothers using 15 items (Baydar et al., 2013). The Marmara School Readiness Scale (Polat-Unutkan, 2003), developed for assessing the readiness of Turkish children aged 60-78 months, collects data from both adults and children. Another School Readiness Scale evaluates the readiness levels of first-grade students based on teachers' assessments, comprising 33 items categorized into four sub-dimensions: cognitive, affective, motor, and self-care (Canbulat & Kırıktaş, 2016). Standardized readiness assessments measuring children's performance in Türkiye typically concentrate on numerical and verbal skills. For criteria gathered from adults, the emphasis is on physical, self-care, and social-emotional development skills. Importantly, qualitative research expands upon these quantitative studies by prioritizing more comprehensive attributes like self-expression, self-confidence, and eagerness to learn.

In addition to standardized tests, the presence of qualitative studies is crucial for detecting cultural differences in school readiness and understanding culture-specific expectations. For this purpose, interviews with kindergarten and primary school teachers have been conducted in Türkiye to understand the conditions and prospects of children's readiness for primary school. Furthermore, studies have found that the views of first-grade and preschool teachers regarding the school readiness process are generally similar (Erkan et al., 2021; Koçyiğit & Saban, 2014; Şahin et al., 2013; Yorgun & Sak, 2019).

The Need for Comprehensive Assessment Tools in Measuring School Readiness

In Türkiye, it's customary for all children to be deemed prepared for primary school entry at 69 months, although parents have the option to request enrollment for their children at 60 months (Ministry of National Education-MoNE, 2012). Nevertheless, research in Türkiye highlights that age alone doesn't suffice as a criterion for measuring school readiness. Relatively, essential indicators include social-emotional skills, motor abilities, and self-care aptitude (Koçyigit & Kayılı, 2014). Failing to recognize children who aren't prepared for school can widen the disparity between those lacking in school readiness and their peers, impacting their academic journey (Mercan Uzun & Alat, 2017).

Furthermore, holistic child development approaches encompass all aspects of survival, development, learning, and participation, including not only verbal and intellectual abilities and knowledge, but also social skills, health, and healthy eating (Erkan et al., 2021). Particularly in multicultural communities, standardized tests applied to children and adapted from different cultures were reported to have multiple reliability and validity issues in prior studies (Boivin et al., 1996; Nijenhuis et al., 2004; Shuttleworth-Edwards, 2016). Therefore, using culturally grounded scales developed to assess school readiness with a holistic perspective enables more valid and reliable assessments of children. These assessments, in turn, allow for the development of various intervention programs or the provision of necessary guidance and support, preparing children better for their educational journey.

School readiness and adjustment to primary school are also essential in forming social policies. Assessing children's school maturity in the preschool period and developing educational policies to support early identification and support for socio-economically disadvantaged or culturally different children facing potential school adjustment problems can prevent these issues from intensifying in later years (Emond & Coad, 2019). Additionally, children who need support in school readiness skills require early intervention to acquire the fundamental abilities they should possess before starting school. However, to develop any educational program or support children in their areas of developmental need, culturally specific standard assessment tools are necessary for identifying and supporting these children.

This study aims to develop a Comprehensive School Readiness Assessment Tool (SRAT) with demonstrated validity and reliability for preschool children in Türkiye. The inclusive nature of the scale, which used data gathered from both the child and the teacher in addition to incorporating items focusing on self-regulation skills, differentiates it from existing school readiness scales. Specifically, this study is designed to establish a) the reliability of the scores from the SRAT with specific attention to inter-item consistency and b) the validity of the SRAT with specific attention to content, factorial structure, and concurrent and predictive evidence.

METHOD

Participants

The study, conducted in two phases, involved children receiving preschool education in both private and public kindergartens. A total of 413 children participated, with 228 in the initial phase and 185 in the second phase (Table 1).

Table 1.
Demographic Characteristics of the Participants

		Phase I (n=228)		Phase II (n= 185)	
		N	%	N	%
Sex	Female	134	58.8	98	53
	Male	93	41.2	87	47
Mother's Education	Primary	36	15.8	11	5.9
	Secondary	30	13.2	6	3.2
	Highschool	81	35.5	55	29.7
	Undergraduate	75	32.9	107	57.8
	Graduate	6	2.6	6	3.2
Father's Education	Primary	23	10.1	14	7.6
	Secondary	17	7.5	6	3.2
	Highschool	75	32.9	56	30.3
	Undergraduate	102	44.7	101	54.6
	Graduate	10	4.4	7	3.8
Duration of child's education	less than a year	127	55.7	49	26.5
	one year	27	11.8	87	47
	two years	66	28.9	14	7.6
	three years	8	3.5	35	18.9

The mean age of the children involved in the initial phase was 63.4 months, whereas for those engaged in the subsequent phase, it was 68.4 months. About 53.0% of the children are girls in the total sample, and approximately 47% of them have been attending school for two years. Among the parents, 57.8% of mothers and 54.9% of fathers are university graduates, and 60.5% of mothers are employed. The schools from which child data was collected include private kindergartens (48.1%), state kindergartens (29.2%), and municipality-affiliated kindergartens (22.7%).

Data Collection Instruments

This study aims to develop the School Readiness Assessment Tool (SRAT) in addition to demographic data that were collected by the children and parent participants.

Demographic Form

Crafted by the researchers, this form collected data concerning both the children in the sample group and their parents. It included questions about the children's demographic characteristics (age, gender, duration of preschool education), as well as the parents' educational status and the mother's employment status.

The School Readiness Assessment Tool (SRAT)

In the initial stage of the study, an item pool was generated to evaluate children's readiness for school. The development of this assessment tool was conducted by a research team consisting of an early childhood education specialist and two colleagues who are experts in developmental psychology and

measurement evaluation. First, theoretical frameworks regarding school readiness were reviewed (Blair & Raver, 2015; Broström, 2000; Dockett & Perry, 1999; Duncan et al., 2007; Mangione & Speth, 1998; Pianta et al., 2007; UNICEF, 2012). Then, similar tools developed for assessing school readiness in the literature were examined, including the Metropolitan Readiness Test (Nurss & McGauvran, 1974), Peabody Picture Vocabulary Test (Dunn & Dunn, 1997), Bracken Basic Concept Scale-Revised (Bracken, 1998), Bracken School Readiness Assessment (Bracken, 2002), and Denver Developmental Screening Test II (Epir & Yalaz, 1984). Additionally, the developmental achievements specified in the Preschool Education Program and the basic skills required for readiness for primary school were reviewed (MoNE, 2013).

Upon reviewing the literature and other tools assessing readiness for school, the SRAT was developed to address school readiness along three dimensions: cognitive development, motor development, and social skills and self-regulation. Information regarding the developmental areas included in the item pool and the skills addressed in these areas is provided below:
1. Cognitive skills (Visual perception, auditory perception, attention and memory, problem solving, and basic concept skills)
2. Motor skills (Fine motor skills)
3. Social skills and self-regulation (Social problem-solving, interpersonal social skills)

Below are examples of items included in the child and teacher forms.
- Show me the shape that is not in the cat picture (Child Form)
- Show me which of these is the same as the initial picture (Child Form)
- Works well despite any distraction (Teacher Form)
- Can wait patiently in the queue when necessary (Teacher Form)

Researchers administered the cognitive, fine motor development, and social problem-solving areas one-on-one with the children. Teachers were provided items related to interpersonal social skills and self-regulation skills. Thus, an initial item pool consisting of 50 items for the part administered one-on-one with children and 48 items for the part based on information obtained from teachers was prepared. The School Readiness Assessment Tool (SRAT) consists of four sections: an application guide, visuals, a scoring sheet, and a teacher form. In the one-on-one application dimension of the SRAT, each item has a corresponding visual, and these visuals are compiled in the form of a table calendar. The materials needed during the application are blue and green felt-tip/gauze pens for drawing items.

Focus group discussions were conducted to evaluate the accuracy of the SRAT items, whether they encompass the skills to be measured, and whether there are any similar or inappropriate items. The first focus group discussion consisted of 4 experts in the field of early childhood education, who also have studies on the sub-dimensions of the scale. The second focus group discussion was conducted with 4 preschool teachers with over fifteen years of professional experience. Experts evaluated the appropriateness of the items, while teachers evaluated the understandability of the items by children. A trial application with 3 children followed this. Corrections were made based on the focus group discussions. Explanatory examples were added in parentheses after some items in the Teacher Form. Finally, the opinions of two experts in early childhood mathematics education and one expert in measurement and evaluation were obtained for the items applied with the child and the teacher form, and the experts reached a high level of agreement (.92) on the items (Miles &Huberman, 1994).

Global School Readiness Teacher Form

Researchers prepared qualitative questions for teachers to assess the child's readiness for school in terms of physical, social-emotional, and academic aspects. The questions, answered with yes, no, or partially, allowed the teachers to express their overall opinion on the child's readiness. An example of these questions is as follows: “Do you think the child is ready for school regarding social and emotional development?”. In the second phase, Cronbach's alpha reliability of this form was as follows: .74 for physical readiness, .76 for social-emotional readiness, and .84 for academic readiness.

Preliteracy and Prenumeracy Skills Scale

The Preliteracy and Prenumeracy Skills Scale was used to analyze the criterion validity with the SRAT Child Form. Developed by Adato and Bekman (1989), the Preliteracy and Prenumeracy Skills Scale was used to measure the effects of preschool programs administered by the Mother Child Education Fund (AÇEV) on children's cognitive development. This scale evaluates early literacy and mathematical skills, which form the basis for acquiring reading, writing, and mathematical skills in primary school. The scale consists of verbal and numerical sections, each containing 11 questions, for a total of 22 questions, and each question also has various sub-questions. The maximum score achievable in the verbal section is 81, whereas in the numerical section, it is 58. The scale demonstrates a Cronbach's alpha reliability coefficient of 0.87 for the verbal section and 0.89 for the numerical section (Erdemir, 2022).

Child Behavior Rating Scale (CBRS)

The Child Behavior Rating Scale (CBRS), used for the criterion validity of the SRAT Teacher Form, was developed by Bronson, Goodson, Layzer, and Love (1990) to assess children's behavioral skills by individuals interacting with them. Adapted by Ertürk Kara (2017), the CBRS has two subscales: behavior regulation and interpersonal social skills. The behavior regulation dimension of the scale comprises 10 items with a reliability coefficient of .95. For the interpersonal social skills dimension, consisting of 4 items, the reliability value is .86. The overall reliability coefficient for all 14 items on the scale is .92, while for the sample in this study, it was .97.

Data Collection Procedures

The data collection process commenced with obtaining approval from the Hacettepe University Ethics Committee (Number: E-66777842-300-00003256746, Date:15.12.2023). The data collection materials were introduced to the school administrators and teachers who volunteered for the study, and then parent consent forms were handed out to the teachers. A practice schedule was created by deciding on a suitable day and time for data collection with the teachers. SRAT Children Form is conducted with children with the researcher. The implementation started with the willing children and then continued in the order determined by the teacher. After the implementation of the SRAT Children Form, with all the children in the class, the child who did not want to participate was asked again and the implementation proceeded after obtaining their consent. The research information was obtained in a quiet, distraction-free space, attended solely by the researcher and the child involved. Every child who was involved in the research was seated in a spot that allowed them to easily view the images of the SRAT-Children Form figures, displayed on a table adjusted to their height. The one-on-one implementations with the children lasted approximately 15 minutes. In scoring the SRAT, correct answers given by the children were recorded as 1, and incorrect answers were recorded as 0.

The SRAT Teacher Form, with the same code as the scoring form for each child in the implementation, was given to the teacher. Some teachers filled out the forms while the implementations were ongoing, but others filled out all the teacher forms following the implementations and then delivered them to the researchers. A five-point Likert scale was used in the teacher form to determine the frequency of children's behaviors. The scale consisted of options such as "never, rarely, sometimes, often, always". Two of the items on the scale were negative, while the others were positive items. Consistent data collection procedures were maintained throughout both the initial and subsequent phases. Since the majority of data in the first phase and all data in the second phase were gathered by a single researcher, calculating inter-rater reliability was unnecessary.

After accessing the research data, all the data was transferred to the SPSS 29 program for analysis. The data was taken in its raw form and recoded into a 1-0 matrix using answer keys suitable for the child performance test booklet codes, and the data obtained from the teachers were transferred to the SPSS in

a 5-point Likert style scale. To test whether the data obtained from the first phase was suitable for factor analysis, the Kaiser-Meyer-Olkin (KMO) and Bartlett Sphericity tests were conducted. Then, exploratory factor analysis (EFA) was conducted to explore the structure of the items of the SRAT. To determine the adequacy of the factor structures derived from the EFA, confirmatory factor analysis (CFA) was done on a new sample using the "Mplus 7" program, following the KMO and Bartlett Sphericity tests. Cronbach's alpha values were computed to assess the internal consistency of the scale. Finally, correlation analyses were conducted to examine the criterion validity and the relationship with various variables.

RESULTS

Phase I: Exploratory Factor Analysis, Validity, and Reliability

Before conducting the EFA, an analysis was conducted to determine whether the data was suitable for factorization. The analysis indicated that the scale's Kaiser-Mayer-Olkin (KMO) measurement for the child's measures was 0.85, and for the teacher's version was 0.94, while Bartlett's Test of Sphericity gave acceptable results ($p<.05$). These metrics confirmed the suitability of the data for factor analysis. Exploratory Factor Analysis (EFA) was carried out on the initial phase data to assess the pre-determined eight-factor model, which was devised from reliability and validity assessments and theoretical considerations, while adding self regulation skills as a new criterion besides previous school readiness skills (Blair & Raver, 2015; Broström, 2000; Dockett & Perry, 1999; 2004; Duncan et al., 2007; Mangione & Speth, 1998; Pianta et al., 2007; UNICEF, 2012). In this process, the evaluations for children and teachers were handled separately because of different item types. Any items with factor loadings of 0.40 or above were kept within the model, while those falling below this threshold were not included in the final analysis.

SRAT-Child Form

Item Response Theory Analysis of the Child Form: Upon examining the discriminability and difficulty levels of the items through item response theory analysis, items that demonstrated significant deviation with difficulty values either below 0.2 or above 0.8, as well as items with a discriminability index below 0.3, were identified for removal. This decision was made to ensure the integrity and effectiveness of the measurement tool by eliminating items that did not adequately differentiate among respondents or presented an inappropriate level of challenge.

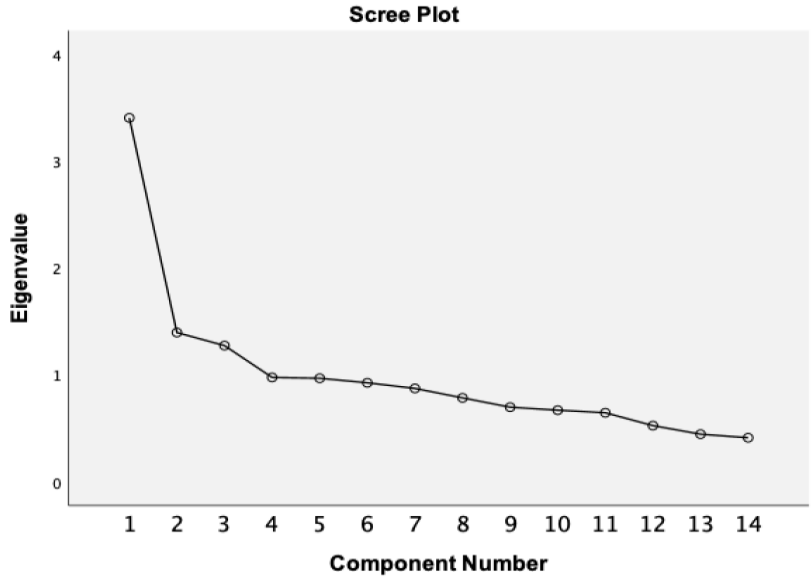
Item analysis was performed on the data gathered from children within the same group, leading to the removal of items that produced nonsensical results, thereby restructuring the scale. Accordingly, items 6A2, 6B1, 6C1, 7C2, 9A, 9C, 10C, 11A, 11B, 12A, 12E, 13A, 13B, 13C, 14B, and item 16 were eliminated. A second EFA was then performed with the remaining items. The results of the EFA, including the scree plot and eigenvalues, are presented (Table 2, Figure 1).

Table 2.
Item Difficulty and Discrimination Indices

Item number	Difficulty	Discrimination	Item number	Difficulty	Discrimination
6A2	0.95	0.27	12A	0.26	0.24
6B1	0.93	0.17	12B	0.84	0.49
6B2	0.79	0.4	12C	0.89	0.39
6C1	0.97	0.35	12D	0.54	0.29
6C2	0.73	0.52	12E	0.42	0.07
7A	0.73	0.45	13A	0.91	0.29
7B	0.64	0.54	13B	0.89	0.61
7C1	0.46	0.43	13C	0.96	0.37
7C2	0.41	-0.24	14A	0.78	0.52
8A	0.86	0.37	14B	0.93	0.49
8B	0.69	0.46	14C	0.79	0.52
8C	0.47	0.42	15A	0.61	0.54
9A	0.97	0.28	15B	0.77	0.38
9B	0.6	0.43	15C	0.33	0.31
9C	0.83	0.3	16A1	0.96	0.4
10A	0.68	0.34	16A2	0.95	0.42
10B	0.72	0.46	16A3	0.85	0.35
10C	0.66	0.26	16B	0.92	0.36
11A	0.77	0.13	16C1	0.97	0.2
11B	0.95	0.47	16C2	0.92	0.31
11C1	0.57	0.48	16C3	0.85	0.34
11C2	0.64	0.52	16D	0.91	0.41

Factor Analysis of SRAT Child Form: A principal components analysis was conducted to determine the dimensionality (Figure 1). Items exhibiting low factor loadings were systematically identified, leading to the exclusion of those with a factor loading below 0.40 from further analysis.

Figure 1.
Components of the Child Form Scree Plot



Eigenvalues for the child form were determined as 3.41 for Factor 1 and 1.40 for Factor 2. Based on both the eigenvalues and the scree plot, the child form was bi-dimensional (Table 3).

Table 3.
Factor Loadings for the Exploratory Factor Analysis of the Child Form

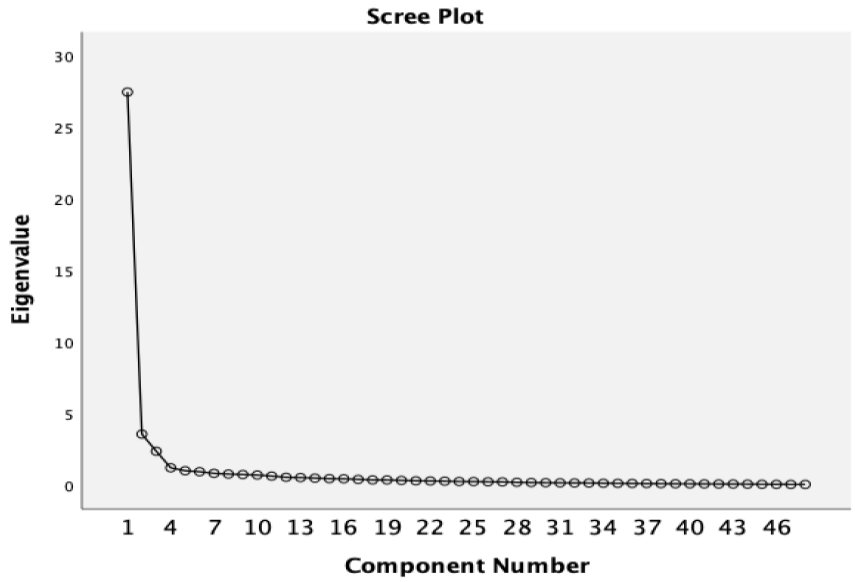
	Factor 1	Factor 2
6C2	0.61	
7C1	0.61	
7B	0.57	
8A	0.51	
8B	0.63	
8C	0.44	
9B	0.43	
10A		0.401
10B		0.759
11A	0.47	
11C1	0.53	
12B	0.59	
12C	0.46	
12D		0.64

Reliability and Validity Analysis of SRAT- Child Form: The reliability analysis of the subtest derived from child responses was performed by evaluating Cronbach's alpha value, with consideration given to the factor structure. When considered unidimensional, the overall reliability was determined to be .72, with the reliability coefficients for the first and second factors being .72 and .54, respectively. Based on these findings, it was resolved that the items would undergo revision and subsequent re-administration to enhance the instrument's reliability.

SRAT- Teacher Form

Factor Analysis of SRAT- Teacher Form: The eigenvalues for the teacher form of 4 factors are as follows: For Factor 1, 27.62; Factor 2: 3.24; Factor 3: 2.27; Factor 4: 1.05. Based on the eigenvalues and the scree plot, a two-factor model was a good fit. A significant proportion of the variance (48%) was explained by the first factor alone, with the two factors combined accounting for 58.3% of the variance. This suggests a strong dominant factor and a secondary factor that together provide a substantial explanation of the dataset. The item factor loadings for a two-factor solution are provided (Table 4, Figure 2).

Figure 2.
Component Scree Plot of the Teacher Form



Items exhibiting low factor loadings were systematically identified, leading to the exclusion of those with a factor loading below 0.40 from further analysis. After this process, additional scrutiny, informed by user feedback and evaluations, prompted the removal of items with redundant expressions among the retained items. The Chi-square test statistic demonstrated significance ($p < 0.001$) within the two-factor model, suggesting a lack of perfect congruence between the model and the empirical data (Table 4).

The Comparative Fit Index (CFI) was determined to be 0.703, falling short of the commonly recommended benchmark of 0.90 for indicative of a satisfactory fit. Similarly, the Tucker-Lewis Index (TLI) recorded a value of 0.689, remaining below the threshold of 0.90. Furthermore, the Root Mean Square Error of Approximation (RMSEA) was calculated to be 0.129, surpassing the accepted maximum of 0.08 for an acceptable fit and implying a necessity for model refinement. The Standardized Root Mean Square Residual (SRMR) was valued at 0.091, exceeding the widely accepted criterion of 0.08.

Table 4.
Item Factor Loadings and Common Variance of the Teacher Form

	Factor1 Loading	Factor2 Loading	Common Variance		Factor1 Loading	Factor2 Loading	Common Variance
T1	0.83		0.56	T25	0.77		0.7
T2	0.93		0.72	T26	0.94		0.74
T3	0.72		0.5	T27		0.41	0.24
T4	0.82		0.59	T28	0.93		0.77
T5	0.83		0.64	T29	0.71		0.7
T6	0.71		0.75	T30	0.94		0.78
T7	0.67		0.6	T31	0.78		0.71
T8	0.72		0.59	T32	0.77		0.68
T9	0.81		0.64	T33		0.52	0.33
T10	0.72		0.66	T34	0.78		0.58
T11	0.66		0.67	T35	0.73		0.62
T12	0.91		0.71	T36	0.59		0.56
T13	0.91		0.72	T37		0.6	0.41
T14	0.75		0.72	T38	0.9		0.71
T15	0.83		0.74	T39	0.64		0.68
T16	0.65		0.74	T40	0.49		0.46
T17	0.77		0.69	T41	0.58		0.52
T18	0.73		0.7	T42	0.64		0.68
T19	0.5		0.68	T43		0.53	0.44
T20	0.76		0.64	T44		0.72	0.53
T21	0.85		0.74	T45		0.74	0.57
T22	0.66		0.75	T46	0.51		0.64
T23	0.51		0.69	T47		0.73	0.59
T24	0.73		0.75	T48	0.54		0.72

In response to these findings, a thorough review of the reliability indices of the bifactorial configuration of the scale was undertaken. This evaluation prompted a decision for a meticulous re-examination of the items within the scale.

Reliability and Validity Analysis of SRAT- Teacher Form: The assessment of internal consistency for the entire subtest gathered from the teacher was conducted, yielding a value of 0.96. Based on this value, the reliability of the teacher form has been determined to be high. Items reducing reliability were identified based on the item-total correlation and removed: 24, 44, 27, 33, 37. Following expert opinion, items that complicated usability were also eliminated, items 21, 22, 28, 29, 30, 6, 11, 14, 15, 16, 17, and 18 have been excluded from the measurement.

Phase II: Confirmatory Factor Analysis, Validity, and Reliability Measurements Findings

SRAT-Child Form

In the phase II study, the analyzed data were reapplied to children aged 3-5 years attending 185 kindergartens, in light of issues arising from the application process. Items correctly answered by every child and those with factor loadings below 0.4 were decided to be eliminated. Following this, a reliability analysis was conducted for a single-factor reliability analysis was found to be .73. Upon evaluation based on factor loadings, the alpha value for the first factor was .71, while the second factor was determined to be .54. Therefore, it was decided to continue with a single-factor approach and to re-examine and modify item 12D, which was found challenging during the application.

For the child dimension (10 ITEMS), the KMO value was found to be 0.77, and Bartlett's Test of Sphericity was statistically significant ($p<0.001$). Principal Component Analysis was conducted to determine the dimensionality. The eigenvalues for the child scale for three factors were respectively identified as 3.41 for Factor 1, 1.28 for Factor 2, and 1.02 for Factor 3. Based on both the eigenvalues and the scree plot (Figure 3), it was decided that it is unidimensional (Table 5).

Figure 3.
Scree Plot of the Child Form Components

Table 5.
Child Dimension Item Factor Loadings and Common Variance Table

Items	Factor Loadings	Common Variance
6B2	1	0.528
7A	1	0.609
8C	1	0.197
11A	1	0.4
12B	1	0.767
12C	1	0.813
12D	1	0.68
14A	1	0.655
15A	1	0.599
15C	1	0.451

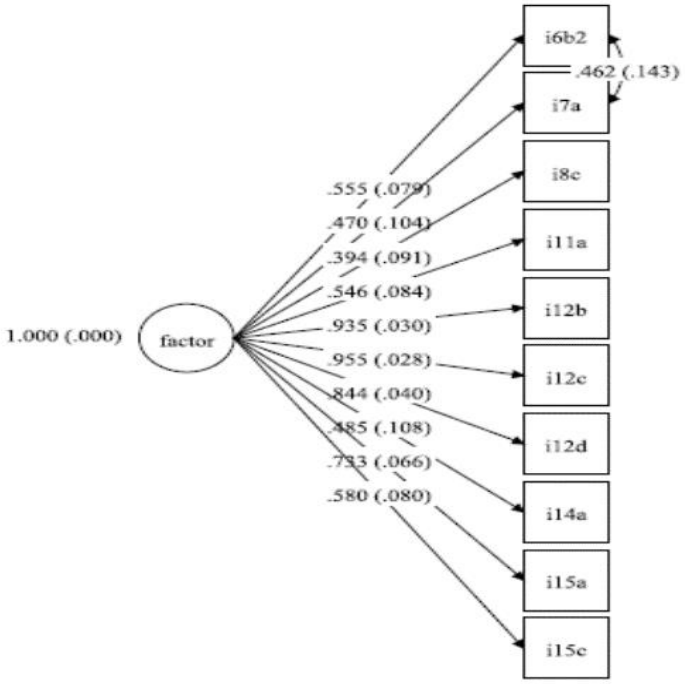
Phase II: Study Validity and Reliability Analysis of SRAT-Child Form

For the child dimension, the reliability value of the 10 items obtained was found to be .77. To assess the criterion validity of the child's basic academic skills dimension, the Numerical Verbal Skill Scale was used, and a moderate level of relationship was found between the two measurements. The child dimension exhibits a correlation of .53 with the numerical skill scale and .49 with the verbal skill scale. Additionally, it demonstrates a correlation of .59 with academic readiness, representing the teacher's overall assessment.

Confirmatory Factor Analysis (CFA), Validity, and Reliability of SRAT- Child Form

CFA was employed to authenticate the structure identified through EFA. The path diagram and findings resulting from this analysis are provided below (Figure 4). In the analysis of the child test, the initial Chi-square model fit value was determined to be 80.323, indicating statistically significant conformity of the model to the data ($p < 0.05$). An RMSEA value of 0.084 signifies that the model achieves an acceptable level of fit, suggesting room for improvement. The model's goodness of fit is further supported by a CFI value of 0.960 and a TLI value of 0.948, both indicative of a satisfactory fit. Additionally, a WRMR value of 1.057, when evaluated alongside other fit indices, confirms that the model is acceptably aligned with the observed data.

Figure 4.
CFA Analysis of the Child Form



In the validity analysis of the SRAT, three different types of validity were assessed: face validity, convergent validity, and predictive validity. For face validity, two focus group discussions were conducted separately with 5 early childhood education experts and 5 preschool teachers. In the focus group discussions, the objective of the study was explained, and all items of the SRAT and the materials used during the application were presented to the participants to gather their opinions and suggestions on each item and material. Following the analysis of data from both focus group discussions, the items were adjusted accordingly.

To assess convergent and concurrent validity, Pearson r and Kendall τ correlation coefficients were calculated between participants' ages, preschool attendance status, and pre-test scores in verbal and numerical domains against both specific variables and the general variable. The child subtest

demonstrated a moderate correlation with child age, yielding a coefficient of .42 ($p < .01$), highlighting its relevance to the developmental stage.

The correlation between the teacher subtest and child age was found to be .19 ($p < .01$), suggesting a weaker yet significant relationship. The verbal skills scale's correlation with the SRAT teacher subtest was significant at $r = .67$ ($p < .05$), establishing its concurrent validity. The SRAT teacher scale's correlation with the CBRSA scale was also significant ($r = .87$, $p < .05$), reinforcing its concurrent validity.

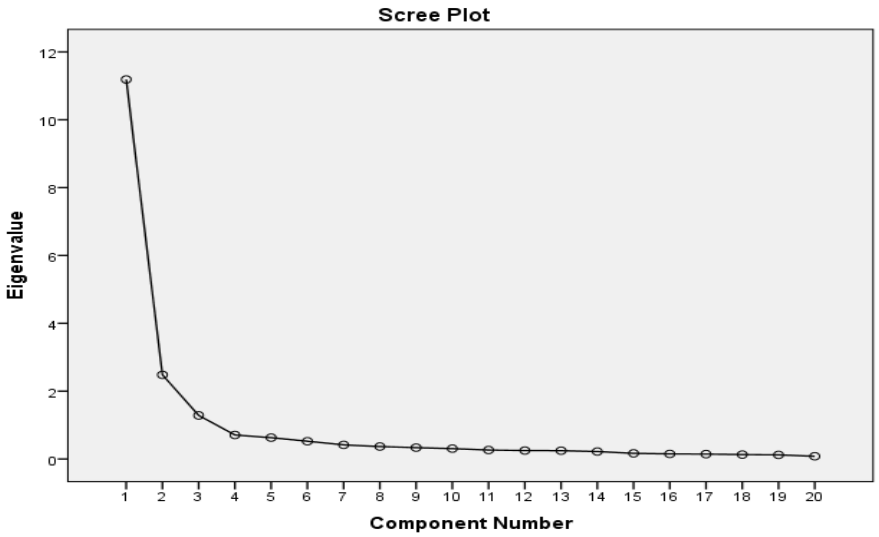
Hierarchical multiple regression was employed in two dimensions to investigate the predictive validity of the SRAT for school readiness. This analysis aimed to ascertain the proportion of variance in children's SRAT scores that could be explained by variables such as age, maternal education level, and indices of verbal and numerical skills. The findings revealed that age accounted for 28.3% of the variance in SRAT scores, with maternal education level adding 1.7% to the explained variance upon inclusion. Verbal scores contributed an extra 13.9% to the variance explained, while numerical scores further elucidated another 4.3% of the variance in SRAT scores. Overall, the model elucidated 48.2% of the variance in children's SRAT scores, demonstrating the scale's sufficient predictive validity.

The SRAT child scale's concurrent validity was affirmed through a significant correlation with the CBRSA scale ($r = .87$, $p < .05$). Moreover, the duration of preschool attendance exhibited a significant correlation ($r = .15$, $p < .05$), underscoring its importance. The SRAT child subtest showed significant relationships with scales measuring numerical skills ($r = .53$, $p< .05$), verbal skills ($r = .49$, $p< .05$), and academic skills ($r= .59$, $p< .05$), further validating its comprehensive applicability. A notable correlation was also observed between the SRAT child and teacher subtests ($r = .28$, $p < .05$), indicating their interconnectedness in assessing readiness.

SRAT-Teacher Form

The KMO value for the teacher dimension (20 items) was determined to be 0.94. Because Bartlett's test was statistically significant with $p < 0.001$, the data was determined to be suitable for factor analysis. Principal component analysis was performed to determine dimensionality. Eigenvalues for the teacher scale for three factors were determined to be 11.19 for Factor 1, 2.480 for Factor 2, and 1.28 for Factor 3, respectively. Since the eigenvalue of the first factor is 4.5 times that of the second factor, and also as seen in the scree plot (Figure 5), it has been concluded that it is unidimensional.

Figure 5.
Scree Plot of the Teacher Form Components



After running a single-factor analysis, the item loadings are provided below (Table 6).

Table 6.
Teacher Sub Dimension Item Factor Loadings and Common Variance

Items	Factor Loadings	Variance
T1	1	0.76
T2	1	0.8
T3	1	0.8
T4	1	0.731
T5	1	0.692
T7	1	0.802
T8	1	0.784
T9	1	0.637
T10	1	0.695
T11	1	0.808
T13	1	0.586
T14	1	0.822
T15	1	0.761
T17	1	0.586
T18	1	0.832
T19	1	0.854
T20	1	0.687
T21	1	0.692
T24	1	0.808
T25	1	0.817

Phase II: Study Validity and Reliability Analysis of SRAT-Teacher Form

In the reliability test conducted on the teacher dimension form comprising 20 items, the Cronbach's alpha coefficient was determined to be .96. In the study, the Child Behavior Assessment Scale (CBRS), used for the criterion validity of the teacher dimension, is also filled out by the teacher. The reliability of the CBRS for the current research sample is .97. The reliability coefficient for the Physical Readiness dimension included in the Global School Readiness Teacher Form is .74, for the Academic Readiness dimension, is .84, and for the Social Emotional Readiness dimension is .76. The relationship between the behavior regulation dimension of the teacher form (20 items) and the CBRS was found to be .87.

The presence of gender differences was assessed with a t-test. A significant difference was found in the teacher dimension, higher in girls. The average for girls was 4.38, and for boys, it was 4.04. The difference was found to be significant at p=0.001. No gender difference was found in the dimensions of physical readiness and academic readiness. In the social-emotional readiness dimension, the average value for girls was 2.73, while for boys, it was 2.59 (p=0.012).

Whether there is a significant difference in the dimensions of the scale according to the age variable was calculated with the Pearson Correlation coefficient. A moderately weak relationship was found in the SRAT child dimension, 0.42, and a weak relationship in the SRAT teacher dimension, 0.19 ($p < .05$). A low-level relationship was found with physical readiness (r=0.38), academic readiness (r=0.33), and social-emotional readiness (r=0.25).

When the significance of differences in the dimensions of the scale according to parental education status was examined with the Pearson Correlation coefficient; a significant but weak relationship was found in the child dimension (r=0.15), a significant but weak relationship with the teacher dimension (r=0.15), and a significant and moderate relationship in academic readiness (r=0.19).

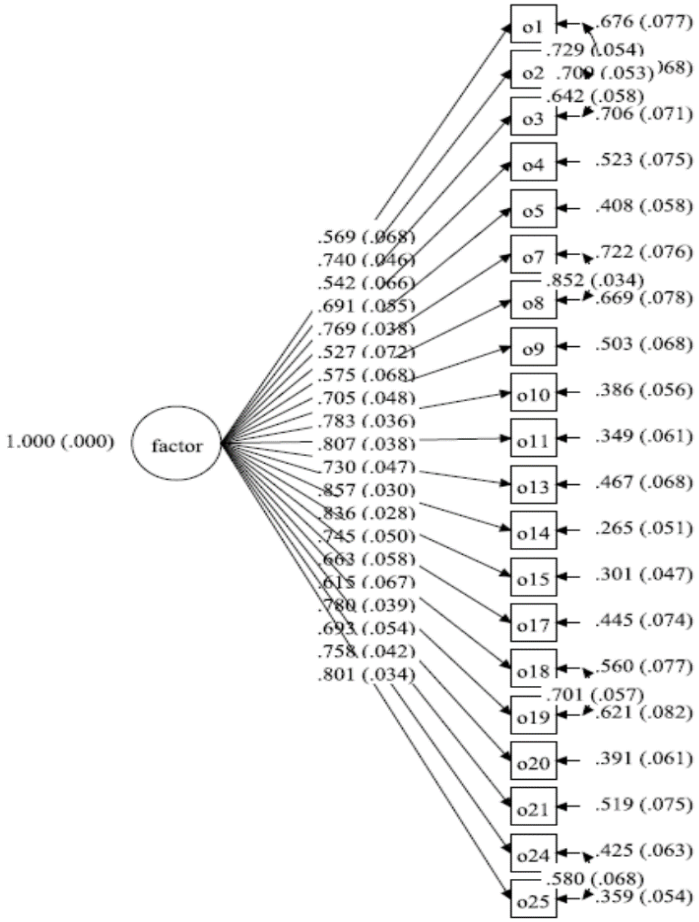
When assessing the relationship between the duration of education and the various dimensions of the scale, noteworthy but modest correlations emerged. Specifically, a significant yet weak association was observed in the child dimension, indicating a correlation coefficient (r) of 0.18. Similarly, the teacher

dimension exhibited a comparable pattern of significance and weakness in its relationship, with a correlation coefficient of 0.15. The dimension assessing academic readiness also demonstrated a significant but weak link, marked by a correlation coefficient of 0.18. Likewise, the social-emotional dimension revealed a correlation that, while significant, remained weak, with a coefficient of 0.16. These findings suggest that while the duration of education bears a relationship with the measured dimensions, the strength of these relationships is relatively modest.

Confirmatory Factor Analysis (CFA), Validity, and Reliability of SRAT- Teacher Form

CFA was employed to authenticate the structure identified through EFA (Figure 6). As per the analysis findings of the adult test, the initial Chi-square model fit value was determined to be 558.543. This indicates that the model's fit to the data is statistically significant ($p < 0.05$). The RMSEA value is 0.114, suggesting the model provides an acceptable fit.

Figure 6.
The CFA Analysis of the Teacher Form



The CFI value was found to be 0.839, indicating a good fit of the model. The NNFI (also known as TLI) value is 0.813, which also demonstrates a good fit. When evaluating the current fit indices, it can be concluded that the model provides an acceptable fit.

CONCLUSION

In this research, the development of the School Readiness Assessment Tool (SRAT) aimed to evaluate preschool children's readiness for elementary school. Following the two phases of the study, the SRAT's

validity was assessed in terms of content validity (focus group discussions with experts and teachers), construct validity (EFA, CFA, and comparisons by gender (t-test), age (Pearson Correlation Analysis), duration of preschool attendance, and parental education status), criterion validity (correlations between the child dimension and the Preliteracy and Prenumeracy Skills Scale, and between the teacher dimension and the Child Behavior Rating Scale - CBRS), and predictive validity (correlations among dimensions). Internal consistency was assessed through reliability analysis employing Cronbach's alpha coefficient.

During the development process of SRAT, the item pool created included 50 items related to motor skills, basic academic skills, and social problem-solving for the child dimension, and 48 items covering social-emotional and self-regulation skills for the teacher dimension. Focus group discussions with domain experts and preschool teachers on the content validity of SRAT indicated that the items were deemed reflective of children's readiness for school. From this perspective, SRAT was considered to adequately represent the areas it aimed to assess.

The first phase of SRAT was conducted with 228 preschool children. Based on the analyses (EFA, Correlation, etc.) conducted after the first phase, the child dimension was reduced to 37 items, and the teacher dimension to 25 items.

185 children participated in the second phase of the assessment tool. The EFA performed to establish construct validity resulted in the removal of social problem-solving items with factor loading values below .40 from the assessment tool. The EFA showed that the child dimension, assessing motor and basic academic skills, exhibited a unidimensional structure consisting of 10 items. The teacher dimension was also found to have a unidimensional structure of 20 items assessing interpersonal social skills and self-regulation skills. Subsequent CFA confirmed the unidimensional structure for both dimensions. These findings suggest that the construct validity of SRAT is adequately established. The Cronbach's alpha reliability for the child dimension is .77, and for the teacher dimension, it is .96.

When data from both dimensions of SRAT were compared by age, gender, duration of preschool attendance, and parental education status, a moderate but weak relationship was found in the child dimension by age, and a low but weak relationship in the teacher dimension. It can be said that as the child's age increases, the scores obtained from the assessment tool increase.

No significant discrepancy was observed in the child dimension by gender. In the teacher dimension, it was determined that the average score for girls (4.38) surpassed that of boys (4.04), with this contrast proving statistically significant at $p=0.012$. Parental education status showed a significant but weak relationship with both the child and teacher dimensions. Another significant and weak relationship was observed between the duration of preschool attendance and the child and teacher dimensions of SRAT. It can be said that as the parental education status and the duration of preschool attendance increase, the scores obtained from SRAT also increase. The findings obtained are considered to be theoretically expected results and support the view that the construct validity of SRAT is adequate. The significant correlation values between the scores gathered from the child and teacher sub-dimensions of SRAT and the criterion test scores have provided findings related to the criterion validity of SRAT.

SRAT is a school readiness assessment tool that offers a formative evaluation of children's basic academic skills, social and emotional skills, motor, and self-regulation skills, and can also be used to assess preschool education programs. Including participants from private and municipal kindergartens has provided a broad spectrum of sociodemographic information, which can be considered a strong aspect of the study. The fact that the statements in the child and teacher dimensions of SRAT consist of short and understandable sentences is thought to facilitate its application and evaluation by researchers.

Despite the strong aspects of this study, there are some fundamental limitations. SRAT was conducted with children attending kindergartens in Ankara. Therefore, to increase the generalizability of the validity and reliability of data obtained in the study, it is recommended to be applied to larger and more

diverse sample groups. Social problem-solving items in the child dimension were excluded from SRAT because they did not provide data at the expected level for construct validity. Direct interaction with children is important for understanding the problem, empathizing, and suggesting solutions for social problem-solving. Therefore, in future studies, validity and reliability studies can be repeated with improved different items and visuals related to social problem-solving.

The integration of self-regulation skills into the School Readiness Assessment Tool (SRAT), skills crucial for both school readiness and academic achievement, represents a notable distinctiveness compared to other school readiness assessments commonly used in Türkiye. Specifically designed for children in Türkiye, this tool stands out for its brief administration time of approximately 15 minutes and its user-friendly interface, distinguishing it from other assessment tools in this field. Its administration does not require specialized training, further highlighting its practicality and accessibility.

In conclusion, the SRAT is considered a reliable and valid instrument for identifying children at risk of school readiness issues and for developing targeted interventions for these children. The current form of SRAT is anticipated to make a noteworthy contribution to both academic discussions and applications in the field. Its cost-effectiveness, ease of use, and practicality of the scoring system are also recognized as additional advantages, further enhancing its value in educational and developmental assessment purposes.

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TÜRKÇE GENİŞLETİLMİŞ ÖZET

Okula hazırbulunuşluk genel olarak çocuğu okul ortamında başarıya taşıyacak temel davranışsal ve akademik becerilerin kazanılması olarak tanımlanmaktadır (Pianta vd., 2007; Williams vd., 2019). Araştırmalar okula hazır olma ile çocukların okul başarısı arasında önemli bir ilişki olduğunu ortaya koymaktadır (Dockett & Perry, 1999; Duncan vd., 2007; Hair vd., 2006; Mangione & Speth, 1998; UNICEF, 2012). Çocuklardan, ilkokula geçmeden önce bilinçli bir şekilde düşünmeleri ve plan yapmaları, dikkat dağıtıcılarını görmezden gelerek amaca odaklanabilmeleri beklenmektedir. Eğitim programının gerektirdiği bilgileri bilinçli bir şekilde hatırlamaları, zevki erteleyebilmeleri, saldırgan davranışı bırakabilmeleri ve duygularını kontrol altına alarak olumlu yönde hareket edebilmeleri de ilkokula hazır bir şekilde geçmeleri ve uyum göstermeleri için gereken önemli becerilerdir (Bodrova & Leong, 2017). Öz düzenleme becerileri olarak adlandırılan bu becerilerin okula hazırbulunuşluk üzerindeki etkisini ortaya koyan çalışmalar dikkat çekmektedir (Blair & Raver, 2015; Duncan & Magnuson, 2011; Hamre & Pianta, 2001; Tekin & Koçyiğit, 2020; Uyanık vd., 2021).

Erken çocukluk eğitiminde özdüzenleme becerileri okula hazır olmaya ve uzun vadeli akademik başarıya önemli katkı sağlamaktadır (McClelland & Cameron, 2011). Öz düzenleme ve okula hazırbulunuşluk, gelişimin meydana geldiği bağlamlar tarafından şekillenen biyolojik ve davranışsal düzeylerdeki bütünleşik gelişimsel süreçlerin ürünüdür. Ayrıca öz düzenleme, okula hazır bulunuşluk ve yoksulluk ile sosyoekonomik seviye eşitsizliği arasındaki köprüdür (Blair & Raver, 2015). Bu nedenle okula hazırbulunuşluğu kapsayıcı bir şekilde değerlendirmek için öz düzenleme becerilerinin de kriter olarak yer alması gereklidir.

Çeşitli ülkelerde okul öncesinden ilkokula yumuşak bir geçiş yapılması için okula hazırlık programları ve okula hazırlığa ilişkin değerlendirme araçları kullanılmaktadır. Peabody Resim Kelime Testi ve Woodcock-Johnson III Testi, Bracken Okula Hazırlık Testi, Metropolitan Okul Olgunluğu Testi bu araçlardan bazılarıdır. Türkiye'de kullanılan çoğu okula hazırbulunuşluk ölçekleri İngilizceden adapte edilmiştir. Bununla birlikte Türk çocukları için geliştirilen az sayıda ölçek de bulunmaktadır (Yorgun & Sak, 2019). Bu ölçeklerde genellikle bilgi kaynağı öğretmenler ve/veya ebeveynlerdir. Okula hazır olmayı çoklu veri kaynağı ile değerlendirme çocuk hakkında doğru karar vermede ve bu doğrultuda çocuğu desteklemede etkili olacaktır. Bu çalışmada hem çocuk hem de öğretmenin kaynak olduğu ayrıca okula hazırlıkta ve okul başarısında etkisi olan öz düzenleme becerilerinin yer aldığı Okula Hazırlık Değerlendirme Aracı'nın (OHDA) geliştirilmesi amaçlanmıştır.

Yukarıda belirtilen amaç doğrultusunda gerçekleştirilen bu ölçek geliştirme çalışması iki aşamada yürütülmüştür. Çalışmanın katılımcıları özel ve devlet anaokullarında okul öncesi eğitim almakta olan çocuklardan oluşmuştur. Ayrıca ikinci aşamada belediyeye bağlı çalışan 5 anaokulundaki çocuklardan da veri toplanmıştır. Çalışmanın birinci aşamasına 228, ikinci aşamasına 185 olmak üzere toplam 413 çocuk katılmıştır.

Çalışmanın veri toplama araçları demografik bilgi formu ve OHDA ile ölçüt geçerliği için kullanılan Çocuk Davranışı Değerlendirme Ölçeği ve Okul Öncesi Sözel ve Sayısal Beceriler ölçeğidir. OHDA okula hazır olmayı şu alanlarda değerlendirmeyi hedeflemiştir:
- Bilişsel gelişim: görsel algı, işitsel algı, dikkat ve hafıza, sosyal problem çözme, temel kavram becerileri.
- Motor gelişim: ince motor becerileri,
- Sosyal beceriler ve öz düzenleme.

OHDA'nın çocuklarla birebir uygulanan kısmının; bilişsel ve ince motor gelişim ile sosyal problem çözme alanlarından oluşmasına karar verilmiştir. Öğretmenden alınan verilerin yer aldığı kısımda ise kişilerarası sosyal beceriler ve öz düzenleme becerilerine ilişkin maddeler bulunmaktadır.

Çalışmanın birinci ve ikinci aşamasında elde edilen verilerle, OHDA'nın geçerliğine ilişkin olarak

kapsam geçerliği (uzmanlarla ve öğretmenlerle odak grup görüşmeleri), yapı geçerliği (açımlayıcı faktör analizi, doğrulayıcı faktör analizi), ölçüt geçerliği (çocuk boyutu için Okul Öncesi Sözel ve Sayısal Beceriler Ölçeği ve öğretmen boyutu için Child Behavior Rating Scale- CBRS ile arasındaki korelasyonlar) ve yordama geçerliği (boyutlar arasındaki korelasyonlar ve cinsiyet (t testi), yaş (Pearson Korelasyon Analizi), okul öncesi eğitime devam etme süresi ve anne baba öğrenim durumuna göre karşılaştırma) hesaplamaları yapılmıştır. Güvenirlik analizi için ise Cronbach alfa iç tutarlılık katsayısı hesaplanmıştır.

Yapı geçerliği için gerçekleştirilen açımlayıcı faktör analizi sonucunda çocukla birebir uygulanan kısımda yer alan sosyal problem çözme maddeleri faktör yük değerleri .40'ın altında olduğu için değerlendirme aracından çıkarılmıştır. AFA sonucunda motor beceriler, temel akademik becerileri değerlendiren çocuk boyutu 10 maddeden oluşan tek faktörlü bir yapı sergilemiştir. Öğretmen boyutunun da kişilerarası sosyal beceriler ve öz düzenleme becerilerini değerlendiren 20 maddelik tek faktörlü yapıya sahip olduğu bulunmuştur. Daha sonra yapılan DFA, her iki boyutta da tek faktörlü yapıyı doğrulamıştır. Bu bulgulara göre OHDA'nın yapı geçerliğinin yeterli düzeyde olduğu kabul edilmiştir. Çocuk boyutunun Cronbach alfa güvenirlik katsayısı .77, öğretmen boyutunun ise .96'dır. Bu doğrultuda OHDA'nın yeterli psikometrik özelliklere sahip olduğu ve 60 ay ve üzeri yaştaki çocukların ilkokula hazır olma düzeylerini çeşitli beceriler açısından değerlendirmede bir ölçme aracı olarak kullanılabileceğini göstermiştir.

OHDA'nın her iki boyutundan elde edilen veriler yaşa, cinsiyete, okul öncesi eğitime devam etme süresine ve anne baba öğrenim durumuna göre karşılaştırıldığında ise yaşa göre çocuk boyutunda orta düzeyde zayıf ilişki olduğu, öğretmen boyutunda ise düşük düzeyde zayıf bir ilişki olduğu bulunmuştur. Çocuğun yaşı arttıkça değerlendirme aracından alınan puanların arttığı söylenebilir. Cinsiyete göre çocuk boyutunda anlamlı bir farklılık bulunmamıştır. Ebeveyn öğrenim durumu hem çocuk hem de öğretmen boyutu ile anlamlı fakat zayıf bir ilişki göstermiştir. Çalışma grubunda yer alan çocukların okul öncesi eğitime devam etme süreleri açısından OHDA'nın çocuk boyutu ile öğretmen boyutu arasında anlamlı ve zayıf ilişki görülmüştür. Ebeveyn öğrenim durumu ve okul öncesi eğitime devam etme süresi arttıkça OHDA'dan alınan puanların da arttığı söylenebilir. OHDA'dan elde edilen verilerin okula hazırbulunuşlukta etkili olan çocuğun yaşı, ebeveyn öğrenim durumu, okula devam süresi ile ilişkili bulunması aracın yordama geçerliğine sahip olduğunu göstermektedir.

OHDA, çocukların temel akademik becerileri, sosyal ve duygusal becerileri, motor becerileri ve öz düzenleme becerileri açısından biçimlendirici değerlendirme sunan ve aynı zamanda okul öncesi eğitim programının değerlendirilmesinde de kullanılabilecek bir okul hazırbulunuşluk değerlendirme aracıdır. Çalışmanın katılımcılarının özel ve resmi anaokulları ile belediyeye bağlı anaokullarından olması sosyodemografik özellikler açısından geniş bir yelpazede bilgi sunmasını sağlamıştır. Bu da çalışmanın güçlü bir yönü olarak belirtilebilir. OHDA'nın çocuk ve öğretmen boyutunda yer alan ifadelerin kısa ve anlaşılır cümlelerden oluşması nedeniyle uygulanmasının ve değerlendirilmesinin araştırmacılara kolaylık sağlayacağı düşünülmektedir.

OHDA'nın, okula hazırbulunuşluk ve okul başarısıyla ilişkili olan öz düzenleme becerilerini de içermesi ülkemizde kullanılan diğer okula hazırbulunuşluk ölçeklerinden ayrılan bir özelliği olarak öne çıkmaktadır. Türkiye'de yaşayan çocuklar için geliştirilmiş bu aracın bir çocukla yaklaşık 15 dakikalık uygulama süresi ve kullanım kolaylığı özellikleri de alanda kullanılan ölçeklerden farklılaşmasını sağlamaktadır. OHDA'nın ilkokula hazırbulunuşluk açısından risk grubunda olan çocukların belirlenmesinde ve bu çocuklara sağlanacak desteğin planlanmasında geçerli ve güvenilir bir ölçme aracı olduğu ve bu haliyle alanyazına ve uygulamaya önemli katkılar sağlayacağı düşünülmektedir.