Contents

3 BLOCK PLAY

MARY ANNE PEABODY

Children are natural builders. Constructing and deconstructing with blocks, children often test their theories about the physical and social world. They create block structures to share their thoughts, beliefs, and interests based on culture and experience, tempered by their developmental level. A child's innate impulse to construct with blocks starts early in life and appears to be a universal human tendency (Schaefer, 2016). Accordingly, this innate desire makes blocks one of the most versatile play materials available to children.

Ample research supports the importance of block building in early childhood settings (Barton et al., 2018; Yelland, 2011), providing a normative context for children's play individually and collectively. Playing with blocks contributes to children's early mathematical development, including numerical knowledge, shape recognition, spatial reasoning, and problem-solving skills (Kamii et al., 2004; Ness & Farenga, 2007; Seo & Ginsburg, 2004; Wellhousen & Kieff, 2001). As children grow older, they often develop newer or more sophisticated ways to build, adding to their abilities in creative problem solving, mental imagery, visual spatial ability, mathematical skills,

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and geometric skills (Pirrone & Di Nuovo, 2014; Wolfgang et al., 2003). There is also support for associating block play with later math achievement (Stannard et al., 2001; Wolfgang et al., 2001).

In further studies, block play has been shown to contribute to children's language and literacy skills (Cohen & Uhry, 2007; Wellhousen & Kieff, 2001). Hanline et al. (2001) found a predictive relationship between block play complexity and later reading ability and self-regulation. Expanding on block play as a social activity, research has suggested that children engage in more complex language interactions with peers during classroom block play settings (Kersh et al., 2008; Sluss & Stremmel, 2004). Cartright (1974) used blocks in group play settings to help child clients gain skills in planning ahead, seeking each other's help, and learning to understand differences. Likewise, Rogers (1985) reported that block play enhanced children's friendship skill development and served as a catalyst for exchanging positive social interaction.

Therefore, when examining the literature on children's block play in educational settings, when children are given time to plan and construct with blocks, multiple opportunities for learning and development occur socially, emotionally, cognitively, linguistically, and physically (Hirsch, 1996; Pollman, 2010; Tunks, 2013; Wellhousen & Kieff, 2001). With the interconnected nature of block play across various learning domains and ages, it is clear that the benefits of block play are undisputable.

Despite the wealth of research supporting block play in educational settings, studies on the therapeutic impact of blocks in play therapy appear to be a relatively neglected topic (Schaefer, 2001). This is quite surprising given blocks or bricks are often mentioned in the play therapy material lists across various theoretical orientations. Landreth (2012) identified different shapes and sizes of building blocks in his recommended toys and materials list for child-centered play therapy, stating that blocks allow for creativity and emotional release through the building and knocking down of structures. Kottman and Meany-Walen (2018) placed building blocks in the pretend/fantasy toy category of Adlerian play therapy, whereas O'Connor (2000) discussed the pros/cons of construction toys (LEGO bricks, Lincoln Logs, Tinkertoys, and Erector sets) during his explanation of Level III play materials in Ecosystemic play therapy. Gaskill and Perry's (2017) identified stacking blocks, or playing with manipulatives such as LEGO bricks, as a relational/affective activity in their Neurosequential therapeutics approach of a play therapy model.

LEGO bricks, a form of blocks, are used in a specific intervention with children with autism called LEGO-based therapy (LeGoff et al., 2014; MacCormack et al., 2015). LEGO-based therapy is a directive group social

skills intervention using children's interest in LEGO bricks as a motivator for socialization. Additionally, Thomsen (2018) recently explored the therapeutic use of LEGO bricks for boosting self-esteem and promoting the emotional well-being of children.

Specific to play therapy, Kestly (2014) adapted the LEGO Serious Play methodology to family play therapy, and Peabody (2015) used an adapted version in play therapy clinical supervision. Briefly, the LEGO Serious Play methodology involves several rounds of brick building, storytelling, and reflection to aid in communication and problem solving (Kristiansen & Rasmussen, 2014; The LEGO Group, 2010). When used in family play therapy or play therapy supervision, the therapist offers a specific directive prompt (Kestly, 2014; Peabody, 2015) whereby the client then builds a series of three-dimensional LEGO metaphoric models to represent feelings, reflections, struggles, or potential solutions.

In this chapter, the therapeutic use of block and brick play is explored by first conceptualizing four therapeutic powers of play as mediators of change in clients. Next, three core techniques are described, followed by clinical applications across individual, group, and family play therapy. Next, a case illustration highlights how blocks and bricks may be used throughout the play therapy process. Finally, empirical support for therapeutic block play is examined, and the chapter concludes with suggestions for future studies within the field of play therapy.

THERAPEUTIC BENEFITS

Foundational to play therapy is the belief that play behaviors are active forces that initiate, facilitate, or strengthen behavior change (Schaefer & Drewes, 2014). Dependent on the individual client treatment plan and the training or theoretical orientation of the therapist, block and brick play has tremendous potential to activate different therapeutic powers of play. To illustrate this, four therapeutic powers of play have been selected: self-expression, creative problem solving, self-regulation, and social competence. In choosing these four, the author recognizes that other therapeutic powers of play could be further examined and that the chosen four may overlap. Readers are urged to become well versed in all therapeutic powers of play that produce change in a client (Schaefer & Drewes, 2014).

Self-Expression

Landreth (2012) shared that children are naturally comfortable with using play activities, materials, and toys as ways to express themselves. The freedom

inherent in blocks allows children to create anything they desire. Children can build walls or fortresses, they can invite their play therapist to join them inside their structure, or they can build a barrier that excludes the therapist. Children can add to their block creations by including miniatures, figures, puppets, or natural items like leaves or rocks as symbolic representations for experiences, thoughts, and feelings. As self-expression crosses all therapeutic orientation models, blocks and bricks can be useful along the continuum of nondirective, directive, and integrative approaches.

Block building provides emotional release for both comfortable and uncomfortable emotions. On one end of this continuum, mastery and accomplishment build self-esteem and ego strength. Conversely, block building may heighten frustration, such as in a young child struggling to balance a tower or a more experienced builder creating a complex structure. Learning to cope with frustration and gaining skills in perseverance are parts of the therapeutic self-expression process.

Creative Problem Solving

Bagiati and Evangelou (2006) found that young children demonstrated considerable problem-solving knowledge during block play. As children move through the various stages of building (stacking towers, creating elaborate designs, and reenacting their world), they have opportunities to experiment, make mistakes, problem solve, and find solutions. Block play allows children to practice both divergent and convergent thinking during problem solving. Divergent problem solving generates many options and choices, such as manipulating and arranging objects in varying constructions. Convergent problem solving involves assessing why the structure is not working as planned, what adjustments are necessary to make, and decision making on how to proceed.

This type of creative problem solving requires the ability to give organization to one's mental processes, often holding several pieces of information in mind while trying to navigate another task. The ability to problem solve requires the ability to think flexibility, which may be difficult for some children who are in therapy (Russ & Wallace, 2014). Children who struggle with self-regulation, a common referral issue for play therapy, often need support and directed teaching that could be met with opportunities for block and brick play.

Self-Regulation

Bodrova and Leong (2005) defined *self-regulation* as a deep internal mechanism that underlies mindful, intentional, and thoughtful behaviors of children (p. 32). Self-regulated children can suppress their impulses long enough to think about possible consequences of their behavior and to consider different

actions that may be more appropriate. This ability to be intentional, thoughtful, and futuristic involves both thinking and behavioral skills (Blair, 2002).

Block building inherently requires planning ahead, frustration tolerance, and impulse control (Schaefer, 2016). For impulsive children who tend to act first, then remember what they should have or could have done later, the opportunity to playfully practice cognitive planning and impulse control is valuable. Anticipating block-building structural difficulties and slowing down before building as you think through possible adjustments are important ingredients of thinking ahead and inhibiting impulses. Additionally, while solving structural challenges, children may learn persistence and how to cope with feelings of frustration, anger, or disappointment.

Therefore, block play can provide a foundation for children to develop self-control and frustration tolerance while gaining self-confidence. Each of these skills is embedded in the ability to regulate internal emotions and external impulsive behavior. Because the primary context in which young children learn self-regulation is often through imaginative and extended play experiences (Bodrova & Leong, 2005), block building can be a way to strengthen these lifelong self-regulation skills.

Social Competence

When block or brick building is a social activity, it can be a training ground for acquiring and practicing socially necessary skills. Block and brick play provides experiences that foster social development as children work together and come to understand that others have different perspectives through playful exchanges. When children build with others, they are provided ample opportunities to make and implement plans, or in the case of disagreement, they can attempt to negotiate with others, compromise, or find mutually agreed-upon solutions. These are highly sophisticated skills, and children initially may need the support of adults to navigate these critical skills.

Imagine two children building with blocks, and one decides to knock down the other's tower. The child on the receiving end must try to cope with the feelings and use words to convey to the other child how she or he is feeling. Alternatively, building with others can provide opportunities whereby children experience a sense of communal accomplishment, pride, and satisfaction.

CORE TECHNIQUES

Given the popularity, versatility, and accessibility of blocks and bricks, three popular play therapy techniques are shared.

Jenga Variations

The Hasbro game Jenga and its many generic adaptations have been used therapeutically to build rapport, to identify and discuss feelings, and for social skill training. Therapists have written questions or feeling words directly on the blocks, or applied stickers with questions to the blocks, or paired different colored blocks with different feeling words. Totika is a commercially available therapeutic game (https://www.playtherapysupply.com) that uses question cards across different age levels (child–teen–adult) to start topical conversations on topics such as self-esteem, life skills, divorce, values, and beliefs. As the popular game requires little preparation or explanation, it is easily adaptable across multiple presenting issues.

Guided Teaching Techniques

More recently, the LEGO Education company created bricks with various emotional expressions with accompanying structured social and emotional learning activities (https://education.lego.com/en-us). The learning sets include cards, activities, and lesson plans created for helping young children recognize and understand feelings, express preferences, resolve conflicts, and learn about relationships. Although developed for the early childhood classroom setting, the materials and stories are easily transferable to the play therapy setting.

Another popular technique, created by Heidi Kaduson to promote a child's self-control, is Beat the Clock (Kaduson, 1997, pp. 139–141). The goal of the technique is for the child to stay focused for a select period while building with blocks and simultaneously resisting distractions created by the therapist. The child begins with a collection of 10 poker chips and is challenged to neither look up or around nor talk despite signs of distraction. If they do engage in distractible behaviors, the therapist takes a chip from their collection. The child is encouraged to stay focused because the child will also collect tokens after a specified amount of time. After accumulating a certain number of chips, the child can redeem the chips for a prize. When the children are successful with this technique, they feel a sense of accomplishment and competence, while extending time on task despite distractions (Kaduson, 1997). Although block building is often the activity of choice, children could also draw, stay still, or attempt to keep a straight face during the therapist-generated distractions.

Unstructured Play

If a therapist is using a nondirective approach to play therapy, blocks or bricks in the playroom could be considered a developmental mastery toy (Holliman

et al., 2013). For many children, they have experience with building with LEGO bricks using detailed instructions for a specified purpose, so a play therapist can switch that by allowing free-form building. This unstructured play opportunity allows clients to stay within the comfort of a familiar material while offering a challenge without a template (Kronengold, 2017; O'Connor, 2000).

CLINICAL APPLICATIONS

Because block and brick building has such a universal appeal to enhance developmental skills across many domains, most children can benefit from the competence building that block or brick play provides. If the clinical setting allows for dyad, group, or family play therapy, the benefits for social skill applications are heightened.

Children With Trauma Backgrounds

Children with histories of trauma have experienced a loss of control, and at times their behaviors may appear maladaptive as they attempt to cope with elevated levels of competing needs, thoughts, physical symptoms, and emotions. These overwhelming experiences may cause some children to go back and forth between their response styles in unpredictable ways (Ohnogi & Drewes, 2016).

A sensitive therapist understands that trauma work is often erratic and intermittent and respects the child's need to move toward and away from trauma-related content (Goodyear-Brown, 2010). Valuing the rhythmic movement inherent in trauma play requires an understanding of the importance of pacing. A nuanced observation of children's block building reveals a natural pacing element embedded in the process. Typically, the building phase occurs as a quiet, slow, or methodical process. Conversely, the knocking-down phase is loud, quick, and exciting. When the therapist facilitates the intersection of construction or deconstruction pacing, along with the movement toward and away from difficult content, a reestablishment of the child's sense of power and control may occur.

Children who have been involved in natural or human-made disasters may reenact scenes with the building materials with themes of destruction and rescue, grief, and loss. Care must be taken to understand the advances in trauma treatment and when reenactment might be retraumatizing for children (Gil, 2006, Terr, 1990). Therapists can model appropriate ways to handle catharsis and clarify when, for whom, and how catharsis in play therapy can be helpful or hurtful (Schaefer & Mattei, 2005). It is imperative

to stay current with the research and knowledge around trauma and reenactment play, catharsis, and skillful limit setting as part of the training, competencies, and ongoing clinical supervision of all play therapists.

Because of the open-ended and nondescriptive nature of block play, children experiencing trauma may be drawn to the element of destruction. Block play has a destructive appeal, not necessarily an aggressive appeal, and as such this destructive appeal can make some adults uncomfortable (Hewitt, 2001). It is important for play therapists to consider their own reactions and comfort level in the "destructive" side of block play and use supervision to explore this concept of the play therapy process.

Children With Social Communication Needs

Children with autism, dysregulation issues, and other neurodevelopmental disorders often are resistant to group therapy because of increased anxiety around the required demands or unfamiliarity with needed skills in social situations (LeGoff et al., 2014). LEGO-based therapy is a social skills intervention for school-age children that harnesses children's interest in LEGO construction to make social interactions interesting (LeGoff, 2004). It is one of the most researched interventions that uses LEGO bricks with children diagnosed with autistic spectrum disorder and others with communication and social developmental difficulties (LeGoff et al., 2010; Owens et al., 2008).

Using a naturalistic and directive approach to treatment, LEGO-based therapy is delivered in 30-minute sessions, once per week. A triage of children jointly build LEGO models, each with assigned roles of Engineer, Builder, and Supplier. The activity provides opportunities for children to use their problem-solving, creativity, attention, verbal and nonverbal communication, collaboration, and social interaction skills (LeGoff et al., 2010). It has been suggested that children on the autism spectrum have a strong urge to systemize—to predict patterns and changes in events (Baron-Cohen, 2008). Consequently, playing with LEGO bricks appeals to children with this diagnosis, as the toy itself is suited to being systemized because of its predictable and systematic nature (Owens et al., 2008).

Family Play Therapy

Kestly (2014) used a modification of LEGO Serious Play to restore a family's social engagement and family problem solving. By building models based on a directed prompt chosen by the therapist, family members move through the right–left–right brain hemispheric progression (McGilchrist, 2009). First, the right hemisphere of the brain is used as family members build with their

hands, then the left hemisphere is used as individual family members tell a story about their model, and finally the right hemisphere through a metaphorical understanding at a creative higher level (Kestly, 2014). Additionally, by limiting the number and types of brick materials, the feeling of containment is maintained, thereby validating each family member's contribution, regardless of age or rank, while modeling active listening to one another (Kestly, 2014). Furthermore, this approach allows playful exchanges between parents and children that enhances connection.

CASE ILLUSTRATION

The following case illustration is a composite sketch of clients presenting with chronic medical concerns, and confidentiality is protected by changes to names and identifying details. Five-year-old Sam was referred to play therapy after his parents reported increased emotional meltdowns and bedtime fears that seemed to coincide with entering kindergarten. Sam was no stranger to managing stress, separation, or meeting a new therapist. Being born without lower extremities, Sam had undergone 10 surgeries in his short life, with another planned in 2 months. His parents described the impact of repeated hospitalizations on their family, but they also shared excitement that Sam had reached the developmental milestone of kindergarten entry.

Despite his numerous medical treatments and disruptions of routines, Sam possessed a range of coping strategies and resiliency that were immediately evident. He wheeled himself from the waiting room into the playroom, spun around in a full circle, and immediately ripped apart the Velcro seat belt holding him in his wheelchair. He independently climbed out of the chair onto the floor and subsequently used the strength of his upper body and arms to maneuver wherever he wanted.

In his first few play therapy sessions, Sam exhibited play themes related to exploratory play, control, and safety. Specifically, he engaged in sorting behaviors (sorting the wooden block sizes and the dishes into categories), fixing play (construction tools used to fix the dollhouse), and instability play (tools, cups, dishes, and small blocks falling from the sky). He would play rather intensely and then immediately stop, physically climb back into his wheelchair, and proceed to the whiteboard to draw. He seemed to have developed the emotional regulation skill of knowing when he needed to take a break.

In the middle of our fourth session, he grabbed the miniature bear family, a small police car, and a similar-sized fire truck. He unbuckled himself and moved toward the wooden block and LEGO bricks. Sam began to build as he engaged in private speech, self-narrating out loud his building plans. "This is

my new house," he proclaimed, setting up the block rooms carefully, including a garage for the police car and fire truck. Sam continued to build for the remainder of the session. He was disappointed when our time was up, but like so many children, he returned right to this same building process in the following session. His story was not yet built, finished, or shared.

Suddenly, Sam's play changed. Danger entered the block house in the form of LEGO brick bombs dropped by Sam. "Danger, danger," he called out. In response to the reflection of how scared the bear family must be feeling. "No worries . . . they will get out. They can climb down the stairs, down the ladders." Upon closer examination, Sam had placed LEGO window-shaped bricks and ladders on the edges of the wooden blocks, providing safety escapes for each room. As this therapist reflected that the bear family was figuring out how to get to safety, Sam frantically exclaimed, "Where's the dog? Somebody get the dog! The dog can't climb the ladders. Don't forget the dog. Don't forget the dog! He can't climb! Find him!"

Sure enough, Sam had placed the small LEGO brick dog underneath the block and brick destruction. "Save him, save him. The firemen and police are stuck too!" As Sam had now placed this therapist in a role, the whisper voice technique was used (Kottman, 2011). In this technique, the therapist maneuvered between three distinct voices, including the voice of the rescuer; the whisperer voice, which involved asking Sam questions of what to do or say next so he remained in control of the story; and the regular voice of the therapist offering emotionally facilitative responses. Remaining in control of the play process, Sam led the bear family out through the windows, as he repeated, "Someone has to carry the dog out, he can't climb! Hurry up, don't forget him. The teacher doesn't know he's still in there!"

His fear of being unable to physically escape was being played out. The use of the word "teacher" when the original structure had been a home was significant. As often happens in play therapy, the home became school, the bear family became his kindergarten class, and the bear students began to climb through the windows and down the slides. His rescue play, certainly frantic at points, shifted and resulted in resolution play. The teacher bear finally found the LEGO dog and carried it on her back through the window and down the slide to safety. Sam abruptly announced, "Let's build a school with slides and ramps everywhere," again taking control of the play environment.

The blocks and bricks could be anything Sam wanted or needed. Blocks, as the ultimate expressive toy, easily allowed him to engage in several therapeutic powers of play, such as self-expression, emotional release, fear management, and creative problem solving. Bears, bombs, dogs, teachers, rescue plans, ramps, and windows came to life. Sam could play and express his fears,

his need to know that others would take care of him, and how he could take control over his own play scenes.

At the end of the session, this therapist asked for a parent consultation, in which the themes of the play were shared and a plan developed. Sam's parents would share with the new teacher the importance of explicitly explaining to Sam the overall safety plan for all children and specifically any accommodations for Sam. Because the school was scheduled to practice safety drills for both fire and lockdown scenarios, Sam could be helped in advance to process this new information, environment, and experience.

Sam continued in play therapy for several weeks, and as the kindergarten routine became normalized, his unsafe play subsided. For Sam, block and brick play was the ultimate open-ended material choice. He used blocks and bricks to build and create, communicate, destroy, rescue, cope, prepare for upcoming stressful events, and process unfamiliar experiences. As the unfamiliar became more familiar, he was emotionally stronger to face the next steps in his ever-changing life.

EMPIRICAL SUPPORT

A growing body of empirical support for block play has supported correlational evidence for gains in mathematics, spatial, and literacy skills (Ramani et al., 2014; Verdine et al., 2014), gross and fine motor skills (Pirrone & Di Nuovo, 2014), and executive functioning (Schmitt et al., 2018). The empirical studies conducted in educational settings highlight that block and brick building have tremendous potential across various child developmental domains (Hirsch, 1996; LeGoff, 2004; Pollman, 2010; Tunks, 2013; Wellhousen & Kieff, 2001).

Despite blocks and bricks often appearing on play therapy material lists, block play is a relatively neglected topic in the play therapy literature (Schaefer, 2016). The capacity of block play to activate various therapeutic powers of play beyond those described in this chapter, along with the versatility and interest that block play holds for children across disparate treatment difficulties, paves the way for future exploration.

Specifically, two areas for exploration include children's executive functioning and social learning. Charles Schaefer (2016) reminded us that block building requires planning, frustration tolerance, and impulse control, which are skills involved in executive functioning and skills that many play therapy clients struggle navigating. As previously stated, educationally based research has found that block play enhances children's executive functioning (Schmitt et al., 2018). Although we can potentially extrapolate the results into a clinical

setting, it behooves play therapist researchers to replicate this study within a play therapy context.

Furthermore, for the therapist who conducts sibling or small-group therapy, including many school-based play therapists, LEGO-based therapy (LeGoff et al., 2014) has strong empirical support, specifically with children presenting with communication and social developmental difficulties (LeGoff et al., 2010; Owens et al., 2008). Therefore, a play therapist seeking to apply empirically supported interventions using bricks and blocks can look to this body of literature (LeGoff et al., 2010; Owens et al., 2008) during case formulation and when developing their treatment plans.

SUMMARY AND CONCLUSION

This chapter explored the nature of and empirical support for block and brick play in educational and therapeutic contexts. Additionally, this chapter focused on four therapeutic powers of play activated in block and brick play, core techniques, clinical applications, and a case study. At the heart of block and brick play is an ability to sustain focus, to diverge and converge one's thinking to create a structure, and to use imagination to create new solutions. This ability to build, grow, and change offers infinite possibilities for self-expression, leading to growth in confidence and competence. Although blocks and bricks are products of play, it is the process of play that intrigues and helps us to understand its power to effect change. In both block building and play therapy, we cannot fully understand until we take apart, examine, and rebuild with our clients and families. With clear evidence that blocks and bricks hold power for developmental growth in educational settings, perhaps the same exploration holds promise for the play therapy community of practice.

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