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## Correlation patterns between pretend play and playfulness in children with autism spectrum disorder, developmental delay, and typical development



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### ABSTRACT

This study aims to explore the relationships between pretend play and playfulness in children with autism spectrum disorder (ASD), children with developmental delay (DD), and typically developing (TD) children. Twenty children with ASD, 20 children with DD, and 20 TD children aged 3–7 years 11 months entered the play conditions for the assessments of pretend play and playfulness. Data were analyzed using the Pearson correlation coefficient and a regression analysis. Results revealed that the play patterns of the ASD group indicated greater reliance on others to generate novel ideas of how to play. The number of imitated actions and amount of elaborate pretend play were positively associated with the suspension of reality and framing dimensions of playfulness, respectively. In the DD group, pretend play performance was more closely related to the internal locus of control of playfulness. The play patterns for the TD group, as expected, involved more symbolic play and internal control. The results of this study provide further understanding of the relationships between pretend play and playfulness in children with ASD, children with DD, and TD children. Assisting children with ASD to engage in elaborate pretend play through adult facilitation may help improve the framing and suspension of reality dimensions of their playfulness.

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## 1. Introduction

Play, a primary occupation of children that is crucial to child development (Parham, 2008), is important in the development of cognition, communication, social skills, and physical well-being (Ginsburg, 2007; Lantz, 2001). Through

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play, children develop coping skills that shape their future behavior (Saunders, Sayer, & Goodale, 1999). In addition, play encompasses many skills that are essential for school activities and could enhance children's ability to learn (Fantuzzo, Sekino, & Cohen, 2004; Milteer and Ginsburg, 2012; Saunders et al., 1999). Therefore, it is important that children engage in play to facilitate various aspects of development.

Play has been defined as the dynamic interactions between an individual child and his/her immediate environment (Cooper, 2000; Sutton-Smith, 1980) and can be manifested by the external performance and internal experience (Bundy, 1993; Parham, 2008). The external performance is the observable performance that unfolds in play activities. In contrast, the internal experience is the feeling of playfulness, which is how a child feels during play and determines whether the activity belongs to play or not (Bundy, 1993; Neumann, 1971; Parham, 2008). The external performance and internal experience of play together can provide a more comprehensive manifestation of play and promote better understanding of the attributes of play.

Pretend play has been identified as a form of external performance involving both conventional imaginative play and symbolic play (Stagnitti and Unsworth, 2000). Conventional imaginative play involves perceiving objects (or conventional toys) as real or small copies of things, and then using them in a functionally proper way outside of the typical context (Lewis, Boucher, & Astell, 1992; Stagnitti and Unsworth, 2000). Symbolic play involves using objects (or unstructured toys) as something else, attributing properties to objects, or pretending an absent object is present (Lewis et al., 1992; McCune-Nicolich, 1981; Stagnitti and Unsworth, 2000). The external performance of pretend play reflects and facilitates the development of emotions, language, cognition, social skills, and perspective-taking ability (Baron-Cohen et al., 1996; Lillard et al., 2013; Vygotsky, 1976).

The internal experience of playfulness is the quality of play; children engage in play activities simply because they want to play, not for any other reasons (Barnett, 1990; Bundy, Nelson, Metzger, & Bingaman, 2001). Playfulness involves four dimensions: internal locus of control, intrinsic motivation, suspension of reality, and framing (Bateson, 1971; Bundy, 1993; Bundy et al., 2001). The internal locus of control is the extent to which children feel that they are in charge of their actions and some aspects of an action's outcome. For example, the child can decide "when", "what", "where", "how", and "with whom" to play by him/herself. Intrinsic motivation refers to whether the activity itself can provide the stimulus for children to engage in play activity. Stated simply, the child engages in an activity for enjoyment of the activity itself, rather than for external rewards. The suspension of reality means that children choose the degree to which play activity differs from reality, such as by bringing non-literal, fantasy elements into play. Finally, framing is the ability of children to give and receive social cues in order to interact with others (Bateson, 1971; Bundy, 1993; Bundy et al., 2001; Neumann, 1971). For example, during play with others, the child is able to pick up cues and maintain play scenarios (Bundy et al., 2001). According to Bundy (1997), a child

**Table 1**  
Characteristics of the participants ( $n=60$ ).

Characteristics/measure	ASD ( $n=20$ )		DD ( $n=20$ )		TD ( $n=20$ )	
	Mean (SD)	Range	Mean (SD)	Range	Mean (SD)	Range
Gender (boy/girl) ( $n$ )	17/3	–	15/5	–	12/8	–
Chronological age (months)	67.3 (16.3)	51–95	71.2 (11.5)	56–94	58.9 (10.2)	43–78
Childhood Autism Rating Scale	33.6 (2.9)	30–39	20.7 (2.3)	17–25	15.9 (1.5)	15–20
Receptive and Expressive Vocabulary Test—second edition						
Receptive scale	82.1 (18.2)	39–109	81.5 (17.3)	45–103	80.3 (16.8)	51–110
Expressive scale	74.5 (24.3)	37–110	74.8 (22.2)	32–108	78.4 (21.7)	37–110
Overall scale	156.6 (40.9)	76–219	156.3 (38.3)	78–211	157.2 (38.8)	88–220
ChiPPA						
PEPA-conventional	44.5 (25.5)	3–91	42.3 (15.9)	17–71	53.0 (18.0)	11–81
PEPA-symbolic	32.6 (17.9)	8–73	42.7 (19.5)	9–80	41.9 (16.4)	11–69
NOS-conventional	1.9 (3.2)	0–14	1.7 (1.9)	0–7	1.9 (1.9)	0–6
NOS-symbolic	10.1 (5.4)	2–22	8.1 (3.8)	2–15	13.5 (8.1)	5–39
NIA-conventional	0.6 (0.7)	0–2	0.3 (0.6)	0–2	0.4 (0.6)	0–2
NIA-symbolic	0.8 (1.2)	0–4	0.5 (0.8)	0–3	0.5 (1.0)	0–4
Symbolic play actions						
Symbolic play	15.2 (9.3)	2–39	19.5 (15.0)	3–52	17.7 (8.5)	6–37
Test of Playfulness						
Internal locus of control	24.2 (5.2)	18–37	27.4 (5.1)	14–35	27.0 (4.4)	20–35
Intrinsic motivation	12.0 (1.6)	9–15	12.0 (1.8)	8–15	12.5 (1.7)	9–15
Suspension of reality	9.1 (4.7)	3–18	11.8 (3.4)	6–17	10.8 (4.4)	3–18
Framing	6.9 (1.8)	4–10	7.4 (2.0)	3–10	7.7 (1.7)	4–10

Note: ChiPPA, Child-Initiated Pretend Play Assessment; PEPA, percentage of elaborate pretend actions; NOS, number of object substitutions; NIA, number of imitated actions; ASD, children with autism spectrum disorder; DD, children with developmental delay; TD, typically developing children.

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