



The Relationship between Temperament Characteristics and Play Behaviors of Preschool Children ¹

Gülçin Güven ¹  M. Oya Ramazan ²  Elif Yılmaz İler ³ 

¹ Marmara University, Atatürk Faculty of Education, Elementary Education Department, İstanbul, Türkiye
gulcinm@marmara.edu.tr

² Marmara University, Atatürk Faculty of Education, Elementary Education Department, İstanbul, Türkiye
oramazan@marmara.edu.tr

² Karamanoğlu Mehmetbey University, Faculty of Education, Elementary Education Department, Karaman, Türkiye
elifyilmaz@kmu.edu.tr

Article Info

ABSTRACT

Article History

Received: 22/10/2024

Accepted: 01/12/2024

Published: 31/12/2024

Keywords:

peer play behavior,
preschool,
temperament
characteristics.

This research examines the relationship between play behaviors and temperament characteristics of preschool children from the point of parent and teacher evaluation. It is designed in survey model. The study group of the research consists of 313 children aged 60-72 months attending the educational institutions selected by cluster sampling method among the preschool education institutions in İstanbul in the 2017-2018 academic year and their mothers and teachers (n=21). The research used three data collection tools: the Parent and Teacher Form of the Penn Interactive Peer Play Scale (PIPPS) and the Short Temperament Scale for Children. The Short Temperament Scale for Children consists of four sub-dimensions (reactivity, persistence, approach/withdrawal, and rhythmicity). Penn Interactive Peer Play Scale has three sub-dimensions: play interaction, disruption, and disconnection. According to the evaluation of parents and teachers, the research indicates significant relationships between children's temperament characteristics and play behaviors. The role of temperament in forming the behavior patterns of children supports the results of the research on the relationships between temperament characteristics and play behaviors in peer-to-peer interactions from the point of parent and teacher evaluations.

Citation: Güven, G., Ramazan, M. O., & İler, E. Y. (2024). The relationship between temperament characteristics and play behaviors of preschool children. *Journal of Teacher Education and Lifelong Learning*, 6(2), 456-465. <https://doi.org/10.51535/tell.1572098>



"This article is licensed under a Creative Commons Attribution-NonCommercial 4.0 International License (CC BY-NC 4.0)"

¹ The study was presented at the International IV. Child Development Congress, Hacettepe University, Ankara.

INTRODUCTION

Temperament is the sum of behavioral tendencies structured by heredity and experience that are thought to have a biological basis. Emotional reactions, too, are accepted as a part of temperament in this aspect. Although individuals' biological differences must be considered, temperament is stated as partially containing permanent and unchangeable features. While the concept of temperament has many different definitions in the literature, on an everyday basis, it is defined as the reactions of children to stimuli in early childhood and the setting of self-regulation due to individual differences (Eivers et al., 2012; Losonczy-Marshall, 2014; Rothbart, 2011; Rothbart & Bates, 2006). Individuals reveal different emotional reactions to other experiences. However, the concept of temperament expresses that they have a general emotional style that shapes their tendency to react in specific ways to various events in their environment. While some people are typically shy and anxious, others can be brave, extroverted, aggressive, or angry (Levine & Munsch, 2018). Rather than their behaviors, temperament is related to the content of the individual's reactions to the situation (Prior, Sanson, Smart, and Oberklaid, 2000; Sanson et al., 2004).

The environment affects the psychological structure of the individual. Temperament is a dynamic structure that mediates the effect of the environment on the individual and shapes it against internal and external stimuli. The individual continuously interacts with family, school, and peers. These interactions that the individual is exposed to either reinforce or transform the various aspects of temperament. The intensity and dynamism of the interaction may cause the individual to behave dissonant to his/her temperament in some cases (Goldsmith, 1996).

The intense relationships preschool children have with their peers provide excellent opportunities to demonstrate adequate social cohesion and acquire the necessary social skills. In this era, children interact with their peers complexly but tend to play with same-gender peers mostly (Çetin et al., 2003). Children's demands for fulfilling their wishes in play or various interaction situations sometimes lead to conflicts. These conflict situations are social experiences for the child. She learns from these experiences that her friends also have wishes like hers and that she must fulfill some of their wishes to be with them. In addition, they learn to give up and postpone some of their wishes (Bakırcıoğlu, 2013). These conflicts are experienced intensely in plays. Children acquire social competence and confidence in relationships with peers through play. It is an essential life skill (Howes & Matheson, 1992; Singer & Singer, 2005). Such interactions that the child experiences in a play environment may transform some aspects of her temperament while reinforcing others.

Thanks to playing, children learn to cope with items and people not in their safe zone and their thinking and perception of the inner world (Artar, 2004). Play teaches children necessary behaviors, knowledge, and skills by themselves. The play has a vital role in a child's life and development. Play is a severe occupation and a source of entertainment, learning, and development for the child. Speaking, reasoning, finding out roles in life, solidarity, cooperation, sharing, connecting with the environment, and problem-solving are developed in the play environment (Aral et al., 2001; Çoban & Nacar, 2006; Darwish et al., 2001; Melendez et al., 2000; Swindells & Stagnitti, 2006).

Through play, the child can have the opportunity to experiment with different roles in social life, express her feelings and concerns, and examine her relations with other people. Thus, play is accepted as one of the critical factors in acquiring positive social behaviors. The richness of children's play experiences at young ages forms the basis for developing their social skills. Play has a unique place in the development and education of the child. Play ensures healthy growth, providing development and learning. The meaning and purposes of child play are to search, find, recognize, enhance or rearrange, and structure knowledge. Play is the most effective and straightforward way of learning (Adak-Özdemir & Ramazan, 2014; Mistrett & Bickart, 2009; Yavuzer, 2000).

Besides their interactions with people in their environments, such as family, peer group, and school, children's temperaments affect their reactions to events. It is expected that a child who has a low level of socialization with her environment is less likely to be an extrovert adult who has many friends. However, a child at a low level of socialization can also acquire social skills and become a perfect friend. In this respect, the temperamental characteristics of individuals are also accepted as a tool for developing social skills. Children with different temperaments can exhibit different social skills in playgroups, which helps to improve each other's social skills (Bee, 2000; Burger, 2006; Santrock, 2012). Thus, this research investigates the relationship between children's temperament characteristics and play behaviors. Considering the time children spend in a home environment, the mothers' observations on the children's play behaviors with their peers were consulted. In addition, the evaluation of preschool teachers was consulted due to the intensity of peer interaction provided by preschool education in early childhood. Therefore, the research examines the relationship between children's temperament characteristics and play behaviors from parent and teacher evaluation.

METHOD

Research design

The research study, which examines the relationship between temperament characteristics in the preschool period and play behaviors from the point of parent and teacher evaluation, is designed as a survey in a relational model. Relational studies are models designed to predict the relationship between variables (Christensen et al., 2015).

Study Group/Participants

The study group of the research includes children attending four independent kindergartens and six primary school kindergartens selected by random cluster sampling method among independent kindergartens and kindergartens affiliated to primary education in Kadıköy, Maltepe, Üsküdar and Ataşehir on the Anatolian side of Istanbul in Turkey. It consists of 313 children (171 girls, 142 boys) aged 60-72 months, their parents (mothers) and teachers (n=21). Twenty-one preschool teachers from selected ten preschool institutions who agreed to participate in the study made an announcement, and 313 mothers with 60-72-month-old children participated voluntarily.

Research Instruments and Processes

The study used three data collection tools: the Short Temperament Scale for Children and Penn Interactive Peer Play Scale-Parent Form and Teacher Form.

The Short Temperament Scale for Children

Yağmurlu and Sanson created the Turkish adaptation of the short temperament scale for children developed by Prior, Sanson, and Oberklaid (2009). The scale is designed in a six-point Likert type to evaluate the temperament characteristics of the child, and it consists of options between "almost always" and "almost never." The scale includes 30 items and four sub-dimensions (reactivity, persistence, approach/withdrawal, and rhythmicity), and 8 of the items are reverse coded (Yağmurlu & Sanson, 2009). Within the research, the internal consistency coefficients of the scale were calculated. They are determined as .80 for the reactivity sub-dimension, .78 for the persistence sub-dimension, .69 for the approach/withdrawal sub-dimension, and .72 for the rhythmicity sub-dimension.

Penn Interactive Peer Play Scale

Penn Interactive Peer Play Scale (PIPPS) was designed by Fantuzzo, Mendez, and Tighe (1998) to evaluate the quality of peer play behaviors of children in early childhood. Ahmetoğlu, Acar and Aral (2016) adapted the scale into Turkish. The validity-reliability studies of the PIPPS-Parent Form and the PIPPS-Teacher Form were conducted in 2016 and 2017, respectively. PIPPS has three sub-dimensions: "Play Interaction," "Play Disruption," and "Play Disconnection." It is a Likert-type measurement tool that evaluates

the subject scoring from 1 to 4, as “never (1)”, “rarely (2)”, “often (3),” and “always (4)”. The original scale consists of 32 items. With the Turkish adaptation and validity-reliability studies, the Teacher Form took its final form with 29 items and the Parent Form with 28 items (Ahmetoğlu et al., 2016; 2017). The internal consistency reliability coefficients of the scale were calculated within the research. For the Teacher Form, they were determined as .80 for the Play Interaction sub-dimension, .84 for the Play Disruption sub-dimension, and .78 for the Play Disconnection sub-dimension. For the Parent Form, they were found to be .75 for the Play Interaction sub-dimension, .78 for the Play Disruption sub-dimension, and .76 for the Play Disconnection sub-dimension.

Data Collection Process and Analysis

In the study, four independent kindergartens and six primary school kindergartens were determined by random cluster sampling method in Kadıköy, Maltepe, Üsküdar, and Ataşehir on the Anatolian side of Istanbul in the 2017-2018 academic year. Twenty-one preschool teachers who agreed to participate in the study after the interviews with the preschool teachers in the selected preschool education institutions and 313 parents who voluntarily participated in the research among the parents who were informed through these teachers were included in the study group. Preschool teachers participating in the research were asked to evaluate the PIPPS-Teacher Form, and mothers were asked to assess the PIPPS-Parent Form and the Short Temperament Scale for Children.

The gathered data were imported into the statistical package program. The data showed normal distribution according to Kolmogorov-Smirnov Test results and skewness-kurtosis values. Pearson Correlation analysis was used to test the relationship between temperament characteristics and the play behaviors of the children participating in the study, according to the opinions of the teachers and parents. The significance level in the study was accepted as .05.

FINDINGS

This section contains the findings related to the data gathered within the scope of the research. First of all, the results of the correlation analysis regarding the relationship between preschool children’s play behaviors and the opinions of the parents and teachers are presented in Table.

Table 1. Correlation analysis results on the relationship between the opinions of parents and teachers on children’s play behaviors

PIPPS-Teacher Form		PIPPS-Parent Form		
		Play Interaction	Play Disruption	Play Disconnection
Play Interaction	r	,304	-.146	-.132
	p	,000*	,010*	,020*
	n	313	313	313
Play Disruption	r	-.188	,262	,124
	p	,001*	,000*	,028*
	n	313	313	313
Play Disconnection	r	-.279	,233	,240
	p	,000*	,000*	,000*
	n	313	313	313

Table 1 examines the relationship between the opinions of teachers and parents on the play behaviors of preschool children. Accordingly, the “Play Interaction” ($r=,304$), “Play Disruption” ($r=,262$), and “Play Disconnection” ($r=,240$) sub-dimension mean scores of PIPPS have a positive significant relationship between teacher and parent opinions ($p .05$). This result shows that the views of parents and teachers on children’s play behaviors are compatible.

Table 2 presents the results examining the relationship between the temperament characteristics and the play behaviors of the children participating in the study according to the teacher’s opinion.

Table 2. Correlation analysis results on the relationship between children's temperament characteristics and play behaviors according to teacher's opinion

PIPPS-Teacher Form		Short Temperament Scale for Children			
		Approach/Withdrawal	Persistence	Rhythmicity	Reactivity
Play Interaction	r	,114	,202	,167	-.198
	p	,045*	,000*	,003*	,000*
	n	313	313	313	313
Play Disruption	r	,008	-.146	-.022	,170
	p	,891	,010*	,697	,003*
	n	313	313	313	313
Play Disconnection	r	-.092	-.215	-.076	,165
	p	,105	,000*	,179	,003*
	n	313	313	313	313

According to Table 2, the "Play Interaction" sub-dimension of the PIPPS-Teacher Form and the "Approach-Withdrawal" ($r=.114$), "Persistence" ($r=.202$) and "Rhythmicity" ($r=.167$) sub-dimensions of the Short Temperament Scale for Children are positively correlated and "Reactivity" ($r=-.198$) sub-dimensions are negatively correlated ($p .05$). There is a negative relationship between the "Play Disruption" and "Play Disconnection" sub-dimensions of the scale and the "Persistence" sub-dimension of the Short Temperament Scale for Children and a positive relationship between the "Reactivity" sub-dimension of this scale ($p .05$).

The results of the correlation analysis regarding the relationship between temperament characteristics and play behaviors of the children participating in the study according to the parents' opinions are presented in Table 3.

Table 3. Correlation analysis results on the relationship between children's temperament characteristics and plays behaviors according to parents' opinion

PIPPS-Teacher Form		Short Temperament Scale for Children			
		Approach/Withdrawal	Persistence	Rhythmicity	Reactivity
Play Interaction	r	,114	,202	,167	-.198
	p	,045*	,000*	,003*	,000*
	n	313	313	313	313
Play Disruption	r	,008	-.146	-.022	,170
	p	,891	,010*	,697	,003*
	n	313	313	313	313
Play Disconnection	r	-.092	-.215	-.076	,165
	p	,105	,000*	,179	,003*
	n	313	313	313	313

Table 3 shows that the "Play Interaction" sub-dimension of the PIPPS-Parent Form and "Approach/Withdrawal" ($r=.295$), "Persistence" ($r=.483$), and "Rhythmicity" ($r=.306$) sub-dimensions of Short Temperament Scale for Children scale have a negative correlation. In contrast, the "Reactivity" ($r=-.291$) sub-dimension has a positive correlation ($p .05$). The "Play Disruption" sub-dimension of the scale and the "Persistence" ($r=-.335$) and "Rhythmicity" ($r=-.132$) sub-dimensions of the Short Temperament Scale for Children have a negative correlation. In contrast "Reactivity" ($r=.339$) sub-dimension have a positive correlation ($p .05$). "Play Disconnection" sub-dimension of the scale and the "Approach/Withdrawal" ($r=-.368$), "Persistence" ($r=-.321$) and "Rhythmicity" ($r=-.208$) sub-dimensions of the Short Temperament Scale for Children have a negative correlation. In contrast, the "Reactivity" ($r=.303$) sub-dimension has a positive correlation.

DISCUSSION, CONCLUSION, RECOMMENDATIONS

The research aims to examine the relationship between the temperament characteristics of preschool children and their play behaviors. It was deemed appropriate for the research to consult teachers' and mothers' evaluations of children's play behaviors. Lines, Miller, and Arthur-Stanley's findings (2011) show that children spend 70% of their waking hours outside school. Thus, in the research, mothers' observations were decisive in evaluating play behaviors. In addition, children interact with their peers and teachers in pre-school education institutions (Özdoğan, 2014). These places are their first natural social environment, where they are separated from family members and encounter social and behavioral problems for the first time (Carey, 1997). Accordingly, preschool teachers' observation of play behaviors in children's interactions with their peers is essential. Therefore, the preschool teacher and the mothers evaluated the children's play behaviors separately. According to the findings obtained in the study, there is a positive but low-level relationship between the Teacher Form and the Parent Form in "Play Interaction" ($r=.304$), "Play Disruption" ($r=.262$), and "Play Disconnection" ($r=.240$) sub-dimensions of Penn Interactive Peer Play Scale (Shavelson, 2016). This result supports the decision to evaluate children's play behaviors by both the teacher and parent observations. Research by Kesäläinen et al. (2023) on children's play behavior in early childhood special education (ECSE) settings similarly emphasizes that teachers' and parents' observations are crucial, especially when considering the complex interrelation of temperament and special educational needs (SEN) (Kesäläinen et al., 2023).

According to the findings obtained as a result of the research, there is a significant relationship between temperament characteristics and play interactions involving children's behaviors such as comforting their peers, helping them, showing creative behaviors in the play, and encouraging others to participate in the play, regarding the evaluation made by preschool teachers and mothers (Ahmetoğlu et al., 2016; 2017). Accordingly, there is a positive relationship between children's approach/withdrawal, persistence, and rhythmicity characteristics and their play interactions, while there is a negative relationship between their reactivity and play interactions. This finding is supported by the findings of other studies indicating that there is a relationship between children's temperament characteristics and their skills for play interaction behaviors such as positive peer interaction (Farver & Branstetter, 1994), positive communication skills (DiLalla, 1998) and playing (Mendez et al., 2002). Sousa et al. (2023) identified that persistence and approach/withdrawal positively predict emotion regulation in children, further supporting that these traits benefit positive play interactions (Sousa et al., 2023). In addition, as a result of the research conducted by Adak-Özdemir and Budak (2019), in which the relationship between children's temperament characteristics and play behaviors from the point of mother evaluation was examined, a positive relationship is found between children's play interaction behaviors and approach/withdrawal, persistence, and rhythmicity temperament characteristics and a negative significant relationship between reactivity temperament characteristics. This result shows high consistency with the results obtained in the study. The study of Mendez, Fantuzzo, and Cicchetti (2002) found that children with positive temperament exhibit successful peer play interactions.

In the sub-dimension of play disruption, which is one of the play behaviors of children, aggressive and antisocial behaviors that hinder the ongoing peer interaction in play are expressed (Ahmetoğlu et al., 2016; 2017). The research results indicate a positive relationship between children's play disruption behavior and reactivity temperament characteristics and a negative relationship between persistence temperament traits according to the evaluations of both teachers and mothers. In addition, according to the mother's evaluation, a negative relationship exists between children's play disruption behavior and their rhythmicity temperament characteristics. Play disruption behaviors represented by antisocial and aggressive behaviors indicate that the child does not have social competence. According to Sousa et al. (2023), children with higher levels of negative reactivity often struggle with social integration due to increased emotional volatility, impacting their play interactions negatively. The literature mainly supports the result that temperament characteristics are related to social competence, as in Rothbart and Bates (2006), Sanson et al. (2011), and Şendil (2010). Cohen and Mendez (2009) found that problems in children's social competencies also make playing with their peers difficult. While Yoleri (2014) found a positive relationship between the rhythmicity and persistence

temperament characteristics of preschool children and their social competencies, Walker, Berthelsen, and Irving (2001) stated that children with a difficult temperament exhibit more cases of aggressive behavior. Aggressive behaviors related to play disruption behavior are accepted as an indicator. The research conducted by Uçar (2017) shows a negative relationship between physical aggression and children's persistence and rhythmicity temperament characteristics. The study by Şendil (2010) shows that children with reactivity temperament exhibit more anger and aggression.

Play disconnection, expressed as another play behavior in children's interactions with their peers, indicates introverted behavior and not participating in plays created by their peers (Ahmetoğlu et al., 2016, 2017). According to the teacher's evaluation, examination of the result shows a positive relationship between children's play disconnection with reactivity temperament characteristics and a negative relationship with persistence temperament characteristics. According to the evaluation made by the mothers participating in the study, there is a positive relationship between their children's play disconnection and reactivity temperament characteristics and a negative relationship with their approach/withdrawal, persistence, and rhythmicity temperament characteristics. Studies have found that there is a relationship between the reactive behaviors of preschool and school-age children and behaviors that can be associated with play disconnection, such as not participating in peer groups and being reluctant to interact spontaneously with unfamiliar peers (Asendorpf, 1991; Rubin et al., 2009; Stevenson-Hinde et al., 2011). Kesäläinen et al. (2023) further highlight the role of supportive adult guidance in reducing play disconnection, especially in children with higher reactivity traits, indicating the potential for targeted interventions to support these children's social interactions (Kesäläinen et al., 2023). For children, using a passive coping approach often means avoiding or denying the problem (Blair et al., 2004). Therefore, it can be thought that the behavior of play disconnection is a kind of passive coping approach. Thus, the behavior of play disconnection, which is found to be negatively related to approach/withdrawal, persistence, and rhythmicity according to the mothers' evaluations, can be associated with adopting a passive coping approach. In the study conducted by Adak-Özdemir and Budak (2019), a positive relationship is found between the children's disengagement from play and the reactivity temperament feature according to the evaluation of the parents and a negative relationship with the warm-heartedness-shyness temperament feature. This result supports the research findings.

Since plays are the primary activity of social interaction with peers in early childhood, they are accepted as an excellent indicator of social competence (Gagnon et al., 2014). The findings of the research and the literature confirm that play behaviors are indicators of social interaction for children. The role of temperament in forming the behavior patterns of children supports the results of the research on the relationships between temperament characteristics and play behaviors in peer-to-peer interactions from the point of parent and teacher evaluations. Thus, studies that indicate that temperament characteristics can be evaluated differently by peer groups in a cultural context (Chen & Schmidt, 2015) can also be considered from the point of play behaviors. Ari Arat and Özdemir Beceren (2021) also emphasize that temperament's influence on peer interactions is critical for children's social adaptation in educational settings (Ari et al., 2021). The effectiveness of variables related to social-emotional development, such as self-regulation and self-perception, can be tested with further studies.

Considering the research results, a longitudinal study can first be designed to monitor how children's temperament and play behaviors change in different early childhood periods to deeply examine the effect of temperament characteristics on social skill development. Considering the relationship between reactivity and disruptive behaviors that may affect children's play behavior, intervention programs can be designed for the emotional regulation of children with high reactivity; thus, these children can be supported to gain more positive experiences in social interactions. A comparative analysis can be conducted across age groups and different contexts (home and school) better to understand the differences between teacher and parent evaluations.

LIMITATIONS AND IMPLICATIONS

Parents and teachers are assessed based on their perceptions when evaluating children's temperament characteristics and play behaviors. The data obtained in the study is limited to the observations of the participants.

Author Contribution Rates: The first author contributed 40% to the study, and the second and third authors contributed 30%.

Conflict of Interest: The authors declare that there is no conflict of interest regarding the publication of this paper.

REFERENCES

- Adak-Özdemir, A., & Budak, K. S. (2019). Mizaç ve öz-düzenlemenin çocukların oyun davranışını yordamadaki rolü [The role of temperament and self-regulation on predicting children's play behavior]. *Pamukkale Üniversitesi Eğitim Fakültesi Dergisi*, 45, 78-98. <https://dergipark.org.tr/tr/pub/pauefd/issue/41649/434100>
- Adak-Özdemir, A., & Ramazan, O. (2014). Okul öncesi öğretmenlerinin oyuna ilişkin görüşleri. *Eğitim ve Öğretim Araştırmaları Dergisi*, 3(4), 298-308. http://www.jret.org/FileUpload/ks281142/File/29.adak_ozdemir.pdf
- Ahmetoğlu, E., Acar, İ. H., & Aral, N. (2016). Penn etkileşimli akran oyun ölçeği ebeveyn formunun (PIPPS-P) geçerlik ve güvenilirlik çalışması. *Turkish Studies International Periodical for the Languages, Literature and History of Turkish or Turkic*, 11(9), 31-52. <http://dx.doi.org/10.7827/TurkishStudies.9634>
- Ahmetoğlu, E., Acar, İ. H., & Aral, N. (2017). Penn etkileşimli akran oyun ölçeği öğretmen formunun (PEAOÖ-Ö) uyarılma çalışması [The adaptation study of the penn interactive peer play scale-teacher form (PIPPS-T)]. *Trakya Üniversitesi Eğitim Fakültesi Dergisi*, 7(1), 104-119. <https://dergipark.org.tr/tr/pub/trkefd/issue/27304/287424>
- Aral, N., Gürsoy, F., & Köksal, A. (2001). *Okul öncesi eğitimde oyun* [Play in preschool education]. Ya-Pa.
- Arı Arat, C., & Ozdemir Beceren, B. (2021). The analysis of the relationship between the temperament and the social status of preschool students age 5. *Dokuz Eylül Üniversitesi Buca Eğitim Fakültesi Dergisi*, 52, 112-132. <https://doi.org/10.53444/deubefd.847663>
- Artar, M. (2004). Okul öncesi öğretmenlerinin çocukların "oyun hakkı"na ilişkin tutumları [Preschool teachers' attitudes towards children's "right to play"]. B. Onur & N. Güney (Prep. for Pub). *Türkiye'de çocuk oyunları: Araştırmalar [Children's games in Turkey: Studies]*. Ankara: Ankara Üniversitesi Çocuk Kültürü Araştırma ve Uygulama Merkezi Yayınları.
- Asendorpf, J. B. (1991). Development of inhibited children's coping with unfamiliarity. *Child Development*, 62, 1460-1474. <https://doi.org/10.2307/1130819>
- Bakırcıoğlu, R. (2013). *Çocuk ve ergenlerde ruh sağlığı [Mental health in children and adolescents]*. Anı.
- Bee, H. (2000). *The developing child*. Pearson.
- Blair, K. A., Denham, S. A., Kochanoff, A., & Whipple, B. (2004). Playing it cool: Temperament, emotion regulation, and social behavior in preschoolers. *Journal of School Psychology*, 42(6), 419-443.
- Burger, J. M. (2006). *Kişilik, psikoloji bilimin insan doğasına dair söyledikleri [Personality, what psychological science says about human nature]* (Trans. İ. D. Erguvan). Kaknüs.
- Carey, K. T. (1997). Preschool interventions. In A. P. Goldstein and J. C. Conoley (Eds.), *School violence intervention: A practical handbook* (pp. 93-106). The Guilford.
- Chen, X., & Schmidt, L. A. (2015). Temperament and personality. In M. E. Lamb (Ed.) and R. M. Lerner (Ed.-in-Chief), *Social, emotional and personality development: Vol. 3. The handbook of child psychology and developmental science* (7th ed. pp. 1-49). Wiley.
- Christensen, L. B., Johnson, R. B., & Turner, L. A. (2015). *Araştırma yöntemleri desen ve analiz [Research methods design and analysis]* (Ed. and Trans. A. Aypay) (2. Baskı). Ankara: Anı.
- Cohen, J. S., & Mendez, J. L. (2009). Emotion regulation, language ability and the stability of preschool children's peer play behavior. *Early Education and Development*, 20(6), 1016-1037.

- Çetin, F., Bilbay, A., & Kaymak, D. (2003). *Çocuklarda sosyal beceriler [Social skills in children]*. Epsilon.
- Çoban, B., & Nacar, E. (2006). *Okul öncesi eğitimde eğitsel oyunlar [Educational games in preschool education]*. Nobel Akademi.
- Darwish, D., Esquivel, G. B., Houtz, J. C., & Alfonso, V. C. (2001). Play and social skills in maltreated and non-maltreated preschoolers during peer interactions. *Child Abuse and Neglect*, 25, 13-31.
- DiLalla, L. F. (1998). Daycare, child and family influences preschoolers' social behaviors in a peer play setting. *Child Study Journal*, 28, 223-245.
- Eivers, A. R., Brendgen, M., Vitaro, F., & Borge, A. I. (2012). Concurrent and longitudinal links between children's and their friends' antisocial and prosocial behavior in preschool. *Early Childhood Research Quarterly*, 27(1), 137-146.
- Fantuzzo, J., Mendez, J., & Tighe, E. (1998). Parental assessment of peer play: Development and validation of the parent version of the Penn Interactive Peer Play Scale. *Early Childhood Research Quarterly*, 13(4), 659-676.
- Farver, J. A. M., & Branstetter, W. H. (1994). Preschoolers' prosocial responses to their peers' distress. *Developmental Psychology*, 30(3), 334-341.
- Gagnon, S. G., Huelsman, T. J., Reichard, A. E., Kidder-Ashley, P., Griggs, M. S., Struby, J., & Bollinger, J. (2014). Help me play! Parental behaviors, child temperament, and preschool peer play. *Journal of Child and Family Studies*, 23(5), 872-884.
- Goldsmith, H. H. (1996). Studying temperament via the construction of the toddler behavior assessment questionnaire. *Child Development*, 67, 218-235.
- Howes, C., & Matheson, C. (1992). Sequences in the development of competent play with peers: Social and social pretend play. *Developmental Psychology*, 28, 961-974.
- Kesäläinen, J., Suhonen, E., Alijoki, A., & Sajaniemi, N. (2023). The interrelation between children's play behaviour, temperament, and special educational needs (SEN) in early childhood special education (ECSE). *Early Child Development and Care*, 193(2), 247-261. <https://doi.org/10.1080/03004430.2022.2080202>
- Levine, L. E., & Munsch, J. (2018). *Child development, an active learning approach* (Third edition). SAGE Publications.
- Lines, C., Miller, G., & Arthur-Stanley, A. (2011). *The power of family-school partnering (FSP): A practical guide for school mental health professionals and educators*. Routledge
- Losonczy-Marshall, M. (2014). Stability in temperament and emotional expression in 1- to 3-year-old children. *Social Behavior and Personality: An International Journal*, 42(9), 1421-1430.
- Melendez, W. R., Beck, V., & Fletcher, M. (2000). *Teaching social studies in early education*. Delmar Thomson Learning.
- Mendez, J. L., Fantuzzo, J., & Cicchetti, D. (2002). Profiles of social competence among low-income African-American preschool children. *Child Development*, 73(4), 1085-1100.
- Mistrett, S., & Bickart, T. (2009). Child's play: The best way to learn. *The Middle East Educator*, 12(5), 18-22.
- Özdoğan, B. (2014). *Çocuk ve oyun, çocuğa oyunla yardım [Child and play, helping the child through play]*. Anı.
- Prior, M., Sanson, A., Smart, D., & Oberklaid, F. (2000). *Pathways from infancy to adolescence. Australian temperament project 1983-2000*. Australian Institute of Family Studies.
- Rothbart, M. K., & Bates, J. E. (2006). Temperament. In W. Damon and R. M. Lerner (Series Eds.) and N. Eisenberg (Vol. Ed.), *Handbook of child psychology: Social, emotional, and personality development* (6th ed., pp. 99-166). Wiley.
- Rothbart, M. K. (2011). *Becoming who we are: Temperament and personality in development*. Guilford.
- Rubin, K. H., Coplan, R. J., & Bowker, J. C. (2009). Social withdrawal in childhood. *Annual Review of Psychology*, 60, 141-171.
- Sanson, A., Hemphill, S. A., Yagmurlu, B., & McClowry, S. (2011). *Temperament and social development*. In P. K. Smith and C. H. Hart (Eds.), *The Wiley-Blackwell handbook of childhood social development* (pp. 227-

Blackwell.

- Sanson, A., Hemphill, S. A., & Smart, D. (2004). Connections between temperament and social development: A review. *Social Development, 13*(1), 142–170.
- Santrock, J.W. (2012). *Ergenlik [Puberty]* (Trans. D. Müge). Nobel.
- Shavelson, R. J. (2016). *Sosyal bilimler için istatistik [Statistics for social sciences]*. (Trans. Ed. N. Güler). Pegem.
- Singer, D., & Singer, J. L. (2005). *Imagination and play in the electronic age*. Harvard University Press.
- Sousa, M., Peixoto, M. M., Cruz, O., & Cruz, S. (2023). The relationship between temperament characteristics and emotion regulation abilities in institutionalized and noninstitutionalized children. *Psychol Stud* 68, 421–433. <https://doi.org/10.1007/s12646-023-00735-5>
- Stevenson-Hinde, J., Shouldice, A., & Chicot, R. (2011). Maternal anxiety, behavioural inhibition and attachment. *Attachment and Human Development, 13*, 199–215.
- Swindells, D., & Stagnitti, K. (2006). Pretend play and parents' view of social competence: The construct validity of the child-initiated pretend play. *Australian Occupational Therapy Journal, 53*, 314-324.
- Şendil, Ç. Ö. (2010). An investigation of social competence and behavioral problems of 5-6 year-old children through peer preference. Master of Science dissertation, Middle East Technical University.
- Uçar, E. (2017). *Okul öncesi dönem (48-72 ay) çocuklarında ilişkisel ve fiziksel saldırganlığın mizaç ve çeşitli değişkenler açısından incelenmesi [A research of physical and relational aggression of preschool children (48-72 months) in terms of various variables]*. Master of Science dissertation, Halic University.
- Walker, S., Berthelsen, D., & Irving, K. (2001). Temperament and peer acceptance in early childhood: Sex and social status differences. *Child Study Journal, 31*, 177–191.
- Yağmurlu, B., & Sanson, A. (2009). Parenting and temperament as predictors of prosocial behavior in Australian and Turkish Australian children. *Australian Journal of Psychology, 61*(2), 77-88.
- Yağmurlu, B., & Altan, O. (2010). Maternal socialization and child temperament as predictors of emotion regulation in Turkish preschoolers. *Infant and Child Development, 19*(3), 275-296.
- Yağmurlu, B., & Sanson, A. (2009). Acculturation and parenting among Turkish mothers in Australia. *Journal of Cross-Cultural Psychology, 40*(3), 361-380.
- Yavuzer, H. (2000). *Okul çağı çocuğu [School-age child]*. Remzi.
- Yolcu, S. (2014). The role of child's temperament predictor on preschool social competence. *Creative Education, 5*, 1160-1169.