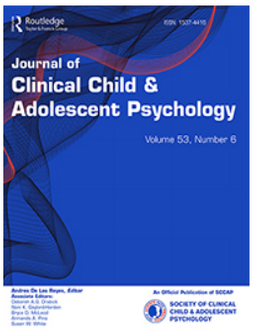

Routledge
Taylor & Francis Group

Journal of Clinical Child & Adolescent Psychology

ISSN: (Print) (Online) Journal homepage: www.tandfonline.com/journals/hcap20

Parenting Challenges Among Families Experiencing Homelessness with Children with and without Externalizing Behavior Problems

Paulo A. Graziano, Melissa L. Hernandez, Anthony S. Dick, Emily Arcia, Shana K. Cox, Muriel Ayala, Nicole A. Carnero, Noelle L. O'Mara & Sundari Foundation

To cite this article: Paulo A. Graziano, Melissa L. Hernandez, Anthony S. Dick, Emily Arcia, Shana K. Cox, Muriel Ayala, Nicole A. Carnero, Noelle L. O'Mara & Sundari Foundation (05 Dec 2024): Parenting Challenges Among Families Experiencing Homelessness with Children with and without Externalizing Behavior Problems, Journal of Clinical Child & Adolescent Psychology, DOI: 10.1080/15374416.2024.2429087

To link to this article: https://doi.org/10.1080/15374416.2024.2429087

JOURNAL OF CLINICAL CHILD & ADOLESCENT PSYCHOLOGY
https://doi.org/10.1080/15374416.2024.2429087

Parenting Challenges Among Families Experiencing Homelessness with Children with and without Externalizing Behavior Problems

Paulo A. Graziano[a], Melissa L. Hernandez[a], Anthony S. Dick[a], Emily Arcia[b], Shana K. Cox[c], Muriel Ayala[c], Nicole A. Carnero[c], Noelle L. O'Mara[c], and Sundari Foundation[c]

[a]Department of Psychology, Florida International University – Center for Children and Families; [b]Emilly Arcia Consulting Co; [c]Sundari Foundation, Inc. dba Lotus House Women's Shelter (Lotus House)

ABSTRACT

Objective: To examine differences in parenting factors among caregivers with children with and without externalizing behavior problems (EBP) in a community homeless shelter sample versus a stable housing sample.

Method: Nine hundred and fourteen children (ages = 2.01-7.49 years, SD = 1.45 years, 40.8% female, 54.3% Black, 46.7% Hispanic) were recruited from a service-driven research project in a shelter setting ($n = 638$) and a longitudinal/clinical study ($n = 276$). Primary caregivers (97% mothers) completed a parenting stress questionnaire and an observational measure of parent-child interactions.

Results: Logistic regression indicated that children who were Black and/or of Hispanic background were less likely to be identified as having elevated EBP but only in the homeless shelter sample. Multivariate analyses indicated that the homeless shelter-EBP group reported the highest levels of overall stress compared to the homeless shelter-typically developing (TD), stable housing-EBP and stable housing-TD groups. Mothers from the homeless shelter-EBP group exhibited a higher proportion of negative verbalizations relative to caregivers from all other groups while mothers from the homeless shelter-TD group exhibited a higher proportion of positive verbalizations relative to the caregivers from the homeless shelter-EBP group and the stable housing TD group. Both homeless shelter groups engaged in less total verbalizations relative to both stable housing samples, with the stable housing-EBP group exhibiting the most verbalizations.

Conclusions: High levels of parenting stress and negative parent-child interactions within a homeless shelter sample are exacerbated by having a child with EBP. Embedding universal parenting programs in a homeless shelter setting to reduce parenting stress would be valuable to address health disparities in this vulnerable population.

One in every 30 children in the U.S., experience homelessness each year (Bassuk et al., 2014) for a multitude of reasons, including limited access to affordable housing, adequate employment, and healthcare (Aubry et al., 2021), as well as family violence and parental mental health (Gutwinski et al., 2021) and many others. It has also been well documented that Black and Hispanic/Latinx individuals disproportionately make up the homeless population within the United States (Fusaro et al., 2018). According to a study conducted in 2021, such overrepresentation may be due to the failure of many systems to provide equal opportunity for people of color (Olivet et al., 2021). It is important to note that up to 78% of children experiencing homelessness suffer from at least one mental health issue (Weinreb et al., 1998). Of particular interest to the current study is externalizing behavior problems (EBP), which encompass aggression, defiance, inattention, hyperactivity, and impulsivity, and are the most common reasons for early childhood mental health referrals (Cormier, 2008). Children experiencing homelessness are at a higher risk for developing early-onset (Koblinsky et al., 2000) and more severe presentations of EBP (Bassuk, Weinreb, et al., 1997) than their non-homeless peers. Moreover, given that over half of all children in the U.S. experiencing homelessness are under the age of 6 (Samuels et al., 2010), it is important to investigate malleable parenting factors (e.g., parenting stress, quality of parent-child interactions) that may exacerbate or attenuate children's behavioral functioning.

Development of EBP

During infancy and early toddlerhood, it is common for children to display some normative externalizing

CONTACT Paulo A. Graziano pgrazian@fiu.edu Department of Psychology, Florida International University – Center for Children and Families, 11200 SW 8th Street, Miami, FL 33199

behaviors. For example, temper tantrums and aggressive behaviors occur in as many as 75% of two-year-olds (Potegal et al., 2003; Tremblay et al., 1999). The emergence of externalizing behaviors coincides with greater physical and motor development, cognitive sophistication, capacity to experience anger, and more independence from caregivers (see Sroufe, 2005). As children improve their self-regulation skills, such normative externalizing behaviors decline throughout early childhood and the preschool period (Côté et al., 2007). However, some children, as many as 3 to 18%, do not "outgrow" their "terrible twos" and continue to exhibit externalizing behaviors that start to cause problems and significant impairment in their lives (Côté et al., 2007; NICHD Early Child Care Research Network & Arsenio, 2004), eventually leading to clinical diagnoses such as Oppositional Defiant Disorder and/or Attention-Deficit /Hyperactivity Disorder (ADHD) that can be reliably diagnosed as early as age 4 (Wolraich et al., 2019). Hence, it is critical to identify malleable factors that relate to early EBP.

Parenting Challenges

Parenting stress is conceptualized as the mismatch between the perceived demands of parenting and available resources to meet those demands that create aversive feelings (Abidin, 1992). Higher levels of parenting stress are associated with a host of negative child outcomes, including greater EBP (Barroso et al., 2018). Surprisingly, limited research has examined parenting stress among families experiencing homelessness. The few studies that exist suggest that homelessness is associated with increased parental frustration (Lee et al., 2010). Higher levels of overall stress (not necessarily parenting related) are also found among mothers experiencing homelessness relative to housed low-income mothers (Banyard & Graham-Bermann, 1998). Within a homeless shelter sample, Wu et al. (2018) highlighted parenting stress as a key mechanism linking maternal mental health to child EBP. More recently, within a preschool sample of parents experiencing homelessness, DeCandia et al. (2023) found that a one unit increase in parent distress was negatively associated with children's neurodevelopmental functioning, equating to several months of delay.

As pointed out by a more recent review (Murran & Brady, 2023), the quality of the parent-child relationship may also be impacted by the experience of homelessness. While there are multiple theories on how homelessness may impact parenting and subsequent child adjustment, it is worth pointing out two as it relates to the current study: stress theory and developmental attachment. As reviewed by (Deater-Deckard, 1998), the stress process includes a) causal events or agents, b) a cognitive appraisal of this event or agent to determine whether it is harmful or not, c) coping mechanisms to reduce the aversive aspect of the event or agent, and d) the stress reaction or consequences on physical and mental health. The ABC-X model of family stress further highlights how when a family experiences a crisis (i.e., experience of homelessness), their ability to perform other family activities such as engaging in positive parenting is impaired (Stekler, 2023). In addition to the stressful experience of homelessness, mothers experiencing homelessness may also be carrying additional personal risk factors such as their own mental health and/or physical health difficulties, and exposure to trauma, all of which may impact their coping mechanisms and/or their stress reactions (see Bradley et al., 2018; Perlman et al., 2012 for reviews). Additional stressors for mothers experiencing homelessness may include limited social support as they are more likely to be single parents with limited education and job training (Bassuk, Buckner, et al., 1997). As part of a qualitative review, Bradley et al. (2018) found negative self-concept in the parental role (e.g., feelings of embarrassment, failure) as a significant factor impacting their parenting. The accumulation of such risk factors and subsequent family stress may impact one's ability to engage in positive parenting practices and lead to poor child outcomes which subsequently further impacts parental stress (Deater-Deckard, 1998). It is important to note that while the link between parenting stress and child outcomes also includes internalizing symptoms (Costa et al., 2006; Mäntymaa et al., 2012), it appears to have a stronger impact on EBP (see meta-analysis by Barroso et al., 2018).

From a developmental attachment perspective (David et al., 2012), such stress also impacts a mother's ability to attend to the child's needs during critical developmental periods. During the toddlerhood period, parents must provide appropriate scaffolding and a secure environment to promote their child's self-regulation development (Sroufe, 2005) while during the preschool period, parents help children improve their social-emotional awareness by providing support, social referencing, and using appropriate language to scaffold relationships with peers and other adults (Heinicke, 2002). Unfortunately, the events leading up to and experience of homelessness can make a secure attachment more difficult to establish. A systematic review exploring parental perception of the effects of homelessness on their parenting identified negative view of themselves in the parenting role, parental mental health, and child characteristics, all of which affect

attachment (Bradley et al., 2018). Additionally, a restricted or more crowded and less private environment such as a shelter may not allow mothers to allow their child to safely explore or even impact the mother's ability to comfortably interact and/or discipline their child in front of shelter staff (Hausman & Hammen, 1993). A qualitative review (Andrade et al., 2020) further highlights how the shelter environment may contribute to changes in parents' behavior in both negative and positive ways. While some parents reported a negative influence on parenting due to a perceived lack of privacy, insecurity, isolation, stigma, and disempowerment, others reported enhanced parenting due to perceived support for their role as parent and the promotion of family cohesion and relationships within the family and with others, as well as the parent and child individually. Notably, within a shelter sample of caregivers of children from birth to 5 years, caregivers' negative perceptions of the shelter environment were linked to worse social-emotional functioning among the children (Vrabic et al., 2022). More recently, Stekler (2023) highlights that parents experiencing homelessness must juggle various stressors at once which subsequently leads to having fewer mental or physical resources to employ sensitive and responsive caregiving.

Indeed, limited studies have found that homelessness is associated with decreased parental warmth and positive parent-child interactions (Koblinsky et al., 1997), increased incidence of negative parenting behaviors (Lindsey, 1998; Torquati, 2002), and increased involvement with child protective services and foster care placement (Fantuzzo & Perlman, 2007; McChesney, 1995). On the other hand, children experiencing homelessness who experienced more positive parenting had fewer trauma symptoms and EBP (Herbers et al., 2014) while more parental warmth also buffered the link between parental violence exposure and children's negative peer relationships (Narayan et al., 2015). In a sample of parents experiencing homelessness and their 4-to-6-year-old children, higher parental quality was also linked to greater child peer acceptance and had a protective effect on children's internalizing symptoms (Labella et al., 2017). More recently, Herbers et al. (2023) found social support as an important resilience factor in attenuating the association between homelessness and lower infant-parent responsiveness. However, as highlighted by a review by Murran and Brady (2023) there remains a scarcity of quantitative studies as it relates to the parenting challenges associated with homelessness with most primarily relying on self-report, and not including a stable housing comparison group. Understanding if there are any observable differences in parent-child interactions among families experiencing homelessness versus those with stable housing would inform intervention efforts within a shelter environment. Examining these parenting factors as it relates to child EBP is particularly important given the bidirectional nature of these associations (see Patterson's coercive theory, Patterson, 1982) and emerging work showing how parenting interventions can be implemented within a shelter setting (Armstrong et al., 2021; Graziano et al., 2023).

Health Disparities Among Minoritized Populations

As mentioned above, lifetime prevalence rates of homelessness are significantly higher among minorities (16.8% in non-Hispanic Blacks and 8.1% in Hispanics) compared to 4.8% of non-Hispanic Whites as well as individuals without a high school diploma or equivalent (Fusaro et al., 2018) for many reasons, including unequal access to important resources such as equitable pay and housing (Olivet et al., 2021). A 2019 meta-analysis (Nilsson et al., 2019) further highlights male sex, unemployment, veteran status, being single, adverse life events (e.g., abuse in childhood, foster care experiences), and psychiatric problems as consistent risk factors for experiencing homelessness in adults. It is well-established that both minoritized populations as well as those adults experiencing homelessness face multiple barriers to receiving care for both physical and mental health difficulties (Alang, 2019; Green et al., 2020; Mahajan et al., 2021; Olivet et al., 2019). Similarly, over one-third of youth accessing shelters do not have a source of healthcare and are less likely to seek health treatment (Klein et al., 2000; Lebrun-Harris et al., 2013). As it relates to EBP, Black and Hispanic children are less likely to use outpatient mental health services (Malhotra et al., 2015) and are under identified for services (Wood et al., 2005). Black and Hispanic children are often more likely to be diagnosed with more serious conduct problems relative to their White peers (Baglivio et al., 2017; Fadus et al., 2020) but tend to be under diagnosed as it relates to ADHD (Crouch et al., 2021) and mood disorders (Liang et al., 2016). Higher levels of maternal education are also linked to lower EBP (Carneiro et al., 2013), including reduced risk for the development of ADHD (Spencer et al., 2022). As it relates to the family structure, children from a single mother household, which occur more frequently among Blacks and Hispanics relative to Whites (Damaske et al., 2017), as well as those experiencing homelessness (Bassuk, Buckner, et al., 1997; Bullock et al., 2020), have higher odds of ADHD (Claussen et al., 2022; Crouch et al., 2021) and generally higher levels of EBP (Hilton & Desrochers, 2002). Hence, consideration of such demographic factors is crucial when examining early EBP within a homeless population.

Goals of the Current Study

The goals of the current study were to examine the extent to which parenting stress levels and the quality of parent-child interactions differed among caregivers with children with and without EBP in a homeless shelter sample versus a stable housing sample. We expected that caregivers in the homeless shelter sample would report greater levels of parenting stress, engage in less verbalizations, and exhibit lower proportions of positive parent-child interactions relative to caregivers in the stable housing sample. Finally, we expected that the presence of child EBP would exacerbate such parenting factors.

Method

Participants and Recruitment

The participating sample of families were derived from two separate community samples: 1) a homeless shelter sample ($n = 638$) which was part of a larger service driven, community based, research project (Arcia, 2020; Graziano et al., 2023) and 2) a stable housing sample ($n = 276$) which were recruited as part of larger longitudinal study (Graziano, Garic & Dick, 2022; Graziano, Hernandez, & Dick, 2024) or early intervention project (Graziano, Ros-Demarize, & Hare, 2020). To qualify for the current study, families were required to have a child between the ages of 2 and 7-years-of-age and have a caregiver who spoke English or Spanish. Exclusionary criteria, for the current study, included children not being in the target age range, or who were diagnosed or suspected of having autism spectrum disorder. In terms of recruitment, for the homeless shelter sample, all families upon entry to the shelter were offered clinical assessments and based on clinical needs, therapeutic services promptly upon admission. Families were permitted to receive clinical services without participating in research; however, almost all mothers whose youth received services provided consent to participate in research. For the stable housing sample, those in the early intervention project were seeking out intervention in an outpatient child clinic whereas the larger longitudinal study sample were recruited from the community/schools. See Graziano et al. (2023) for more details outlining study enrollment and reasons for exclusion for the homeless shelter sample and (Graziano, Hernandez, & Dick, 2024; Graziano, Ros-Demarize, & Hare, 2020) for more details outlining study enrollment and reasons for exclusion for the stable housing shelter samples.

The total participating sample consisted of 914 young children whose caregiver (97% were mothers) provided consent to participate in the study. Children had a mean age of 4.64 years ($SD = 1.45$ years) with 40.8% being females and 41.2% having clinically elevated levels of EBP. See Table 1 for other demographic variables.

Study Design and Procedure

This study was approved by the University's Institutional Review Board. At intake clinicians/trained staff across both samples administered an assessment protocol that lasted approximately two hours and included: a) a biopsychosocial interview of caregivers, b) questionnaires on children's EBP symptoms, c) questionnaires on maternal parenting stress, and d) videotaped observations of three 5-minute standard parent-child interaction situations that varied in the degree of parental control expected. Within the homeless shelter sample, families were given small incentives, such as a small toy for the child or small gift for the parent, upon completion of the assessments, and all subsequent interventions were provided at no cost. Within the stable housing sample, parents received up to $50, children received a small toy for participating, and all subsequent interventions were provided at no cost. The efficacy of the interventions provided for both samples have been published elsewhere (Graziano et al., 2023; Spiegel et al., 2022). The current study is a secondary data analysis comparing baseline data collected across these different samples among children with and without EBP.

Externalizing Behavior Problem Groups

Caregivers from the homeless shelter sample and the stable housing early intervention sample completed the *Eyberg Child Behavior Inventory* (ECBI; Eyberg & Ross, 1978), a 36-item questionnaire that is designed to assess the presence of EBP in children ages 2 through 16 years. The ECBI has been demonstrated as having high internal consistency and strong test-retest reliability (Funderburk et al., 2003; Robinson et al., 1980). In the present study, the total intensity scale raw score was used as the measure of EBP (α's = .84–.93) with a score of 130 or higher being indicative of clinically elevated levels. Clinically elevated EBP from the stable housing sample who were participating in an ongoing longitudinal project was derived from a diagnosis of ADHD along with any comorbid disruptive behavior disorder (DBD) such as Oppositional Defiant Disorder (ODD) or Conduct Disorder (CD). This sample was highly comorbid as 71.8% were diagnosed with both ADHD and a DBD disorder. Diagnoses were assessed through a combination of parent structured interview (Computerized-Diagnostic Interview Schedule for Children; Shaffer et al., 2000) and parent/teacher ratings of symptoms and impairment (Disruptive Behavior Disorders Rating Scale [DBD-RS] and Impairment

Table 1. Participant baseline demographic variables by sample.

	Total Sample ($N = 914$)	Homeless Shelter Sample ($n = 638$)	Stable Housing Sample ($n = 276$)
Demographic Variables			
Child sex (% female)*	40.8	45.8	29.3
Mean Child age (*SD*)*	4.64 (1.44)	4.36 (1.54)	5.29 (0.90)
Child Race (%)			
Black*	54.3	75.4	5.4
White*	42.1	21.3	90.2
Asian	0.4	0.0	1.4
Biracial	3.0	3.0	2.9
Other	0.2	0.3	0.0
Child Ethnicity (%)			
Hispanic/Latinx*	46.7	30.9	83.3
Non-Hispanic/Latinx*	53.3	69.1	16.7
Maternal Education (%)			
Some High School*	30.3	42.5	2.2
High School Diploma/GED*	29.8	40.1	5.8
Technical Degree	1.5	2.2	0.0
Some College	13.4	13.3	13.5
Associate's Degree	3.9	0.8	11.3
Bachelor's Degree*	9.9	0.8	30.9
Advanced Degree*	11.0	0.0	36.4
Home language (%)			
English*	62.1	73.2	36.6
Spanish	7.0	7.8	5.1
Creole	0.2	0.3	0.0
Bilingual (Spanish/English)*	21.1	5.6	56.9
Bilingual (English/Creole)	0.7	0.9	0.0
Trilingual	0.1	0.2	0.0
Other*	8.8	11.9	1.4
Marital Status (%)			
Single, never married*	61.8	83.9	10.5
Married/living with a partner*	28.7	7.2	78.5
Separated	5.3	6.1	3.3
Divorced	3.8	2.4	7.3
Widowed	0.4	0.5	0.4

Note: *Denotes significant difference between samples at $p < .05$.

Rating Scale [IRS]; Fabiano et al., 2006; Pelham et al., 1992, respectively). Children in the typically developing (TD) group endorsed less than four ADHD symptoms (across either Inattention or Hyperactivity/Impulsivity according to the DSM-5), less than four ODD symptoms and indicated no clinically significant impairment (score below 3 on the IRS). It is important to note that while both samples relied on different evidence-based approaches to capture children with clinically elevated EBP (ECBI rating scale vs. diagnostic interview), prior work has shown the viability of doing so as the ECBI contains ADHD, ODD, and CD items (Axberg et al., 2008; Lindahl, 1998; Weis et al., 2005) with other studies showing concurrent validity with the same diagnostic interview (DISC) used in the stable housing longitudinal sample (Rolon-Arroyo et al., 2016).

Parenting Outcomes

Parenting Stress

Caregivers across both samples completed the Parenting Stress Index-Short Form (PSI-SF; Abidin, 1983). The PSI-SF is a widely used 36-item self-report instrument for parents of children ages 1 month to 12 years measuring parental stress (Abidin, 1983). All scales derived from the PSI-SF have demonstrated strong test-retest reliability in previous studies (Barroso et al., 2016). Given the high correlation between the total PSI-SF and subscales (i.e., Difficult Child, Parent-Child Dysfunctional Interaction, and Parental Distress), the total stress score was used in the analyses (r's ranged from .83 to .89, $p < .001$).

Parenting Skills

The *Dyadic Parent-Child Interaction Coding System-4th Edition* (DPICS-IV; Eyberg et al., 2013), an established behavioral coding system, was used across samples to measure the quality of parent-child interactions during three 5-minute parent-child interaction situations that varied in the degree of parental control expected (child-led play, parent-led play, and clean-up) which were recorded and transcribed. To consider overall frequency of verbalizations, staff coded from the video recordings and created raw scores of *total parenting verbalizations, total positive verbalizations* (behavior descriptions, reflections, praises), *total negative verbalizations* (questions, commands, negative talk), and *total neutral verbalizations* (neither positive nor negative), were also calculated. Additionally, consistent with prior research (Bagner et al., 2016), composite scores were also created

Table 2. Correlations between variables of interest.

Variable	1	2	3	4	5	6
1. PSI Total Stress Raw Score	–					
2. Total Parenting Verbalizations	−.16***	–				
3. Total Neutral Parenting Verbalizations	−.23***	.81***	–			
4. Total Positive Parenting Verbalizations	−.12***	.53***	.35***	–		
5. Total Negative Parenting Verbalizations	−.06	.88***	.49***	.39***	–	
6. Proportion of Negative Parenting Verbalizations	.20***	−.05	−.53***	−.22***	.37***	–
7. Proportion of Positive Parenting Verbalizations	−.07*	.10**	−.02	.87***	.00	−.22***

Note: ***$p < .001$, **$p < .01$, *$p < .05$.

for the *proportion of positive parenting verbalizations* and *proportion of negative parenting verbalizations*. To account for caregivers' total verbalizations the current study used a proportion score ranging from 0 to 1 for both positive and negative verbalizations (e.g., the total number of positive verbalizations was divided by the total number of positive, negative, and neutral verbalizations; Bagner et al., 2016). Staff coders were trained to 80% agreement with a criterion tape and 20% of the observations were coded by a second staff member within each site (two coders per site). Although across both sites all coders were masked from the child's EBP status, given the nature of the larger intervention study taking place at the homeless shelter, coders were aware of housing status. Reliability across all codes was excellent (interclass correlation coefficients range from .80 to .99).

Data Analytic Plan

All analyses were conducted using Statistical Package for the Social Sciences, version 26 (SPSS 26). Missing data was 1% for pre-intervention variables ($n = 12$) and were determined to be missing completely at random per Little's MCAR test ($p = .35$). No demographic differences were noted between complete and missing cases. Therefore, complete case analyses were used as the missing data amount was insufficient to require multiple imputation procedures (Graham, 2009; Schafer, 1999). Preliminary analyses focused on examining differences in demographic variables across samples and the bivariate correlations between parenting outcomes. Next, we examined odds ratios (ORs) using a logistic regression model to examine associations between the demographic variables and elevated EBP classification across samples. For our primary analyses, within a general linear model framework, multivariate analyses of covariance (MANCOVA) were conducted to examine if there were significant differences in the parenting outcomes across both samples of children with and without elevated EBP, while covarying for relevant demographic variables. Given the moderate to large differences in group sizes, Levene's test of homogeneity of variances was utilized and a robust test of equality of means (Welch test) was employed as necessary. For the effect size metric reported, Cohen's *d* and associated confidence intervals were calculated according to the formula provided in Lipsey and Wilson (2001).

Results

Preliminary Analyses

Descriptive statistics for both the homeless shelter and stable housing samples are provided in Table 1. The sample of children experiencing homelessness were younger (4.36 yrs., SD = 1.54 vs. 5.29 yrs., SD = .90), more likely to be female (45.8% versus 29.3%), more likely to identify as Black (76% vs. 6%) and less likely to identify as Hispanic (30.9% vs. 83.3%) compared to the stable housing sample. Caregivers experiencing homelessness also had lower levels of education (82.6% had high school degree or lower versus 8%) and were more likely to be single, never married (84% versus 11%) relative to the mothers of the stable housing sample. Further, bivariate correlation analyses are presented in Table 2 between parental total stress raw score on the PSI and parenting verbalizations (total and proportion scores).

Demographic Factors and Elevated EBP Status

Next, we examined the extent to which these demographic variables related to elevated EBP status across both the homeless shelter sample and the stable housing sample. As seen in Table 3, logistic regression results indicated that within the stable housing sample, none of these demographic factors predicted elevated EBP status. On the other hand, among the homeless shelter sample, children whose mothers identified as Black had lower odds in being classified as having elevated EBP relative to children whose mothers identified as White, OR = 0.40 (95% CI: 0.20–0.78). Similarly, children whose mothers identified as Hispanic had lower odds in being classified as having elevated EBP relative to children whose mothers identified as Non-Hispanic, OR = 0.50 (95% CI = 0.27–0.92).

Table 3. Logistic Regression Model (odds ratio) of demographic variables relating to EBP status.

	Total Sample ($N = 914$)			Homeless Shelter Sample ($n = 638$)			Stable Housing Sample ($n = 276$)		
	B (S.E.)	Exp (B)	95% C.I.	B (S.E.)	Exp (B)	95% C.I.	B (S.E.)	Exp (B)	95% C.I.
Child Age (continuous)	.09 (.05)	1.09	.99, 1.20	.07 (.06)	1.08	.96, 1.20	−.17 (.15)	.85	.64, 1.13
Child Sex: Female (vs. Male)	−.31 (.15)	.74*	.55, .98	−.28 (.18)	.76	.54, 1.08	−.13 (.29)	.88	.50, 1.53
Child Race: Black (vs. White)	−1.10 (.27)	.33***	.20, .56	−.92 (.34)	.40**	.20, .78	−.17 (.65)	.79	.24, 3.03
Child Ethnicity: Hispanic/Latinx (vs. non-Hispanic/Latinx)	−.51 (.24)	.60*	.37, .97	−.70 (.32)	.50*	.27, .92	−.10 (.42)	.91	.40, 2.05
Maternal Education: <high school diploma (vs. high school diploma or above)	−.38 (.17)	.69*	.49, .95	−.11 (.18)	.90	.63, 1.27	−1.88 (1.18)	.15	.02, 1.56
Marital Status Single, never married (vs. married/living with a partner/separated/divorced/widowed)	−.17 (.19)	.84	.58, 1.23	.17 (.26)	1.18	.71, 1.96	.61 (.49)	1.84	.70, 4.83

Note: ***$p < .001$, **$p < .01$, *$p < .05$. Reference groups: Child Sex (Female = 1, Male = 0), Child Race (Black = 1, White = 0), Child Ethnicity (Hispanic/Latinx = 1, Non-Hispanic/Latinx = 0), Maternal Education (<high school diploma = 1, High school diploma or above = 0), Marital status (Single, never married = 1, married/living with a partner/separated/divorced/widowed = 0).

Parenting Factors and Elevated EBP Status

As mentioned previously, children were selected for the EBP group if their ECBI score was clinically elevated or if they were diagnosed with ADHD (with or without a comorbid DBD diagnosis). The four groups created (homeless shelter-TD, homeless shelter-EBP, stable housing-TD, and stable housing-EBP) were subsequently compared across the parenting outcomes. The resulting MANOVA was significant F (15, 2446) = 20.22, $p < .001$, and as seen in Table 4, follow-up ANOVAs were significant across all parenting variables. Of note, Levene's test of homogeneity of variances was significant for four out of the six parenting outcomes. However, using the more robust Welch's test for equality of means, the group differences for these variables remained highly significant. Follow-up post-hoc tests (Games-Howell) indicated that overall stress levels (see Figure 1) were significantly higher among the homeless shelter-EBP group relative to all other groups (Cohen's d ranged from 1.50 to 3.28). Mothers in the homeless shelter-TD group had comparable levels of overall stress compared to caregivers with stable housing and with children with EBP. Both mothers in the homeless shelter-TD and stable housing-EBP groups had higher overall parenting stress levels compared to mothers in the stable housing-TD group (d's = 1.56 and 1.41, respectively).

Table 4. Differences between groups on parent report and observed measures.

	Homeless Shelter-TD[a] ($n = 426$) M (SD)	Homeless Shelter-EBP[b] ($n = 202$) M (SD)	Stable Housing-TD[c] ($n = 101$) M (SD)	Stable Housing-EBP[d] ($n = 175$) M (SD)	F score	Levene's Statistic	Welch Statistic	Cohen's d
Parenting Outcomes								
Parenting Stress								
PSI Total Stress Raw Score (P)	81.85 (17.85)[b]	109.41 (17.78)[c]	55.10 (13.80)[a]	80.78 (20.37)[b]	222.80***	3.63*	286.37***	1.55***[ab], 1.56***[ac], 3.28***[bc], 1.50***[bd], 1.41***[cd]
Observed Parenting During Parent-Child Interactions								
Total Parenting Verbalizations (O)	177.38 (74.18)[a]	167.09 (69.67)[a]	221.33 (68.20)[b]	253.57 (72.89)[c]	59.51***	0.92	59.57***	0.60***[ac], 1.03***[ad], 0.78***[bc], 1.22***[bd], 0.45**[cd]
Total Neutral Parenting Verbalizations (O)	62.62 (31.18)[a]	54.41 (28.04)[b]	95.18 (32.07)[c]	100.58 (38.00)[c]	94.21****	6.54***	84.24****	0.27**[ab], 1.04***[ac], 1.14***[ad], 1.39***[bc], 1.40***[bd]
Total Positive Parenting Verbalizations (O)	13.75 (11.77)[a]	10.61 (10.27)[b]	12.96 (10.99)[ab]	16.83 (16.92)[c]	7.66****	2.65*	7.05***	0.28**[ab], 0.45***[bd]
Total Negative Parenting Verbalizations (O)	101.01 (48.53)[a]	102.07 (47.01)[ab]	113.18 (42.53)[b]	136.16 (52.06)[c]	23.25****	1.31	20.76****	0.71***[ad], 0.69***[bd], 0.47***[cd]
Proportion of Negative Parenting Verbalizations (O)	.566 (.11)[a]	.610 (.11)[c]	.511 (.10)[b]	.535 (.11)[b]	22.53***	1.26	24.51***	0.40***[ab], 0.51***[ac], 0.28*[ad], 0.93***[bc], 0.68***[bd]
Proportion of Positive Parenting Verbalizations (O)	.075 (.06)[a]	.061 (.05)[b]	.056 (.04)[b]	.068 (.07)[ab]	4.86**	2.75*	6.73***	0.25*[ab], 0.33***[ac]

Note: ***$p < .001$, **$p < .01$, *$p < .05$.TD = typically developing. EBP = externalizing behavior problems. SD = standard deviation. p = Parent report, O = Observation, P/C = Parent and child. Subscripts that are not shared across rows indicates a significant difference among groups at $p < .05$.

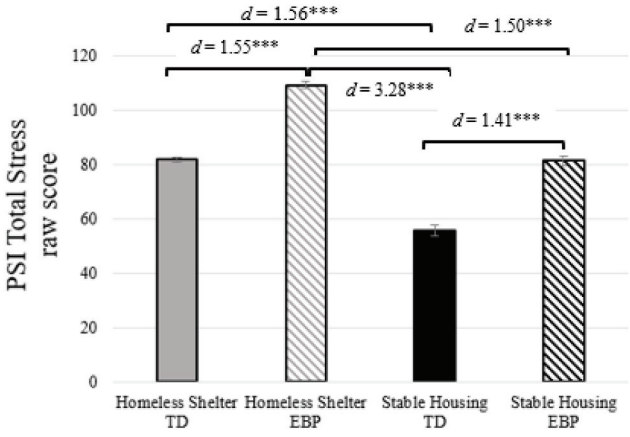

Figure 1. Differences between groups on parenting stress.

As it relates to the *proportion* of parenting verbalizations and graphically depicted in Figure 2, mothers in the homeless shelter-EBP group had the highest proportions of negative verbalizations relative to all other groups (d ranged from 0.40–0.93). Mothers in the homeless shelter-TD group had significantly higher proportions of negative verbalizations relative to stable housing EBP ($d = 0.28$) and stable housing TD ($d = 0.51$), which did not differ (Figure 2a.). In terms of positive verbalizations, mothers in the homeless shelter-TD group had a significantly higher proportion of positive verbalizations compared to mothers in both the homeless shelter-EBP group ($d = 0.25$) and the stable housing-TD group ($d = 0.33$; Figure 2b.). No other group differences were found as it relates to proportion of positive verbalizations.

Regarding *total* parenting verbalizations, mothers in the stable housing-EBP group engaged in the most total verbalizations compared to all other groups (d's range from 0.45 to 1.22; Figure 3a). Next, mothers in the stable housing-TD group engaged in more total verbalizations relative to the homeless shelter-EBP ($d = 0.78$) and TD ($d = 0.60$) groups. No differences were found between either homeless shelter samples as it relates to total verbalizations. In terms of total neutral parenting verbalizations, although both stable housing samples were comparable, they were significantly higher relative to both homeless shelter samples (d's range from 1.04 to 1.40; Figure 3b). Additionally, mothers in the homeless shelter-TD group engaged in significantly more neutral parenting verbalizations compared to the homeless shelter-EBP group ($d = 0.27$). As it relates to total positive parenting verbalizations, all groups were comparable, except for the homeless shelter-EBP group, which was significantly lower than the homeless shelter-TD ($d = 0.28$) and stable housing-EBP ($d = 0.45$) groups (Figure 3c). Finally, regarding total negative parenting verbalizations, only the stable housing-EBP group was significantly higher compared to the three other groups (d's range from 0.47 to 0.71; Figure 3d).

Discussion

The current study is the largest, to our knowledge, to compare malleable parenting factors among caregivers with children with/without EBP in a homeless shelter sample versus a stable housing sample. The combination of having a child with EBP while experiencing homelessness yielded the highest levels of parenting stress while also engaging in a higher *proportion* of negative parenting verbalizations during parent-child interactions relative to caregivers experiencing homelessness with TD children and caregivers with stable housing with children with/without EBP. On the other hand, caregivers experiencing homelessness with TD children engaged in a higher *proportion* of positive parenting verbalizations during parent-child interactions relative to caregivers experiencing homelessness with children with EBP and those caregivers with stable housing with TD children. Lastly, caregivers experiencing homelessness, particularly those with children with EBP, had fewer *total* verbalizations during parent-child interactions relative to caregivers with stable housing with children with/without EBP.

First, when examining demographic variables that differed among our samples, we found within the homeless shelter sample that children whose mothers identified as Black and/or identified as Hispanic had *lower* odds in being classified as having elevated EBP relative to children whose mothers identified as non-Hispanic White. This finding is noteworthy as all mothers in the homeless shelter had access to free mental health services for their children. Thus, while prior work within the health disparities literature indicates a lack of access to mental health services for Black and Hispanic families (Alang, 2019; Green et al., 2020), our finding demonstrates more of a greater under identification of elevated EBP by such families relative to non-Hispanic White families. It may have also been the case that Black and Hispanic families experiencing homelessness were prioritizing other needs (e.g., education, employment, housing, transportation, medical issues, child care) and/or were experiencing other stressors that impacted their reporting of their child's EBP. Clearly, more research is needed in examining health disparities, access, and treatment choices among minoritized families experiencing homelessness versus those with stable housing.

As pointed out by Paquette and Bassuk (2009), there has been a dearth of research related to the needs of

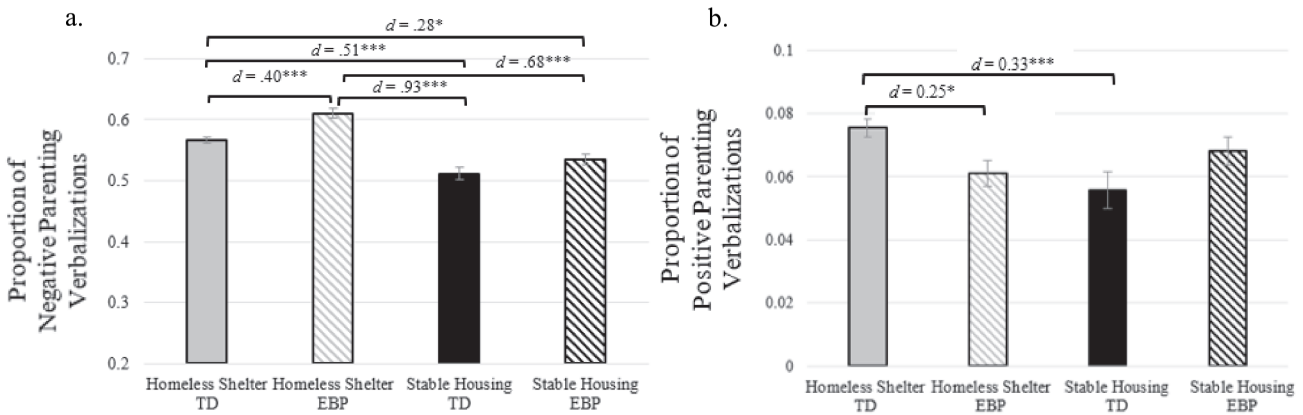

Figure 2. Differences between groups on negative and positive proportion of parenting verbalizations. *Notes*: ***$p < .001$.*$p < .05$.TD = typically developing. EBP = externalizing behavior problems. d = Cohen's d effect size.

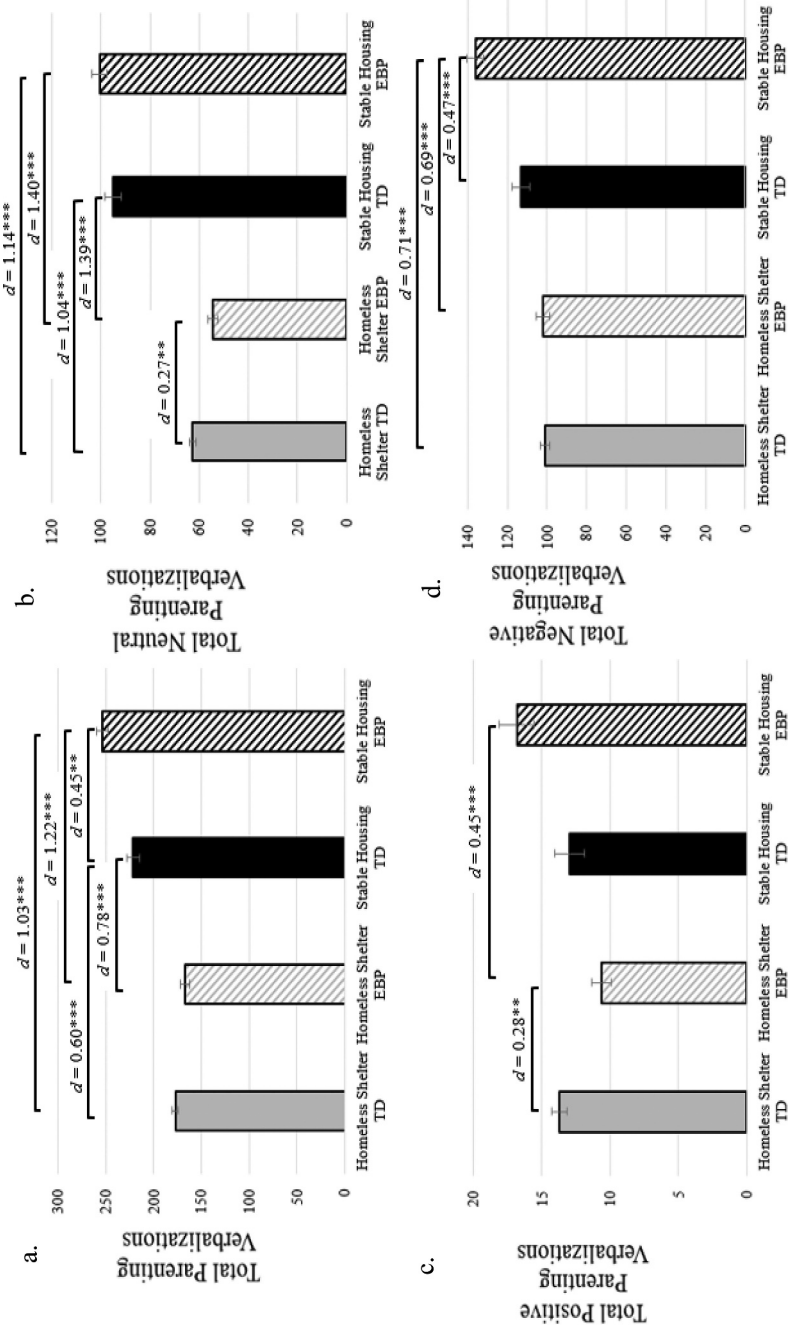

Figure 3. Differences between groups on total parenting verbalizations. *Notes*: ***$p < .001$.TD = typically developing. EBP = externalizing behavior problems. d = Cohen's d effect size. PSI = Parenting Stress Index.

parents experiencing homelessness. Our study is unique in that we were able to utilize two large samples within the same city and show that the combination of having a child with EBP along with experiencing homelessness and living at a shelter yielded the highest levels of parenting stress. Importantly, the level of parenting stress reported by mothers experiencing homelessness with TD children was at the same level as those found among caregivers in the stable housing-EBP group. These findings provide compelling evidence that a significant portion of caregivers experiencing homelessness and living at a shelter may benefit from therapeutic services targeting parenting stress levels regardless of their child's diagnostic status. Evidence-based parenting programs such as Triple P and Parent-Child Interaction Therapy (PCIT) are well established in not only improving child EBP but also decreasing parenting stress (Cooley et al., 2014; Ghazanfari, 2017). While emergency, transitional, or supportive housing programs for families experiencing homelessness often provide parenting support services, the implementation of empirically supported parenting programs is quite rare (Gewirtz & Taylor, 2009). Emerging studies suggest that it can be feasible and effective to have such parenting interventions delivered within a shelter setting by shelter staff (see Graziano et al., 2023).

Another novel aspect to the current study was our ability to observe parent-child interactions across both samples. Consistent with our parenting stress finding, we also found that families with a combination of having a child with EBP along with experiencing homelessness/living at a shelter had the highest proportion of negative verbalizations during parent-child interactions compared to all other groups. This finding is consistent with past research documenting bidirectional associations between parental behaviors and children's behavioral functioning (Wittig & Rodriguez, 2019; J. Zhang et al., 2020). Within general community samples we find that children exhibiting EBP elicit more negative parenting behaviors (Akhter et al., 2011), however within a homeless shelter sample, it is also likely that such EBP is a reaction to and/or is exacerbated by the experience of becoming homeless. For example, J. Zhang et al. (2020) found among families living in temporary supportive housing that child EBP predicted less effective parenting practices two years later while more effective parenting practices predicted fewer EBP two years later.

When viewed in conjunction with the higher stress levels and mental health difficulties that occur when experiencing homelessness (Tischler et al., 2007) along with environmental factors within a shelter and how the environment could be perceived that may impact parenting (Andrade et al., 2020), it is not surprising that mothers engage in proportionally more negative verbalizations during parent-child interactions. Perhaps more surprising was our finding that mothers experiencing homelessness in the shelter setting but who had TD children engaged in proportionally more positive verbalizations during parent-child interactions relative to mothers in stable housing who had TD children. This finding suggests how parents who are experiencing homelessness but are not overwhelmed by the addition of having a child with EBP, may be trying to be more positive with their children given their environmental/economic circumstances. Indeed, engaging in more positive parent-child interactions and positive parenting in general has been shown in at-risk samples (e.g., low-income) to be an important protective factor as it relates to various child outcomes (Bender & Carlson, 2013; Galanter et al., 2012; Marra et al., 2009). Embedding parenting programs within a homeless shelter would help to promote such resiliency in families while also decreasing parenting stress and related negative parent-child interactions among those families who have children with more challenging behaviors.

Lastly, it is important to note that mothers experiencing homelessness, particularly those with children with EBP, had fewer *total* verbalizations during parent-child interactions relative to caregivers with stable housing with children with/without EBP. There is significant research linking the importance of caregiver speech in children's cognitive, behavioral, and social-emotional development as well as work demonstrating how parents of lower socio-economic status (SES) tend to talk less, use fewer word types/tokens, as well as less complex sentence structures relative to higher SES parents (see Huttenlocher et al., 2010 for a review). Our findings within a shelter environment indicated that over 40% of mothers did not complete high school. It is known that poverty combined with low maternal education can significantly impact the language environment that young children experience. Thus, providing language enrichment services for children experiencing homelessness seems essential to narrow the achievement gap that can occur when these children enter formal schooling. Parenting programs have also been shown to positively impact children's language skills (Jeong et al., 2021; L. Zhang et al., 2021) which are often related to early EBP (Petersen & LeBeau, 2021). Thus, to inform such interventions, it will be important for future work to determine whether the proportion of positive or negative verbalizations or simply the quantity of such verbalizations made by parents is what matters in predicting future child EBP.

In terms of limitations, the cross-sectional nature of the study prevents us from determining the impact of

homelessness on parenting and child EBP. Given the secondary data analyses aspect to this study, it is important to acknowledge that both samples relied on different evidence-based approaches toward classifying elevated EBP. While these measures have been validated in the past as outlined in our method section, it would be ideal for future work to use the exact same clinical measures. Additionally, our stable housing comparison sample was from a higher socioeconomic background and were more likely to be White-Hispanic than Black. While we examined the extent to which these sociodemographic factors related to EBP, a low income but stable housing comparison group that had a more similar race/ethnic background to our homeless shelter sample would have provided additional information on whether our findings are uniquely associated with the experience of homelessness versus simply a more impoverished environment and/or due to race/ethnic differences related to parenting. Moreover, 97% of our caregivers were mothers which is not surprising given that the homeless shelter was only for women, although it was also very high (92%) in the stable housing sample. Future work examining these parenting factors within fathers or partners of women experiencing homelessness would add to the emerging literature showing the importance of fathers/partner support in children's development (Lamb & Lewis, 2013). Our measure of the quality of parent-child interactions was based on the coding of positive and negative verbalizations during play that has traditionally been used in PCIT interventions (Bagner et al., 2016). Future work should measure more global aspects of parenting such as dimensions of warmth/responsiveness, intrusiveness, and attachment, and discipline strategies that may be impacted by the experience of homelessness. Lastly, it is important to for future work to examine the heterogeneity of life altering events (e.g., ranging from loss of employment to gender-based violence, migration from other countries, and a host of other traumatic and violent events) that precede homelessness and how it relates to parenting difficulties and subsequent child EBP.

In summary, the current study highlights not only the parenting challenges facing mothers who are experiencing homelessness but also how their children's EBP may exacerbate such challenges. This study also provides hope in showing that in the absence of having a child with EBP, mothers experiencing homelessness and living in a trauma-informed supportive shelter are more positive in their interactions with their children relative to parents from a stable housing background. That said, mothers experiencing homelessness with TD children still evidenced higher parenting stress levels than mothers with stable housing who had an EBP child. Additionally, mothers experiencing homelessness, particularly those with children with EBP, had fewer *total* verbalizations during parent-child interactions relative to caregivers with stable housing with children with/without EBP. From a clinical perspective, these findings suggest the importance of embedding and/or making cost-effective early intervention programs within a homeless shelter setting available for parents who have a child with EBP and/or who are experiencing elevated parenting stress levels. Providing such services could address some of the racial and ethnic disparity in access to valuable parenting and mental health programs. It is important to acknowledge that families experiencing homelessness are often resilient (Cutuli & Herbers, 2014) and may prefer or choose other early intervention/prevention programs that are not necessarily a typical parenting program (e.g., language/reading enrichment program and/or a trauma informed intervention) or may choose to focus their efforts elsewhere.

From a mental health disparities lens, our study highlights that providing equal access to outpatient services may not be enough as children whose mothers identified as Black and/or identified as Hispanic had *lower* odds in being classified as having elevated EBP relative to children whose mothers identified as non-Hispanic White. Thus, early intervention services that are only provided for families that report elevated EBP may differentially impact minoritized groups, even when access appears equal. Hence, from a policy perspective and when financially possible, making early intervention programs available to highly vulnerable and at-risk families such as those experiencing homelessness may help overcome any potential measurement and/or diagnostic biases during screeners. Incorporating parenting or other early intervention/prevention services within a shelter for everyone to have access to may have an additional benefit of de-stigmatizing mental health. In fact, as suggested by Graziano et al. (2023), forming community-university based partnerships may be one way to facilitate shelters in not simply providing universal parenting programs but also evaluating which programs may work best for this at-risk population. Finally, it will be important for future research to evaluate how these parenting factors and child EBP change over time, particularly after families transition from a shelter to stable housing as that would help determine what further interventions may be beneficial.

Acknowledgment

We would like to thank all the families and dedicated staff who participated in the study.

Disclosure Statement

No potential conflict of interest was reported by the author(s).

Funding

This work was supported by grants from the National Institute of Mental Health (R01MH112588), the National Institute of Diabetes and Digestive and Kidney Diseases (R01DK119814), as well as by the generous funding of: The Children's Trust of Miami Dade County, Florida; Miami Dade County Homeless Trust; Miami Dade County and Lotus Endowment Fund, Inc.; Micky and Madeleine Arison Family Foundation; Martin Z. Margulies; H. Angela Whitman and Family Foundation; and our community.

ORCID

Paulo A. Graziano http://orcid.org/0000-0003-2960-2331

References

Abidin, R. R. (1983). *Parenting stress index–manual (PSI)*. CPPC Tests.

Abidin, R. R. (1992). The determinants of parenting behavior. *Journal of Clinical Child Psychology*, *21*(4), 407–412. https://doi.org/10.1207/s15374424jccp2104_12

Akhter, N., Hanif, R., Tariq, N., & Atta, M. (2011). Parenting styles as predictors of externalizing and internalizing behavior problems among children. *Pakistan Journal of Psychological Research*, *26*(1), 23.

Alang, S. M. (2019). Mental health care among blacks in America: Confronting racism and constructing solutions. *Health Services Research*, *54*(2), 346–355. https://doi.org/10.1111/1475-6773.13115

Andrade, F. M. R., Simões Figueiredo, A., Capelas, M. L., Charepe, Z., & Deodato, S. (2020). Experiences of homeless families in parenthood: A systematic review and synthesis of qualitative evidence. *International Journal of Environmental Research and Public Health*, *17*(8), 2712. https://doi.org/10.3390/ijerph17082712

Arcia, E. (2020). *Lotus house therapeutic mother–child program: Year III report*. Lotus House.

Armstrong, J. M., Owens, C. R., & Haskett, M. E. (2021). Effects of a brief parenting intervention in shelters for mothers and their children experiencing homelessness. *Journal of Child & Family Studies*, *30*(9), 2097–2107. https://doi.org/10.1007/s10826-021-02021-2

NICHD Early Child Care Research Network, & Arsenio, W. F. (2004). Trajectories of physical aggression from toddlerhood to middle childhood: Predictors, correlates, and outcomes. *Monographs of the Society for Research in Child Development*, i–143. http://www.jstor.org/stable/3701390

Aubry, T., Ayda, A., Cilia, M.-L., James, L., Ri, W., Rosane, N., Anita, P., & Hwang, S. H. (2021). Housing trajectories and associated risk factors and resources among individuals who are homeless or precariously housed. *ANNALS of the American Academy of Political and Social Science*, *693*(1), 102–122. https://doi.org/10.1177/0002716220987203

Axberg, U. L. F., Johansson Hanse, J. A. N., & Broberg, A. G. (2008). Parents' description of conduct problems in their children–A test of the eyberg child behavior inventory (ECBI) in a Swedish sample aged 3–10. *Scandinavian Journal of Psychology*, *49*(6), 497–505. https://doi.org/10.1111/j.1467-9450.2008.00670.x

Baglivio, M. T., Wolff, K. T., Piquero, A. R., Greenwald, M. A., & Epps, N. (2017). Racial/Ethnic disproportionality in psychiatric diagnoses and treatment in a sample of serious juvenile offenders. *Journal of Youth & Adolescence*, *46*(7), 1424–1451. https://doi.org/10.1007/s10964-016-0573-4

Bagner, D. M., Coxe, S., Hungerford, G. M., Garcia, D., Barroso, N. E., Hernandez, J., & Rosa-Olivares, J. (2016). Behavioral parent training in infancy: A window of opportunity for high-risk families. *Journal of Abnormal Child Psychology*, *44*(5), 901–912. https://doi.org/10.1007/s10802-015-0089-5

Banyard, V. L., & Graham-Bermann, S. A. (1998). Surviving poverty: Stress and coping in the lives of housed and homeless mothers. *The American Journal of Orthopsychiatry*, *68*(3), 479–489. https://doi.org/10.1037/h0080357

Barroso, N. E., Hungerford, G. M., Garcia, D., Graziano, P. A., & Bagner, D. M. (2016). Psychometric properties of the Parenting Stress Index-Short Form (PSI-SF) in a high-risk sample of mothers and their infants. *Psychological Assessment*, *28*(10), 1331. https://doi.org/10.1037/pas0000257

Barroso, N. E., Mendez, L., Graziano, P. A., & Bagner, D. M. (2018). Parenting stress through the lens of different clinical groups: A systematic review & meta-analysis. *Journal of Abnormal Child Psychology*, *46*(3), 449–461. https://doi.org/10.1007/s10802-017-0313-6

Bassuk, E. L., Buckner, J. C., Weinreb, L. F., Browne, A., Bassuk, S. S., Dawson, R., & Perloff, J. N. (1997). Homelessness in female-headed families: Childhood and adult risk and protective factors. *American Journal of Public Health*, *87*(2), 241–248. https://doi.org/10.2105/AJPH.87.2.241

Bassuk, E. L., DeCandia, C. J., Beach, C. A., & Berman, F. (2014). *America's youngest outcasts: A report card on child homelessness*. National Center on Family Homelessness.

Bassuk, E. L., Weinreb, L. F., Dawson, R., Perloff, J. N., & Buckner, J. C. (1997). Determinants of behavior in homeless and low-income housed preschool children. *Pediatrics*, *100*(1), 92–100. https://doi.org/10.1542/peds.100.1.92

Bender, S. L., & Carlson, J. S. (2013). An initial investigation of parenting stress, social-emotional protective factors, and behavior concerns within a head start population. *Journal of Educational and Developmental Psychology*, *3*(1), 113. https://doi.org/10.5539/jedp.v3n1p113

Bradley, C., McGowan, J., & Michelson, D. (2018). How does homelessness affect parenting behaviour? A systematic critical review and thematic synthesis of qualitative research. *Clinical Child & Family Psychology Review*, *21*(1), 94–108. https://doi.org/10.1007/s10567-017-0244-3

Bullock, H. E., Reppond, H. A., Truong, S. V., & Singh, M. R. (2020). An intersectional analysis of the feminization of homelessness and mothers' housing precarity. *The Journal of Social Issues*, *76*(4), 835–858. https://doi.org/10.1111/josi.12406

Carneiro, P., Meghir, C., & Parey, M. (2013). Maternal education, home environments, and the development of children

and adolescents. *Journal of the European Economic Association*, *11*(suppl_1), 123–160. https://doi.org/10.1111/j.1542-4774.2012.01096.x

Claussen, A. H., Holbrook, J. R., Hutchins, H. J., Robinson, L. R., Bloomfield, J., Meng, L., Bitsko, R. H., O'Masta, B., Cerles, A., Maher, B., Rush, M., & Kaminski, J. W. (2022). All in the family? A systematic review and meta-analysis of parenting and family environment as risk factors for attention-deficit/hyperactivity disorder (ADHD) in children. *Prevention Science*, *25*(S2), 1–23. https://doi.org/10.1007/s11121-022-01358-4

Cooley, M. E., Veldorale-Griffin, A., Petren, R. E., & Mullis, A. K. (2014). Parent–child interaction therapy: A meta-analysis of child behavior outcomes and parent stress. *Journal of Family Social Work*, *17*(3), 191–208. https://doi.org/10.1080/10522158.2014.888696

Cormier, E. (2008). Attention deficit/hyperactivity disorder: A review and update. *Journal of Pediatric Nursing*, *23*(5), 345–357. https://doi.org/10.1016/j.pedn.2008.01.003

Costa, N. M., Weems, C. F., Pellerin, K., & Dalton, R. (2006). Parenting stress and childhood psychopathology: An examination of specificity to internalizing and externalizing symptoms. *Journal of Psychopathology & Behavioral Assessment*, *28*(2), 113–122. https://doi.org/10.1007/s10862-006-7489-3

Côté, S. M., Vaillancourt, T., Barker, E. D., Nagin, D., & Tremblay, R. E. (2007). The joint development of physical and indirect aggression: Predictors of continuity and change during childhood. *Development & Psychopathology*, *19*(1), 37–55. https://doi.org/10.1017/S0954579407070034

Crouch, E., Radcliff, E., Bennett, K. J., Brown, M. J., & Hung, P. (2021). Examining the relationship between adverse childhood experiences and ADHD diagnosis and severity. *Academic Pediatrics*, *21*(8), 1388–1394. https://doi.org/10.1016/j.acap.2021.03.009

Cutuli, J. J., & Herbers, J. E. (2014). Promoting resilience for children who experience family homelessness: Opportunities to encourage developmental competence. *Cityscape*, *16*(1), 113–140. http://www.jstor.org/stable/26326860

Damaske, S., Bratter, J. L., & Frech, A. (2017). Single mother families and employment, race, and poverty in changing economic times. *Social Science Research*, *62*, 120–133. https://doi.org/10.1016/j.ssresearch.2016.08.008

David, D. H., Gelberg, L., & Suchman, N. E. (2012). Implications of homelessness for parenting young children: A preliminary review from a developmental attachment perspective. *Infant Mental Health Journal*, *33*(1), 1–9. https://doi.org/10.1002/imhj.20333

Deater-Deckard, K. (1998). Parenting stress and child adjustment: Some old hypotheses and new questions. *Clinical Psychology Science & Practice*, *5*(3), 314. https://doi.org/10.1111/j.1468-2850.1998.tb00152.x

DeCandia, C. J., Herbers, J. E., Unick, G. J., & Volk, K. T. (2023). Parent characteristics associated with neurodevelopmental competence for young children experiencing family homelessness. *Journal of Child & Family Studies*, *32*(5), 1546–1558. https://doi.org/10.1007/s10826-023-02566-4

Eyberg, S. M., Nelson, M. M., Ginn, N. C., Bhuiyan, N., & Boggs, S. R. (2013). *Dyadic parent-child interaction coding system*. PCIT International.

Eyberg, S. M., & Ross, A. W. (1978). Assessment of child behavior problems: The validation of a new inventory. *Journal of Clinical Child & Adolescent Psychology*, *7*(2), 113–116. https://doi.org/10.1080/15374417809532835

Fabiano, G. A., Pelham, W. E., Jr., Waschbusch, D. A., Gnagy, E. M., Lahey, B. B., Chronis, A. M., Onyango, A. N., Kipp, H., Lopez-Williams, A., & Burrows MacLean, L. (2006). A practical measure of impairment: Psychometric properties of the impairment rating scale in samples of children with attention deficit hyperactivity disorder and two school-based samples. *Journal of Clinical Child & Adolescent Psychology*, *35*(3), 369–385. https://doi.org/10.1207/s15374424jccp3503_3

Fadus, M. C., Ginsburg, K. R., Sobowale, K., Halliday-Boykins, C. A., Bryant, B. E., Gray, K. M., & Squeglia, L. M. (2020). Unconscious bias and the diagnosis of disruptive behavior disorders and ADHD in African American and Hispanic youth. *Academic Psychiatry*, *44*(1), 95–102. https://doi.org/10.1007/s40596-019-01127-6

Fantuzzo, J., & Perlman, S. (2007). The unique impact of out-of-home placement and the mediating effects of child maltreatment and homelessness on early school success. *Children & Youth Services Review*, *29*(7), 941–960. https://doi.org/10.1016/j.childyouth.2006.11.003

Funderburk, B. W., Eyberg, S. M., Rich, B. A., & Behar, L. (2003). Further psychometric evaluation of the Eyberg and Behar rating scales for parents and teachers of preschoolers. *Early Education & Development*, *14*(1), 68–81. https://doi.org/10.1207/s15566935eed1401_5

Fusaro, V. A., Levy, H. G., & Shaefer, H. L. (2018). Racial and ethnic disparities in the lifetime prevalence of homelessness in the United States. *Demography*, *55*(6), 2119–2128. https://doi.org/10.1007/s13524-018-0717-0

Galanter, R., Self-Brown, S., Valente, J. R., Dorsey, S., Whitaker, D. J., Bertuglia-Haley, M., & Prieto, M. (2012). Effectiveness of parent–child interaction therapy delivered to at-risk families in the home setting. *Child & Family Behavior Therapy*, *34*(3), 177–196. https://doi.org/10.1080/07317107.2012.707079

Gewirtz, A., & Taylor, T. (2009). Participation of homeless and abused women in a parent training program: Science and practice converge in a battered women's shelter. In M. F. Hindsworth & T. B. Lang (Eds.), *Community participation and empowerment* (pp. 97–114). Nova Science Publishers, Inc.

Ghazanfari, F. (2017). The effectiveness of positive parenting program (triple-p) in parental stress and self efficacy of mothers and behavioral problems of students with educable mental retardation. *Journal of Torbat Heydariyeh University of Medical Sciences*, *5*(1), 7–16. http://jms.thums.ac.ir/article-1-403-en.html

Graham, J. W. (2009). Missing data analysis: Making it work in the real world. *Annual Review of Psychology*, *60*(1), 549–576. https://doi.org/10.1146/annurev.psych.58.110405.085530

Graziano, P. A., Garic, D., & Dick, A. S. (2022). Individual differences in white matter of the uncinate fasciculus and inferior fronto-occipital fasciculus: Possible early biomarkers for callous-unemotional behaviors in young children with disruptive behavior problems. *Journal of Child Psychology and Psychiatry*, *63*(1), 19–33.

Graziano, P. A., Hernandez, M. L., & Dick, A. S. (2024). Examining change in Callous-Unemotional behaviors in

Young Children with attention-Deficit/hyperactivity disorder (ADHD) and comorbid disruptive behavior disorders: Impact of the Summer treatment program for pre-kindergarteners (STP-PreK). *Evidence-Based Practice in Child and Adolescent Mental Health*, 1–17.

Graziano, P. A., Ros-Demarize, R., & Hare, M. M. (2020). Condensing parent training: A randomized trial comparing the efficacy of a briefer, more intensive version of parent-child interaction therapy (I-PCIT). *Journal of Consulting & Clinical Psychology*, *88*(7), 669.

Graziano, P. A., Spiegel, J. A., Hayes, T., Arcia, E., & Foundation, S. (2023). Early intervention for families experiencing homelessness: A pilot randomized trial comparing two parenting programs. *Journal of Consulting & Clinical Psychology*, *91*(4), 192–207. https://doi.org/10.1037/ccp0000810

Green, J. G., McLaughlin, K. A., Fillbrunn, M., Fukuda, M., Jackson, J. S., Kessler, R. C., Sadikova, E., Sampson, N. A., Vilsaint, C., Williams, D. R., Cruz-Gonzalez, M., & Alegría, M. (2020). Barriers to mental health service use and predictors of treatment drop out: Racial/ethnic variation in a population-based study. *Administration and Policy in Mental Health and Mental Health Services Research*, *47*(4), 606–616. https://doi.org/10.1007/s10488-020-01021-6

Gutwinski, S., Schreiter, S., Deutscher, K., Fazel, S., & Patel, V. (2021). The prevalence of mental disorders among homeless people in high-income countries: An updated systematic review and meta-regression analysis. *PLOS Medicine*, *18*(8), e1003750. https://doi.org/10.1371/journal.pmed.1003750

Hausman, B., & Hammen, C. (1993). Parenting in homeless families: The double crisis. *The American Journal of Orthopsychiatry*, *63*(3), 358–369. https://doi.org/10.1037/h0079448

Heinicke, C. M. (2002). The transition to parenting. Chapter 12. In M. H. Bornstein (Ed.), *Handbook of Parenting: Vol. 3: Being and becoming a parent* (2nd ed., pp. 363–388). Lawrence Erlbaum Associates Publishers.

Herbers, J. E., Cutuli, J. J., Monn, A. R., Narayan, A. J., & Masten, A. S. (2014). Trauma, adversity, and parent–child relationships among young children experiencing homelessness. *Journal of Abnormal Child Psychology*, *42*(7), 1167–1174. https://doi.org/10.1007/s10802-014-9868-7

Herbers, J. E., Tabachnick, A. R., Hayes, K. R., Tebepah, T. C., Wallace, L. E., & Cutuli, J. J. (2023). Social support as a resilience factor for parent–infant dyads experiencing homelessness. *Journal of Family Psychology*, *37*(5), 689–698. https://doi.org/10.1037/fam0001073

Hilton, J. M., & Desrochers, S. (2002). Children's behavior problems in single-parent and married-parent families: Development of a predictive model. *Journal of Divorce & Remarriage*, *37*(1–2), 13–36. https://doi.org/10.1300/J087v37n01_02

Huttenlocher, J., Waterfall, H., Vasilyeva, M., Vevea, J., & Hedges, L. V. (2010). Sources of variability in children's language growth. *Cognitive Psychology*, *61*(4), 343–365. https://doi.org/10.1016/j.cogpsych.2010.08.002

Jeong, J., Franchett, E. E., Ramos de Oliveira, C. V., Rehmani, K., Yousafzai, A. K., & Persson, L. Å. (2021). Parenting interventions to promote early child development in the first three years of life: A global systematic review and meta-analysis. *PLOS Medicine*, *18*(5), e1003602. https://doi.org/10.1371/journal.pmed.1003602

Klein, J. D., Woods, A. H., Wilson, K. M., Prospero, M., Greene, J., & Ringwalt, C. (2000). Homeless and runaway youths' access to health care. *Journal of Adolescent Health*, *27*(5), 331–339. https://doi.org/10.1016/S1054-139X(00)00146-4

Koblinsky, S. A., Gordon, A. L., & Anderson, E. A. (2000). Changes in the social skills and behavior problems of homeless and housed children during the preschool year. *Early Education & Development*, *11*(3), 321–338. https://doi.org/10.1207/s15566935eed1103_6

Koblinsky, S. A., Morgan, K. M., & Anderson, E. A. (1997). African-American homeless and low-income housed mothers: Comparison of parenting practices. *The American Journal of Orthopsychiatry*, *67*(1), 37–47. https://doi.org/10.1037/h0080209

Labella, M. H., Narayan, A. J., McCormick, C. M., Desjardins, C. D., & Masten, A. S. (2017). Risk and adversity, parenting quality, and children's social-emotional adjustment in families experiencing homelessness. *Child Development*, *90*(1), 227–244. https://doi.org/10.1111/cdev.12894

Lamb, M. E., & Lewis, C. (2013). Father–child relationships. In N. Cabrera & C. S. Tamis-LeMonda (Eds.), *Handbook of father involvement: Multidisciplinary perspectives* (pp. 119–134). Routledge/Taylor & Francis Group.

Lebrun-Harris, L. A., Baggett, T. P., Jenkins, D. M., Sripipatana, A., Sharma, R., Hayashi, A. S., Ngo-Metzger, Q., & Daly, C. A. (2013). Health status and health care experiences among homeless patients in federally supported health centers: Findings from the 2009 patient survey. *Health Services Research*, *48*(3), 992–1017. https://doi.org/10.1111/1475-6773.12009

Lee, S., August, G., Gewirtz, A., Klimes-Dougan, B., Bloomquist, M., & Realmuto, G. (2010). Identifying unmet mental health needs in children of formerly homeless mothers living in a supportive housing community sector of care. *Journal of Abnormal Child Psychology*, *38*(3), 421–432. https://doi.org/10.1007/s10802-009-9378-1

Liang, J., Matheson, B. E., & Douglas, J. M. (2016). Mental health diagnostic considerations in racial/ethnic minority youth. *Journal of Child & Family Studies*, *25*(6), 1926–1940. https://doi.org/10.1007/s10826-015-0351-z

Lindahl, K. M. (1998). Family process variables and children's disruptive behavior problems. *Journal of Family Psychology*, *12*(3), 420. https://doi.org/10.1037/0893-3200.12.3.420

Lindsey, E. W. (1998). The impact of homelessness and shelter life on family relationships. *Family Relations*, *47*(3), 243–252. https://doi.org/10.2307/584973

Lipsey, M. W., & Wilson, D. B. (2001). *Practical meta-analysis.Thousandoaks*. Sage.

Mahajan, S., Caraballo, C., Lu, Y., Valero-Elizondo, J., Massey, D., Annapureddy, A. R., Roy, B., Riley, C., Murugiah, K., Onuma, O., Nunez-Smith, M., Forman, H. P., Nasir, K., Herrin, J., & Krumholz, H. M. (2021). Trends in differences in health status and health care access and affordability by race and ethnicity in the United States, 1999-2018. *JAMA*, *326*(7), 637–648. https://doi.org/10.1001/jama.2021.9907

Malhotra, K., Shim, R., Baltrus, P., Heiman, H. J., Adekeye, O., & Rust, G. (2015). Racial/Ethnic disparities in mental

health service utilization among youth participating in negative externalizing behaviors. *Ethnicity & Disease*, *25* (2), 123–129. https://www.jstor.org/stable/48668140

Mäntymaa, M., Puura, K., Luoma, I., Latva, R., Salmelin, R. K., & Tamminen, T. (2012). Predicting internalizing and externalizing problems at five years by child and parental factors in infancy and toddlerhood. *Child Psychiatry and Human Development*, *43*(2), 153–170. https://doi.org/10.1007/s10578-011-0255-0

Marra, J. V., Lin, H. J., McCarthy, E., Ford, J., Rodis, E., & Frisman, L. K. (2009). Effects of social support and conflict on parenting among homeless mothers. *The American Journal of Orthopsychiatry*, *79*(3), 348–356. https://doi.org/10.1037/a0017241

McChesney, K. Y. (1995). A review of the empirical literature on contemporary urban homeless families. *The Social Service Review*, *69*(3), 429–460. https://doi.org/10.1086/604134

Murran, S., & Brady, E. (2023). How does family homelessness impact on children's development? A critical review of the literature. *Child & Family Social Work*, *28*(2), 360–371. https://doi.org/10.1111/cfs.12968

Narayan, A. J., Sapienza, J. K., Monn, A. R., Lingras, K. A., & Masten, A. S. (2015). Risk, vulnerability, and protective processes of parental expressed emotion for children's peer relationships in contexts of parental violence. *Journal of Clinical Child & Adolescent Psychology*, *44*(4), 676–688. https://doi.org/10.1080/15374416.2014.881292

Nilsson, S. F., Nordentoft, M., & Hjorthøj, C. (2019). Individual-level predictors for becoming homeless and exiting homelessness: A systematic review and meta-analysis. *Journal of Urban Health*, *96*(5), 741–750. https://doi.org/10.1007/s11524-019-00377-x

Olivet, J., Dones, M., & Richard, M. (2019). The intersection of homelessness, racism, and mental illness. In M. Medlock, D. Shtasel, N. Trinh, & D. Williams (Eds.), *Racism and psychiatry. Current clinical psychiatry*. Humana Press. https://doi.org/10.1007/978-3-319-90197-8_4

Olivet, J., Wilkey, C., Richard, M., Dones, M., Tripp, J., Beit-Arie, M., Yampolskaya, S., & Cannon, R. (2021). Racial inequity and homelessness: Findings from the SPARC study. *ANNALS of the American Academy of Political and Social Science*, *693*(1), 82–100. https://doi.org/10.1177/0002716221991040

Paquette, K., & Bassuk, E. L. (2009). Parenting and homelessness: Overview and introduction to the special section. *The American Journal of Orthopsychiatry*, *79*(3), 292–298. https://doi.org/10.1037/a0017245

Patterson, G. R. (1982). *Coercive family process*. Castalia.

Pelham, W. E., Jr., Gnagy, E. M., Greenslade, K. E., & Milich, R. (1992). Teacher ratings of DSM-III-R symptoms for the disruptive behavior disorders. *Journal of the American Academy of Child and Adolescent Psychiatry*, *31*(2), 210–218. https://doi.org/10.1097/00004583-199203000-00006

Perlman, S., Cowan, B., Gewirtz, A., Haskett, M., & Stokes, L. (2012). Promoting positive parenting in the context of homelessness. *The American Journal of Orthopsychiatry*, *82* (3), 402. https://doi.org/10.1111/j.1939-0025.2012.01158.x

Petersen, I. T., & LeBeau, B. (2021). Language ability in the development of externalizing behavior problems in childhood. *Journal of Educational Psychology*, *113*(1), 68–85. https://doi.org/10.1037/edu0000461

Potegal, M., Kosorok, M. R., & Davidson, R. J. (2003). Temper tantrums in young children: 2. Tantrum duration and temporal organization. *Journal of Developmental & Behavioral Pediatrics*, *24*(3), 148–154. https://doi.org/10.1097/00004703-200306000-00003

Robinson, E. A., Eyberg, S. M., & Ross, A. W. (1980). The standardization of an inventory of child conduct problem behaviors. *Journal of Clinical Child Psychology*, *9*(1), 22–28. https://doi.org/10.1080/15374418009532938

Rolon-Arroyo, B., Arnold, D. H., Harvey, E. A., & Marshall, N. (2016). Assessing attention and disruptive behavior symptoms in preschool-age children: The utility of the diagnostic interview schedule for children. *Journal of Child & Family Studies*, *25*(1), 65–76. https://doi.org/10.1007/s10826-015-0203-x

Samuels, J., Shinn, M., & Buckner, J. C. (2010). *Homeless children: Update on research, policy, programs, and opportunities*. Report. Office of the Assistant Secretary for Planning and Evaluation, U.S. Department of Health and Human Services. https://aspe.hhs.gov/reports/homeless-children-update-research-policy-programs-opportunities-0

Schafer, J. L. (1999). Multiple imputation: a primer. *Statistical Methods in Medical Research*, *8*(1), 3–15. https://doi.org/10.1177/096228029900800102

Shaffer, D., Fisher, P., Lucas, C. P., Dulcan, M. K., & Schwab-Stone, M. E. (2000). NIMH diagnostic interview schedule for children version IV (NIMH DISC-IV): Description, differences from previous versions, and reliability of some common diagnoses. *Journal of the American Academy of Child and Adolescent Psychiatry*, *39*(1), 28–38. https://doi.org/10.1097/00004583-200001000-00014

Spencer, N. J., Ludvigsson, J., Bai, G., Gauvin, L., Clifford, S. A., Abu Awad, Y., Goldhaber-Fiebert, J. D., Markham, W., Faresjö, Å., White, P. A., Raat, H., Jansen, P., Nikiema, B., Mensah, F. K., McGrath, J. J., & EPOCH Collaborative Group. (2022). Social gradients in ADHD by household income and maternal education exposure during early childhood: Findings from birth cohort studies across six countries. *PLOS ONE*, *17*(3), e0264709. https://doi.org/10.1371/journal.pone.0264709

Spiegel, J. A., Graziano, P. A., Arcia, E., Cox, S. K., Ayala, M., Carnero, N. A., ... & Sundari Foundation. (2022). Addressing mental health and trauma-related needs of sheltered children and families with trauma-focused cognitive-behavioral therapy (tf-cbt). *Administration and Policy in Mental Health and Mental Health Services Research*, *49*(5), 881–898.

Sroufe, L. A. (2005). Attachment and development: A prospective, longitudinal study from birth to adulthood. *Attachment & Human Development*, *7*(4), 349–367. https://doi.org/10.1080/14616730500365928

Stekler, N. (2023). A framework for how homelessness impacts children's attachments to their caregiver. *Journal of Family Theory & Review*, 1–19. https://doi.org/10.1111/jftr.12545

Tischler, V., Rademeyer, A., & Vostanis, P. (2007). Mothers experiencing homelessness: Mental health, support and social care needs. *Health & Social Care in the Community*, *15*(3), 246–253. https://doi.org/10.1111/j.1365-2524.2006.00678.x

Torquati, J. C. (2002). Personal and social resources as predictors of parenting in homeless shelters. *Journal of Family*

Issues, *23*(4), 463–485. https://doi.org/10.1177/0192513X02023004001

Tremblay, R. E., LeMarquand, D., & Vitaro, F. (1999). The prevention of oppositional defiant disorder and conduct disorder. In H. C. Quay & A. E. Hogan (Eds.), *Handbook of disruptive behavior disorders* (pp. 525–555). Springer Science+Business Media. https://doi.org/10.1007/978-1-4615-4881-2_25

Vrabic, S. C., Herbers, J. E., Davis, M., & Thomas, C. (2022). Perceptions of support in shelter environments for caregivers and young children experiencing family homelessness. *Child: Care, Health and Development*, *48*(4), 588–594. https://doi.org/10.1111/cch.12963

Weinreb, L., Goldberg, R., Bassuk, E., & Perloff, J. (1998). Determinants of health and service use patterns in homeless and low-income housed children. *Pediatrics*, *102*(3), 554–562. https://doi.org/10.1542/peds.102.3.554

Weis, R., Lovejoy, M. C., & Lundahl, B. W. (2005). Factor structure and discriminative validity of the eyberg child behavior inventory with young children. *Journal of Psychopathology & Behavioral Assessment*, *27*(4), 269–278. https://doi.org/10.1007/s10862-005-2407-7

Wittig, S. M., & Rodriguez, C. M. (2019). Interaction between maternal and paternal parenting styles with infant temperament in emerging behavior problems. *Infant Behavior and Development*, *57*, 101323. https://doi.org/10.1016/j.infbeh.2019.04.005

Wolraich, M. L., Hagan, J. F., Allan, C., Chan, E., Davison, D., Earls, M., Evans, S. W., Flinn, S. K., Froehlich, T., Frost, J., Holbrook, J. R., Lehmann, C. U., Lessin, H. R., Okechukwu, K., Pierce, K. L., Winner, J. D., & Zurhellen, W. (2019). Clinical practice guideline for the diagnosis, evaluation, and treatment of attention-deficit/hyperactivity disorder in children and adolescents. *Pediatrics*, *144*(4). https://doi.org/10.1542/peds.2019-2528

Wood, P., Yeh, M., Pan, D., Lambros, K., McCabe, K., & Hough, R. (2005). Exploring the relationship between race/ethnicity, age of first school-based services utilization, and age of first specialty mental health care for at-risk youth. *Mental Health Services Research*, *7*(3), 185–196. https://doi.org/10.1007/s11020-005-5787-0

Wu, Q., Slesnick, N., & Murnan, A. (2018). Understanding parenting stress and children's behavior problems among homeless, substance-abusing mothers. *Infant Mental Health Journal*, *39*, 423–431. https://doi.org/10.1002/imhj.21717

Zhang, J., Lee, S. K., Piehler, T. F., Gewirtz, A. H., & August, G. J. (2020). Bidirectional relations between parenting practices and child externalizing behaviors in formerly homeless families: A random-intercept cross-lagged panel analysis. *Parenting*, *20*(3), 177–199. https://doi.org/10.1080/15295192.2019.1694833

Zhang, L., Ssewanyana, D., Martin, M. C., Lye, S., Moran, G., Abubakar, A., Marfo, K., Marangu, J., Proulx, K., & Malti, T. (2021). Supporting child development through parenting interventions in low-to middle-income countries: An updated systematic review. *Frontiers in Public Health*, *9*, 671988. https://doi.org/10.3389/fpubh.2021.671988