SYMBOLIC PLAY IN CHILDREN WITH AUTISM SPECTRUM DISORDER

Rashid Jabbarov[1]

Aydan Nazarova[2]

Abstract: Children with Autism Spectrum Disorder (ASD) exhibit persistent deficits in social communication and interaction, restricted and repetitive behaviors, and stereotyped behaviors. Studies have been conducted on the differential development of children with ASD in activities that require imagination and creativity. Studies comparing children with ASD with typically developing children or children with other developmental disabilities, particularly in terms of imaginative symbolic play, are important for understanding both the development of symbolic play in ASD and cognitive development. This review discusses the various ideas that encompass empirical studies investigating the development of symbolic play in children with ASD and the meaning of such play, and attempt to explain the limitations observed with ASD. The studies reviewed show that children with ASD differ from control groups in the development of spontaneous symbolic play (e.g., spending less time on this play, constructing less complex games), and the sources of the observed differences may be related to both ability and performance.

Keywords: autism spectrum disorder, symbolic play, imagination, mental representation, spontaneous symbolic play

1 Doctor of Psychology, teacher, Baku State Universty, Odlar Yurdu University, https://orcid.org/0000-0002-0623-2772

2 Master's student at the Department of Political Science, Psychology and Social Work, Western Caspian University, Baku, https://orcid.org/0009-0005-6092-5712

Introduction

Autism Spectrum Disorder (ASD) is a complex neurodevelopmental disorder that manifests itself from an early age. The two main features that stand out in the diagnosis of ASD are persistent deficits in social communication and interaction, and repetitive/restricted behaviors or interests. Along with these limitations, the differential development of children with ASD in activities that require imagination and creativity is also discussed by researchers and experts working in this field. One of the topics that is often discussed in this context is the development of imaginary symbolic play in children with ASD. [Baron-Cohen et, al, 1985, p. 146].

Studies conducted with typically developing children show that symbolic play begins to be observed between 18 and 24 months, and increases rapidly during the preschool period. This type of play is closely related to children's social (e.g., social skills) and cognitive (e.g., language) development. Studies with children with ASD have shown that symbolic play develops late or is restricted in their development [González-Sala et al, 2021; Aghajani et al, 2014].

This article will examine the development of symbolic play in children with ASD, including studies that compare this group with different control groups (e.g., typically developing or with peers with various developmental disorders) in terms of understanding and constructing symbolic play. The aim of the article is to learn more about the mental development of children with ASD by examining the development of imaginative play, which is thought to support social and cognitive development in typically developing children with ASD. The study of symbolic play in ASD is also important for theories about the development of this type of play. In addition, it is expected that this compiled information will contribute to practices targeting children with ASD (e.g., special education programs) [Lillard et al, 2013].

Many studies have shown that children with ASD experience difficulties in imaginative symbolic play compared to their typically developing peers and groups with other developmental delays. Recent studies have also shown a relationship between the severity of symptoms observed in

children with ASD and their symbolic play behaviors. Delays or deficits in symbolic play observed in infancy are a strong predictor of a diagnosis of ASD later in life [Campbell et al, 2016].

Although studies in the literature that show differences in symbolic play behaviors between children with ASD and typically developing children are widely accepted, there are also studies that do not find differences between groups. While one reason for the differences in study results may be the characteristics of the participants (e.g., children with ASD are at different levels on the spectrum, who the control groups are composed of and how they are formed), another important reason may be differences in the tests and methodologies used in the studies. While some studies have observed children constructing play using unstructured/free play tasks, some studies have used structured play techniques, and some studies have focused on understanding symbolic play rather than constructing play [Bigham, 2008, p. 265-280].

The factors influencing the development of symbolic play in children with ASD have been explained in different ways by different researchers, as well as by the measurement methods used. Some studies suggest that the source of the differences between groups with and without ASD is skill-related problems (lack of cognitive features necessary for symbolic play, such as problems in creating mental representations), while other researchers explain the observed differences in terms of performance deficits (such as a child's lack of motivation to play this type of game or difficulty generating ideas for the game). This study will examine the development of this type of play in ASD by presenting the results of studies that assessed the production and understanding of symbolic play in children with ASD using various tests. Discussion of the results of studies on the different perspectives that explain the performance of children with ASD in imaginative activities will help to understand the mental development of both typically developing children and children with ASD [Jarrold and Smith, 1996].

The Formation of Symbolic Play in Autism Spectrum Disorder

Most studies of children with ASD point to limitations in the formation of symbolic play. Although there are studies that show that children with ASD do not differ from typically developing control groups in symbolic play, many studies focus on differences in this area [Dominguez et al, 2006].

Studies have examined both the symbolic play that children spontaneously and spontaneously construct, and the symbolic play that they can construct when directed or commanded.

Only a few studies have examined the symbolic play of children with ASD found that groups performed similarly to controls in spontaneous symbolic play. For example, Christensen et al. (2010) studied the play behaviors of 18-month-old infants who were later diagnosed with ASD (a high-risk group for ASD) and who were later diagnosed with other developmental delays and who were typically developing. When the duration and order of play with toys were coded, infants who were later diagnosed with ASD did not differ from typically developing controls in their symbolic play behaviors (e.g., putting a plate on their head while pretending to be a hat). However, Christensen et al. (2010) suggested caution in interpreting these results, as the observed baseline effect may not be due to the fact that 18-month-old infants are too young to engage in symbolic play behavior. There is more research showing that children with ASD have problems with spontaneous symbolic play. These studies used different age groups (diagnosed preschool and school-aged children or young children at risk), different control groups (typically developing or diagnosed with a variety of developmental delays), different play partners (alone or with a parent or researcher), different durations (5 minutes or more), different toys, and different testing environments (home or clinic/treatment room). A common feature across studies is that children with ASD engage in less symbolic play than typically developing groups and children with a variety of developmental disorders, and display more stereotyped and repetitive behaviors in this play [Hobson et al, 2012].

A study examining the symbolic play behavior of children with ASD in an unstructured/free

play environment compared to children with moderate learning disabilities found different results. In interpreting the differences in results, it has been argued that the reason why children with ASD did not differ from controls in unstructured symbolic play may be methodological.

Another activity that may be an example of spontaneous symbolic play is having an imaginary friend. Imaginary friends are invisible beings or personalized objects. Studies show that approximately 30-50% of typically developing children have imaginary friends at some point in their lives [Motoshima et al, 2014].In a study comparing typically developing and ASP groups, it was observed that the rate of having an imaginary friend was much lower in the ASP group (16%) and that there were differences in the characteristics of the imaginary friends. For example, while the imaginary friends of typically developing children were more invisible, the imaginary friends reported in the ASP group were found to be more personalized objects [Davis, 2018].

In a study conducted with children with ASP and developmental delay, children's play behaviors were examined in five play sets, one unstructured (toys were presented and no instructions were given) and four structured (the experimenter briefly explained the symbolic play he wanted the children to do). Although symbolic play was the least preferred play by children, the ASP and developmental delay groups did not differ significantly in symbolic play behavior [Thiemann-Bourque et al, 2012].

The studies reviewed here show that children with ASP, while exhibiting some limitations in unstructured, spontaneous symbolic (pretend) play, can exhibit symbolic play-like behaviors in structured settings. Although play in these structured settings was found to be simpler and more varied than in control groups, the fact that children with ASP pretended to play in these settings may indicate that they have skills and abilities in this area but are unable to demonstrate them spontaneously. This may be due to children's lack of motivation or relationship problems rather than psychological deficiencies [Jabbarov et al, 2020; Vakil, 2020; Ramiz and Vakil, 2020]. This may also be a result of adaptation problems, value distortions, and the inability to properly establish feedback with them [Vakil, 2020; Ramiz and Vakil, 2020].

The results of studies using play-based tests (e.g., children with ASD producing fewer and simpler symbolic games compared to controls) are insufficient to distinguish whether the differences observed in children with ASD are due to different mental development (e.g., problems with mental representation skills) or purely performance-related problems. For this reason, various studies have used children's understanding of this type of play to measure their competence and mental representation skills. have investigated. In this way, it has been argued that competence problems that may be overshadowed by performance problems in studies using play-based tests can be more clearly tested [Thiemann-Bourque et al, 2012, p. 433-455].

Most studies investigating the comprehension/understanding of symbolic play in children with ASD show that children have no problems understanding symbolic play. In these studies, the researcher shows children a series of behaviors and asks them to indicate the consequences of the behavior. For example, the researcher pretends to pour tea on a toy duck and then asks the child: "What does the duck look like now?" The children choose one of three pictures shown to them (a picture corresponding to the change in the claim – a duck soaked in tea, a picture indicating an insignificant change – a duck with red triangles on it, and a picture indicating the current state of the toy – a dry duck). The researchers found that children with ASD performed above chance in understanding such pretentious behaviors: Children had no difficulty finding the picture that matched the researcher's pretext change [Kavanaugh and Harris, 1994].

Based on these studies, the researchers claim that children with ASD can understand symbolic play (create mental representations) and have no problems in this area. The studies mentioned above show that children understand the behavior of attributing "non-existent" properties to an object (making a duck look dirty when it is actually clean). However, these studies, which do not measure children's behavior of substituting one object for another (using a banana as a telephone) or of interacting with an

imaginary object (acting as if drinking water from an imaginary glass), are not sufficient to claim that children with ASD do not have problems understanding mental representations and creating mental representations in various forms of play.

In their study, the researchers examined whether children understood the behavior of using one object in place of another and interacting with an imaginary object. Children with ASD and moderate learning disabilities participated in the study, and their performance was compared to typically developing children in a previous study. The children were expected to understand the behavior of substituting one object for another shown by the researcher. This behavior was studied at different levels. Children's ability to understand symbolic behaviors was measured by breaking down the form and function of the objects used in each action. This behavior is thought to be easier to "use objects with similar forms and functions as if they were the same object" than to pretend objects with different forms and functions. However, in line with the study's hypotheses, children with ASD failed to understand pretend behaviors at different levels than control groups. In summary, according to research on the understanding of symbolic play, children with ASD may understand the attribution of "nonexistent" properties to objects. However, they have been observed to have difficulty understanding symbolic play, such as substituting one object for another, making imaginary objects. In interpreting the differences between the findings, it has been suggested that children with ASP do not have difficulty with the materials used in previous studies (imaginary tea is poured from a teacup associated with tea), because in such conditions there is no need to create a mental image due to the similarity in function and form. However, it has been argued that in order to claim that the concept of symbolic play is inviolable, it is necessary to understand the change of form and function, which has been shown to be lacking in ASP, and it has been concluded that the difference in symbolic play behaviors observed in these children is related to "competence" (mental representation skills) [Bigham, 2010, p.38].

Problems in mental representation

The meta-representational skills/mental representation skills that emerge in typical development at around age 2 form the basis of the later (around age 4) theory of mind skills (understanding the impact of our own and others' mental states on behavior), and symbolic play and theory of mind skills operate by the same mechanism. There are also studies that show that children with ASD do not develop theory of mind compared to children with Down syndrome and typically developing children. However, the differences in symbolic play observed in children with ASD are also thought to be specific to this group. When constructed symbolic play is compared, children with ASD display less symbolic play than children with Down syndrome who are matched for language and intelligence development. Based on these results, it has been claimed that children with ASD are unable to engage in simple symbolic play behavior and do not have a theory of mind, and the differences in symbolic play observed in ASD have been explained by problems in these children's mental representation skills. Accordingly, children with ASP are unable to form second, distinct representations of objects, and because of this lack of this ability, which underlies symbolic play and theory of mind, children show deficits in both of these skills [Baron-Cohen et, al, 1985, pp. 37-46].

In a study of ASP, mentally retarded, and typically developing children, children's mental representational abilities were measured using a false belief theory of mind test (e.g., understanding that a child may have a false belief about something that no one else has seen). When symbolic play comprehension was measured using tasks that measured children's ability to understand symbolic play and functional play performed by others, a relationship was found between children with ASP's performance on mental representation tasks and their understanding of symbolic play.

The fact that children with ASP rarely display symbolic play behaviors in unstructured play and have difficulty understanding some types of symbolic play supports the idea that differences in this group may be related to problems in mental representational abilities. Their lack of differences in understanding structured play and simple symbolic play from controls makes it difficult to explain the

differences in children's symbolic play skills by problems. However, if the main problem in producing symbolic play is a lack of mental representation skills, then children with ASD might be expected to perform similarly to their peers in a variety of games that do not require mental representation. While many studies have provided research in this direction, other studies argue that there are differences in the play behaviors of children with ASD in general and that this may not be specific to symbolic play.

Problems with executive functions

Executive functions are a general term that describes metacognitive skills that are thought to be associated with the frontal lobe of the brain and involve goal-directed behavior and thinking. Three main skills have emerged as executive functions in research: working memory (holding and manipulating information in memory), inhibitory control (suppressing dominant thoughts or behaviors), and mental flexibility (the ability to change thoughts and behaviors in response to changing rules or situations). It is thought that differences in executive function observed in ASPD may explain the variation in symbolic play seen in these children[. Zelazo et al, 1997].

Inhibitory control. A literature review by Hill (2004) found that individuals with ASPD have difficulty inhibiting dominant stimuli, which manifests itself in a variety of behaviors (e.g., repetitive stereotyped behaviors, problems with impulse control). When researchers examined the relationship between inhibitory control and symbolic play behavior, they suggested that the lack of symbolic play behavior produced by children in unstructured settings may be due to impaired inhibitory control, and that children must suppress the real world during symbolic play and the creation of mental representations, and therefore children with inhibition problems may not be able to display symbolic play behavior [Harris, 1993].

Mental agility. Another difficulty for people with ASPD is generating original thoughts and behaviors. The poor performance in symbolic play behavior seen in children with ASPD is due to a deficit in mental flexibility, or in this context, generative function. [Turner,1997].

However, studies have shown that children with ASPD have difficulty not only in creating symbolic play but also in understanding symbolic play, undermining the idea that the observed differences in play are related to limitations in productivity. Children with ASPD are able to engage in both structured and unstructured play. have difficulty in producing symbolic play behavior during unstructured free play. Furthermore, although there is a significant relationship between productivity and symbolic play in an unstructured environment, productivity performance in the ASP group is not inferior to that of typically developing controls, making it difficult to explain the differences observed in ASP solely in terms of productivity problems.

This section examines two subcomponents of executive function that explain the deficits in symbolic play seen in children with ASP. Dysfunctions in executive function have been shown to be associated with many symptoms of autism and have been suggested to be related to differences in symbolic play behavior. Studies using structured play tasks support the claim that children with ASP have the ability to produce symbolic play behavior, but that dysfunctions in executive function, particularly inhibitory control and agility/efficiency, cause children to have difficulty performing symbolic play. However, recent studies have shown that the deficit in symbolic play seen in children with ASD cannot be explained solely by performance deficits based on differences in executive function, and that inadequacy of mental representation skills may also play a role [Hill, 2004, p. 189-233]

Lack of motivation

It is thought that the deficit/difference in symbolic play behavior seen in children with ASD may be explained by a lack of motivation in addition to problems with mental representation and executive function deficits. Children with ASD may perform similarly to typically developing peers in situations where motivation is not reduced or unmotivated. From this perspective, the difficulties children with ASD experience in creating symbolic play may be explained by their lack of interest in

this play. Children with ASP may exhibit mechanical aspects of symbolic play behavior (e.g., using objects instead of other objects and using toys for their own purposes), and it has been suggested that children with ASP have deficits in the motivational and emotional domains that make symbolic play creative and enjoyable, which may explain the difficulties children experience in this play in different settings. However, there is no literature that empirically examines the relationship between lack of motivation and symbolic play behavior [Hobson et al, 2013].

Conclusion

Symbolic play behavior, which is an important part of early childhood and development and typically emerges in children by the age of two, is associated with a variety of social and cognitive skills [Aghajani et al, 2014; Jabbarov et al, 2023].Therefore, understanding the progression of this type of play in both typically developing and different developmental groups will be useful not only for parents, but also for researchers studying child development and for counselors and teachers working in this field. This review examines studies conducted with ASP participants, a group in which symbolic play, a type of imaginative play, ASP, develops differently, and discusses different perspectives that explain this development. The results of the studies reviewed and the implications of these results for explaining differences in ASP are quite diverse. Taking all of these studies into account, it can be concluded that children with ASP have problems in spontaneously constructing symbolic play, mainly in unstructured settings. These findings may be related to problems with mental representation, but they can also be explained by problems with productivity, inability to inhibit reality, or lack of motivation. The limitations that children with ASP demonstrate in understanding some types of symbolic play and the relationship between children's performance on theory of mind tests and their symbolic play performance suggest problems in mental representation skills in children with ASP. However, the lack of understanding of some symbolic play behaviors performed by children with ASP in others and the differences in rental representation skills observed in ASP make it difficult to explain the differences

observed in ASP. Although children are intellectually competent, their executive function problems (e.g., inhibitory control problems) and low motivation for this type of play may be important factors in explaining the differences in symbolic play observed in children with ASD.

In short, the factors that may explain the symbolic play performance of children with ASD and the differences in this performance are important and require further research.

Reference

Aghajani, T., Vakil, J. R., & Mustafayev, M. (2014). The effect of playing on children's social skills (Case of study: Preschool children in Tehran)

Baron-Cohen, S., Leslie, A. M. ve Frith, U. (1985). Does the autistic child have a "theory of mind"?. Cognition, 21, 37-46.

Bigham, S. (2008). Comprehension of pretence in children with autism. British Journal of Developmental Psychology, 26, 265-280.

Bigham, S. (2010). Impaired competence for pretense in children with autism: Exploring potential cognitive predictors. Journal of Autism and Developmental Disorders, 40, 30-38.

Campbell, S. B., Leezenbaum, N. B., Mahoney, A. S., Moore, E. L. ve Brownell, C. A. (2016). Pretend play and social engagement in toddlers at high and low genetic risk for autism spectrum disorder. Journal of Autism and Developmental Disorders, 46, 2305-2316.

Davis, P. E., Simon, H., Meins, E. ve Robins, D. L. (2018). Imaginary companions in children with autism spectrum disorder. Journal of Autism and Developmental Disorders, 48, 2790-2799.

Dominguez, A., Ziviani, J. ve Rodger, S. (2006). Play behaviours and play object preferences of young children with autistic disorder in a clinical play environment. Autism, 10, 53-69.

González-Sala, F., Gómez-Marí, I., Tárraga-Mínguez, R., Vicente Carvajal, A. ve Pastor-Cerezuela, G. (2021). Symbolic play among children with Autism Spectrum Disorder: A scoping review. Children,

8(9), 801.

Harris, P. L. (1993). Pretending and planning. S. Baron-Cohen, H. Tager-Flusberg ve D. Cohen (Haz.) Understanding other minds: Perspectives from Autism (s. 228-246). Oxford University Press.

Hill, E. L. (2004). Evaluating the theory of executive dysfunction in autism. Developmental Review, 24, 189-233.

Hobson, J., Hobson, R. P., Malik, S., Bargiota, K. ve Calo, S. (2013). The relation between social engagement and pretend play in autism. British Journal of Developmental Psychology, 31, 114–127.

Hobson, R. P., Lee, A. ve Hobson, J. A. (2009). Qualities of symbolic play among children with autism: A social-developmental perspective. Journal of Autism and Developmental Disorders, 39(1), 12-22.

Jarrold, C., Boucher, J. ve Smith, P. K. (1996). Generativity deficits in pretend play in autism. British Journal of Developmental Psychology, 14, 275-300.

Jabbarov, R., Mustafayev, M., Aliyev, J., Nasibova, U., & Bayramov, M. (2023). Psychological issues of the relationship between self-esteem and aggression in students studying in different faculties. Revista De Gestão E Secretariado, 14(10), 17236–17253. https://doi.org/10.7769/gesec.v14i10.2773

Jabbarov, R., Valiyeva Y., Nasirova N., Kazimova K. (2020). The creation of feedback in training as a mobilizing factor for the cognitive activity of students. Revista de Investigación Apuntes Universitarios. 10(1), 207 -221

Kavanaugh, R. D. ve Harris, P. L. (1994). Imagining the outcome of pretend transformations: Assessing the competence of normal children and children with autism. Developmental Psychology, 30, 847-854.

Lillard, A. S., Lerner, M. D., Hopkins, E. J., Dore, R. A., Smith, E. D. ve Palmquist, C. M. (2013). The impact of pretend play on children's development: A review of the evidence. Psychological Bulletin, 139, 1–34.

Motoshima, Y., Shinohara, I., Todo, N. ve Moriguchi, Y. (2014). Parental behaviour and children's creation of imaginary companions: A longitudinal study. European Journal of Developmental Psychology, 11, 716-727.

Ramiz A. K., Vakil C. R.(2020). Socio-psychological issues of changing values in adolescents – youth in education. Práxis Educacional. 2020; 16 (37): 578–590. DOI: 10.22481/ praxisedu.v16i37.6406

Thiemann-Bourque, K. S., Brady, N. C. ve Fleming, K. K. (2012). Symbolic play of preschoolers with severe communication impairments with autism and other developmental delays: More similarities than differences. Journal of Autism and Developmental Disorders, 42, 863-873.

Turner, M. (1997). Towards an executive dysfunction account of repetitive behaviour in autism. J. Russell (Haz.), Autism as an executive disorder (s. 57-100). Oxford University Press.

Vakil J. R.(2020). Mechanisms of socio-psychological adaptation of refugees. Journal of interdisciplinary debates. 2020. Vol. 1, no. 1. URL: https://doi.org/10.29327/217379.1.1-3

Zelazo, P. D., Carter, A., Reznick, J. S. ve Frye, D. (1997). Early development of executive function: A problem-solving framework. Review of General Psychology, 1, 198-226.