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Benevolent Childhood Experiences (BCEs) in Homeless Parents: A Validation and Replication Study

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Abstract

This study extends the validity and replicability of the Benevolent Childhood Experiences (BCEs) scale, a novel instrument for adults with childhood adversity. The BCEs scale assesses 10 favorable childhood experiences, yielding a total score similar to the Adverse Childhood Experiences (ACEs) scale (Centers for Disease Control and Prevention, 2017; Felitti et al., 1998). The current study examined the BCEs scale in a sample of homeless parents and hypothesized that higher levels of total BCEs would predict lower odds of psychological distress, sociodemographic risk, and parenting stress after accounting for ACEs. Participants were 50 ethnically diverse parents (42 birth mothers, 5 birth fathers, 1 stepfather, and 2 grandmothers in the primary caregiver role; M = 32.50 years, SD = 9.29, range = 21–62 years; 66% African American, 12% White, 12% American Indian, 10% biracial/other) residing at a homeless shelter with their children. Parents completed the BCEs and ACEs scales and instruments on psychological distress, sociodemographic risk, and parenting stress. Higher levels of BCEs predicted lower odds of psychological distress, as expected. Higher levels of ACEs predicted higher sociodemographic risk. However, neither BCEs nor ACEs predicted parenting stress. Mean levels of total BCEs and item frequencies were strikingly similar to the pilot sample, although homeless parents reported significantly lower predictable home routines in childhood. BCEs and ACEs were only modestly negatively associated, underscoring the independence of adverse and positive early experiences. The BCEs scale is a promising, brief and culturally sensitive index of childhood experiences linked to long-term resilience.

Keywords

childhood adversity; homelessness;	psychological	distress; parenting	stress; resilience
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An extensive body of research supports the long-term effects of both adverse and positive early experiences on later pathways of maladaptation and adaptation (Masten & Cicchetti, 2016; Sroufe, Egeland, Carlson, & Collins, 2005). Whereas negative and adverse early experiences can have lasting and harmful effects on an individual's health and well-being (Centers for Disease Control and Prevention [CDC], 2017; Felitti et al., 1998), positive childhood experiences are associated with more favorable trajectories (Masten, 2014). Currently, many existing instruments, such as the Adverse Childhood Experiences scale (ACEs; Centers for Disease Control and Prevention, 2017), assess early experiences of adversity, but there is a need for well-validated instruments on positive early experiences.

The Benevolent Childhood Experiences (BCEs) scale is a new, culturally sensitive instrument of positive childhood experiences, specifically designed for adults with childhood adversity (Narayan, Rivera, Bernstein, Harris, & Lieberman, 2018). The BCEs scale assesses the presence of 10 favorable childhood experiences reflecting love, predictability, and support, and yields a sum total score out of 10, similar to the ACEs scale (CDC, 2017; Felitti et al., 1998). The BCEs scale was initially validated in a sample of ethnically diverse, low-income pregnant women with high levels of childhood adversity and demonstrated promising psychometric properties (Narayan et al., 2018). In that pilot sample, higher levels of BCEs predicted lower posttraumatic stress disorder symptoms and fewer stressful life events during pregnancy after accounting for effects of ACEs. The current study extends the validity and replicability of the BCEs scale with a second high-risk sample: parents of young children residing at an urban emergency homeless shelter.

Resilience and BCEs in Homeless Parents

In examining the positive long-term effects of BCEs, as well as the construct of resilience more broadly, the role of the context must be considered (Southwick, Bonanno, Masten, Panter-Brick, & Yehuda, 2014; Ungar, 2013). Resilience, the capacity for positive adaptation to adverse experiences, is manifested in positive functioning during or following exposure to significant adversities (Masten, 2014). To fully understand the potential influences of BCEs and the ways in which they may influence adaptive outcomes, it is essential to study their effects across multiple contexts of risk.

Similar to low-income pregnant women with histories of childhood adversity, parents experiencing homelessness are highly vulnerable. Homelessness is often associated with high levels of cumulative stress, challenges such as chronic poverty, and related demographic risks (Masten, Miliotis, Graham-Bermann, Ramirez, & Neemann, 1993; Narayan et al., 2017). Homeless parents often experience substantially elevated distress compared with their low-income but housed counterparts because of lack of housing and difficulty meeting basic needs for their families. These challenges may become amplified as parents attempt to maintain positive parenting and provide a sense of stability in shelter contexts in which chaotic, underresourced living conditions are often the norm (Masten et al., 1993; Narayan, 2015).

When parenting is challenged or put to the test in conditions of stress, parents may increasingly reference their own childhood experiences with caregivers as templates for

parenting. For instance, in particularly transformative circumstances such as pregnancy, parents are especially likely to reflect on their own childhood care (Narayan, Oliver Bucio, Rivera, & Lieberman, 2016; Slade, Cohen, Sadler, & Miller, 2009). Because of the social, economic, and psychological stressors that threaten homeless parents (David, Gelberg, & Suchman, 2012), homelessness may be another highly transformative—and taxing—period. Thus, homelessness represents a particularly opportune window for the study of long-term effects of parents' BCEs and ACEs.

The Present Study

The current study examined the predictive validity of the BCEs scale with respect to three outcomes: caregivers' psychological distress, sociodemographic risk, and parenting stress. These particular outcomes, which commonly accompany severe poverty and homelessness (Narayan, 2015; Obradovi , Shaffer, & Masten, 2012), are similar to outcomes examined in the original BCEs pilot study, providing replicability (Narayan et al., 2018). For instance, the pilot study examined the effects of BCEs on mental health symptoms and contextual stress. The present study used a composite of sociodemographic risk with specific stressors found to be particularly relevant in homeless families (Labella, Narayan, McCormick, Desjardins, & Masten, 2019; Obradovi et al., 2012). As an extension of the pilot study, we also assessed parenting stress because of the unique stressors of parenting while homeless (David et al., 2012; Narayan, 2015).

The first aim was to examine descriptive frequencies of BCEs in this sample of homeless parents. We hypothesized that rates of total and individual BCEs would be similar to rates in low-income pregnant women described by Narayan et al. (2018). The second aim was to examine the association of BCEs with three indicators of parents' current adaptation. Specifically, we hypothesized that (a) higher levels of BCEs would be related to lower odds of psychological distress and lower levels of sociodemographic risk and parenting stress, and (b) these associations would hold after controlling for effects of ACEs, reflecting unique associations of BCEs with current functioning.

Method

Participants

Participants included 50 primary caregivers (42 birth mothers, five birth fathers, one stepfather, two grandmothers; hereafter referred to as parents; M=32.50 years, SD=9.29, range = 21–62 years; 66% African American, 12% White, 12% American Indian, 10% biracial/other) residing at a large urban emergency homeless shelter. Parents were recruited to participate as a part of a larger study on parenting and school readiness in homeless and highly mobile families with children approximately 4–6 years old (M=5.38, SD=.84, range = 4.02-7.07 years). Families were considered eligible after three nights of staying in the shelter (to allow for acclimation) if they had a child in the target age range with no known developmental delays that would interfere with participation, and they spoke sufficient English to participate in all study procedures.

Procedure

The university's institutional review board approved all procedures. After providing informed consent, parents completed an interview that included standardized measures of psychological distress, ACEs, BCEs, and demographics. Interviews lasted approximately 1 hour, and instruments were administered orally to minimize differences in reading level. After participating, parents were compensated with gift cards.

Measures: Predictors

Benevolent Childhood Experiences (BCEs).—The BCEs scale is a 10-item checklist of favorable childhood experiences from birth to age 18 years (Narayan et al., 2018). Items pertain to perceived internal and external safety and security (e.g., presence of beliefs that gave comfort, at least one safe caregiver), positive and predictive quality of life (e.g., enjoyment of school, predictable home routine), and relational support (e.g., a teacher who cared, a supportive noncaregiver adult). The BCEs has shown high test-retest reliability, r = 0.80, p < 0.01, and good predictive validity for psychopathology and stressful life events in diverse, low-income pregnant women (Narayan et al., 2018). Positively endorsed items were summed for a total BCEs score (M = 7.56, SD = 2.23, range = 1–10) reflecting greater numbers of favorable experiences.

Adverse Childhood Experiences (ACEs).—ACEs were assessed using the ACEs scale (CDC, 2017; Felitti et al., 1998). Items reflect the presence of 10 childhood adversities (emotional, physical, and verbal abuse; emotional and physical neglect; parental separation or divorce; and exposure to domestic violence and household substance abuse, mental illness, and incarceration) between birth and age 18 years. ACEs have shown good predictive validity for increased mental and physical health risks and disease in adulthood (e.g., CDC, 2017; Felitti et al., 1998). Positively endorsed items were summed to yield a total ACEs score (M = 4.39, SD = 3.09, range = 0–10) where higher scores indicate greater childhood adversity.

Measures: Outcomes

Psychological distress.—Psychological distress was measured using the Kessler Scale for Psychological Distress (K-6; Kessler et al., 2003). This six-item screener assesses mental health symptoms and psychological distress (e.g., feeling nervous, feeling so depressed that nothing could cheer you up) over the past 30 days. Items are rated on a scale of 0, *all of the time*, to 4, *none of the time*, indicating symptom severity, with lower scores signaling higher levels of distress. The K-6 has demonstrated excellent internal consistency ($\alpha = .89$) and good reliability (r = .78), with scores significantly related to mental illness diagnoses (Lee et al., 2012; Kessler et al., 2003). Here a total score was created by summing responses to all six items (M = 15.33, SD = 5.40, range = 0–24, $\alpha = .83$). Following standard scoring procedures (Kessler et al., 2003), scores of 0–12 were considered above the threshold for psychological distress, whereas scores 13 were considered below the threshold for psychological distress. Accordingly, 26% of parents in the present sample (n = 13) surpassed the threshold and were coded as 1, *above threshold for psychological distress*, whereas 74% (n = 37) were coded 0, *below threshold for psychological distress*.

Sociodemographic risk.—A 10-item sociodemographic risk composite was computed using parent-reported demographic information. Items were selected based on relevant risk factors for disadvantaged populations (Obradovi et al., 2012) that have been previously used and validated with homeless families. In past research with this composite, higher sociodemographic risk was related to higher levels of family adversity, illustrating good construct validity of these items (Labella et al., 2019). Items included: single parenthood (82%; n = 41), current parent unemployment (82%; n = 41), chronic homelessness (three or more times; 42%; n = 21), inability to afford rent at last residence (34%; n = 17), last residence in an unsafe neighborhood (34%; n = 17), parent <18 years old at the time of the first child's birth (30%; n = 15), parent with less than a high school education (30%; n = 15), four or more children in the household (28%; n = 14), family that is highly mobile (participating child has lived at five or more addresses in his or her lifetime; 26%; n = 13), and last residence in unsafe or substandard housing (24%; n = 12). Total scores were created by summing all positively endorsed items (M = 4.18, SD = 1.92, range = 1–9), with higher scores indicating higher cumulative risk.

Parenting stress.—Parenting stress was measured using the Parental Stress Scale (Berry & Jones, 1995). This 18-item instrument assesses stress related to one's role and experiences as a parent (e.g., "The major source of stress in my life is my child"). Items are rated on a scale from 1, *strongly disagree* to 5-*strongly agree*, and higher scores signify higher stress. This scale has shown excellent internal consistency ($\alpha = .83$), reliability (r = .81), and convergent validity with other measures of parenting stress (Berry et al., 1995). Eight items were reverse scored, and a total score was created by summing all 18 items (M = 34.94, SD = 6.49, range = 22–47, $\alpha = .66$).

Covariates

Parent age and sex were examined as potential covariates for all analyses.

Data Analytic Plan and Missing Data

First, frequencies of individual BCEs items were examined and compared with frequencies of corresponding items in the pilot sample. Then bivariate correlations between BCEs and all outcome measures were conducted. A binary logistic regression tested the predictive validity of BCEs for psychological distress (thereby resulting in the outcome variable, odds of psychological distress), and hierarchical regressions tested the predictive validity of BCEs for sociodemographic risk and parenting stress. To preserve degrees of freedom given the very small sample size, covariates significant at p .05 were included as controls in the first step of the regression, followed by BCEs in the second step and ACEs in the third step (assuming that BCEs and ACEs would be correlated with all three outcomes). All regressions were examined for influential cases using Cook's d 4/n (Cook & Weisberg, 1982; Rawlings, 1988).

Missing data were minimal. For participants missing only one item on an instrument (n = 8), a total score was computed with all remaining items. When participants were missing two or more items on an instrument (n = 3), total scores were considered missing. Using this guideline, missing data ranged from 0% on the covariates to 2% on the predictor and

outcome variables. The total amount of missing data across the entire data set was less than 1%, so analyses for missing data and imputation were not deemed necessary. No influential cases were identified as affecting the pattern of findings reported below.

Results

Descriptive Statistics

Frequencies of individual items and mean levels of total BCEs compared with the pilot sample are shown in Table 1. The mean number of BCEs in the two samples did not differ, t(147) = .74, ns, and item-level frequencies between the samples differed significantly on only one item. Item 10, "Did you have a predictable home routine, like regular meals and a regular bedtime?" was endorsed at a significantly lower rate in homeless parents (68%) than in low-income pregnant women (81%), $\chi^2(1, N=149) = 4.24$, p < .05. (Note, however, that this difference would not be significant if p values were adjusted to account for multiple tests).

Bivariate associations for the homeless sample are shown in Table 2. Higher levels of BCEs were significantly associated with lower odds of psychological distress, r = -.34, p < .05. Specifically, an independent t-test showed that mean levels of BCEs significantly differed for parents above the threshold for psychological distress on the K-6 compared with those below the threshold, t(48) = 2.47, p < .05. Parents with scores below the threshold for distress reported significantly higher levels of BCEs (M = 8.00, SD = 2.22) than parents with scores above the threshold (M = 6.31, SD = 1.80). Higher BCEs were not significantly correlated with lower sociodemographic risk or parenting stress. Alternatively, higher levels of ACEs were significantly correlated with higher sociodemographic risk, r = .37, p < .05, but not higher odds of psychological distress or parenting stress. Finally, higher levels of BCEs were significantly but only modestly associated with lower levels of ACEs, r = -.33, p < .05.

Predictive Validity

For the binary logistic regression predicting psychological distress, only total BCEs were entered into the model. Parent age, sex, and ACEs were not included because they were not associated with this dependent variable. Results indicated that higher levels of BCEs significantly predicted lower odds of psychological distress ($\beta = -.35$, p < .05, odds ratio = . 71; Table 3).

Only ACEs were entered into the hierarchical regression for sociodemographic risk because parent age, sex, and BCEs were not related to sociodemographic risk. Results indicated that higher levels of ACEs significantly predicted higher levels of sociodemographic risk (B = .23, SE = .09, $\beta = .37$, p < .05). This model accounted for approximately 13% of the variance (R^2) in sociodemographic risk (p < .05).

Neither BCEs nor ACEs were associated with parenting stress, so this regression was not conducted. The only variables significantly related to greater parenting stress were younger parent age, r = -.32, p < .05, and higher odds of psychological distress, r = .30, p < .05.

All regressions were subsequently examined with birth mothers only (n = 42). The main pattern of results did not differ, so analyses from the larger sample are discussed below.

Discussion

The current study extends previous work on the BCEs scale by examining its psychometric properties in a sample of homeless parents. Current findings enhance pilot evidence that the BCEs scale is promising as a brief measure linking self-reports of positive childhood experiences to better long-term functioning in high-risk populations. Consistent with the first hypothesis, means of total BCEs and frequencies of individual items in the current sample were similar to the pilot sample of low-income pregnant women (Narayan et al., 2018) for all but one individual item. Notably, homeless parents endorsed the BCEs item about the presence of a predictive home routine significantly less often than low-income pregnant women (68% vs. 81%). Although preliminary, this finding suggests that lack of predictable home routines may be a distinguishing childhood experience for parents experiencing homelessness compared with low-income pregnant women. Notably, in the current sample, 60% of parents had been homeless before. Thus, this result may be attributable to childhood histories of homelessness often associated with lack of structure and routine (David et al., 2012) or may suggest that unpredictable childhood home routines are a unique precursor to adulthood homelessness (Koegel, Melamid, & Burnam, 1995). Given that this item-level difference was preliminary and multiple testing was not controlled, this result should be interpreted cautiously and replicated in future studies. The generally comparable rates of mean- and item-level BCEs suggest that the BCEs scale operates similarly in two high-risk, low-income samples. Future studies should continue to examine this instrument in other disadvantaged samples (e.g., refugees, substance users) to further understand similarities and differences in how the BCEs operates across multiple high-risk contexts.

Regarding the second hypothesis, higher levels of BCEs, but not lower levels of ACEs, predicted lower odds of psychological distress. Parents with higher BCEs scores were significantly more likely to fall below the screening threshold for psychological distress on the K-6. This finding is consistent with research that greater numbers of positive childhood experiences forecast adult well-being (Sroufe et al., 2005) and is aligned with pilot findings that higher levels of BCEs were significantly correlated with lower levels of depression symptoms and perceived stress at the bivariate level and significantly predicted lower levels of posttraumatic stress disorder symptoms, even after ACEs were accounted for (Narayan et al., 2018). Notably, here, higher levels of ACEs were not associated with higher odds of psychological distress, which contradicts ACEs research that higher levels of ACEs predict higher levels of mental health problems (CDC, 2017; Felitti et al., 1998). It is possible that in homeless parents, direct associations between parents' ACEs and psychological distress are weaker because distress is exacerbated by multiple influences, including early adversity as well as contemporaneous stressors (Masten et al., 1993; Narayan, 2015).

Furthermore, higher levels of BCEs did not significantly predict lower levels of sociodemographic risk or parenting stress. The finding that BCEs were related to stressful life events in the pilot study but not to contextual stress in the current sample may be understood by evaluating the items included in each stress variable. For instance, the pilot

sample included several stressful life events that may be characterized as traumatic, such as contemporaneous physical or sexual assault during pregnancy, whereas the current stress variable was more focused on sociodemographic stressors reflecting household composition and resources. The more general, rather than trauma-specific, operationalization of contextual stress in the current sample may explain this discrepant finding. The significant associations between ACEs and sociodemographic risk in the current study, however, are consistent with extant research highlighting childhood adversity as a predictor of demographic risk factors such as lower educational attainment and higher rates of unemployment (e.g., Metzler, Merrick, Klevens, Ports, & Ford, 2017). Together these findings suggest that in homeless parents specifically, BCEs and ACEs may be differentially associated with outcomes, with BCEs more strongly predicting (lower) psychological distress and ACEs predicting sociodemographic risk. Because of the small sample, more research is needed to replicate these findings across additional outcomes.

The finding that neither BCEs nor ACEs predicted parenting stress should be interpreted with caution because of the small sample size and current low internal consistency of the Parental Stress Scale. It is also possible that current parenting stress may be more strongly predicted by other factors, such as current stressors, rather than to childhood experiences. Indeed, initial validation research on this instrument indicated that parental stress was in fact related to parents' current stress, emotions, and role satisfaction (Berry et al., 1995). Furthermore, given that 60% of parents had been homeless previously, their parenting stress at this particular point in time may not have been particularly associated with childhood experiences, either adverse or benevolent.

Strengths of the current study included assessment of BCEs in a second high-risk sample of homeless parents, providing additional psychometric information on the BCEs scale. Parents in this study included more than just birth mothers, whereas the pilot study was limited to pregnant women. This sample also identified as predominantly ethnic minority, lending additional support to the BCEs as a multiculturally relevant instrument. This study also used a well-validated screener to assess odds of psychological distress, on which the majority of the sample (74%) fell below the threshold for probable psychological distress, illuminating psychological resilience in this group of homeless parents.

This study was limited by small sample size and sampling characteristics, given that participants were drawn from a single shelter. A wider range of mental health outcomes used for official clinical diagnoses would also have been preferable. Additionally, the BCEs scale relies on retrospective self-report, thereby introducing potential reporting biases. Future studies should validate the BCEs scale with prospective data on favorable experiences (e.g., positive observed caregiving) documented at the time they occurred in childhood.

In conclusion, the BCEs scale is a promising index of positive early life experiences that predicted lower odds of psychological distress in homeless parents. Findings across two different samples indicate that BCEs and ACEs scores are relatively orthogonal, illustrating that childhood adversity does not preclude the presence of love, predictability, or support. The prevalence of benevolent childhood experiences in high-risk individuals may present

opportunities for long-term resilient functioning, especially in the most disadvantaged of childhood contexts.

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Table 1

BCEs Items and Frequencies for Homeless Parents Compared With Pilot Sample of Pregnant Women

Item	Question	(n = 50) $(n = 101)$	(n = 101)
-	1 At least one caregiver with whom you felt safe	94%	%06
2	At least one good friend	%98	87%
33	Beliefs that gave you comfort	76%	%69
4	Enjoyment of school	%89	%29
5	At least one teacher who cared	%98	82%
9	Good neighbors	%99	%65
7	An adult (not a parent/caregiver or the person from #1) who could provide you with support or advice	%89	78%
∞	Opportunities to have a good time	%08	%98
6	Like yourself or feel comfortable with yourself	64%	%19
10	Predictable home routine, like regular meals and a regular bedtime	68% * M = 7.56	81%* M = 7.84

Note. χ^2 analyses compared the rates of individual BCEs in the two samples. Homeless parents endorsed BCEs item 10 at a significantly lower rate than pregnant women (* p < .05). For exact wording of scale items for the complete BCEs instrument, see Narayan et al. (2018).

 a Narayan et al., 2018.

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Table 2

Bivariate Correlations Between All Variables for 50 Homeless Parents

Variable	1	2	3	4	S.	9	7
Primary variable							
1. BCEs							
2. ACEs	33*						
3. Odds of psychological distress	34*	.14					
4. Sociodemographic risk	08	.37*	60:				
5. Parenting stress	01	24	.30*	.10			
Demographic covariates							
6. Parent sex (female)	10	.19	.22	.27	.15	I	
7. Parent age	.27	13	26	18	32*	50	
Descriptive statistics							
Mean (or %)	7.56	4.39	26%	4.18	34.94	%88	32.5
QS	2.23	3.09	NA	1.92	6.49	NA	9.29
Missing (n)	0	1	0	1	1	0	0

Note. Odds of psychological distress is percentage of parents above the threshold for psychological distress (Kessler et al., 2003).

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p < .01.

p < .05.

Table 3

Binary Logistic Regression for Odds of Psychological Distress

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Predictor	В	SE B	exp^B
BCEs	35*	.16	.71*
Model χ^2		5.49*	
Nagelkerke's R ²		.15	
Percent classification		70	

^{*}p<.05.

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