European Journal of Education Studies
ISSN: 2501 - 1111
ISSN-L: 2501 - 1111
Available on-line at: www.oapub.org/edu

doi: 10.5281/zenodo.1253998 Volume 4 | Issue 7 | 2018

THE EFFECTS OF PRESCHOOL ATTENDANCE ON PERSPECTIVE TAKING SKILLS OF TURKISH CHILDREN[i]

Melda Şahin[ii],
Durmuş Aslan
Çukurova University,
Faculty of Education,
Turkey

Abstract:
Perspective taking is one of the basic skills necessary for an individual to succeed in social life and begins to develop in early ages. In the present study, we examined the effect of preschool attendance on the perspective taking skills of children. The sample included 48-72 months children who attended (n=100) and did not attend (n=100) preschool. We utilized the "Perspective Taking Scale for Children (PTC)" developed by Aslan and Köksal-Akyol (2016) as the data collection instrument in the study. We collected the data through individual interviews conducted with the children. At the end of the study, we found that preschool attendance had a significant effect on children's perspective taking skills, and this effect commenced at early ages. Furthermore, we determined that age and preschool attendance significantly predicted the perspective taking skills of children.

Keywords: children, social skills, perspective taking, preschool attendance

1. Introduction

Successful social interactions require some basic social skills that help understand others such as empathy and perspective taking. Perspective taking is defined as the ability to understand a situation from another individual's perspective, to simultaneously grasp the ideas of others, their feelings and verbal and visual perspectives on the world (Şener, 1996). Perspective taking consists of three conceptual dimensions: perceptual, cognitive, and emotional perspective taking. Perceptual perspective taking helps an individual to be aware of the position of another and recognize the observations of this individual; cognitive perspective taking involves

[i] This article has been produced from her master's thesis titled "*The Effects of Preschool Attendance on Perspective Taking Skills of Turkish Children"*

[ii] Correspondence e-mail: meldasahin90@gmail.com

understanding the intellectual perspective of another individual along with her or his own perspective; and emotional perspective taking is to recognize the emotions of another individual (Hinnant & O'Brien, 2007; Friedman, 2011). Perspective taking is often confused with empathy. While perspective taking reflects the capacity to understand others' views, empathy is an emotional reaction towards another individual (Eisenberg & Miller, 1987). Various researchers considered that there is a positive correlation between perspective taking and empathy and perspective taking is necessary for empathy (Scarpelli-Dwyer, 2001; Decety, 2005; Peng et al., 2010).

Perspective taking has a positive impact on several social skills. Young children's understandings of others' emotions and perspectives often lead to positive consequences in their social relationships. Previous studies demonstrated that there was a positive correlation between perspective taking and prosocial behavior (Underwood & Moore, 1982; Denham, 1986; Strayer & Roberts, 1989), self-esteem (Gültekin, 2006) and interpersonal problem-solving skills (Bal & Temel, 2014). Studies also suggested that there was a significant correlation between age, gender, socioeconomic status, and parental education level and children's perspective taking skills. Study findings demonstrated that perspective taking skills develop with age and perspective taking level increased with the decrease in egocentricity level (Kurdek & Rodgon, 1975; Dicktein & Warren, 1980; Kraus, 1984) and the increase in socioeconomic status and parent empathy levels (Lupinetti, 1999; Oguz, 2006). The findings also showed that children with higher problem-solving and visual perception skills were more likely to have a higher perspective taking skills (Bal, 2013; Değirmenci, 2014). Moreover, children's perspective taking skills improved when supported by adequate education programs (Taş, 2017; Aslan, 2017; Aras, 2018).

It is widely accepted that a quality preschool education supports the social and emotional development of children. The communications between the children and their peers and adults in preschool years affect their future social skills. Children initially acquire these skills from their families and relatives and then they continue to develop these skills at preschool institutions (Gülay & Akman, 2009; Kuru-Turaşli, 2007; Durualp & Aral, 2011). Past studies on preschool education revealed that preschool attendance and the duration of this education have a positive effect on children's future social skills (Gülay & Akman, 2009). Studies demonstrated that preschool education has a positive impact on social adaptation (Kurt, 2007; Günindi, 2010), peer relationships (Ogelman & Erten-Sarıkaya, 2014), school maturity and school adaptation (Mcclelland, Morrison & Holmes, 2000; Tunçeli, 2012).

Preschool curricula include various activities such as drama, language, arts, play and music to support all areas of child development. The common goal of these activities is to support children in several developmental areas (Anonymous, 2013). Previous studies (Akın & Önder, 2003; Ünüvar, 2006; Akos, 2008; Ölçer, 2015; Aslan, 2017) demonstrated that various intervention programs significantly supported preschool children's perspective taking skills. On the other hand, the above mentioned studies were conducted only with children who attended preschool education. In the literature review, we did not find a study that compared the perspective taking skills of

children who attended and did not attend preschool. Therefore, we were not able to reach at a conclusion whether the current preschool education led to a differentiation between children who attended preschool and those who did not. Thus, we aimed to compare the perspective taking skills of children who did and did not attend preschool education in the present study.

2. Method

2.1 Participants

The study sample consisted of 200 48-72 months old children who attended (n= 100) or did not attend (n= 100) preschool in the city of Niğde, Turkey. We used simple random sampling method in the selection of the study sample. In order to access children who attend preschool, we identified five kindergartens in a lower socioeconomic region in Niğde urban center. We listed 540 children attending these kindergartens. We randomly selected 25 children from each age group (48- 54 months, 55-60 months, 61-66 months, and 67-72 months) using random numbers. Thus, we selected 100 children who attend preschool. Then we contacted the local authorities in the area where the kindergartens in the sample were located and attempted to determine children who did not attend preschool education. We listed 420 children who did not attend preschool and randomly selected 25 children from each age group (48- 54 months, 55-60 months, 61-66 months, and 67-72 months) by using random numbers. Thus, 100 children who did not attend preschool were selected for the sample. The demographic information of children and their families are presented in Table 1.

Table 1: Demographic characteristics of children and their families

Group		**Attend preschool**		**Did not attend preschool**	
		f	**%**	**f**	**%**
Gender	Girl	54	54	51	51
	Boy	46	46	49	49
Age	48-54 months	25	25	25	25
	55-60 months	25	25	25	25
	61-66 months	25	25	25	25
	67-72 months	25	25	25	25
Duration of preschool attendance	One year	79	79	0	0
	Two years	19	19	0	0
	Three years	2	2	0	0
Family type	Conventional two parents families	90	90	88	88
	Divorced parents	10	10	12	12
Mother occupation	Housewife	74	74	93	93
	Civil servants	20	20	4	4
	Artisans	4	4	2	2
	Fabric worker	2	2	1	1
Father occupation	Not working	7	7	3	3
	Civil servants	30	30	24	24

	Artisans	28	28	24	24
	Fabric worker	35	35	49	49
Mother education	Illiterate	0	0	5	5
	Literate	1	1	1	1
	Primary school	20	20	37	37
	Secondary school	22	22	27	27
	High school	33	33	20	20
	Graduate	24	24	10	10
Father education	Illiterate	0	0	2	2
	Literate	0	0	6	6
	Primary school	14	14	26	26
	Secondary school	13	13	20	20
	High school	42	42	29	29
	Graduate	31	31	17	17
Family income	1-350 $	8	8	17	17
	351-700 $	63	63	73	73
	701-1000 $	29	29	10	10

Among the children who attended preschool, 54% were girls and 46% were boys, while 51% of the children who did not attend preschool were girls and 49% were boys. Among the preschool children, 79% attended the preschool for one year, 19% for two years and 2% for three years. 90% of the parents of the children who attended preschool lived together, 10% were separated, while 88% of the parents of children who did not attend preschool lived together, and 12% were separated. 85% of the children who attend preschool lived in a nuclear family, 15% in a larger family, while 80% of children who did not attend preschool lived in a nuclear family and 20% lived in a large family. 74% of the mothers of the children who attended preschool were unemployed and 20% were civil servants, 4% were small business owners, 2% were workers, while 93% of the mothers of children who did not attend preschool were unemployed, 4% were civil servants, 2% were small business owners and 1% were workers. 7% of the fathers of the children who attended the preschool were unemployed, 30% were civil servants, 28% were small business owners, and 35% are workers; 3% of the fathers of the children who did not attend preschool were unemployed, 24% were civil servants, 24% were small business owners and 49% were workers. 1% of the mothers of the children who attended the preschool were literate, 20% were primary school graduates, 22% were junior high school graduates, 33% were high school graduates, and 24% were university graduates; 5% of the mothers of children who did not attend preschool were illiterate, 1% were literate, 37% were primary school graduates, 27% were junior high school graduates, 20% were high school graduates, and 10% were university graduates. 14% of the fathers of the children who attended the preschool were primary school graduates, 13% were junior high school graduates, 42% were high school graduates, and 31% were university graduates; 6% of the fathers of the children who did not attend preschool were literate, 26% were primary school graduates, 20% were junior high school graduates, 29% were high school graduates, and 17% were university graduates. Finally, 8% of the families of the children who attended preschool had a monthly

income of $ 1-350, 63% of $ 351-700, and 29% of $ 701-1000; 17% of the families of the children who did not attend preschool had a monthly income of $ 1-350, 73% of $ 351- $ 700 and 10% of $ 701-1000.

2.2 Data Collection Instrument

"Perspective Taking Test for Children (PTC)" developed by Aslan and Köksal-Akyol (2016) was used as the data collection instrument in the study. PTC is an illustrated test that includes three theoretical dimensions; perceptual, cognitive and emotional perspective taking. In the perceptual perspective taking dimension of the test, there are four illustrations that include various perceptual situations that children may encounter in daily life. The child is expected to correctly guess what the protagonist in the illustration can/cannot see, thus to take the perspective of the protagonist. In the cognitive perspective taking dimension, there are four short stories and four illustrations in each story that the children can experience in daily life. The researcher presents the illustrations and narrates the stories in the adequate order. After narrating the story, the researcher omitted the picture that contains the critical point of event and asks the child "what would your best friend say if we tell the same study with the remaining pictures and ask her/him why that happened (or what happened at the end)?" The child is expected to take the perspective of her/his friend based on her/his present knowledge. In the emotional perspective taking dimension of the test, there are four illustrations that represent the emotional states of fear, anger, sadness, and happiness that children may experience in their daily lives. The face of the protagonist is left blank in each image. The situation on each card is briefly explained to the child by the researcher and the child was asked about the probable feeling of the protagonist on the card. The child is expected to estimate the emotional perspective of the protagonist in the given situation.

Aslan and Köksal-Akyol (2016) investigated the validity and reliability of the ETC by applying it to 236 three - five years old children. The reliability, internal consistency coefficient and test-retest reliability coefficient were calculated for the PTC. For the determination of the internal reliability of the PTC, KR-20 Alpha coefficient was calculated. It was found that the KR-20 Alpha coefficient of PTC was .71. The test-retest reliability coefficient of PTC was .91. In the present study, PTC KR-20 Alpha coefficient was calculated as .70.

2.3 Data Collection

The data were collected at the end of the 2016-2017 academic year. Approvals of the parents of the children who attend preschool and the administrators of the schools were obtained before data collection. The researcher was introduced to the children before the application of the PTC and participated in class activities. Then, each child in the sample was interviewed in a quiet room at the school and PTC was applied. While the data were collected from the children who did not attend preschool, the parent approval was obtained after the study objective and method were initially explained to the parents. For the orientation of the child, the researcher first spent a short time with

the parent and the child. The data were then collected in an adequate room at the house via individual interviews. During the interviews, the child's responses were recorded using an interview registration form.

2.4 Data Analysis

For each correct answer, the child was awarded with "1" points and each wrong answer was worth "0" points, and the total PTC points were calculated for each child. Shapiro-Wilk test was used to determine whether the scores of the children with or without preschool attendance exhibited a normal distribution. The normality test results are presented in Table 2.

Table 2: Results of descriptive statistics and normality test of children's PTC scores

	Groups	$\bar{x}$	Sd	Median	Minimum	Maximum	Skewness	Kurtosis	Shapiro-wilk Test
48-54 months	Attend preschool	12.44	3.33	12	6	18	.236	.668	.493
	Do not attend preschool	11.44	2.55	12	7	16	.227	.632	.237
55-60 months	Attend preschool	13.80	1.91	14	11	19	.813	1.03	.057
	Do not attend preschool	12.24	2.65	12	8	18	.711	.109	.058
61-66 months	Attend preschool	15.04	2.16	15	11	19	.370	.335	.183
	Do not attend preschool	13.54	2.34	13	10	17	.151	1.340	.062
67-72 months	Attend preschool	16.36	2.11	16	13	21	.397	.486	.299
	Do not attend preschool	13.76	1.92	14	10	19	.477	1.209	.306
Total	Attend preschool	13.91	2.85	14	6	21	.366	.608	.056
	Do not attend preschool	12.74	2.53	13	7	19	.017	.258	.088

Shapiro-Wilk normality test results demonstrated that PTC scores of the children in each age group were distributed normally. Thus, the children's PTC scores were analyzed with parametric statistics. In each age group, we used independent sample *t* test to determine whether there was a significant difference between the PTC scores of the children who did and did not attend the preschool. We also conducted a regression analysis to assess the degree at which the independent variables such as preschool

attendance, age, gender, maternal education level, and parental education level predicted children's PTC scores.

3. Findings

The findings of the present study that was conducted to determine the effects of preschool attendance on the perspective taking skills of children are presented in tables. Table 3 shows the results of the *t* test conducted on PTC scores of the children who attended and did not attend preschool.

Table 3: Mean scores for children who attended preschool and children who did not attend preschool in PTC

Groups		n	$\bar{X}$	Sd	df	t	p	Effect Size
48-54 months	Attend preschool	25	12.44	3.33	48	1.192	.239	-
	Do not attend preschool	25	11.44	2.55				
55-60 months	Attend preschool	25	13.80	1.91	48	2.386	.021	.12
	Do not attend preschool	25	12.24	2.65				
61-66 months	Attend preschool	25	15.04	2.16	48	2.378	.021	.12
	Do not attend preschool	25	13.52	2.34				
67-72 months	Attend preschool	25	16.36	2.11	48	4.545	.001	.43
	Do not attend preschool	25	13.76	1.92				
All group	Attend preschool	100	13.91	2.85	198	3.068	.002	.19
	Do not attend preschool	100	12.74	2.53				

There was no significant difference between the PTC scores of 48-54 months old children who attended preschool and those who did not attend preschool (t(48)=1.192, p >.05) while PTC scores of 55-60 months old children demonstrated a significant difference based on preschool attendance (t(48)= 2.386, p <.05). PTC scores of the 55-60 months old children who attended preschool were higher ($\bar{X}$= 13.80) when compared to the PTC scores of children who did not attend preschool ($\bar{X}$= 12.24). The effect of preschool attendance on children's perspective taking skills was also observed in the 61-66 months old group. There was a significant difference between the PTC scores of 61-66 months old children who attended preschool and those who did not attend preschool (t(48)= 2.378, p <.05). PTC scores of the 61-66 months old children who attended preschool were higher ($\bar{X}$= 15.04) when compared to the PTC scores of children who did not attend preschool ($\bar{X}$= 13.52). Similarly, there was a significant difference between the PTC scores of 66-72 months old children who attended preschool when compared to that of the children who did not attend preschool (t(48)= 4.545, p <.01). The PTC scores of 61-66 months old children who attended preschool were higher ($\bar{X}$= 16.36) than the PTC scores of children who did not attend preschool ($\bar{X}$= 13.76). Finally, when the PTC scores of all the children in the sample were assessed, it was determined that the PTC scores exhibited a significant difference based on preschool attendance (t(198)= 3.068, p <.05). PTC scores of the children who attended

preschool were higher ($\overline{X}$= 13.91) when compared to the PTC scores of children who did not attend preschool ($\overline{X}$= 12.74).

Table 4: Predictors of perspective taking achievement

	Perspective taking achievement		
	Model 1	**Model 2**	
Variable	**B**	**B**	**95%CI**
Constant	10.92**	13.42	[12.12, 14.72]
Age	1.06**	1.06	[.76, 1.36]
Preschool attendance		1.67	[2.34, .99]
R^2	.18		.27
F	43.65**		36.43**
ΔR^2			.27
ΔF			.08**

Note: N=200; CI=confidence interval; **p<.01

We also conducted a stepwise regression analysis with the perspective taking achievement as the dependent variable and preschool attendance, gender, age, mother's education level, father's education level, mother's occupation and father's occupation as independent variables. It was determined that most of the independent variables had an insignificant role in explaining the children's perspective taking achievements. In contrast, child's age and preschool attendance significantly explained 27% of the variance in perspective taking achievement (ΔR^2 =.27) as measured by the PTC.

4. Discussion

In the present study, we investigated the effect of preschool attendance on the perspective taking skills of 48-72 months old children. We found that there was no significant differences the perspective taking scores of the children who attended preschool were significantly higher when compared to that of the children who did not attend preschool, except for 48-54 months. The study findings demonstrated that preschool attendance has a significant effect on children's perspective taking skills. Literature review did not reveal any studies that examined the effect of preschool attendance on children's perspective taking skills. On the other hand, there were several studies that examined the effect of preschool attendance on the social development of children and the findings of these studies were consistent with the present study results, reporting that preschool attendance had a positive impact on social development of the children. Aboud (2006) compared social development of children who attended preschool and did not attend preschool in rural areas and found that children with preschool attendance exhibited a better social development when compared to children who did not attend preschool. Similar results were obtained in studies conducted with older age groups. Schlotter (2011) examined the social skill levels of 2351 secondary school students with and without preschool attendance. The findings of that study demonstrated that the students who attended preschool had

better achievements in social skills when compared to the students who did not attend preschool. A high number of evidence that preschool attendance had a significant effect on social skills is present in studies conducted in Turkey. Several authors (Atılgan, 2001; Toluç, 2008; Erbay, 2008; Öztürk, 2008; Kale Karaaslan, 2012; Turan, 2013) demonstrated that preschool attendance had a significant effect on social skills of children. In conclusion, the present study expanded the previous findings that preschool attendance had a significant effect on social skills of children by including perspective taking skills.

In the Turkish National Preschool Program, there is only one objective that directly supports perspective taking skills, and the achievement aimed the acquisition of emotional perspective taking. On the other hand, experiences achieved by children through various activities available in the program may have contributed significantly to the development of their perspective taking skills. Play is one of the main activities available in the preschool program. During play, children experience various social interactions and assume several roles, tasks and responsibilities. Game playing allows the development of the skill to view the world through the eyes of someone else (Zolyomi, Bharadwaj & Snyder, 2017). Thus, children are able to take and compare their own and others' perspectives. Previous studies demonstrated that symbolic (Burns, 1978; Benz, 1981), constructive (Burns & Brainerd, 1979; Sener, 1996) and dramatic play (Burns & Brainerd, 1979; Şener, 1996) improved the perspective taking skills of children. Another main activity in the program is drama. Drama activities allow social interaction and experimenting with various roles among children. During such activities, children have the opportunity to observe and experience the perspectives of others. Iannotti (1978) and Tan-Niam (2003) identified that role-play activities conducted after story-telling improved the perspective taking skills children. Similarly, Akın and Önder (2003) found that educational drama activities that included perspective taking skills supported the perspective taking skills of children. Another activity available in the Turkish Preschool Program is language activity. The stories narrated during language activities allow children to recognize different characters and take their perspective. Ünüvar (2006) concluded that pre-storytelling conversations and post-storytelling dramatization activities in enriched language activities significantly improved the perspective taking skills of children. Similarly, Grazzani and Ornahi (2011) found that listening to stories about emotional situations and talking about these emotional situations affected the perspective taking skills of children positively. Activities such as science and mathematics in the preschool program could also improve children's perspective taking skills as well. During these activities, social interactions can help children observe different perspectives. For example, when children are asked to express their estimations during an experiment, they might have the opportunity to observe that there are individuals who has different ideas on the same event. Ölçer (2015) demonstrated that science activities contributed positively to children's perspective taking skills in an experimental study conducted with 5 years old children.

There are also several intervention programs that included several of the above-mentioned activities, as well as studies that examined the effects of these activities on perspective taking skills separately. Aslan (2017) determined that the empathy

education program that included various activities such as play, drama, music and language had a significant effect on the perspective taking skills of preschool children. Similarly, Aras (2018) demonstrated that the "I Can Solve Problems Program" that includes similar activities had a positive effect on preschool children's perspective taking skills.

Furthermore, the findings of the present study demonstrated that the effect of preschool attendance on the perspective taking skills of children commences as early as four years of age. Similarly, other studies in the literature demonstrated that the perspective taking skills can be improved from early age with various activities among children. Appleton and Reddy (1996) found that watching short videos and discussing about the perspectives of people in these videos developed the perspective taking skills of three-year-old children. Finally, we found that age and preschool attendance significantly predicted children's perspective taking skills. While there are no previous studies on the impact of preschool attendance on the perspective taking skills of children, there is ample evidence that age had a significant effect on the perspective taking skills of children (Mossler et al., 1976; Cox, 1978; Liben, 1978; Taylor, 1988; Szarkowicz, 1997; Frick et al., 2014, Gauvain and Monroe, 2014; Schwenck et al., 2014).

5. Conclusion

As a result of the current study, we determined that preschool attendance had a significant effect on the perspective taking skills of preschool children, except for 48-54 months, and those attending preschool performed significantly better in the perspective taking test. It was also determined that the effect of preschool attendance on children's perspective taking skills commenced when the children were 55 months old. Finally, it was found that age and preschool attendance could significantly predict the perspective taking skills of children. Thus, children should attend preschool education at an early age. Furthermore, holistic intervention programs can be developed to improve children's perspective taking skills. Parents can be counseled on developing the perspective taking skills of their children at an early age. In future studies, the impact of preschool attendance on children's perspective taking skills can be investigated with longitudinal studies.

About the Authors

Ms. Melda Şahin is a preschool teacher in Adana, Turkey. She received bachelor and master degree in Department of Early Childhood Education from Çukurova University, Turkey.

Dr. Durmuş Aslan is an Assoc. Prof. Dr. in Department of Early Childhood Education in Çukurova University, Adana, Turkey. He received bachelor, master and Ph.D. degree in Department of Early Childhood Education from Çukurova University, Turkey. He also received another Ph.D. degree in Department of Child Development from Ankara University, Turkey.

References

1. Aboud FE, 2006. Evaluation of an early childhood preschool program in rural Bangladesh. Early Childhood Research Quarterly 21(1): 46-60.
2. Akos P, 2000. Building empathic skills in elementary school children through group work. Journal for Specialists in Group Work 25(2): 214-223.
3. Akın Y, Önder A, 2003. The effect of educational drama and parental attitudes on perspective taking abilities of six year old preschool children, In G. Haktanır & T. Güler (Eds.), OMEP World Council and Conference (pp.469-482), İstanbul: Ya-Pa Publishing.
4. Anonymous, 2013. Turkish national preschool education program, Accessed March 21, 2018. https://tegm.meb.gov.tr/dosya/okuloncesi/ooproram.pdf
5. Appleton M, Reddy V, 1996. Teaching three year-olds to pass false belief tests: A conversational approach. Social Development 5(3): 275-291.
6. Aras CY, 2018. The effects of 'I can problem solve' program on preschool children's perspective taking skills. Unpublished master thesis. Çukurova University, Adana, Turkey.
7. Aslan D, 2017. Investigation of empathy training program's effect on preschoolers' perspective taking skills. Unpublished doctoral dissertation, Ankara University, Ankara, Turkey.
8. Atılgan G, 2001. The comparison of 1st. step 1st. period students-who attend preschool and don't attend preschool-social skill characteristics. Unpublished master thesis. Selçuk University, Konya, Turkey.
9. Bal Ö, Temel F, 2014. Examining the relationship between preschool interpersonal problem solving skills and perspective taking skills of children attending preschool education programs between 4 to 6 years of age. Trakya University Journal of Education Faculty 1(4): 156-169.
10. Burns SM, Brainerd CJ, 1979. Effects of constructive and dramatic play on perspective taking in very young children. Developmental Psychology 15(5): 512-521.
11. Cox MV, 1978. The development of perspective-taking ability in children. International Journal of Behavioral Development 1(3): 247-254.
12. Decety J, 2005. Perspective taking as the royal avenue to empathy, In Malle, B. F. & Hodges, S. D. (eds), Other minds: How humans bridge the divide between self and other (pp.143-157), New York: Guilford Publications.
13. Denham SA, 1986. Social cognition, prosocial behavior, and emotion in preschoolers: Contextual validation. Child Development 57(1): 194-201.
14. Dickstein EB, Warren DR, 1980. Role-taking deficits in learning disabled children. *Journal of Learning Disabilities*, 13(7), 33-37.
15. Durualp E, Aral N, 2011. Game based social skills training, Ankara: Vize Publishing.
16. Eisenberg N, Miller PA, 1987. The relation of empathy to prosocial and related behaviors. Psychological Bulletin 101: 91-119.

17. Erbay E, 2008. The level of having social skills of the preschool educated and not preschool preschool educated students at first class of primary schools. Unpublished Master's thesis. Pamukkale University, Denizli, Turkey.
18. Frick A, Möhring W, Newcombe NS, 2014. Picturing perspectives: Development of perspective-taking abilities in 4-to 8-year-olds. Frontiers in Psychology 5: 1-7.
19. Friedman WJ, 2011. Compassion is Healing—Empathy is "Perspective Taking". http://www.willjoelfriedman.com/articles/articToolsFTC-Compassion.html. Accessed 31.03.2016.
20. Gauvain M, Munroe RL, 2014. Development of perspective taking in relation to age, education, and the presence of community features associated with industrialization: A four-culture study. Cross-Cultural Research 48(1): 32-44.
21. Grazzani I, Ornaghi V, 2011. Emotional state talk and emotion understanding: A training study with preschool children. Journal of Child Language 38(5): 1124-1139.
22. Gülay H, Akman B, 2009. Social skills in preschool period, Ankara: Pegem Akademi.
23. Gültekin A, 2006. Examining the relation between the skill of getting perspective and selfesteem level of 6-year-old children attending kindergarten. Unpublished Master's Thesis. Gazi University, Ankara, Turkey.
24. Günindi Y, 2011. The evaluation of social skills of children attending to independent preschool and kindergarten. Journal of Kirsehir Education Faculty 12(1): 133-144.
25. Hinnant JB, O'Brien M, 2007. Cognitive and emotional control and perspective taking and their relations to empathy in 5-year-old children. The Journal of Genetic Psychology 168(3): 301-322.
26. Iannotti RJ, (1978). Effect of role-taking experiences on role taking, empathy, altruism, and aggression. Developmental Psychology 14(2): 119-124.
27. Kale Karaaslan Ü, 2012. The effects of pre-school education and other variables to emotion recognition and expression skills of 1st grade elementary school students. Unpublished Master's Thesis. Selçuk Universitesy, Konya, Turkey.
28. Kraus ML, 1984. Perspective taking ability: Effects of age, task and egocentrism. http://eric.ed.gov/?id=ED248985. Accessed 01.04.2016
29. Kurdek LA, Rodgon MM, 1975. Perceptual, cognitive, and affective perspective taking in kindergarten through sixth-grade children. Developmental Psychology 11(5): 643-650.
30. Kurt F, 2007. An examination of the effects of project based education programs on the social adaptation and social skills of five- and six-year-old children attending pre-school. Unpublished Master's Thesis. Gazi University, Ankara, Turkey.
31. Kuru Turaşlı N, 2007. About preschool education, In G. Haktanır (Ed.) Introduction of preschool education (pp.1-24), Ankara: Anı Publishing.
32. Liben LS, 1978. Perspective-taking skills in young children: Seeing the world through rose-colored glasses. Developmental Psychology 14(1): 87-92.

33. Lupinetti L, 1999. Perspective-taking, social competence, gender, and prosocial behavior of suburban preschool children. Unpublished Doctoral Dissertation. Fordham University.
34. Taylor M, 1988. Conceptual perspective taking: Children's ability to distinguish what they know from what they see. Child Development 59: 703-718.
35. McClelland MM, Morrison FJ, Holmes DL, 2000. Children at risk for early academic problems: The role of learning-related social skills. Early childhood research quarterly 15(3): 307-329.
36. Mossler DG, Marvin RS, Greenberg MT, 1976. Conceptual perspective taking in 2-to 6-year- old children. Developmental Psychology 12(1): 85-86.
37. Ogelman HG, Erten-Sarıkaya H, 2014. Relationships between variables of sibling and social skills, peer relations and school adjustment levels of 5-6 year old children. Journal of Academic View 41: 1-27.
38. Oğuz V, 2006. Investigation of perspective taking skills of six years old children and emphatic skills of their parents. Unpublished Master's Thesis. Ankara University, Ankara, Turkey.
39. Ölçer S, 2015. Examination of effect of science training program on five-year-old children's skills in science learning and perspective-taking. Unpublished Doctoral Dissertation. Gazi University, Ankara, Turkey.
40. Öztürk A, 2008. The examination of the effect of preschool education on the 1st and 3rd grade primary school students' social skills. Unpublished Master's Thesis. Selçuk University, Konya, Turkey.
41. Peng W, Lee M, Heeter C, 2010. The effects of a serious game on role-taking and willingness to help. Journal of Communication 60(4): 723-742.
42. Scarpelli-Dwyer JM, 2001. Attention to emotional cues, affective perspective taking, and arousal in shy children. Unpublished Doctoral Dissertation. Kent State University, Graduate School of Education, 112, Ohio.
43. Schlotter M, 2011. The effect of preschool attendance on secondary school track choice in Germany-Evidence from siblings (No. 106). Ifo Working Paper.
44. Schwenck C, Göhle B, Hauf J, Warnke A, Freitag CM, Schneider, W, 2014. Cognitive and emotional empathy in typically developing children: The influence of age, gender, and intelligence. European Journal of Developmental Psychology 11(1): 63-76.
45. Strayer J, Roberts W, 1989. Children's empathy and role taking: Child and parental factors, and relations to prosocial behavior. Journal of Applied Developmental Psychology 10(2): 227-239.
46. Szarkowicz DL 1997. Young children's developing understanding of conceptual perspective taking. Biennial Meeting of the Society for Research in Child Development, 3-6 April, 1-11, Washington, DC.
47. Şener T, 1996. *The Effects of dramatic play and constructive play in perspective taking ability in 4-5 years old children*. Unpublished Master's Thesis. Ankara University, Ankara, Turkey.

48. Tan-Niam C, 2003. Thematic fantasy play: Effects on the perspective-taking ability of preschool children. International Journal of Early Years Education 2(1): 5-16.
49. Taş I, 2017. The effects of philosophy for children on theory of mind and creativity of 48-72 month-old children. Unpublished Doctoral Dissertation. Çukurova University, Adana, Turkey.
50. Toluç Z, 2008. The comparison of the students who are subjected to preschool education and not subjected to preschool education according to 1st grade elementary school teachers. Unpublished Master's Thesis. Beykent University, İstanbul, Turkey.
51. Tunçeli Hİ, 2012. Examination of the social skills effects on the school readiness of the 6 years old pre-school children. Unpublished Master's Thesis. Hacettepe University, Ankara, Turkey.
52. Turan SB, 2013. An examination of the mathematics ability and social skills among 60-77 month-old children who received preschool education versus those who did not. Unpublished Master's Thesis. Necmettin Erbakan University, Konya, Turkey.
53. Underwood B, Moore B, 1982. Perspective-taking and altruism. Psychological Bulletin 91(1): 143-173.
54. Ünüvar G, 2006. The Analyze for the children continuing nursery school between four and five ages riched Turkish language activities perspective taking and the level of expressing language. Unpublished Master's Thesis. Selçuk University, Konya, Turkey.
55. Zolyomi A, Bharadwaj A, Snyder J, 2017. Let's play (while far away)! Using technology to mediate remote playdates for children with autism. In International Conference of Design, User Experience, and Usability (pp. 415-432). Springer, Cham.