Describing the Sensory Profiles of Toddlers Living in a Homeless Shelter

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Abstract

A pilot study investigation gathered quantitative and descriptive data to describe the sensory processing preferences of homeless toddlers living in an emergency housing shelter in Northern California. Measures of central tendency, frequency counts, and a visual analysis was used to describe toddlers’ sensory processing scores. Differences between sensory processing preferences of toddlers in a homeless shelter were found in comparison to the national normative data provided by Dunn (2014). This is an impetus for additional research on the correlational mechanisms behind the phenomenon as well as the development, or refinement, of occupational therapy (OT) early intervention (EI) strategies for this at risk population.

Literature Review

The number of homeless families and children is growing in the United States (Institute for Children, Poverty, and Homelessness, 2013). This fact has implications for the development of young children who are experiencing homelessness and housing instability.

Koblinsky, Gordon & Anderson (2000) have found that homeless children are compromised in their occupations of play and social participation, compared to low-income housed peers. Additionally, research suggests that prenatal stress may lead to abnormal sensory responsiveness in infants (Foster, 2006).

However, the link between postnatal environmental stress, such as that associated with homelessness, and sensory processing is an area that has received little attention. Some studies propose a potential link between sensory processing differences among children living in low-income families (Ben-Sasson, Briggs & McGowan, 2009; Reynolds, Shepard & Lane, 2008). However there is a lack of information about homelessness, which is associated with stressful, impoverished environments (Evans, 2006; Klitzing, 2003; Puckett, Black, Wittmer, & Peterson, 2005), and its influence on sensory processing.

This study used the Ecology of Human Performance (Dunn, Brown & McGuigan, 1994) and Dunn’s (1997) model of sensory processing as frameworks from which to explore the potential link between contextual factors such as homelessness and the influence of toddlers’ sensory processing styles on everyday occupations. Occupational therapists are well-suited to evaluate the interaction between contexts, self and occupation (American OT Association, 2014). Occupational therapists in early intervention play an important role in promoting the healthy development of toddlers by collaborating with families in homeless shelters, which is an emerging practice area.

Methods

The subject population included 8 caregivers and 8 toddlers (ages 15-35 months) living in a family homeless shelter in Northern California. Researchers gained IRB and homeless shelter permission and approval. To qualify for recruitment, families had to reside at the shelter for at least one week and had to be able to read, write, and understand English at the third grade level. Toddlers who had a diagnosed condition from the Diagnostic and Statistical Manual of Mental Disorders, fifth edition or who had significant auditory or visual impairments were not included in the study. Participants were recruited through a convenience sampling method. Each caregiver completed the Toddler Sensory Profile (TSP 2), a two-part, standardized, norm-referenced, self-questionnaire based on Dunn’s Model of Sensory Processing (Dunn, 2014). In addition
to the TSP 2, participants completed informational forms to collect demographic and housing history data. Following the completion of the questionnaires, the researcher informed the parent of a follow up meeting, in which the researchers discussed test results, and offered individualized suggestions regarding the sensory processing needs of the toddler. Confidentiality protocols were followed by all researchers in order to protect the privacy of the participants.

Quantitative, descriptive statistics were used to analyze data. The data was analyzed by the student researchers and checked by an expert (Dr. Schultz-Krohn) to ensure accuracy and relevance. Demographic data and raw TSP 2 scores were entered into an Excel spreadsheet for each participant. Then, the TSP 2 raw data was analyzed to determine measures of central tendency in the quadrants specified by the TSP 2 (seeking, avoiding, registration, and sensitivity). Additionally, frequency counts and visual analyses were used to compare the distribution of scores against the normative sample.

**Results**

Visual analysis revealed atypical patterns of distribution among three of the four quadrants of sensory processing including sensory avoiding, sensory sensitivity, and sensory registration; the sensory seeking quadrant revealed typical patterns as compared to the normative sample. The sample of toddlers from the homeless shelter revealed unusually high distributions of toddlers in the classifications of “more than others” and “much more than others.” Specifically, in the “avoiding/avoider” and “registration/bystander” quadrants, 75% of sample scored “more than” and “much more than others;” 25% scored in the typical range. Similarly, 62.5% of the sample scored “more than” and “much more than others” in the “sensitivity/sensory” quadrant. All toddlers scored within the “just like the majority of others” range in the “seeking/seeker” quadrant. The toddlers also differed from the normative sample in the auditory processing and oral sensory processing sections.

**Discussion**

Visual analysis revealed atypical results. This suggests that there are sensory differences in this population. These findings were similar to the studies in the literature review, which found over-responsivity in their populations of low SES children, consistent with research on children in poverty (Ben-Sasson et al., 2009; Reynolds et al., 2008). However, there is a lack of research about the context of homelessness and its effects on sensory processing.

**Limitations**

The following factors may not have captured the full breadth of the experience of homeless toddlers and their families: small sample size, participants only sampled from one shelter, limited time frame to collect data, exclusion of non-English speakers, exclusion of individuals not literate past the third grade level in English, potential for caregivers to misunderstand the TSP2, and use of a single measurement.

**Future Directions for Research**

The provision of OT services in a homeless shelter is an emerging area of practice. OT provides required EI services to toddlers and their families as a primary interventionist under IDEA Part C (U.S. Department of Education, 2004). EI addresses the sensory and occupational needs of toddlers living in homeless shelters, but in order to effectively provide services, there is a need for more research.
References