



Investigation of 36-72 Month-old Play Behaviors and Perspective-Taking Levels for Children

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Perspective-taking; play behaviors; preschool period

Abstract: This study, which was conducted to determine the relationship between play behaviors and perspective-taking levels of 36-72-month-old children and to determine the effect of sex and age variables that may be effective on play behaviors and perspective-taking levels, is a descriptive research in the relational screening model. The study group consisted of 147 children aged 36-72 months attending kindergartens and preschools affiliated with the Ministry of National Education and private kindergartens in Antakya, Hatay province center, and their 15 teachers. In the study, data were collected using the General Information Form created by the researchers, the Play Behavior Scale for 36-71 Month-old Children and the Children's Perspective-Taking Test (PCT). Among the sub-dimension and total scores of the Play Behavior Scale for 36-71 Month-old Children and the Perspective-Taking Test for Children (PTC): It was found that there was a low level negative significant relationship between perceptual perspective and recitance behavior. There was a weak yet statistically significant positive correlation between perceptual perspective-taking and social play, cognitive perspective-taking and rough-and-tumble play, and overall perspective-taking and social play. There was a significant difference in perceptual, cognitive, and total perspective-taking according to age. In the study, it was found that there was a significant relationship between children's perspective-taking skills and play behaviors.

Introduction

Play has a place in a child's life at least as important as their physiological needs. Through play, children find many developmental support opportunities, such as realizing their own potential, making new discoveries, gaining experience, and increasing their skills. Especially in the preschool period, through their experiences in play, children see that the wishes, feelings, and intentions of different individuals differ from their own wishes, feelings, and intentions. As a result, they begin to recognize and interpret other people's perspectives. Perspective-taking skills are prerequisite skills for children's empathy, social skills, and peer interaction. Play provides the space for children to experience perceptual, cognitive, and emotional perspective-taking in a natural way. Therefore, it is important for children's development to examine children's play behaviors and perspective-taking skills together. Indeed, Lillard et al (2011) stated that it is possible for children to recognize other individuals in cognitive, perceptual and emotional dimensions through play. Children in early childhood take their first steps into the social world by coming together with their peers and building their first relationships through play. Supportive peer relationships built through play are also linked to effective social interaction. Considering all these features, it can be said that play is an action that integrates and balances all social, cognitive, and affective aspects of a child's life (Aral & Durualp, 2015; Fantuzzo et al., 2004). According to Coplan and Arbeau (2009), children also

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interact socially with their peers to learn social, cognitive, and emotional regulation skills. However, the behaviors exhibited by children in the social interaction process differ. For instance, children who have difficulty communicating and playing with their peers may not want to participate in the game because they also have difficulties initiating and maintaining social interaction. According to Aslan (2017), different behaviors exhibited by children, such as silence (watching the game from the outside), playing alone, parallel play, social play, push, and shove play are related to different variables, such as temperament characteristics of the child, self-regulation skills, language levels, social cognitive skills, perspective-taking, and theory of mind.

In theoretical and practical studies on play, concepts such as perspective-taking, self-centeredness, and conservation are mentioned. It is stated that there is a relationship between play and the child's cognitive, perceptual and emotional understanding of other individuals (Lillard and al., 2011). In other words, the actions performed during play affect the child's perception of the world and others, helping them to see things from someone else's perspective. Perspective-taking skills make it easier for children to understand other people. In fact, it is stated that the development of the ability to take another person's point of view can constitute the critical period of cognitive development (Fagley et al., 2010) and that perspective-taking is the main precursor of development in different developmental areas (Tan-Niam, 2003). In this context, it has been stated that the development of perspective-taking skill is a prerequisite skill in terms of cognitive and social functions (Aslan, 2017). Children establish social relationships based on the characteristics of different people around them. Therefore, it is important for children to be able to actively use basic skills such as perspective-taking, empathy and social skills in order to make sense of and know their social environment (Aras & Aslan, 2018). Therefore, it can be said that children who are successful in perspective-taking skills are more successful in building empathy and effective social relationships (Mutlu, 2020). When the literature was examined, it was seen that the effect of different variables on the play behaviors of children attending preschool education was reported. According to sex, it was found that girls played more with dolls and kitchen sets by assuming the role of parents, while boys played more with balls and cars by taking roles such as drivers and police officers (Aksoy, 2019; Temel et al., 1999). It was observed that boys preferred vehicle and war-themed toys more than girls (Sezici & Yiğit, 2019). At the same time, it has been reported that boys prefer more active games than girls and that the scores of rough tumble play behavior differ significantly (Fabes et al., 2003; Ogelman et al., 2016; Sezici & Yiğit, 2019; Uygun & Kozikoğlu, 2019; Yokuş & Yavuz Konokman, 2018; Yoleri & Tetik, 2020). It has been found that preschool children prefer to play with peers of their own sex, and the play they play with their peers differs according to their own sex and the sex of their peers (Fabes et al., 2003). While there was no difference between sex regarding the play behavior of Turkish children living in Turkish Republic of Northern Cyprus, the scores of solitary passive play and rough tumble play in Turkish children living in Turkey showed a significant difference in boys (Ogelman et al., 2016). While children's tendency to play games differed according to the age variable, it was found that there was no significant difference according to sex, number of siblings, parents' education level, parents' occupational status, and family income level (Macun & Gündendi, 2019).

When the studies on perspective-taking were reviewed, it was seen that there were studies on perspective-taking skills (Erel, 2016; Kurdek & Rodgon, 1975; Le Blanc et al., 2003; Liao et al., 2014; Moll & Meltzoff, 2011; Selman, 1980). It has been stated that children can distinguish that the visual perspective of others differs from their own perspective from the age of four to five (Mossler et al., 1976; Selman, 1980). Kurdek and Rodgon (1975) suggested that cognitive perspective-taking abilities of children between the ages of five and eight did not change as they grew older. However, Aslan and Köksal Akyol (2016) found that children's perspective-taking scores increased with age. Recent studies revealing that three-year-old children can perform the perceptual perspective-taking skill, which is thought to be acquired between the ages of four and five, have attracted attention (Moll & Meltzoff, 2011). In a study examining children's emotional perspective-taking development, it was found that four-six-year-old children with emotional

perspective-taking positively predicted their ability to understand the intentions underlying moral violations (Erel, 2016).

It was observed that there were few studies in which perspective-taking and play behavior skills were examined together. In the studies examining the relationship between perspective-taking skills and play behaviors, it was found that the perspective-taking levels of children in the sociodramatic play group were better than those of children in the cooperative structure building play group (Burnd, 1978; Şener, 1996). Burns and Brainerd (1979) reported that dramatic play and construction play had a significant positive effect on children's perspective-taking skills. Apart from the aforementioned studies, no study was found in which play behaviors and perspective-taking were examined together. It is important to see the current status of children's play behavior and perspective-taking skills and to support children and their families when necessary. For these reasons, this study aimed to examine the relationship between play behaviors and perspective-taking skills of 36-72-month-old children.

Method

This section outlines the research design, the study group, the data collection instruments, the data collection procedure, and the methods of data evaluation and analysis.

Research Design

This study is a descriptive research in the relational screening model, which was conducted to examine the play behaviors and perspective-taking levels of 36-72-month-old children. According to Büyüköztürk et al. (2019) and Karasar (2020), the relational survey model is a type of research that aims to determine the existence and/or degree of change between two or more variables.

Study Group of the Research

The study group consisted of 147 children aged 36-72 months who attended kindergartens and preschools affiliated with the Ministry of National Education and private kindergartens in Antakya, Hatay province center, and whose parents consented to their participation in the study. The study included 15 teachers of the participating children. The study group was determined by convenience sampling method. "Convenience sampling is a non-random sampling method in which the sample selected from the main mass is determined by the judgment of the researcher" (Aaker et al., 2007). Since the data collection process of the study coincided with the COVID-19 pandemic and in order to reach more children, the study was conducted with children attending public and private kindergartens.

Table 1. Distribution of demographic characteristics of children and their teachers

Features of the Study Group		N	%
Children Age	3 years old	46	31.29
	4 years old	50	34.02
	5 years old	51	34.69
Children Sex	Girl	73	49.66
	Boy	74	50.34
Teacher Age	20-30 years old	5	33.33
	30-40 years old	6	40.00
	40-50 years old	4	26.67
Teacher Sex	Female	15	100.00
	0-5 years	4	26.67
Teacher Experience	6-10 years	6	40.00
	11-15 years	5	33.33

Data Collection Tools

In this study, the General Information Form developed by the researchers was used to collect demographic information about the children, the Play Behavior Scale for 36-71 Month-old Children developed by Metin Aslan (2017) was used to measure children's play behaviors, and Perspective-taking Test for children (PTC) developed by Aslan and Köksal Akyol (2016) was used to measure children's perspective-taking skills.

General Information Form

In this form created by the researcher, the sex and age information of the children were included. In addition, age, gender, and work experience information of the teachers were obtained through a general information form.

Play Behavior Scale for 36-71 Month-Old Children

The Play Behavior Scale for 36-71 Month-old Children developed by Metin Aslan (2017) consists of 21 items. The scale, which is completed by the child's teacher, has a five-point Likert format and consists of five sub-dimensions: reticence behavior, solitary play, parallel play, social play, and scuffle play. During the development process of the measurement tool, data were collected from a total of 444 children: 220 for exploratory factor analysis and 224 for confirmatory factor analysis. While expert opinion was used to determine content validity, exploratory and confirmatory factor analyses were applied to test construct validity. The Cronbach's Alpha internal reliability coefficient was .73 for the overall scale, .92 for the reticence behavior sub-dimension, .84 for the solitary play sub-dimension, .89 for the parallel play sub-dimension, .90 for the social play sub-dimension, and .96 for the scuffle play sub-dimension.

Perspective-Taking Test for Children (PTC)

The Perspective-Taking Test for Children (PTC) developed by Aslan and Köksal Akyol (2016) consists of three sub-dimensions. Its sub-dimensions are perceptual perspective-taking, cognitive perspective-taking, and emotional perspective-taking, and it consists of 24 items in total. The validity and reliability study of the measurement tool was completed with a total of 236 children from three, four, and five age groups. For criterion-referenced validity, the Empathy Scale for Children (ESC) and the Perspective-Taking Test (PTT) were used, and it was found that there was a highly significant positive correlation between the ESC and the PTT ($r=.80$, $p=.001$). There was also a highly significant positive correlation between PTC and PTT ($r=.73$, $p=.001$). The KR-20 coefficient for internal consistency reliability was calculated as .71, and test-retest reliability was found to be .91.

Data Collection Process

Necessary permissions were obtained from the Hatay Provincial Directorate of National Education in the fall semester of 2021-2022 with the research proposal, consent forms, ethics committee permission, data collection tools, and application petition. Institutional administrators were informed about the purpose of the research and the ethical principles to be considered. The implementation process was determined as two full days of a week.

Voluntary written informed consent was obtained from parents and teachers before data collection. The General Information Form was completed by the parent. The Play Behavior Scale for 36-71 Month-old Children was completed by the children's teacher, and the PTC was administered to the children by the researcher. The school administration provided a separate, quiet, empty room outside the classroom with a table and two chairs suitable for the child's height, where the researcher and the child could sit facing each other. The researcher showed the pictures of the PTC to the child in a mixed order as stated in the test instructions, asked the questions in the instructions to the child, and recorded the answers in writing. Each administration lasted 25-30 minutes on average. The Play Behavior Scale for 36-71-Month-Old Children was explained to each teacher individually, along with instructions on how to complete it based on their observations. Teachers filled out the Play Behavior Scale for 36-71 Month-old Children. Teachers' questions about the scale were answered by the researcher.

Data Evaluation and Analysis

In the study, firstly, the Kolmogorov-Smirnov Test was conducted to determine whether the data were normally distributed. Two t-tests and one-way ANOVA were used to analyze the effects of variables with a normal distribution. For variables with scores that did not follow a normal distribution, the Mann-Whitney U Test and Kruskal-Wallis H Test were applied. In cases where significant differences were found, the Post Hoc Test was used to identify the specific groups between which the differences occurred. The relationship between the Perspective-Taking Test for Children (PTC) and the Play Behavior Scale for 36-71 Month-old Children was analyzed with the Spearman Rank Difference Correlation Coefficient Test. The value of the Spearman correlation coefficient varies between -1 and 1. A value of 1 indicates a perfect positive correlation, meaning that as one variable increases, the other increases proportionally.

Results

The findings of the research conducted to determine children's play behaviors and perspective-taking levels are given in tables.

Table 2. Spearman's rank difference correlation coefficient results for the scores received from the play behavior scale for 36-71 month-old children and the perspective-taking test for children (PTC)

		Reticence Behavior	Solo Play	Parallel Play	Social Play	Rough Tumble Play
Perceptual Perspective	rs	-,165	-,061	,048	,143	,100
Cognitive Perspective	rs	,052	,091	,009	,044	,143
Emotional Perspective	rs	-,094	-,001	-,020	,123	,046
Total Perspective	rs	-,126	-,012	-,004	,140	,088

*p<0,05, **p<0,01

R=0,00-0,30 low 0,30-0,70 medium, 0,70-1,00 high (Büyüköztürk, 2017)

Table 2. shows that there is a low level negative relationship between perceptual perspective and reticence behavior ($r_s=-,165$, $p<0.05$). There is a low significant positive relationship between perceptual perspective and social play ($r_s=,143$, $p<0,05$), cognitive perspective and rough tumble play ($r_s=,143$, $p<0,05$), and total perspective and social play ($r_s=,140$, $p<0,05$).

Table 3. Children's rank means and mann-whitney u test results for the reticence behavior, solitary play, parallel play and pushing and shoving play subscales of the play behavior scale for 36-71 month-old children by sex

	Sex	N	Mean Rank	Total Rank	U	Z	P																																
Reticence Behavior	Girl	73	71,79	5240,50	2539,000	-,634	0,526																																
	Boy	74	76,18	5637,50				Solo Play	Girl	73	70,83	5170,50	2469,500	-,904	0,366	Boy	74	77,13	5707,50	Parallel Play	Girl	73	76,88	5612,00	2491,000	-,817	0,414	Boy	74	71,16	5266,00	Rough Tumble Play	Girl	73	54,16	3953,50	1252,50	-5,990	0,000
Solo Play	Girl	73	70,83	5170,50	2469,500	-,904	0,366																																
	Boy	74	77,13	5707,50				Parallel Play	Girl	73	76,88	5612,00	2491,000	-,817	0,414	Boy	74	71,16	5266,00	Rough Tumble Play	Girl	73	54,16	3953,50	1252,50	-5,990	0,000	Boy	74	93,57	6924,50								
Parallel Play	Girl	73	76,88	5612,00	2491,000	-,817	0,414																																
	Boy	74	71,16	5266,00				Rough Tumble Play	Girl	73	54,16	3953,50	1252,50	-5,990	0,000	Boy	74	93,57	6924,50																				
Rough Tumble Play	Girl	73	54,16	3953,50	1252,50	-5,990	0,000																																
	Boy	74	93,57	6924,50																																			

According to the results of the Table 3., it was concluded that there was no significant difference in the mean ranks of the children in the sub-dimensions of reticence behavior, solitary play and parallel play according to sex. It was concluded that there was a significant difference in the mean ranks of the jostling play sub-dimension ($U=1252,50$; $P<0,05$). It was determined that the mean rank of the boys (93,57) was significantly higher than the mean rank of the girls (54,16).

Table 4. T-test results related to the social play subdimension of the play behavior scale for 36-71 month-old children according to the sex of the children

Play Behavior Scale for 36-71 Month Old Children	Sex	N	X	S	T	Sd	P
Social Play	Girl	73	17,49	5,014	1,364	145	0,175
	Boy	74	16,41	4,652			

When Table 4. is examined, according to the results of the t-test, it was found that there was no significant difference in the scores obtained from the social play behaviors according to the sex of the children, the score of the girls in the social play sub-dimension was 17,49, while the score of the boys was 16,41.

Table 5. Children's rank means and kruskal-wallis h test results for the reticence behavior, solitary play, social play, and pushing and shoving play subdimensions of the play behavior scale for 36-71 month-old children by age

	Age	N	Mean Rank	Sd	χ^2	P
Reticence Behavior	3	46	80,13			
	4	50	74,20	2	1,924	0,382
	5	51	68,27			
Solo Play	3	46	70,49			
	4	50	69,58	2	2,470	0,291
	5	51	81,50			
Social Play	3	46	80,62			
	4	50	72,55	2	1,764	0,414
	5	51	69,45			
Rough Tumble Play	3	46	71,86			
	4	50	77,10	2	0,474	0,789
	5	51	72,89			

As seen in Table 5. according to the results of the Kruskal Wallis H test, there was no significant difference in the sub-dimensions of the Play Behavior Scale for 36-71 Month-old Children, namely, reticence behavior, solitary play, social play, and rough tumble play behaviors according to age.

Table 6. ANOVA results regarding the parallel play subdimension of the play behavior scale for 36-71 month-old children by age

	Age	N	X	Ss	Variance Source	KT	Sd	KO	F	p	Significant Difference
Parallel Play	3	46	14,09	4,109	Intergroup	175,968	2	87,984	6,418	0,002	5>3
	4	50	13,82	3,756	Within-group	19774,209	144	13,710			5>4
	5	51	16,24	3,235	Total	2150,177	146				
	Total	147	14,74	3,838							

When Table 6. is examined, it is seen that there is a significant difference in Social Play behaviors according to age. The mean of 5-year-old children (16,24) was higher than the mean of 3 (14,09) and 4-year-old children (13,82). According to the post hoc results of the Kruskal Wallis H test, it was determined that there was a significant difference in the parallel play sub-dimension in the 3-5 age range and in the 4-5 age range in favor of the five-year-olds. At the same time, no significant difference was observed in the 3-4 age range.

Table 7. Rank means and mann-whitney u test results for children's perspective-taking test subdimensions according to children's

sex

	Sex	N	Mean Rank	Total Rank	U	Z	P
Perceptual Perspective	Girl	73	72,03	5258,00	2557,000	-,578	0,563
	Boy	74	75,95	5620,00			
Cognitive Perspective	Girl	73	54,51	5439,00	5439,000	-,175	0,861
	Boy	74	73,50	5439,00			
Emotional Perspective	Girl	73	79,26	5786,00	2317,000	-1,494	0,135
	Boy	74	68,81	5092,00			
Total Perspective	Girl	73	77,46	5654,50	2448,500	-,981	0,326
	Boy	74	70,59	5223,50			

According to the results of the Table 7., it was determined that there was no significant difference in the mean ranks of the children's perspective-taking test sub-dimensions according to sex ($p>0,05$).

Table 8. Children's rank means and kruskal-wallis h test results for children's perspective-taking test sub-dimensions by age

	Age	N	Mean Rank	Sd	χ^2	P	Significant Difference
Perceptual Perspective	3	46	59,28	2	16,369	0,000	5>3
	4	50	69,18				5>4
	5	51	92,00				
Cognitive Perspective	3	46	68,23	2	7,439	0,024	5>3
	4	50	68,34				5>4
	5	51	84,75				
Emotional Perspective	3	46	73,72	2	2,230	0,328	-
	4	50	67,77				
	5	51	80,36				
Total Perspective	3	46	66,63	2	7,272	0,026	5>3
	4	50	67,58				5>4
	5	51	86,94				

According to the results of the Table 8., there was a significant difference in the mean ranks of perceptual perspective, cognitive perspective-taking sub-dimensions and total perspective according to age. A post hoc test was conducted to determine between which age groups the difference was between. As a result of the post hoc test, a significant difference was found between 5 to 3 years old and 5 to 4 years old in the perceptual perspective sub-dimension, between 5 to 3 years old and 5 to 4 years old in the cognitive perspective sub-dimension, and between 5 to 3 years old and 5 to 4 years old in the total perspective in favor of five years old.

Conclusion and Discussion

According to the results of the Spearman rank difference correlation coefficient for the scores obtained from the Play Behavior Scale for 36-71 Month-old Children and the Perspective-Taking Test for Children (PTC), it was found that there was a low level negative significant relationship between perceptual perspective and reticence behavior. There was a low level positive significant relationship between perceptual perspective and social play, between cognitive perspective and rough tumble play, and between total perspective and social play. In the related literature, there are studies showing that children who are included in play-oriented practices have a positive increase in perspective-taking skills. In the study conducted by Şener (1996), it was found that the perspective-taking scores of four- and five-year-old children attending kindergarten increased as a result of the dramatic play and construction play interventions they received. The cognitive and emotional perspective-taking scores of the children in the dramatic play group were found to be higher than the scores of the children in the construction game group. It was reported that the cognitive perspective-taking and total perspective-taking scores of the children in the dramatic play group were significantly different from those of the construction play group and the control group. As a result of our study, a low level positive significant relationship was found between perceptual perspective and social play, between cognitive perspective and rough tumble play,

and between total perspective and social play. At the same time, a negative significant relationship was observed between perceptual perspective and reticence behavior. In this direction, it can be said that perspective skills can be supported by social relationships. According to Howlin et al. (2016), perspective-taking skills form the basis of skills such as making sense of social behavior, making sense of communication, empathizing, gaining insight and self-awareness, and changing someone else's opinion by convincing them. It has been stated that children who are successful in perspective-taking skills are more successful in building social relationships (Mutlu, 2020). It can be said that the play environment provides a supportive space for children to develop social relationships and, thus, perspective-taking skills. The findings of our study also support the relevant literature. It is thought that knowing the relationship between play and perspective-taking skills is an issue that should be considered in the programs to be implemented to support children's development. It was found that the sex variable was effective in the Rough Tumble Play sub-dimension of the Play Behavior Scale for 36-71 Month-old Children. It was observed that the mean ranks of the boys (93,57) were higher than the mean ranks of the girls (54,16) in the rough tumble play sub-dimension. At the same time, it was determined that the sex variable was not effective in the sub-dimensions of reticence behavior, solitary play, parallel play and social play. In the study conducted by Yoleri and Tetik (2020), it was reported that boys' rough tumble play score was significantly higher than girls' rough tumble play score. Similarly, according to the study conducted by Uygun and Kozikoğlu (2019) titled "Investigation of the play behaviors of children attending preschool institutions", it was found that boys' rough tumble play behavior scores differed significantly from girls' scores. When the literature was examined, it was reported in many studies that the scores of boys' rough tumble play behavior differed significantly from girls' scores (Fabes et al., 2003; Ogelman et al., 2016; Sezici & Yiğit, 2019; Yokuş & Yavuz Konokman, 2019). This finding supports these studies.

In the parallel play, which is a sub-dimension of the Play Behavior Scale for 36-71 Month-old Children, according to the age variable of the children, it was found that the parallel play averages of five-year-old children were higher than the averages of three-year-old and four-year-old children. Accordingly, it was observed that there was a significant difference between three-five-year-olds and four-five-year-olds in the parallel play sub-dimension according to age. However, it was determined that there was no significant difference in the parallel play sub-dimension between the ages of three and four. This finding in our study supports Vygotsky's views on play. Contrary to Piaget, Vygotsky argued that parallel play does not end as children grow older; only its frequency may decrease, and social play will also be included (Bodrova & Leong, 2017). According to the findings of the study, it was observed that parallel play continued to exist at a significant level in five-year-old children. In the study conducted by Kılınc (2016), it was found that there was a significant difference between the ages of five and six in the sub-dimensions of silent play behavior and solitary play. It was observed that five-year-old children exhibited silent play behavior and solitary play behavior more than six-year-old children. On the other hand, Uygun and Kozikoğlu (2019) reported that the age variable was not effective in the play behaviors of children attending preschool education institutions. In the related literature, it was observed that there was no consensus on whether play behaviors differed according to the age variable. When similar results and the related literature are evaluated, although the age variable is important in terms of following a developmental sequence for play behaviors, each child may exhibit different play behaviors at the same play time. Therefore, it is thought that different variables affecting the play behaviors of preschool children may also be determinative. It was determined that the sex variable was not effective in the Perceptual Perspective-Taking, Cognitive Perspective-Taking and Emotional Perspective-Taking sub-dimensions of the Perspective-Taking Test for Children (PTC) and the total scores. In the related literature, it has been observed that there is no common view on the effect of children's sex on perspective-taking skills. In the study titled "Creativity and perspective-taking in early childhood", it was determined that sex was not a variable affecting the perceptual perspective-taking, cognitive perspective-taking and emotional perspective-taking dimensions, which are sub-dimensions of perspective-taking (Yıldız & Güney Karaman, 2017). Önem and Coşkun (2021) also reported that sex was not an effective variable in children's perspective-taking skills. The finding we obtained as a result of our research was in parallel with these studies. In addition, there are also studies that concluded that sex is effective in children's perspective-taking skills. In studies examining the

relationship between perspective-taking skills and social behavior in children, it was found that there was a significant difference in the perceptual perspective-taking and cognitive perspective-taking sub-dimensions according to sex variable (Baran & Erdoğan, 2007; Genal, 2018). According to the study conducted by Baran and Erdoğan (2007), it was reported that the scores of girls in the cognitive perspective-taking sub-dimension and the scores of boys in the perceptual perspective-taking and emotional perspective-taking sub-dimensions differed significantly. In line with the study conducted by Genal (2018), it was determined that there was a significant difference in the perceptual perspective-taking scores of the sex variable. In another study, it was stated that girls' emotional perspective-taking scores were higher than boys (Coşkun, 2019). This may be thought to be due to the differences between the sample groups studied in the studies or the differences in the measurement tools.

It was determined that the age variable was effective in the scores obtained according to the perceptual perspective-taking, cognitive perspective-taking sub-dimensions of the Perspective-Taking Test for Children (PTC) and the total scores of the Perspective-Taking Test for Children (PTC). It was found that there was a difference between the ages of three and five and between the ages of four and five in favor of the five-year-old group. In the study conducted by Aslan and Köksal Akyol (2016), it was reported that there was a significant difference between the ages of four and five against the age group of three. Accordingly, it was stated that as children's age increases, their perspective-taking scores also increase. Similarly, in the study conducted by Bal and Temel (2014), it was found that perspective-taking skills differed according to the age variable. According to this study, it was reported that there was a significant difference between the ages of four-five and four-six in perceptual perspective-taking, between the ages of four-five and four-six in cognitive perspective-taking, and between the ages of four-six and five-six in emotional perspective-taking. This finding in our study is in line with the results of the studies in the literature.

As a result, between the sub-dimension and total scores of the Play Behavior Scale for 36-71 Month-old Children and PTC: There was a low level negative significant relationship between perceptual perspective and reticence behavior. There was a low level positive significant relationship between perceptual perspective and social play, between cognitive perspective and rough tumble play, and between total perspective and social play. It was found that the sex of the children caused a significant difference in the scores obtained from the rough tumble play sub-dimension of the Play Behavior Scale for 36-71 Month-old Children. According to the ages of the children, it was concluded that there was a significant difference in the scores obtained from parallel play, which is a sub-dimension of the Play Behavior Scale for 36-71 Month-old Children, between the ages of three-five and between the ages of four-five in favor of the age of five.

It was found that the sex of the children did not cause a significant difference in the scores obtained from the perceptual perspective, cognitive perspective, emotional perspective sub-dimensions and total perspective sub-dimensions of PTC. It was determined that the age of the children was not an effective variable in the scores obtained from the emotional perspective sub-dimension of the PTC; however, the scores obtained from the perceptual perspective, cognitive perspective and total perspective showed a significant difference between the ages of three and five and between the ages of four and five in favor of the age of five.

In this direction, the following recommendations are given:

In the study, it was determined that five-year-old children had higher Perceptual Perspective-Taking, Cognitive Perspective-Taking and Total Perspective-Taking skills than three- and four-year-old children. It is known that children's perspective-taking skills are influenced by their parents' perspective-taking skills and the opportunities offered in preschool education environments. For this reason, research can be conducted to develop programs to support children's perspective-taking skills in the family environment and schools from an early age and to determine their effects on children. It was found that the gender of the children caused a difference in rough tumble play behavior and that boys exhibited this play behavior more often. The push and pull games played by boys in their natural environments, such as home, school and playgrounds can be observed and examined in detail. Research can be conducted to determine with whom they play push-up games more often, what time of the day they prefer to play, and what the content

of the games is. The study was conducted to determine children's perspective-taking skills and play behaviors. In this study, it was determined that there was a relationship between children's perspective-taking skills and play behaviors. In other studies, the relationship between perspective-taking skills and play behaviors and characteristics, such as problem-solving skills, temperament characteristics, and interpersonal communication skills, can be examined.

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