

Inadequate Housing Among Families Under Investigation for Child Abuse and Neglect: Prevalence from a National Probability Sample

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Abstract This study aimed to estimate the prevalence of inadequate housing that threaten out-of-home placement among families under investigation by child welfare. Data came from the National Survey of Child and Adolescent Well-Being, a nationally representative longitudinal survey of child welfare-involved families. Child protective services caseworkers as well as caregivers provided information on families whose child remained in the home after initial investigation ($N = 3,867$). Multilevel latent class analyses tested the presence of inadequately housed subgroups using 4 housing problem indicators at baseline. Logistic regressions assessed convergent and predictive validity. A two class latent solution best fit the data. Findings indicated that inadequate housing contributed to risk for out-of-home placement in approximately 16 % of intact families under investigation by child protective

services. These families were 4 times more likely to need housing services 12 months later. Federal legislation emphasizes integration of social services as necessary to end homelessness. This study demonstrates overlap across public agencies. Enhanced coordination of child welfare and housing services facilitates interventions to prevent and mitigate homelessness.

Keywords Child welfare · Housing · Homelessness · Policy · Latent class analysis · Systems of care

Recent federal legislative enactments focus efforts to end homelessness. Incentives exist to create intertwined local, state, and federal infrastructures that provide a continuum of care for inadequately housed individuals and families. Given the rise in prevalence of homelessness among families, a need exists to identify early precariously housed families for inclusion into networks of housing services. This study investigates the prevalence of inadequate housing that risks out-of-home placement among families under investigation by child protective services. The study highlights a critical juncture for services to mitigate and prevent family homelessness and its associated impact on children and families.

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Background

The 2009 Homeless Emergency Assistance and Rapid Transition to Housing (HEARTH) Act (Public Law 111-22) overhauled homeless assistance funded through the US Department of Housing and Urban Development (HUD). Based on over two decades of evidence from HUD-funded programming (Fosburg and Dennis 1999; Dennis et al.

2008), the Act encouraged “continuum of care” service provision for homeless individuals and families. Funding mechanisms were expanded to elicit local service providers to coordinate efforts to identify and connect homeless to networks of programs that address their multiple needs, including substance abuse and mental health services, employment, education and trainings, in addition to immediate and longer term housing.

The HEARTH Act also recognized extensive research to prioritize the needs of homeless families, the fastest growing segment of the homeless population (Rog and Buckner 2008). The Act expanded the definition of homelessness originally postulated in HUD’s McKinney-Vento homeless programs in 1987 to include precariously housed families, i.e. families who double-up with others because they could not afford to live elsewhere. This adjustment reflected extensive research that demonstrated residential instability as a cardinal feature of homeless families, as well as the potential benefit of housing assistance to prevent this instability (Buckner 2008; Shinn et al. 2008; Samuels et al. 2010). Likewise, HEARTH emphasized the need for early identification and targeting of services for homeless families.

To develop early intervention and prevention efforts for homeless families, research guidelines have argued for greater investigation regarding where and how to coordinate service systems interfacing with homeless families (Burt et al. 2007; Rog and Buckner 2008). Family homelessness has proven difficult to forecast given the relatively large number of low-income families struggling to navigate challenging affordable housing markets (Shinn et al. 1998). Targeting preventive interventions at subpopulations experiencing specific risk for housing instability has been theorized to maximize efficiency in service provision (Montgomery et al. 2013).

Prior research suggested that one potential intersection exists between the child welfare system and housing services (Fowler et al. 2009; Toro et al. 2008). Homeless adults consistently have reported high rates of out-of-home placement during childhood (Koegel et al. 1995; Susser et al. 1987; Winkleby et al. 1992). Likewise, homeless families have demonstrated disproportionate levels of parent–child separations (Culhane et al. 2003; Koegel et al. 1995). A prospective study of homeless children in New York City suggested that 24 % experienced foster care placement within 5 years of families entering the shelter system (Koegel et al. 1995).

Overlap between populations likely reflected correlated liabilities, as well as hazards related specifically to dual service system usage. Socioeconomic disadvantage and poverty represented ubiquitous stressors on families and have been identified as a primary risk factors for both family homelessness and child welfare involvement (Barth et al. 2006; Shinn et al. 1998). Structural neighborhood characteristics related to social disorganization have shown to

threaten families through more proximal neighborhood processes, such as lower collective efficacy, social control, and sense of community (Coulton et al. 1999; Gorman-Smith et al. 2000; Sampson et al. 1997). Overlapping family- and caregiver-level risks also contributed to correlations between homelessness and maltreatment, including parental mental health and substance problems (Bassuk et al. 1997; Besinger et al. 1999; Dubowitz et al. 1993). In addition, involvement with housing and homelessness services contributed to risk for subsequent out-of-home placement (Cowan et al. 2002; Fowler et al. 2011; Park et al. 2004). Homeless caregivers may face additional scrutiny of parenting practices while in homeless shelters, and caregivers may choose out-of-home placement as preferable to homelessness (Cowan et al. 2002; Park et al. 2004).

Despite the acknowledgement of housing as an issue in child welfare, few rigorous evaluations have elucidated the scope of the problem. In a study of families in contact with child welfare in Milwaukee, WI, Courtney and colleagues found that 10 % of 324 intact families endorsed a single item asking if families spent at least one night homeless; however, information came from a purposive non probability sample assessed through mail survey with a 68 % response rate (Courtney et al. 2004). In addition to questions regarding the reliability and validity of single-item assessment, the generalizability of findings to intact families in Milwaukee as well as across the US remained unclear.

The present study aimed to estimate the prevalence of families at risk for out of home placement of children into the child welfare system due to inadequate housing. A latent class approach captured conditional probabilities across multiple indicators of housing problems identified by child protective service caseworkers and caregivers at the time of investigation by child welfare. Analyses empirically investigated whether distinct subgroups of families existed within the population on housing problems. This analysis focused on families whose children remained in the home upon initial investigation, as opposed to examining cases whose children were removed. Although comparisons of housing problems between intact and separated families in child welfare would be interesting, full information across risk indicators was unavailable for families whose children were removed at the time of investigation making it impossible to test this question. Focusing on intact families aimed to best inform the wide array of service streams targeted to promote family preservation. In addition, full information across risk indicators was unavailable for families whose children were removed at the time of investigation making it impossible to test this question.

It was hypothesized that a two class solution would best fit the data. It was assumed that a smaller class of families would be more likely to report housing problems across indicators, while the majority of families would report

lower levels of available risk indicators. We also hypothesized that class membership would be predicted by risk factors for homelessness identified in prior research (Shinn et al. 1998, 2008). In particular, we assumed that caregiver sociodemographic indicators would emerge as the strongest predictors of housing problems, such that caregivers who were younger, single parents, and unemployed would be most likely to belong to the risk group. Finally, we hypothesized that the latent housing problem variable would predict future housing problems 12 months later among a subset of families still in contact with child welfare; we believed that families with riskier profiles on available indicators at baseline would be more likely to need housing services as reported by child welfare caseworkers at follow-up.

Method

Participants

Data came from the National Survey of Child and Adolescent Well-Being (NSCAW), a nationally representative longitudinal survey of families who came into contact with the child welfare system. NSCAW used a two-stage stratified probabilistic sampling design in which 92 primary sampling units (PSUs) were selected from nine regional strata, with each PSU representing the geographic location served by one child protective services agency (NSCAW Research Group 2002). Target children were randomly selected from monthly lists generated by each PSU from October, 1999 to December, 2000 of families that had been investigated for child abuse or neglect from monthly lists generated by each PSU from October, 1999 to December, 2000. Stratification based on child age (0–14 years) and level of child welfare services received (no services, in-home services, or out-of-home placement) ensured selected children represented the child welfare population. Over-sampling occurred for infants, investigations of sexual abuse, and cases that required ongoing services following initial investigation. Of the 5,501 children sampled at baseline, we included 4,034 cases who remained in home after initial investigation. Complete baseline data were available for 3,867 or 96 % of in-home families.

Measures

Inadequate Housing

No single indicator of housing problems existed at baseline, nor were families queried on histories of homelessness. Instead, four indicators of general housing problems were identified in child protective services caseworker as

well as caregiver interviews at baseline. Caseworkers specified at the time of investigation whether or not the family had trouble for basic necessities, such as food, shelter, clothing, electricity, or heat. Additionally, child protective caseworkers indicated whether or not inadequate shelter constituted a primary risk for child neglect. Caregivers reported residential mobility by giving the number of times caregivers moved with the child in the past 12 months, as done in prior studies of inadequately housed and homeless families (Shinn et al. 2008; Obradović et al. 2009). The variable was trichotomized into zero, one, or more than one moves based on the right-skewed distribution of the data. Given the substantial overlap between housing problems and family economic distress (Masten et al. 1993; Rafferty and Shinn 1991), caregiver-reported annual income as a percent of the 2000 federal poverty level was also used as an indicator of inadequate housing. This variable was also converted into a relatively balanced three-level variable that included families at or below federal poverty, 101 to 199 % poverty, and 200 % or more of poverty level. It should be noted that indicators failed to capture the full range of factors encompassed in housing risks for homelessness, and rather, reflected data available in this national study. Risk indicators represented a subset of screens used to determine eligibility for housing assistance in child welfare services due to inadequate housing.

Housing needs at the 12-month follow-up were assessed by child welfare caseworkers who responded to two items on whether or not families needed housing services and whether referrals to such services were made.

Sociodemographic Characteristics

To explore predictors of inadequate housing, a number of correlates of family homelessness were identified. Caregivers reported on sociodemographics including their age, ethnic identification, marital status, current employment (working or not), parental involvement with the law as defined by number of arrests, and average scores of current reported physical and mental health as assessed by the Short Form-12 (Ware et al. 1996). This extensively validated measure used weighted scores across 12 items of general health, physical functioning, role limitations due to physical health problems, bodily pain, vitality, social functioning, role limitations due to emotional problems, psychological distress and psychological well being.

Family and Housing Risks

A number of measures described family risks. This included caregiver reported number of children in the household. Urbanicity reflected 1990 US Census classifications of counties comprised of more than 50 % urban population

areas, while rural counties included all other areas. Domestic violence represented the presence of severe physical assault in the past 12 months as assessed using the Conflict Tactics Scale, Second Edition (Straus et al. 1996; Straus 1990; Straus and Gelles 1990). Social support defined as the structural network, quality, and satisfaction of supportive relationships with other adults was assessed using the Duke-UNC Functional Social Support Questionnaire (Broadhead et al. 1989, 1988). Scores represented raw mean scores on the 12 item measure.

Social Service Utilization

Caregivers reported on service utilization, including whether they were ever admitted for inpatient services due to mental health and/or substance abuse problems. Caregivers also reported on receipt of housing support, such as public housing or Section 8 Vouchers. Receipt of child welfare services referred to whether families were referred for in home services to preserve family unification after initial investigation, including but not limited to health-related services, employment services, housing services, or daycare services.

Procedures

Structured interviews were administered via laptop computers to child protective service caseworkers and permanent caregivers by professional field representatives who received an extensive 12-day training course and subsequent certification (Dowd et al. 2004). Child protective service caseworker interviews, averaging 19.7 min in length, were conducted shortly after investigation to assess level of risk to the child from caregivers. Permanent caregiver interviews conducted in the respondent's home averaged 92.9 min in length and provided information on family and contextual factors.

Follow-up interviews with child welfare caseworkers occurred 12 months after initial investigation if families received child welfare services since baseline assessment according to sampling records or caregiver report. In person interviews took 52.3 min on average and were conducted at the child welfare agency between October 2000 and March 2002. Interviewers were conducted with 85.2 % of eligible caseworkers and analyses suggested no differential attrition among the subset of families who continued to receive services (Dowd et al. 2004). Caseworkers included in this study represented 52 % ($n = 2,014$) of families interviewed at baseline.

Analytic Approach

Multilevel latent class analyses examined the unobserved conditional probabilities among four categorical indicators of inadequate housing (Muthen 2004). Sampling weights

accounted for unequal probabilities of selection of PSUs as well as target children, and estimates generalize to the child welfare population. Models were derived for 1–4 latent class solutions. Three considerations determined the optimal number of latent classifications. First, Bayesian information criterion (BIC) was calculated to determine the relative fit across models; a low value indicated a well-fitting model (Muthen 2004). Second, classification quality ("entropy") was reviewed by examining posterior probabilities of class membership; these estimates reflect the average likelihood of membership in the determined latent class. Third, the usefulness and interpretability of the latent classes were considered. Data were analyzed using Mplus Version 5 (Muthen & Muthen, Los Angeles, CA). Models were estimated using full information maximum likelihood that accounted for missingness among housing risk indicators. The small percentage of cases missing independent variables (4 %) were excluded from analyses. Posterior probabilities of latent class membership of the optimal solution from the full sample were saved and analyzed separately instead of including the distal outcome of housing needs into a single model. The designed missingness at the 12 month follow up (48 %) would limit power and introduce instability into estimates of latent classes. Instead, these analyses focused on validating classes among a representative sample of families who continued to receive child welfare services to preserve family unification (Dowd et al. 2004).

After determining the optimal number of latent classes, posterior probabilities of latent class membership were included into logistic regression models that were appropriately weighted for sampling frames of caseworkers followed at 12 months. Stata was used for these analyses given its flexibility to handle sampling weights (StataCorp, College Station, TX). Predictive validity models regressed latent class membership on baseline family characteristics associated with homelessness. Discriminant validity models used housing problem indicators reported by caseworkers at a 12-month follow-up interview as the dependent variable predicted by latent class membership. The weighted analyses allowed generalization to the population of child welfare involved families whose child remained in the home after initial investigation.

Results

Percentages of families whose children remained in home after child protective services investigation exhibiting available housing risks were presented in Fig. 1. Estimates were weighted to represent the population of this subset of families at initial child welfare investigation and suggested a smaller portion of families exhibiting each risk. Latent

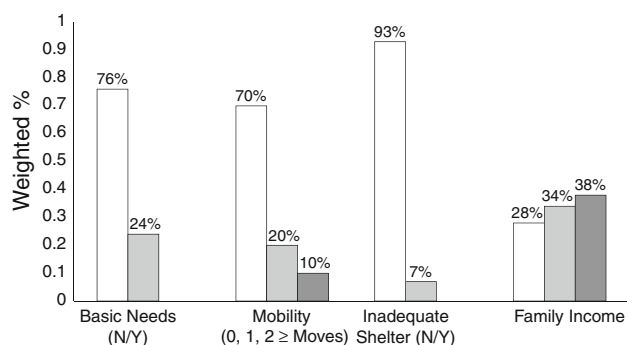


Fig. 1 Weighted percentages of inadequate housing indicators at the time of child protective services investigation among families whose child remained in the home ($n = 3,856$). Family income represented caregiver-reported annual income as a percent of the 2000 federal poverty level converted to represent families at or below federal poverty, 101 to 199 % poverty, and 200 % or more of poverty level

Table 1 Fit indices for multilevel latent class membership

Class	df	BIC	Entropy
1	6	20156.48	–
2	13	19807.58	0.80
3	20	19825.26	0.47
4	27	19864.83	0.49

class analysis examined risk across available indicators. Data provided best fit to a two class latent solution. The BIC was meaningfully lower for a two class solution compared to other solutions, while entropy was substantially higher as presented in Table 1 (Muthen 2004). The entropy of 0.80 suggested that the latent variable had adequate reliability to identify families facing out-of-home placement due to the available risk indicators at the time of initial investigation. Models indicated that 16 % of families under investigation for maltreatment with children who remained in the home experienced inadequate housing as a significant risk for out-of-home placement. The latent subgroup including these families was arbitrarily titled “housing risk group”. This title was selected to reflect higher prevalences across risk indicators available in this study; however, the lack of other risk indicators fails to capture fully housing risk.

Figure 2 presented the odds ratios of available housing risk indicators by latent class. Members of the housing risk group (latent class 1) reported significantly greater probability of risk across housing problem indicators. Trouble meeting basic needs represented a cardinal characteristic to define these families; however, other indicators of housing problems contributed to the subgroup. As hypothesized, the estimate of 16 % for housing problems fell between the number of families identified as having trouble meeting basic needs (24 %) and families whose inadequate housing

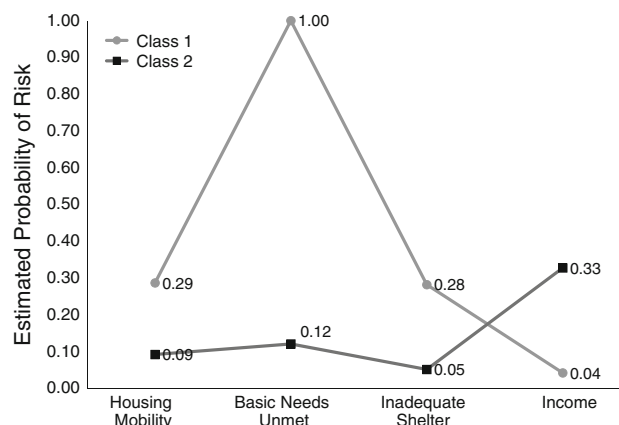


Fig. 2 Latent class membership of child welfare-involved families in relation to available housing risk indicators. Odds ratio for income represented falling below poverty compared to low risk families earning more than 200 % poverty

represented the primary risk for out-of-home placement (7 %). Multilevel analyses adjusted for sampling weights such that parameter estimates closely approximate those of the child welfare population.

Tests of concurrent validity used binary logistic regression models that predicted class membership from homelessness risk factors assessed at the time of investigation. Sampling weights adjusted for survey methodology. As presented in Table 2, families who received in-home child welfare services were more than three times as likely as families not requiring services to be in the housing risk group, suggesting that the latent class picks up on general risk. Specific risk for inadequate housing also appeared. As hypothesized, odds ratios were strongest for homelessness risk factors associated with caregiver socioeconomic and demographic status; younger caregivers who were single, working less, and had fewer social supports were more likely to be in the inadequate housing risk group. Interestingly, Hispanic caregivers were less likely to face housing risk, which may be indicative of the “Hispanic Paradox” seen in child welfare populations (Drake et al. 2011; Gonzalez-Burchard et al. 2005) such that Hispanic children use child welfare services less and exhibit better physical and mental health despite socioeconomic stressors.

Predictive validity emerged such that members of the housing risk group were significantly more likely to exhibit housing problems at a 12-month follow-up assessment. Specifically, the risk latent class were 3.90 times more likely to need housing services according to child welfare case workers ($b = 1.36$, $SE = 0.30$, $p < 0.01$, $OR\ CI = 2.16–7.02$), and they were 4.74 times more likely to be referred for housing services by the caseworkers ($b = 1.33$, $SE = 0.31$, $p < 0.01$, $OR\ CI = 2.73–8.22$). It should be noted that these analyses represent a subset of families; caseworkers were assessed only if the child welfare case remained open at the time of follow

Table 2 Binary logistic regression predicting class membership into latent housing risk

	OR	SE	95 % CI	
	Caregiver sociodemographic characteristics			
Caregiver age	0.81*	0.07	0.68	0.97
Race compared to white				
African American	0.73	0.19	0.44	1.22
Hispanic	0.41**	0.15	0.20	0.83
Other	0.82	0.30	0.40	1.70
Single parent	1.57*	0.34	1.03	2.41
Current unemployment	1.22*	0.11	1.02	1.45
Jailed	0.74	0.16	0.48	1.13
Mental health	1.02	0.01	1.00	1.03
Physical health	1.01	0.01	0.99	1.04
Social support	0.87*	0.06	0.76	1.00
	Family and housing risks			
Parity	1.15	0.10	0.96	1.37
Urbanicity	0.80	0.19	0.50	1.28
Domestic violence	1.34	0.35	0.80	2.23
	Service utilization			
Mental health/substance abuse hospitalization	0.95	0.36	0.45	2.00
Housing support	0.97	0.22	0.62	1.52
Child welfare services	3.08**	0.69	1.99	4.77

OR odds ratio; SE standard error; CI confidence interval

* $p \leq 0.05$, ** $p \leq 0.01$

up. The sampling design adjusted for ($n = 2,014$ compared to wave 1 n of 4,036). Families in the housing risk group were significantly more likely to have their case open 12 months later, so odds ratios may underestimate the likelihood of housing problems given that the least at-risk families were not compared.

Data were not available from this study to replicate latent class analyses among child welfare-involved families working toward reunification. However, post hoc analyses compared weighted prevalence of child protective service caseworkers report of trouble meeting basic needs—the cardinal indicator of the latent model of housing risk—between intact and reunification families. Chi square analyses suggested that reunification families were significantly more likely (50 vs. 24 %) to exhibit trouble meeting basic needs compared to intact families ($\chi^2(1) = 45.23, p < 0.01$).

Discussion

This study provides evidence for greater integration of housing services within the child welfare system. Using nationally representative data, the study suggests housing

problems increase the risk for out-of-home placement among one in six intact families under investigation by child protective services. Families at the periphery of the housing market—younger and underemployed caregivers—experience greatest risk that disproportionately culminates in homeless shelter stays.

Empirically informed federal legislation emphasizes the need for local multi-level service continuums to address best the myriad needs experienced by homeless populations (Fosburg and Dennis 1999; Dennis et al. 2008). Findings from this study suggest that the child welfare system represents a particular juncture for service provision among homeless families; in particular, overlap exists between child welfare, public housing, and homeless services. The intersection presents an opportunity to identify early precariously housed families as well as target services, as recommended to mitigate and prevent family homelessness (National Alliance to End Homelessness 2010; Shinn et al. 2008).

Models exist to coordinate child welfare and housing services. The family unification program (FUP)—a US Department of Housing and Urban Development (HUD) initiative—funds collaborations between local child welfare agencies and public housing authorities. Inadequately housed families at risk for out-of-home placement or delay in reunification are referred for the Housing Choice Voucher (Section 8) Program. Rent subsidies help families secure safe and affordable housing in a timely manner. The program encourages integration of service systems such that housing needs identified by child welfare are addressed by local housing authorities that seek to fill slots of subsidized housing. The coordinated approach across service systems attempts to speed identification and intervention and save costs in expensive placement into foster care. Initial evidence from pre/post-test study of 995 families suggests that FUP successfully stabilizes residential mobility, as well as keeps children with parents, over a 12-month follow-up (Rog et al. 1998). Furthermore, a body of descriptive research shows that families who receive housing subsidies exhibit a lower risk for later homelessness (Bassuk et al. 1997; Shinn et al. 1998; Wong et al. 1997).

Although promising initial findings, rigorous evaluations need to identify the impact of these programs in terms of cost efficiency and promotion of child and family well-being. Some evidence indicates that additional supports may be needed to connect families with rent subsidies (Robert Wood Johnson Foundation 2011). Given the multitude of risks associated with housing problems, families may need to be connected to additional services to maintain safe and stable housing. One promising evidence-based model is the Family Critical Time Intervention (M. Shinn, unpublished data, 2012; Samuels et al. 2006). Initially developed and validated for mentally ill homeless

adults (Herman et al. 2000; Susser et al. 1997), Critical time intervention (CTI) was adapted for homeless young mothers to provide time-limited intensive case management that addresses barriers to stable housing, such as employment, domestic violence, mental health or substance abuse issues, etc. A promising approach may be to evaluate the accommodation of CTI to be administered within a child welfare funding mechanism. Likewise, housing services may best be targeted to subgroups within homeless families, such as younger mothers or families experiencing mental illness.

The present study coincides and expands prior work to demonstrate the scope of housing problems within child welfare. The prevalence of 16 % of intact families with housing problems that risk placement reflects a higher rate than that generated from a sample specific estimates from Milwaukee, WI (Courtney et al. 2004). Courtney and colleagues also estimated housing problems to be three times higher among families working toward reunification compared to intact families (39 vs. 12 %). Unfortunately, the present study could not model housing problems for families whose child had been removed from care after initial investigation due to the lack of full data on these families. However, evidence suggests that prevalence is higher. This study shows that according to caseworkers half of reunification families had trouble meeting basic needs—the cardinal indicator of the latent model of housing risk in this study. Although this single indicator likely overestimates the prevalence of inadequate housing specifically, the magnitude of the differences points to the need to attend to housing as meaningful risk for out-of-home placement, as well as delay in reunification of families.

Limitations exist with the methodology of the study. Foremost, available data fail to capture fully the nature of inadequate housing and homelessness among families. Specifically, items do not assess the full range of housing problems families face, including literal homelessness, precarious housing, eviction threats, etc. Instead, available items focus on housing risks readily identifiable to child protective service caseworkers. The label “housing risk group” represents an arbitrary classification that fails to capture the full extent of risks for homelessness. The latent class method employed in this study attempts to maximize available information and generated an estimate with 80 % reliability; however, more precise estimates could be generated with fuller measurement of housing problems. Likewise, the NSCAW data prohibit longitudinal assessment of residential mobility—a key characteristic of family homelessness (Rog et al. 1998; Shinn et al. 2008). No information was gathered on housing risk at follow-up waves of the study besides homeless shelter usage for a subset of families. Future work that captures housing patterns among child welfare-involved families both retrospectively and

prospectively will provide better information on housing needs (Caspi et al. 1996; McCaskill et al. 1998; Toro et al. 1995).

In sum, child welfare caseworkers lament a lack of housing and income assistance to address the needs of low-income and precariously housed families (Barth et al. 2006; Littell and Schuerman 2002). In line with federal policy initiatives, local public housing authorities and homeless service providers aspire to locate and serve families with immediate housing needs. Timely coordination of services may address risks that threaten out-of-home placement and offer a potential to save the financial and emotional costs involved in foster care services.

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References

- Barth, R. P., Wildfire, J., & Green, R. L. (2006). Placement into foster care and the interplay of urbanicity, child behavior problems, and poverty. *American Journal of Orthopsychiatry*, 76, 358–366.
- Bassuk, E. L., Buckner, J. C., Weinreb, L. F., Browne, A., Bassuk, S. S., Dawson, R., et al. (1997). Homelessness in female-headed families: Childhood and adult risk and protective factors. *American Journal of Public Health*, 87(2), 241–248. doi:10.2105/AJPH.87.2.241.
- Besinger, B. A., Garland, A. F., Litrownik, A. J., & Landsverk, J. A. (1999). Caregiver substance abuse among maltreated children placed in out-of-home care. *Child Welfare: Journal of Policy, Practice, and Program*, 78, 221–239.
- Broadhead, W. E., Gehlbach, S. H., de Gruy, F. V., & Kaplan, B. H. (1988). The Duke–UNC functional social support questionnaire: Measurement of social support in family medicine patients. *Medical Care*, 26(7), 709–723. doi:10.1097/00005650-198807000-00006.
- Broadhead, W. E., Gehlbach, S. H., DeGruy, F. V., & Kaplan, B. H. (1989). Functional versus structural social support and health care utilization in a family medicine outpatient practice. *Medical Care*, 27(3), 221–233. doi:10.1097/00005650-198903000-00001.
- Buckner, J. C. (2008). Understanding the impact of homelessness on children. *American Behavioral Scientist*, 51(6), 721–736. doi:10.1177/0002764207311984.
- Burt, M. R., Pearson, C., & Montgomery, A. E. (2007). Community-wide strategies for preventing homelessness: Recent evidence. *Journal of Primary Prevention*, 28, 213–228. doi:10.1007/s10935-007-0094-8.
- Caspi, A., Moffitt, T. E., Thornton, A., Freedman, D., Amell, J. W., Harrington, H., et al. (1996). The life history calendar: A research and clinical assessment method for collecting retrospective event-history data. *International Journal of Methods in Psychiatric Research*, 6(2), 101–114.
- Coulton, C. J., Korbin, J. E., & Su, M. (1999). Neighborhoods and child maltreatment: A multi-level study. *Child Abuse and Neglect*, 23, 1019–1040.

- Courtney, M. E., McMurtry, S. L., & Zinn, A. (2004). Housing problems experienced by recipients of child welfare services. *Child Welfare: Journal of Policy, Practice, and Program*, 83(5), 393–422.
- Cowal, K., Shinn, M., Weitzman, B. C., Stojanovic, D., & Labay, L. (2002). Mother-child separations among homeless and housed families receiving public assistance in New York City. *American Journal of Community Psychology*, 30(5), 711–730. doi:[10.1023/A:1016325332527](https://doi.org/10.1023/A:1016325332527).
- Culhane, J., Webb, D., Grim, S., Metraux, S., & Culhane, D. (2003). Prevalence of child welfare services involvement among homeless and low-income mothers: A five-year birth cohort study. *Journal of Sociology & Social Welfare*, 30(3), 79–97.
- Dennis D, Locke G, Khadduri J. (Eds.). (2008). *Toward Understanding Homelessness: The 2007 National Symposium on Homelessness Research*. Washington DC: U.S. Department of Housing and Urban Development and U.S. Department of Health and Human Services.
- Drake, B., Jolley, J., Lanier, P., Fluke, J., Barth, R., & Jonson-Reid, M. (2011). Racial bias in child protection? A comparison of competing explanations using national data. *Pediatrics*, 127(3), 471–478. doi:[10.1542/peds.2010-1710](https://doi.org/10.1542/peds.2010-1710).
- Dowd, K., Kinsey, S., Wheelless, S., Thissen, R., Richardson, J., Suresh, R., et al. (2004). *National survey of child and adolescent well-being: Combined waves 1–4 data file user's manual—restricted release*. Ithaca, NY: National Data Archive on Child Abuse and Neglect.
- Dubowitz, H., Feigelman, S., & Zuravin, S. (1993). A profile of kinship care. *Child Welfare*, 72, 153–169.
- Fosburg, L. B., & Dennis, D. L. (Eds.). (1999). *Practical Lessons: The 1998 National Symposium on Homeless Research*. Washington, DC: U.S. Department of Housing and Urban Development and U.S. Department of Health and Human Services.
- Fowler, P. J., Taylor, J. J., & Rufa, A. S. (2011). Evaluation of housing support in child welfare: The impact on family preservation. *Child Welfare*, 90, 107–126.
- Fowler, P. J., Toro, P. A., & Miles, B. W. (2009). Pathways to and from homelessness and associated psychosocial outcomes among adolescents leaving the foster care system. *American Journal of Public Health*, 99(8), 1453–1458. doi:[10.2105/AJPH.2008.142547](https://doi.org/10.2105/AJPH.2008.142547).
- Gonzalez-Burchard, E., Borrell, L. N., Choudry, S., Nagvi, M., Tsai, H. J., Rodriguez-Santana, J. R., et al. (2005). Latino populations: A unique opportunity for the study of race, genetics and social environment in epidemiological research. *American Journal of Public Health*, 95(12), 2161–2168.
- Gorman-Smith, D., Tolan, P. H., Henry, D., & Florsheim, P. (2000). Patterns of family functioning and adolescent outcomes among urban African American and Mexican American families. *Journal of Family Psychology*, 14, 436–457.
- Herman, D., Opler, L., Felix, A., Valencia, E., Wyatt, R., & Susser, E. (2000). A 'critical time' intervention with mentally ill homeless men: Impact on psychiatric symptoms. *Journal of Nervous and Mental Disease*, 188(3), 135–140. doi:[10.1097/00005053-200003000-00002](https://doi.org/10.1097/00005053-200003000-00002).
- Koegel, P., Melamid, E., & Burnam, M. (1995). Childhood risk factors for homelessness among homeless adults. *American Journal of Public Health*, 85(12), 1642–1649. doi:[10.2105/AJPH.85.12.1642](https://doi.org/10.2105/AJPH.85.12.1642).
- Littell, J. H., & Schuerman, J. R. (2002). What works best for whom? A closer look at intensive family preservation services. *Children and Youth Services Review*, 24(9–10), 673–699. doi:[10.1016/S0190-7409\(02\)00224-4](https://doi.org/10.1016/S0190-7409(02)00224-4).
- Masten, A. S., Miliotis, D., Graham-Bermann, S. A., Ramirez, M., & Neemann, J. (1993). Children in homeless families: Risks to mental health and development. *Journal of Consulting and Clinical Psychology*, 61(2), 335–343. doi:[10.1037/0022-006X.61.2.335](https://doi.org/10.1037/0022-006X.61.2.335).
- McCaskill, P. A., Toro, P. A., & Wolfe, S. M. (1998). Homeless and matched housed adolescents: A comparative study of psychopathology. *Journal of Clinical Child Psychology*, 27(3), 306–319.
- Montgomery, A. E., Metraux, S., & Culhane, D. (2013). Rethinking homelessness prevention among persons with serious mental illness. *Social Issues and Policy Review*, 7, 58–82.
- Muthen, B. (2004). Latent variable analysis: Growth mixture modeling and related techniques for longitudinal data. In D. Kaplan (Ed.), *Handbook of quantitative methodology for the social sciences* (pp. 345–368). Newbury Park, CA: Sage Publications.
- NSCAW Research Group. (2002). Methodological lessons from the national survey of child and adolescent well-being: The first three years of the USA's first national probability study of children and families investigated for abuse and neglect. *Children and Youth Services Review*, 24, 513–541.
- National Alliance to End Homelessness. (2010, July 27). Ending family homelessness: Lessons from communities. Retrieved from <http://www.endhomelessness.org/content/general/detail/3270>.
- Obradović, J., Long, J. D., Cutuli, J. J., Chan, C., Hinz, E., Heistad, D., et al. (2009). Academic achievement of homeless and highly mobile children in an urban school district: Longitudinal evidence on risk, growth, and resilience. *Development and Psychopathology*, 21(2), 493–518. doi:[10.1017/S095457940900273](https://doi.org/10.1017/S095457940900273).
- Park, J. M., Metraux, S., Brodbar, G., & Culhane, D. P. (2004). Child welfare involvement among children in homeless families. *Child Welfare: Journal of Policy, Practice, and Program*, 83(5), 423–436.
- Rafferty, Y., & Shinn, M. (1991). The impact of homelessness on children. *American Psychologist*, 46(11), 1170–1179. doi:[10.1037/0003-066X.46.11.1170](https://doi.org/10.1037/0003-066X.46.11.1170).
- Robert Wood Johnson Foundation. (2011, March). Keeping families together: A pilot program and its evaluation. Retrieved from <http://www.rwjf.org/files/research/58836.final.pdf>.
- Rog, D. J., & Buckner, J. C. (2008). Homeless families and children. In D. Dennis, G. Locke, & J. Khadduri (Eds.), *Toward understanding homelessness: The 2007 National Symposium on Homelessness Research* (pp. 1–33). Washington, DC: U.S. Department of Housing and Urban Development and U.S. Department of Health and Human Services.
- Rog, D. J., Gilbert-Mongelli, A. M., & Lundy, E. (1998). *The final unification program: Final evaluation report*. Washington, DC: CWCA Press.
- Sampson, R. J., Raudenbush, S. W., & Earls, F. (1997). Neighborhoods and violent crime: A multilevel study of collective efficacy. *Science*, 277, 918–924.
- Samuels, J., Shinn, M., & Buckner, J. C. (2010). *Homeless children: Update on research, policy, programs, and opportunities*. Washington, DC: Office of the Assistant Secretary for Planning and Evaluation and U.S. Department of Health and Human Services.
- Samuels, J., Shinn, M., Fischer, S., Thompson, A., & Park, H. (2006). *The impact of the family critical time intervention on homeless children: Final report to the national institute of mental health*. Orangeburg, NY: Nathan Kline Institute of Psychiatric.
- Shinn, M., Schteingart, J. S., Williams, N. C., Carlin-Mathis, J., Bialo-Karagis, N., Becker-Klein, R., et al. (2008). Long-term associations of homelessness with children's well-being. *American Behavioral Scientist*, 51(6), 789–809. doi:[10.1177/0002764207311988](https://doi.org/10.1177/0002764207311988).
- Shinn, M., Weitzman, B. C., Stojanovic, D., Knickman, J. R., Jimenez, L., Duchon, L., et al. (1998). Predictors of homelessness among families in New York City: From shelter request to housing stability. *American Journal of Public Health*, 88(11), 1651–1657.

- Straus, M. A. (1990). The conflict tactics scales and its critics: An evaluation and new data on validity and reliability. In M. A. Swam & R. I. Gelles (Eds.), *Physical violence in American families: Risk factors and adaptations to violence in 8,145 families* (pp. 49–73). New Brunswick, NJ: Transaction.
- Straus, M. A., & Gelles, R. J. (Eds.). (1990). *Physical Violence in American families: Risk factors and adaptations to violence in 8,145 families*. New Brunswick, NJ: Transaction Publishers.
- Straus, M. A., Hamby, S. L., Buncy-McCoy, S., & Sugarman, D. B. (1996). The revised conflict tactics scales (CTS2): Development and preliminary psychometric data. *Journal of Family Issues*, 17(3), 283–316.
- Susser, E. S., Struening, E. L., & Conover, S. (1987). Childhood experiences of homeless men. *American Journal of Psychiatry*, 144, 1599–1601.
- Susser, E., Valencia, E., Conover, S., Felix, A., Tsai, W.-Y., & Wyatt, R. J. (1997). Preventing recurrent homelessness among mentally ill men: A ‘critical time’ intervention after discharge from a shelter. *American Journal of Public Health*, 87(2), 256–262. doi: [10.2105/AJPH.87.2.256](https://doi.org/10.2105/AJPH.87.2.256).
- Toro, P. A., Bellavia, C. W., Daeschler, C. V., Owens, B. J., Wall, D. D., Passero, J. M., et al. (1995). Distinguishing homelessness from poverty: A comparative study. *Journal of Consulting and Clinical Psychology*, 63(2), 280–289. doi: [10.1037/0022-006X.63.2.280](https://doi.org/10.1037/0022-006X.63.2.280).
- Toro, P. A., Dworsky, A., & Fowler, P. J. (2008). Homeless youth in the United States: Recent research findings and intervention approaches. In D. Dennis, G. Locke, & J. Khadduri (Eds.), *Toward understanding homelessness: The 2007 national symposium on homelessness research* (pp. 1–33). Washington, DC: U.S. Department of Housing and Urban Development and U.S. Department of Health and Human Services.
- Ware, J. E, Jr, Kosinski, M., & Keller, S. D. (1996). A 12-Item short-form health survey: Construction of scales and preliminary tests of reliability and validity. *Medical Care*, 34(3), 220–233.
- Winkleby, M. A., Rockhill, B., Jatulis, D., & Fortmann, S. P. (1992). The medical origins of homelessness. *American Journal of Public Health*, 82, 1394–1398.
- Wong, Y.-L., Culhane, D. P., & Kuhn, R. (1997). Predictors of exit and re-entry among family shelter users in New York City. *Social Services Review*, 71(3), 441–462.