# Learning to cope through play

Playful learning as an approach to support children's coping during times of heightened stress and adversity



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# Coping through play



# Play provides a supportive context to help children cope with stress

Research shows a link between play and children's ability to understand and cope with the demands of their environment, respond to challenges with creative problem solving, and manage their anxiety in stressful situations. Increasing spaces and opportunities for quality play in children's daily life and contexts—at home, in school, and in public areas—provides them with ways to channel negative emotions and practice strategies to overcome stress.

#### Play is a powerful experience for developing self-regulation, a central ability in children's coping with stress

Play interactions and playful learning activities, such as sociodramatic play and storytelling/story-acting, increase positive feelings and promote the cognitive skills that are critical in managing emotional and behavioral responses integral to integral to learning and managing stress.





# Play supports children exposed to severe and prolonged adversity.

Playful experiences and interventions can be an effective way of addressing the needs of children who have experienced abuse, violence, poverty, illness, and other forms of adversity. Creating the community infrastructure and designing culturally responsive play approaches to facilitate children's learning and development, increases the chances of maintaining children's health and well-being when faced with adversity.

# When combined with adult guidance, the benefits of play are particularly effective in supporting children experiencing adversity

Implementing play interventions that address both adults' and children's coping skills can make an important difference in promoting children's ability to withstand the effects of adversity and supporting caregivers in engaging in responsive interactions with children. This underscores the importance of preserving the ties of children with their significant caregivers and fostering human connections through facilitated playgroups, familial play therapies, and community-based play programs.



#### Professionals in a variety of settings can employ play to support families undergoing stress and adversity.

Educators, healthcare professionals, child life specialists, social workers, counselors, therapists, and other professionals who interact with children and their families can employ play in their work. This requires offering a variety of play approaches that suit the physical, emotional, and cognitive needs of children; developing protocols and ongoing education/training for professionals to introduce playful practices; and using nontraditional areas, like waiting rooms or school hallways, to promote playful interactions. This also means that professionals may need to coordinate with different systems of care depending on children's and families' needs and experiences.

# Supporting children to cope with stress and trauma through play

A robust body of literature demonstrates the negative impact of toxic stress on children's well-being, 1.2 and the critical role that protective factors, including strong caregiver relationships, 3 can have in protecting children against the negative effects of persistent stress. Growing evidence suggests that learning through play can uniquely support children in developing the skills they need to cope with stress and anxiety during everyday as well as adverse circumstances. When combined with adult guidance, the benefits of learning through play are particularly powerful in promoting the coping and regulatory abilities that children experiencing chronic illness, poverty, violence, and/or trauma need to continue to thrive and adapt to change in the face of adversity. 4.5

It is important to note that the research on the relationship between play and coping with stress is broad and investigates different forms of play–from free play to guided play to therapeutic play and more– in different contexts and situations. The variety of play forms represented in the literature fall within a spectrum<sup>6</sup> of experiences and practices that support children to learn to cope through play. Thus, in this document, we use play and learning through play interchangeably to refer to playful experiences in which children learn and develop coping skills. As a joyful, actively engaging, meaningful,

iterative, and socially interactive experience,<sup>7</sup> learning through play provides a supportive context to help children learn to engage with others and their environment, and this seems particularly important when children are faced with stress in daily as well as adverse circumstances.

### The role of play in promoting coping strategies and self-regulation in everyday circumstances

Coping refers to the cognitive and behavioral strategies children employ to control their emotions and behaviors and meet the demands of their environment. When faced with stress in everyday situations, children can turn to play as a way of expressing their negative feelings and seeking resolution for the cognitive and emotional conflict they are experiencing.<sup>8-10</sup> Through play, children can explore their thoughts and feelings and consider other possibilities and realities for how to deal with them. 11 For example, in a study looking at drop off time on the first day of preschool—a situation that has been well documented to be stressful for children—high anxiety children who engaged in imaginative play showed reduced levels of stress.12 Studies also indicate that children themselves recognize play as a strategy for managing their stress, and name it explicitly as an approach they use to reduce negative emotions and stress. 13-16





#### Play promotes self-regulation

Play can especially help children develop self-regulation (i.e, the ability to control impulses, behaviors, and emotions in response particular situations), <sup>17</sup> which is central in their coping and associated with long-term learning and development. <sup>18-22</sup> As a naturally interactive experience, playful experiences can help children learn to manage their behaviors and express their emotions productively, problem solve when interacting with others, take others' perspectives into account,

and demonstrate empathy.<sup>23-29</sup> In a two-year study implementing the storytelling/story-acting practice developed by Vivian Paley in preschool classrooms serving low-income children, researchers found that children who participated in the intervention had significantly improved capacities for self-regulation and cooperative interactions with other children.<sup>30</sup> Play can also help facilitate social interactions among peers who may otherwise have trouble communicating. For instance, children who experience difficulties with the primary

language spoken in their environment can engage in play as an alternate mode of expression. Thus, the research shows that engaging in playful experiences supports children in learning to respond to difficult situations and build the self-regulation skills that allow them to manage their stress when it comes to their everyday lives.

### The role of play in coping with severe and prolonged adversity

Coping strategies are particularly important when children are faced with severe and/or prolonged adversity. As research shows, adversity can get "under the skin" through a number of biological and psychological processes that affect children's lifelong learning, health, and development.32 The relationship between play and stress is reciprocal. 33 When children experience increased levels of stress or anxiety, the nature and organization of their playful behaviors are affected, becoming repetitive, less organized, aggressive, and/or linked to the source of stress or trauma previously experienced.34-41 At the same time, continued opportunities to play during and after stressful or traumatic experiences can help alleviate children's levels of stress and strengthen their coping abilities. Studies have shown that free play and guided forms of play, along with play therapy, are effective in addressing the needs of children who have experienced abuse, violence, poverty, and other forms of adversity. 42-56

#### Play in conflict and crisis settings

For refugee children and children exposed to armed conflict, displacement, and related consequences of crisis, such as extreme poverty, physical or emotional abuse and neglect, loss of family members, and lack of normalcy, play experiences serve an adaptive and healing role. When thoughtfully designed to consider the particular needs of children and their families, play serves as a context within which they can develop positive

relationships with others and their environment. 57-61 For example, one study described that refugee children in Beirut who participated in a play intervention aimed at creating a supportive environment through games and dramatic play, developed trusting relationships, regained a sense of autonomy, were able to express their emotions, and exercise self regulation. 62 In another study, researchers investigated the effects of a 10-week intervention that engaged mothers and their young children living under chronic threat of missile attacks in weekly group play sessions. 63 After the intervention, mothers reported changes in their children's behavior, including more positive moods, increased independence, and fewer tantrums. Researchers also found perceived changes in the behaviors of mothers and their bond with their children, including more focused attention on the child, that persisted at a one-year follow up. In other cases, researchers have found that play approaches adapted to children's cultural practices, religion, or language, serve as a vehicle to promote refugee children's positive affect, sense of social inclusion, and belonging while adapting their changing environment. 64-66 Taken together, the research shows that play can help children cope with past and ongoing trauma of violence and displacement.

#### Play in health care settings

The benefits of play also extend to other stressful or adverse circumstances. Children undergoing medical procedures for acute or chronic illness face many sources of stress and anxiety. The unfamiliar, sterile medical environment, temporary or ongoing separation from family, the constant interaction with medical professionals, equipment, and information, and pain during and after treatment can all make children feel stressed and afraid. Children going through repeated or lengthy hospital visits or undergoing invasive procedures can experience developmental delays,

anxiety, and a loss of a sense of control or mastery. 67,68 Play programming in hospital settings allows children to cope with the negative experiences associated with medical procedures and hospitalization and provides them with a sense of normalcy and control, reduces stress and anxiety about treatment, and improves general mental well-being. 69-87

#### The role of caregivers in learning to copy through play

A critical component of building children's resilience is the availability of caring adult relationships that can help them cope with the stress associated with adversity. 88 As illustrated by research discussed thus far, adults have an important role in helping children develop resilience and cope with stress through play. Starting early in life, children interact with their caregivers through play and learn important self-regulatory skills from these interactions. 89,90 As children get older, adults' play interactions with children continue to strengthen the development of coping strategies and skills that children employ throughout the lifespan. 91-93

When confronted with adverse circumstances, caregivers themselves experience stress and anxiety that can affect how responsive they are to the needs of the children in their care. Implementing play interventions that address both caregivers' and children's needs can make an important difference in promoting the skills to help children cope with adversity. For example, one study found that participation in a facilitated playgroup helped refugee children and their families to deal with past traumatic experiences and integrate into their new environment. Families found new social networks within the group as well as ongoing emotional support that reduced their stress levels and promoted resilience for both the parents and children. Furthermore, parents learned to interact and support their children through play.94

Similarly, researchers explored the play between mothers and children whose fathers died in the events of September 11, 2001 in the United States. 95 During video consultation sessions of play interactions, therapists helped mothers understand their children's experiences of loss and grief and adjust their responses to their children during play. After several years of the intervention, mothers were better able to scaffold and remain flexible during play, resulting in children's more emotionally rich, less aggressive and less repetitive pretend play. Overall, the child-mother dyadic relationship during play fostered more expression between the mother and child. In another study, researchers investigated the effects of a play-based intervention that involved filial therapy with parents and an adapted form of filial therapy with teachers. Results showed that the play intervention served to prevent problem behaviors in participating students. The children in the treatment group showed fewer aggressive, hyperactive, anxious, and depressive behaviors following the intervention period compared to the control group, and parents who participated in the therapy reported they felt more competent and assured in their parenting.96 Like the examples described, evidence suggests a mutually beneficial impact of playbased approaches for caregivers and their children. 97-99

#### The role of professionals in coping through play

In addition to parents and families, teachers and other professionals in schools can help support children's coping with adversity through play. As places that offer physical safety and psychosocial support, schools are an important setting where play interventions can be employed to protect children against the deleterious effects of stress by promoting social emotional and self-regulatory skills. 100 Teachers working with children who have experienced abuse and neglect can recognize opportunities to engage children using simple play



sequences based on children's spontaneous play to help children build attachment, impulse control, interpersonal effectiveness, and a sense of enjoyment.<sup>101</sup>

Furthermore, researchers have found that training teachers in play therapy facilitation can increase teachers' empathic responses toward students and decrease child behavior problems. Although not trained therapists, teachers can use playful techniques to help alleviate their own and students' stress as well as improve the overall relationship. 102,103 Teachers also have an important role in referring students to other professional services that can employ play approaches. 104

Researchers have also argued that professional school counselors and therapists have an important role in identifying children who are coping with trauma, assisting them through appropriate interventions, and providing referrals to services and other networks for further support. School counselors can be a point of contact to help diagnose and respond to the needs of trauma survivors and employ play interventions that emphasize familiar materials and environments to help establish safety and sense of ownership for children who have experienced loss and trauma. 106

As discussed in the previous section on play in health care settings, nurses, doctors, child life specialists, and other health care professionals have an important role in the system of care and community services that can employ play to support children cope with stress. Along with teachers and school staff, pediatricians, mental health professionals, and medical staff at hospitals and clinics can utilize playful approaches in their interactions with children and their families to help them cope with daily as well as acute stressors.

#### Implications for research and practice

Evidence demonstrates that playful activities and interventions support the development of regulatory abilities and coping strategies that are essential in responding appropriately to stress. The research further suggests that play, including play therapies, can help children learn to cope with adversity and traumatic events. Importantly, adults have a critical role in creating and fostering the kinds of playful experiences, opportunities, and interactions that support children's ability to respond adaptively to challenges and can themselves benefit from facilitating and engaging in these playful interactions.

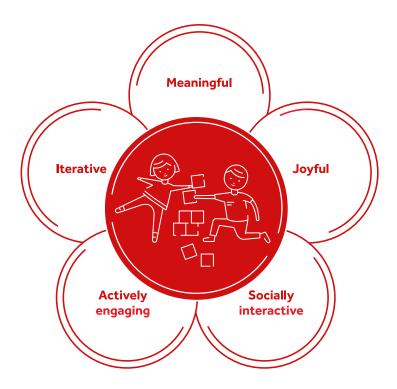
To continue to build on the existing evidence, further research should investigate the cultural dimensions of playful approaches to address the needs of children from diverse backgrounds, especially in conflict and crisis contexts. Furthermore, although the mounting evidence is strong, there are still relatively few studies that establish the mechanisms that help explain the relationship between play interventions and the positive outcomes for children in a variety of adverse circumstances. Addressing questions about dosage and implementation will better inform which programs and approaches are better suited to respond to the needs of children in different circumstances. Relatedly, valid and reliable measures of play and related coping strategies especially ones that can be used by service providers in the field—are sorely needed to target and evaluate interventions. Finally, given the important role of adults in facilitating children's play, it is critical to investigate caregivers', teachers', and other professionals' well-being and coping as well as the possible positive effects that playful interactions may have on adults.

In practice, supporting children's coping through play requires building the knowledge and capabilities of caregivers, professionals, and communities to incorporate play into children's lives and spaces. It requires enhancing infrastructure and policies that prioritize play as a form of learning for children faced with stress in daily situations and during adverse circumstances. And similarly to the gaps in research, it necessitates culturally responsive approaches to implementing learning through play interventions and therapies that acknowledge the histories and perspectives of children and their families.

Characteristics of learning through play

With all of this information, it may be helpful to have some guidelines about how to create playful learning experiences in the work you do with children and caregivers, teachers, and healthcare professionals. When designing experiences that promote learning and foster coping strategies, consider the five characteristics of learning through play. Children are engaged in learning through play when an activity is (1) experienced as joyful, (2) helps children find meaning in what they are doing or learning, (3) involves active, engaged, minds-on thinking (4) involves iterative thinking (e.g., experimentation, hypothesis testing), and (5) involves social interaction (the most powerful resource humans have).97 In situations of high stress, children experience joy when they use their imagination, move their bodies, play games, dance, laugh, and sing. By inviting them to create their own storylines and explore their hopes and fears through art and storytelling makes learning through play authentic and meaningful and can provide a sense of agency over their learning. By solving challenging puzzles, constructing with a variety of materials, and exploring their physical environment, children are engaged in active and iterative thinking. And importantly, when playing with peers and caregivers, children learn to manage their emotions and

behaviors through social interactions. We recognize that these characteristics may ebb and flow throughout a play experience and that all five do not have to be consistently present to be considered a learning through play activity. However, caregivers, educators, and practitioners can use these five characteristics to plan learning through play experiences that support children in coping with stress.



### References

<sup>1</sup>National Scientific Council on the Developing Child (2010). Persistent fear and anxiety can affect young children's learning and development: Working Paper No. 9. Retrieved from www.developingchild.harvard.

<sup>2</sup>National Scientific Council on the Developing Child (2005/2014). Excessive stress disrupts the architecture of the developing brain: Working Paper No. 3. Updated Edition. Retrieved from www. developingchild.harvard.edu.

<sup>3</sup>National Scientific Council on the Developing Child (2004). Young children develop in an environment of relationships: Working Paper No. 1. Retrieved from www.developingchild.harvard.edu.

<sup>4</sup>Lieberman, A.F. (2011). Infants remember: War exposure, trauma, and attachment in young children and their mothers. Journal of the American Academy of Child and Adolescent Psychiatry, 50(7), 640-641.

<sup>5</sup>Yogman, M., Garner, A., Hutchinson, J., Hirsh-Pasek, K., & Golinkoff, R. M. (2018). The power of play: A pediatric role in enhancing development in young children. Pediatrics, 142(3), 1–17.

<sup>6</sup>Jensen, H., Pyle, A., Zosh, J. M., Ebrahim, H. B., Zaragoza Scherman, A., Reunamo, J., & Hamre, B. K. (2019). Play facilitation: the science behind the art of engaging young children (white paper). The LEGO Foundation, DK.

<sup>7</sup>Zosh, J.M., Hopkins, E.J., Jensen, H., Liu, C., Neale, D., Hirsh-Pasek, K., Solis, S.L., & Whitebread, D. (2017). Learning through play: A review of the evidence. LEGO Foundation.

<sup>8</sup>Saunders, I., Sayer, M., & Goodale, A. (1999). The relationship between playfulness and coping in preschool children: A pilot study. American Journal of Occupational Therapy, 53(2), 221–226.

<sup>9</sup>Barnett, L. A., & Storm, B. (1981). Play, pleasure, and pain: The reduction of anxiety through play. Leisure Sciences, 4(2), 161–175.

<sup>10</sup>Goldstein, A. B., & Russ, S. W. (2000). Understanding children's literature and its relationship to fantasy ability and coping. Imagination, Cognition and Personality, 20(2), 105–126.

<sup>11</sup>Kestly, T.A. (2016). Presence and play: Why mindfulness matters. International Journal of Play Therapy, 25(1), 14-23. <sup>12</sup>Barnett, L. A. (1984). Research note: Young children's resolution of distress through play. Child Psychology & Psychiatry & Allied Disciplines, 25(3), 477–483.

<sup>13</sup>Tatlow-Golden, M., O'Farrelly, C., Booth, A., O'Rourke, C., & Doyle, O. (2016). "Look, I have my ears open": Resilience and early school experiences among children in an economically deprived suburban area in Ireland. School Psychology International, 37(2), 104–120.

<sup>14</sup>Vikan, A., Karstad, S. B., & Dias, M. (2013). Young Brazilian and Norwegian children's concepts of strategies and goals for emotion regulation. Journal of Early Childhood Research, 11(1), 63–77.

<sup>15</sup>Veronese, G., Cavazzoni, F., & Antenucci, S. (2018). Narrating hope and resistance: A critical analysis of sources of agency among Palestinian children living under military violence. Child: Care, Health and Development, 44(6), 863–870.

<sup>16</sup>Veronese, G., Pepe, A., Jaradah, A., Murannak, F., & Hamdouna, H. (2017). "We must cooperate with one another against the Enemy": Agency and activism in school-aged children as protective factors against ongoing war trauma and political violence in the Gaza Strip. Child Abuse & Neglect, 70, 364-376.

<sup>17</sup>Bodrova, E., & Leong, D. (2008). Developing self-regulation in kindergarten: Can we keep all the crickets in the basket? Young Children, 63(2), 56-58.

<sup>18</sup>Blalock, S. M., Lindo, N., & Ray, D. C. (2019). Individual and group child-centered play therapy: Impact on social-emotional competencies. Journal of Counseling and Development, 97(3), 238–249

<sup>19</sup>Capurso, M., & Ragni, B. (2016). Bridge over troubled water: Perspective connections between coping and play in children. Frontiers in Psychology, 7, 1953.

<sup>20</sup>Fantuzzo, J., Sekino, Y., & Cohen, H. L. (2004). An examination of the contributions of interactive peer play to salient classroom competencies for urban Head Start children. Psychology in the Schools, 41(3), 323–336.

<sup>21</sup>Savina, E. (2014). Does play promote self-regulation in children? Early Child Development and Care, 184(11), 1692–1705.

<sup>22</sup>Veiga, G., Neto, C., & Rieffe, C. (2016). Preschoolers' free play—Connections with emotional and social functioning. The International Journal of Emotional Education, 8(1), 48–62.

<sup>23</sup>Blair, C., & Raver, C. C. (2014). Closing the achievement gap through modification of neurocognitive and neuroendocrine function: Results from a cluster randomized controlled trial of an innovative approach to the education of children in kindergarten. PLoS ONE 9(11), e112393.

<sup>24</sup>Bulotsky–Shearer, R. J., Manz, P. H., Mendez, J. L., Mcwayne, C. M., Sekino, Y., & Fantuzzo, J. W. (2012). Peer play interactions and readiness to learn: A protective influence for African American preschool children from low–income households. Child Development Perspectives, 6(3), 225–231.

<sup>25</sup>Casey, S. A., Stagnitti, K., Taket, A., & Nolan, A. (2012). Early peer play interactions of resilient children living in disadvantaged communities. International Journal of Play, 1(3), 311–323.

<sup>26</sup>Diamond, A., Barnett, W. S., Thomas, J., & Munro, S. (2007). Preschool program improves cognitive control. Science. 318. 1387-1388.

<sup>27</sup>Li, J., Hestenes, L. L., & Wang, Y. C. (2016). Links between preschool children's social skills and observed pretend play in outdoor childcare environments. Early Childhood Education Journal, 44(1), 61–68.

<sup>28</sup>Lindsey, E. W., & Colwell, M. J. (2003). Preschoolers' emotional competence: Links to pretend and physical play. Child Study Journal, 33(1), 39–52.

<sup>29</sup>Newquist, M. H., Dozier, C. L., & Neidert, P. L. (2012). A comparison of the effects of brief rules, a timer, and preferred toys on self-control. Journal of Applied Behavior Analysis, 45(3), 497–509.

<sup>30</sup>Nicolopoulou, A., dé Sa, A. B., Ilgaz, H., & Brockmeyer, C. (2010). Using the transformative power of play to educate hearts and minds: From Vygotsky to Vivian Paley and beyond. Mind, Culture, and Activity, 17(1), 42–58.

<sup>31</sup>Silver, A. (1999). Play: A fundamental equalizer for ESL Children. TESL Canada Journal, 16(2), 62–69.

<sup>32</sup>Hyman, S.E. (2009). How adversity gets under the skin. Nature Neuroscience, 12, 241-243.

<sup>33</sup>Cohen, E. (2019). Political violence (war and terrorism) and children's play. In P.K. Smith & J.L. Roopnarine (Eds), The Cambridge Handbook of Play (pp. 649-663). Cambridge, UK: Cambridge University Press.

<sup>34</sup>Christian, K. M., Russ, S., & Short, E. J. (2011). Pretend play processes and anxiety: Considerations for the play therapist. International Journal of Play Therapy, 20(4), 179–192.

<sup>35</sup>Cohen, E., Chazan, S., Lerner, M., & Maimon, E. (2010). Posttraumatic play in young children exposed to terrorism: An empirical study. Infant Mental Health Journal, 31(2), 159-181.

<sup>36</sup>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 & Neglect, 25(1), 13–31.

<sup>37</sup>Dripchak, V. L. (2007). Posttraumatic play: Towards acceptance and resolution. Clinical Social Work Journal, 35(2), 125–134.

<sup>38</sup>Felman, D. (2019). Children's play in the shadow of war. American Journal of Play, 11(3), 288-307.

<sup>39</sup>Kronick, R., Rousseau, C., & Cleveland, J. (2018). Refugee children's sandplay narratives in immigration detention in Canada. European Child & Adolescent Psychiatry, 27(4), 423–437.

<sup>40</sup>Rafman, S., Canfield, J., Barbas, J., & Kaczorowski, J. (1997). Children's representations of parental loss due to war. International Journal of Behavioral Development, 20(1), 163–177.

<sup>41</sup>Terr, L. C. (1981). "Forbidden games:" Post-traumatic child's play. Journal of the American Academy of Child Psychiatry, 20(4), 741–760.

<sup>42</sup>Baggerly, J. (2004). The effects of child-centered group play therapy on self-concept, depression, and anxiety of children who are homeless. International Journal of Play Therapy, 13(2), 31–51.

<sup>43</sup>Chan, J. M., & Leff, P. T. (1988). Play and the abused child: Implications for acute pediatric care. Children's Health Care: Journal of the Association for the Care of Children's Health, 16(3), 169–176.

<sup>44</sup>Chazan, S., & Cohen, E. (2010). Adaptive and defensive strategies in post-traumatic play of young children exposed to violent attacks. Journal of Child Psychotherapy, 36(2), 133–151.

<sup>45</sup>Cohen, E., & Gadassi, R. (2018). The function of play for coping and therapy with children exposed to disasters and political violence. Current Psychiatry Reports, 20(5), 31.

<sup>46</sup>Feldman, D. (2019). Children's play in the shadow of war. American Journal of Play, 11(3), 288–307.

<sup>47</sup>Fantuzzo, J., Sutton-Smith, B., Atkins, M., Meyers, R., Stevenson, H., Coolahan, K., Weiss, A., & Manz, P. (1996). Community-based resilient peer treatment of withdrawn maltreated preschool children. Journal of Consulting and Clinical Psychology, 64(6), 1377–1386.

<sup>48</sup>Gascoyne, S. (2017). Patterns and attributes in vulnerable children's messy play. European Early Childhood Education Research Journal, 25(2), 272–291.

<sup>49</sup>Leavitt, K. S., Morrison, J. A., Gardner, S. A., & Gallagher, M. M. (1996). Group play therapy for cumulatively traumatized child survivors of familial AIDS. International Journal of Play Therapy, 5(1), 1–17.

<sup>50</sup>Mcardle, K., Harrison, T., & Harrison, D. (2013). Does a nurturing approach that uses an outdoor play environment build resilience in children from a challenging background? Journal of Adventure Education & Outdoor Learning, 13(3), 238–254.

<sup>51</sup>McDonald, Jr., R. G., & Howe, C. Z. (1989). Challenge/initiative recreation programs as a treatment for low self-concept children. Journal of Leisure Research, 21(3), 242.

<sup>52</sup>Ogawa, Y. (2004). Childhood trauma and play therapy intervention for traumatized children. Journal of Professional Counseling, Practice, Theory, & Research, 32(1), 19–29.

<sup>53</sup>Saylor, C. F., Swenson, C. C., & Powell, P. (1992). Hurricane Hugo blows down the broccoli: Preschoolers' post-disaster play and adjustment. Child Psychiatry and Human Development, 22(3), 139–149.

<sup>54</sup>Schlembach, S. (2017). Young children experiencing homelessness: The overlooked medium of play. Early Child Development and Care, 187(7), 1170–1183.

<sup>55</sup>Southwell, J. (2016). Using "expressive therapies" to treat developmental trauma and attachment problems in preschool-aged children. Children Australia, 41(2), 114–125.

<sup>56</sup>Springer, C., Misurell, J. R., & Hiller, A. (2012). Game-based cognitive-behavioral therapy (GB-CBT) group program for children who have experienced sexual abuse: A three-month follow-up investigation. Journal of Child Sexual Abuse, 21(6), 646–664.

<sup>57</sup>Henley, R., Schweizer, I., De Gara, F., & Vetter, S. (2008). How psychosocial sport & play programs help youth manage adversity: A review of what we know & what we should research. International Journal of Psychotherapy, 12(3), 53–61.

<sup>58</sup>Kwon, Y. J., & Lee, K. (2018). Group child-centered play therapy for school-aged North Korean refugee children. International Journal of Play Therapy, 27(4), 256–271.

<sup>59</sup>Lykes, M. B. (1994). Terror, silencing and children: International, multidisciplinary collaboration with Guatemalan Maya communities. Social Science & Medicine, 38(4), 543–552.

<sup>60</sup>Maitra, S., Ramaswamy, S., & Sirur, S. (2002). Use of play and art forms with children in disaster: The Gujarat experience. The Indian Journal of Social Work, 63(2), 263–282.

<sup>61</sup>Tribe, R. (2004). A critical review of the evolution of a multi-level community-based children's play activity programme run by the Family Rehabilitation Centre (FRC) throughout Sri Lanka. Journal of Refugee Studies, 17(1), 114–135.

<sup>62</sup>Fearn, M., & Howard, J. (2012). Play as a resource for children facing adversity: An exploration of indicative case studies. Children & Society, 26(6), 456–468.

<sup>63</sup>Cohen, E., Pat-Horenczyk, R., & Haar-Shamir, D. (2014). Making Room for Play: An innovative intervention for toddlers and families under rocket fire. Clinical Social Work Journal, 42(4), 336–345.

<sup>64</sup>Killian, T., Cardona, B., & Hudspeth, E. F. (2017). Culturally responsive play therapy with Somali refugees. International Journal of Play Therapy, 26(1), 23–32.

<sup>65</sup>Kirova, A. (2010). Children's representations of cultural scripts in play: Facilitating transition from home to preschool in an intercultural early learning program for refugee children. Diaspora, Indigenous, and Minority Education, 4(2), 74-91.

<sup>66</sup>Marsh, K., & Dieckmann, S. (2017). Contributions of playground singing games to the social inclusion of refugee and newly arrived immigrant children in Australia. Education 3-13, 45(6), 710-719.

<sup>67</sup>Nijhof, S. L., Vinkers, C. H., van Geelen, S. M., Duijff, S. N., Achterberg, E. J. M., van der Net, J., Veltkamp, R. C., Grootenhuis, M. A., van de Putte, E. M., Hillegers, M. H. J., van der Brug, A. W., Wierenga, C. J., Benders, M. J. N. L., Engels, R. C. M. E., van der Ent, C. K., Vanderschuren, L. J. M. J., & Lesscher, H. M. B. (2018). Healthy play, better coping: The importance of play for the development of children in health and disease. Neuroscience and Biobehavioral Reviews, 95, 421–429.

<sup>68</sup>Stenman, K., Christofferson, J., Alderfer, M. A., Pierce, J., Kelly, C., Schifano, E., Klaff, S., Sciolla, J., Deatrick, J., & Kazak, A. E. (2019). Integrating play in traumainformed care: Multidisciplinary pediatric healthcare provider perspectives. Psychological Services, 16(1), 7–15.

<sup>69</sup>Abbott, K. (1990). Therapeutic use of play in the psychological preparation of preschool children undergoing cardiac surgery. Issues in Comprehensive Pediatric Nursing, 13(4), 265–277.

<sup>70</sup>Anandhukrishnan, T. G., Sivan, A., Baiju, D. K., Raj, L. R. S., Sangeetha, S., Saritha, S., & Jayims, B. K. (2018). Effectiveness of play on anxiety among hospitalized children. Asian Journal of Nursing Education and Research, 8(2), 225–229.

<sup>71</sup>Bolig, R., Fernie, D. E., & Klein, E. L. (1986). Unstructured play in hospital settings: An internal locus of control rationale. Children's Health Care, 15(2), 101–107.

<sup>72</sup>Cameron, C.B., & Patte, M. (2019). A typology of play in medical settings. In P.K. Smith & J.L. Roopnarine (Eds), The Cambridge Handbook of Play (pp. 615-629). Cambridge, UK: Cambridge University Press.

<sup>73</sup>Chari, U., Hirisave, U., & Appaji, L. (2013). Exploring play therapy in pediatric oncology: a preliminary endeavour. Indian Journal of Pediatrics, 80(4), 303–8.

<sup>74</sup>Gillard, A. (2019). Outcomes of a hospital-based recreation program. Children and Youth Services Review. 96. 79.

<sup>75</sup>Gold, K., Grothues, D., Jossberger, H., Gruber, H., & Melter, M. (2014). Parents' perceptions of playtherapeutic interventions to improve coping strategies of liver-transplanted children: A qualitative study. International Journal of Play Therapy, 23(3), 146–160.

<sup>76</sup>He, H.G., Zhu, L., Chan, S.W., Liam, J.L., Li, H.C., Ko, S.S., Klainin-Yobas, P., & Wang, W. (2015). Therapeutic play intervention on children's perioperative anxiety, negative emotional manifestation and postoperative pain: a randomized controlled trial. Journal of Advanced Nursing, 71(5), 1032-43.

<sup>77</sup>Koukourikos, K., Tzeha, L., Pantelidou, P., & Tsaloglidou, A. (2015). The importance of play during hospitalization of children. Materia Socio-Medica, 27(6), 438–41.

<sup>78</sup>Li, W. H. C., Chung, J. O. K., & Ho, E. K. Y. (2011). The effectiveness of therapeutic play, using virtual reality computer games, in promoting the psychological wellbeing of children hospitalised with cancer. Journal of Clinical Nursing, 20(15–16), 2135–43.

<sup>79</sup>Li, H. C. W., & Lopez, V. (2008). Effectiveness and appropriateness of therapeutic play intervention in preparing children for surgery: A randomized controlled trial study. Journal for Specialists in Pediatric Nursing, 13(2), 63–73.

<sup>80</sup>Li, H. C. W., Lopez, V., & Lee, T. L. I. (2007). Effects of preoperative therapeutic play on outcomes of schoolage children undergoing day surgery. Research in Nursing and Health, 30(3), 320–332.

<sup>81</sup>Moore, E. R., Bennett, K. L., Dietrich, M. S., & Wells, N. (2015). The effect of directed medical play on young children's pain and distress during burn wound care. Journal of Pediatric Health Care, 29(3), 265–73.

<sup>82</sup>Nabors, L., Bartz, J., Kichler, J., Sievers, R., Elkins, R., & Pangallo, J. (2013). Play as a mechanism of working through medical trauma for children with medical illnesses and their siblings. Issues in Comprehensive Pediatric Nursing, 36(3), 212–224.

<sup>83</sup>Potasz, C., De Varela, M. J. V., De Carvalho, L. C., Do Prado, L. F., & Do Prado, G. F. (2013). Effect of play activities on hospitalized children's stress: a randomized clinical trial. Scandinavian Journal of Occupational Therapy, 20(1), 71–9.

<sup>84</sup>Rindstedt, C. (2014). Children's strategies to handle cancer: A video ethnography of imaginal coping. Child: Care, Health and Development, 40(4), 580–586.

<sup>85</sup>Schleisman, A., & Mahon, E. (2018). Creative play: A nursing intervention for children and adults with cancer. Clinical Journal of Oncology Nursing, 22(2), 137–140.

<sup>86</sup>Teksoz, E., Duzguner, V., Bilgin, I., & Ocakci, A. F. (2018). The impact of a nursing coping kit and a nursing coping bouncy castle on the medical fear levels of Uzbek refugee children. Journal of Pediatric Nursing, 39, 68–73.

<sup>87</sup>Zahr, L. K. (1998). Therapeutic play for hospitalized preschoolers in Lebanon. Pediatric Nursing, 24(5), 449–454.

<sup>88</sup>National Scientific Council on the Developing Child (2004). Young children develop in an environment of relationships: Working Paper No. 1. Retrieved from www.developingchild.harvard.edu.

<sup>89</sup>Fogel, A. (1982). Social play, positive affect, and coping skills in the first 6 months of life. Topics in Early Childhood Special Education, 2(3), 53–65.

<sup>90</sup>Moore, G. A., Hill-Soderlund, A. L., Propper, C. B., Calkins, S. D., Mills-Koonce, W. R., & Cox, M. J. (2009). Mother—infant vagal regulation in the face-to-face still-face paradigm is moderated by maternal sensitivity. Child Development, 80(1), 209–223.

<sup>91</sup>Chen, F., & Fleer, M. (2016). A cultural-historical reading of how play is used in families as a tool for supporting children's emotional development in everyday life. European Early Childhood Education Research Journal, 24(2), 305–319.

<sup>92</sup>Flanders, J. L., Leo, V., Paquette, D., Pihl, R. O., & Séguin, J. R. (2009). Rough-and-tumble play and the regulation of aggression: An observational study of father-child play dyads. Aggressive Behavior, 35(4), 285–295.

<sup>93</sup>Flanders, J. L., Simard, M., Paquette, D., Parent, S., Vitaro, F., Pihl, R. O., & Séguin, J. R. (2010). Roughand-tumble play and the development of physical aggression and emotion regulation: A five-year follow-up study. Journal of Family Violence, 25(4), 357–367.

<sup>94</sup>Jackson, D. (2006). Playgroups as protective environments for refugee children at risk of trauma. Australian Journal of Early Childhood, 31(2), 1–5.

<sup>95</sup>Sossin, K. M., & Cohen, P. (2011). Children's play in the wake of loss and trauma. Journal of Infant, Child, and Adolescent Psychotherapy, 10(2–3), 255–272.

<sup>96</sup>Draper, K., Siegel, C., White, J., Solis, C. M., & Mishna, F. (2009). Preschoolers, Parents, and Teachers (PPT): A preventive intervention with an at risk population. International Journal of Group Psychotherapy, 59(2), 221–242.

<sup>97</sup>Kolos, A. C., Green, E. J., & Crenshaw, D. A. (2009). Conducting filial therapy with homeless parents. American Journal of Orthopsychiatry, 79(3), 366.

<sup>98</sup>Rennie, R., & Landreth, G. (2000). Effects of filial therapy on parent and child behaviors. International Journal of Play Therapy, 9(2), 19–37.

<sup>99</sup>Smith, N., & Landreth, G. (2003). Intensive filial therapy with child witnesses of domestic violence: A comparison with individual and sibling group play therapy. International Journal of Play Therapy, 12(1), 67–88.

<sup>100</sup>Global Education Monitoring Report Team (2019). Education as healing: addressing the trauma of displacement through social and emotional learning (Policy Paper 38). UNESCO. Retrieved from https:// unesdoc.unesco.org/ark:/48223/pf0000367812 <sup>101</sup>Gunsberg, A. (1989). Empowering young abused and neglected children through contingency play. Childhood Education, 66(1), 8–10.

<sup>102</sup>Ray, D. C. (2007). Two counseling interventions to reduce teacher-child relationship stress. Professional School Counseling, 10(4), 428–440.

<sup>103</sup>Ray, D. C., Henson, R. K., Schottelkorb, A. A., Brown, A. G., & Muro, J. (2008). Effect of short- and long-term play therapy services on teacher-child relationship stress. Psychology in the Schools, 45(10), 994–1009.

<sup>104</sup>Clark, R. J. (1995). Violence, young children, and the healing power of play. Dimensions of Early Childhood, 23(3), 28–30,39.

<sup>105</sup>Hebert, B. B., & Ballard, M. B. (2007). Children and trauma: A post-Katrina and Rita response. Professional School Counseling, 11(2), 140–144.

<sup>106</sup>Shen, Y.-J., & Sink, C. A. (2002). Helping elementaryage children cope with disasters. Professional School Counseling, 5(5), 322–330.



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