

Building Playful Learning Environments to Combat Toxic Stress in Homeless Shelters

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Background

- When poverty co-occurs with other risk factors such as residential instability and food insecurity, it may constitute a toxic stressor (Shonkoff et al., 2011). Toxic stress can interfere with early brain development (Hackman et al., 2010), which may account for the robust, negative associations between poverty-risk and young children's language (Vernon-Feagans et al., 2012) and self-regulatory development (Blair et al., 2011).
- Play has been associated with positive learning and developmental outcomes for young children across domains (Tamis-LeMonda et al., 2004). Therefore, the opportunity to experience playful learning environments may serve as a protective factor, mitigating the experience of toxic stress on early language and self-regulatory development.
- However, little is known about the potential for play to serve as a protective factor in the development of young children who are experiencing homelessness, and are therefore particularly likely to encounter toxic stress.

Building Baby Brain Hubs (3BH)

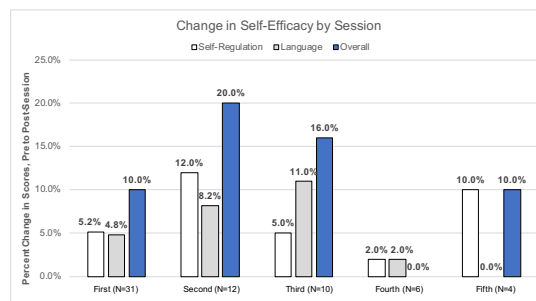
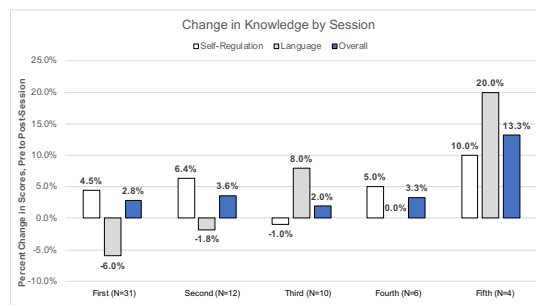
- In 2019, the Children's Museum of Manhattan (CMOM) launched the Building Baby Brain Hubs (3BH) program. Through the program, CMOM installed mini-exhibits (the Brain Building Hubs) in shelters throughout New York City that were designed to foster playful parent-child interactions, and conducted weekly workshop sessions in which CMOM educators engaged parents and children in guided play through art, music, literacy, sensory and movement activities.



- The goals of the program were to:
 - Foster parents' knowledge of their children's language and self-regulatory development and their critical role in supporting that development; and
 - Enhance parents' self-efficacy regarding their capacity to support their children's language and self-regulatory development.

A Researcher-Practitioner Partnership

- To gauge the program's progress towards these goals, CMOM entered into a partnership with researchers from Lehman College.
- Over the course of three years and multiple cycles of program implementation, researchers worked closely with CMOM educators to address issues of program design, implementation, and efficacy.
- During the last three cycles of the program, 35 mothers (37% Black/African American; 29% Latino/Hispanic) and their young children ($M_{age} = 2.5$ years) participated in a summative evaluation.
- As part of their participation, parents completed brief assessments of their knowledge of young children's language and self-regulatory development, and their sense of self-efficacy with respect to their ability to foster that development, just prior to and immediately following each program session they attended.



Results

- After attending a single program session, parents exhibited a 3% increase in their knowledge of child development (top panel), and a 10% increase in their self-efficacy (bottom panel).
- However, parents continued to make increases in both of these areas in subsequent sessions: in the case of knowledge, a 13% increase was observed from the beginning to the end of the fifth session parents attended; for self-efficacy, increases peaked at 20% from pre- to post-following the second session parents attended.

Future Directions

- Data analyses are continuing in an attempt to understand other impacts of the program and how those impacts may have been achieved.
- One area of interest is whether the program may have affected patterns of parent-child interaction. This was assessed by administering an observational measure of interaction (Mills-Koonce et al., 2013) according to a single-case design schedule (Kazdin, 2011).



- Another area of interest is whether providing parents with an opportunity to engage with other parents in a relaxed, safe, and playful environment might build a sense of community and foster dialogue and exchange. Initial evidence from thematic coding of parent interviews conducted at the end of the program suggests that this may have been the case.

Acknowledgements

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