Risk Models for Returns to Housing Instability Among Families Experiencing Homelessness

By

Zachary Glendening

Thesis

Submitted to the Faculty of the

Graduate School of Vanderbilt University

in partial fulfillment of the requirements

for the degree of

MASTER OF SCIENCE

in

Community Research and Action

August 11, 2017

Nashville, Tennessee

Approved:

Marybeth Shinn, Ph.D.

Douglas D. Perkins, Ph.D.

ACKNOWLEDGEMENTS

It has taken a small village to bring this document to fruition. Special thanks are owed to:

1. Vanderbilt University and the faculty and staff of the Community Research and Action Program.
2. Dr. Beth Shinn, my advisor and Thesis Chair. When I have desperately needed one, you have been an unbelievable mentor by every measure of the term.
3. Dr. Doug Perkins for providing invaluable advice as a member of my Thesis Committee.
4. Dr. Paul Speer for serving with Drs. Shinn and Perkins on my Program of Studies Committee.
5. My cohort members Dominique Lyew, Adele Malpert, and Sara Eccleston. I am incredibly fortunate to be in the graduate school trenches with you.
6. My labmates Scott Brown and Jason Rodriguez. You have both been wonderful and I am excited to see where your careers take you.
7. My parents Neil and Beth and my sister Maddi. I could never capture in words how much your love and support mean to me, so I won't try. Suffice it to say that I wouldn't be writing this without you. By the way, this is what I do for a living.

TABLE OF CONTENTS

Page

ACKNOWLEDGEMENTS ii

LIST OF TABLES iv

LIST OF FIGURES v

Risk Models for Returns to Housing Instability Among Families Experiencing Homelessness

- Introduction 1
- Literature Review 3
- Hypotheses 6
- Methods 7
  - Sample Recruitment 7
  - Participants 8
  - Measures 8
- Analyses 13
  - Model Reduction Via Backward Regression 13
  - Testing Model Efficiency 15
- Results 15
  - Usual Care Sample 15
  - Long-term Housing Subsidy Sample 16
- Discussion 19
  - Usual Care Sample 19
  - Long-term Housing Subsidy Sample 21
  - Policy Recommendations 24

REFERENCES 26

LIST OF TABLES

Table Page

1. Baseline Characteristics of Participating Families: 12 U.S. Communities, September 2010-October 2013 9

2. Predictors of Returns to Homelessness Among Participants Randomly Assigned to Usual Care (*N* = 578): 12 U.S. Communities, September 2010-October 2013 17

3. Predictors of Returns to Homelessness Among Participants Leased Up with Long-Term Subsidies (*N* = 446): 12 U.S. Communities, September 2010-October 2013 18

LIST OF FIGURES

Figure Page

1. Final Model ROC Curves for Usual Care Outcomes.....14

2. Final Model ROC Curves for Long-term Housing Subsidy Outcomes.....14

RISK MODELS FOR RETURNS TO HOUSING INSTABILITY AMONG FAMILIES EXPERIENCING HOMELESSNESS

Introduction

Family homelessness has been a persistent concern in the United States since the 1980s. (Bassuk, DeCandia, Beach, & Berman, 2014, pg. 9). Today, more than a third of the individuals experiencing homelessness live in families with children (Henry, Watt, Rosenthal, & Shivji, 2016). Members of families experiencing homelessness face many personal health risks. Adults in homeless families have elevated rates of HIV/AIDS and tuberculosis (Kerker et al., 2011). Homeless mothers experience disproportionately high rates of depression (Bassuk, Buckner, Perloff, & Bassuk, 1998; Weinreb, Buckner, Williams, & Nicholson, 2006). Homeless children are more likely than others to experience asthma (Cutuli, Herbers, Rinaldi, Masten, & Oberg, 2010), obesity (Schwarz, Garrett, Hampsey, & Thompson, 2007), and cognitive and behavioral difficulties (Yu, North, LaVesser, Osborne, & Spitznagel, 2008).

Family housing instability is also costly to American society at large, though Kertesz et al. (2016) highlight the moral and strategic limits of addressing the issue on financial rather than humanitarian grounds. Contributing to this cost is the price of emergency shelter. Culhane, Metraux, Park, Schretzman, and Valente (2007) found that short-term and long-term shelter stays for families in Massachusetts cost $10,900 and $48,500, respectively. Similarly, Gubits and colleagues (2015; 2016) report that families who received usual care in 12 communities across the country used housing and service assistance costing approximately $30,000 and $41,000 over 20 and 37 months, respectively. Children experiencing homelessness also enter foster care at higher rates than their peers (Zlotnick, 2009). In a Pennsylvania-based study, Perlman and Willard (2012) estimated that foster care expenses related to child homelessness cost that state

more than $148 million annually. Furthermore, children in homeless families receive more emergency room health care than do their housed counterparts (Shinn et al., 2008).

The Federal Interagency Council on Homelessness set a goal of ending family, youth, and child homelessness by 2020 (USICH, 2015). This effort is partly served by preventing *returns* to housing instability among families leaving homelessness. However, allocating limited resources to families who will return to homelessness without them is difficult. A minority of low-income families experience homelessness, and most experience single, short-lived episodes (Culhane et al., 2007). Furthermore, studies show that families with long-term housing subsidies are even less likely to return to homelessness than families without subsidies (Gubits et al., 2015; 2016). Supporting housing stability through efficient allocation of housing or other resources requires understanding why some families return to instability when most do not. It also requires understanding why some families return to instability despite the advantage of long-term housing subsidies.

The present study attempts to address the following questions. First, can observable family characteristics explain why families return to housing instability? Second, do families who return to housing instability despite long-term housing assistance observably differ from families who return without such assistance? Because previous studies show large associations between long-term subsidies and housing stability, it is important to understand whether families receiving such assistance face housing barriers above and beyond housing affordability. Second, can those factors be used to efficiently allocate housing or other resources to families most likely to return to housing instability? Improved allocation does not replace the need to address structural drivers of housing instability like unaffordable housing or limited employment

opportunities (Shinn, Baumohl, & Hopper, 2001). However, it may assist a particularly vulnerable group of families to stabilize after an episode of homelessness.

Literature Review

Political responses to housing instability reflect competing understandings of its causes and solutions. Gowan (2010) presents three constructions of poverty that are useful for understanding contemporary housing policies in the U.S. The *moral* construction holds that poverty is the result of individual moral failings like laziness, crime, or substance use. As such, homelessness should be managed through punishment and exclusion. The *therapeutic* construction asserts that poverty results from personal "sicknesses" like mental illness or limited education. Therefore, homelessness should be managed through treatment of those conditions. Finally, the *systemic* construction claims that poverty and homelessness result from oppressive social structures and unequal wealth distribution. Accordingly, structural solutions are required to end poverty and housing instability. Whereas in the moral and therapeutic constructions housing stability emanates from qualities within individuals, the systemic construction suggests housing instability acts on individuals from the outside. If housing instability is associated with internal qualities, it is due to structural inequalities that constrain some groups more than others.

Policy makers seeking to prevent transitions into housing instability face a dilemma. Most families at risk for losing housing at any given time avoid it. Thus, assuming families who experience housing instability share identifiable, internal qualities that set them apart from housed families offers the appeal of predictability. If subsets of poor families are disproportionately exposed to housing instability, prevention resources can be targeted efficiently to them. This goal is supported modestly by studies demonstrating some predictive utility of actuarial predictions in homelessness research (Greenberg, Hoblyn, Seibyl, &

Rosenheck, 2006; Greer, Shinn, Kwon, & Zuiderveen, 2016; Hudson & Vissing, 2010; Shinn, Greer, Bainbridge, Kwon, & Zuiderveen, 2013; Shinn et al., 1998), and reported correlations between homeless entry and family characteristics. Such characteristics include heads of household that are young, pregnant or new mothers (Shinn et al., 2013; Shinn et al., 1998; Weitzman, Knickman, & Shinn, 1992); threatened or actual domestic violence (Smith & Flores, 2005; Weitzman et al., 1992; Wood, Valdez, Hayashi, & Shen, 1990); previous homelessness (Shinn et al., 2013; Smith & Flores, 2005; Weitzman et al., 1992); limited social support (Bassuk et al., 1997; Wood et al., 1990); low education level (Bassuk et al., 1997; Weitzman et al., 1992; Wood et al., 1990); race (Shinn et al., 1998); actual or threatened eviction (Bassuk et al., 1997; Shinn et al., 2013; Smith & Flores, 2005); and childhood sexual abuse or foster care experiences (Bassuk et al., 1997; Weitzman et al., 1992). Personal and family drug dependence (Bassuk et al., 1997; Wood et al., 1990), drug dependence treatment (Weitzman et al., 1992), and mental health (Weitzman et al., 1992; Wood et al., 1990) are associated with homeless entry in some studies but not in others (Shinn et al., 2013).

However, many researchers challenge the notion that families nearing housing instability can be identified by observable characteristics. They argue that political-economic factors leave all poor families precariously housed but that individual transitions into homelessness result from "bad luck", or upredictable events endemic to poverty (O'Flaherty, 2010, p. 143). According to this perspective, resources needed to identify highly vulnerable families are better used removing structural barriers to housing stability among all poor families. This position is supported by inefficiencies in multivariate prediction models for homeless entry (Shinn, Baumohl, & Hopper, 2001) and similarities between homeless and housed low-income families (Bassuk et al., 1998; Goodman, 1991).

Noting the potential benefits of targeting prevention resources based on observable risk, researchers have attempted to combine characteristics correlated with family homeless entry into risk models. Such models allow researchers to determine the ability of a combination of variables to efficiently predict an outcome based on hit rates (i.e., sensitivity) and false alarm rates (i.e., 1-specificity). The hit rate is the proportion of correct predictions of an outcome among those who actually experience that outcome. The false alarm rate is the proportion of incorrect predictions of an outcome among those who do not experience it. Each model has multiple hit rates and corresponding false alarm rates, depending on the stringency of the risk cutoff used. That is, when returns to housing instability are predicted for families with few risk factors, both hit rates and false alarm rates are high. Conversely, when the cutoff is set at higher levels of risk, both hit rates and false alarm rates decrease.

In one study of families using welfare in New York City, Shinn et al. (1998) correctly predicted shelter entry for 66% of families while incorrectly predicting entry for 10% of families. In a similar study, Shinn et al. (2013) developed a screening model to help prevention services efficiently allocate resources to New York City families at risk for homelessness. Their model correctly predicted shelter entry for many families deemed ineligible for services by prevention workers, improving the rate of correct predictions from 71.6 to 90.4% while serving the same percentage of clients. However, this model incorrectly predicted shelter entry for 65.7% of families who remained housed. Achieving the earlier study's 10% false prediction rate using this model would require reducing the rate of correct predictions to approximately 33%. Together, these studies suggest predicting housing instability is possible but limited.

The debate over the existence of observable risk factors for housing instability extends beyond initial entry into homelessness to include *returns* to housing instability. This distinction

is important because one could argue that, though single episodes of housing instability reflect economic circumstances, multiple episodes reflect family characteristics. Many family characteristics are correlated with homeless reentry, including pregnancy, eviction, or low income prior to shelter entry (Wong, Culhane, & Kuhn, 1997; Lin & Smith, 2004b) and younger heads of household (Wong et al., 1997; Shinn et al., 1998; Lin & Smith, 2004a). Other variables have inconsistent relationships to repeated housing instability. Number of children (Rodriguez, 2013; Lin & Smith, 2004a; Wong et al., 1997) and minority racial status (Lin & Smith, 2004a; Wong et al., 1997) have been both positively and negatively correlated to family homeless reentry. Receiving subsidized housing is consistently reported as a protective factor (Lin & Smith, 2004a; Shinn et al., 1998; Stojanovic, Weitzman, Shinn, Labay, & Williams, 1999; Wong et al., 1997).

Studies rarely organize reentry correlates into risk models such as that created by Shinn et al. (2013). In one exception, Shinn et al. (1998) found subsidized housing and age to be the most potent predictors of housing stability five years after shelter entry. Lin and Smith (2004b) also modeled family risk factors for shelter reentry but noted imperfect measures of substance use, public assistance, and domestic conflict as study limitations. Because both these studies focused on data from New York City, models for other locations can help to generalize their results.

Hypotheses

The present study examines risk factors for family returns to housing instability and attempts to create risk models for such returns. Based on previous findings, the following hypotheses are proposed. First, several family characteristics measured at shelter entry will predict returns to housing instability 20 months later. This follows the assumption that some groups face increased barriers to stable housing after a homeless episode. Second, risk factors

will not consistently include characteristics associated with the moral or therapeutic constructions of poverty (e.g., substance dependence, psychological distress).

Third, protective factors *will* include economic supports like disability income and long-term housing subsidies, supporting the structural construction of poverty. Finally, predictive models composed of reported risk factors will add weak predictive utility over and above chance, extending support for O'Flaherty's (2010) "bad luck" thesis beyond homeless entry to repeated housing instability. If, in contrast, strong models are created, they can be used to efficiently allocate resources to families exiting shelter.

Methods

This study is a secondary analysis of data from the Family Options Study (Gubits et al., 2015), an experimental evaluation of housing and service interventions for families experiencing homelessness. Researchers randomly assigned 2,282 families to usual care or to primary offers of long-term housing subsidies, project-based transitional housing, or short-term rapid re-housing subsidies. They also recorded family characteristics through surveys administered at shelter entry and housing stability outcomes through surveys administered 20 months later.

Sample Recruitment

Families enrolled in the Family Options Study as they entered emergency shelter between September 2010 and January 2012. The following 12 communities served as enrollment sites: Alameda County, CA; Atlanta, GA; Baltimore, MD; Boston, MA; the New Haven and Bridgeport regions of CT; Denver, CO; Honolulu, HI; Kansas City, MO; Louisville, KY; Minneapolis, MN; Phoenix, AZ; and Salt Lake City, UT. Study eligibility required families to be in shelter for at least seven days with at least one child under age 16. After completing a baseline

survey with field interviewers, families were randomly assigned to one of the housing and service conditions listed above.

Participants

Participants in this study come from the set of 1,857 Family Options households who completed surveys at both shelter entry and follow-up (81% of original sample). Two groups of Family Options Study families received particular focus. In order to examine predictors independent of housing intervention effects, the first group included families assigned to usual care. Usual care was defined as "any housing or services that a family accesses in the absence of immediate referral to the other interventions" (Gubits et al., 2015, p. 11). Of the 746 families assigned to usual care, 578 families (77.5%) completed follow-up surveys and were included in this study. The second participant group included families who signed leases using priority offers of long-term subsidies. This group was included in order to examine why some families returned to housing instability even after receiving long-term subsidies, which have been shown to decrease the odds of such an outcome (Gubits et al., 2015). Of the 599 families assigned to priority offers of long-term subsidies, 530 families (88.5%) completed follow-up surveys. The final long-term subsidy group included 466 participants who leased up using their subsidies, or 87.9% of long-term subsidy families who completed the follow-up survey. Demographic information for both participant groups is provided in Table 1.

Measures

Family characteristics: Family Options baseline survey. Respondents provided family characteristic data through the Family Options baseline survey. Family characteristics are organized here according to categories provided in Table 1.

Demographics. Dummy variables in this category included: sex; a series of race and ethnicity

TABLE 1—Baseline Characteristics of Participating Families: 12 U.S. Communities, September 2010-October 2013

	Usual Care (*n* = 578)	Long-Term Housing Subsidies (*n* = 466)
Demographics (%)		
Age (*Med.*)	29.0	28.0
Female	93.1	93.2
Race[a]		
Black non-Hispanic	41.6	36.5
Hispanic	21.7	25.1
Asian/Pacific Islander	7.5	6.4
Mixed/Other	9.1	11.7
Marriage-like Situation[b]	28.3	25.0
Number of Children (*Med.*)	2.0	2.0
Child 1-5 Years Old	63.4	66.4
Multiple Adults in Shelter	30.0	26.0
Human Capital (%)		
Education Level[c]		
High School	32.7	40.8
Greater Than High School	27.4	25.1
No Work in 24 Months	33.0	32.1
Receives TANF	40.4	47.6
Receives SSI/SSDI	12.3	9.8
Annual Income (*M, SD*)	$2,315 (6,213)	$1,619 (4,837)
Psychosocial Profile (%)		
Fair or Poor Health	30.9	29.9
Health Problem	64.5	56.9
Personal Disability	17.1	16.2
Family Disability	16.8	16.2
Psychological Distress	24.2	23.1
PTSD	24.0	2.8
Substance Dependence	21.1	16.9
Felony History	13.7	12.1
Psych. Challenge Index (*M, SD*)	2.3 (2.1)	2.2 (2.0)
Interpersonal Disruption (%)		
Interpersonal Violence	50.1	48.9
Separation from Child	23.2	24.9
Separation from Partner	9.5	9.6
Eviction/Landlord Problems	45.0	42.0
Childhood Experiences (%)		
Foster Care in Childhood	24.0	27.7
Homeless in Childhood	16.1	16.7
Housing Security History and Barriers (%)		
Previously Homeless	62.8	63.5
Previously Doubled Up	84.9	84.2
Housing Barriers Index (*M, SD*)	6.5 (2.8)	6.6 (2.9)

a. Reference group is White non-Hispanic; b. Reference group is respondents who are divorced, widowed, or single and never married; c. Reference group is less than high school education.

variables comparing those identifying as Black non-Hispanic, Hispanic or Latino, Asian or Pacific Islander, or multiple or other races to White non-Hispanics; a variable for respondents who were married or living in a marriage-like situation; baseline pregnancy status; the presence of a child between one and five years old; and the presence of more than one adult in shelter. Respondents' age and number of children in shelter were measured continuously. After determining that individual racial categories did not significantly predict outcomes, I collapsed the race and ethnicity variables into a dummy variable comparing all minority race and ethnicity groups to White non-Hispanics.

Human Capital. Dummy variables in this category included: two education variables comparing those with high school or greater than high school education to those with less than a high school education; a variable indicating long-term unemployment (more than 24 months); and two public assistance variables indicating receipt of Temporary Assistance for Needy Families or disability benefits (Supplemental Security Income or Social Security Disability Insurance). Annual family income was measured continuously.

Psychosocial Profile. Dummy variables in this category included: a variable comparing respondents reporting poor or fair health to those reporting good health; a variable indicating the respondent reported a health problem; two disability variables indicating the respondent reported a personal disability or reported caring for a family member with one; and a variable indicating the respondent had a past felony conviction.

Several dummy variables were adapted from previous measures. A psychological distress variable adapted from the Kessler 6 Psychological Distress Scale indicated the respondent reported psychological distress (Kessler et al., 2003). This scale ranges from 0 to 24, with higher scores indicating more distress and scores of 13 or higher indicating serious distress. In a sample

of 155 respondents, Kessler 6 displayed a Cronbach α of .89 and predicted serious distress with a sensitivity of 0.36 and a specificity of 0.96. A variable indicating the respondent experienced post-traumatic stress symptoms in the previous month was adapted from the Posttraumatic Stress Diagnostic Scale (Foa, Cashman, Jaycox, & Perry, 1997). This scale is based on diagnostic criteria for Post-traumatic Stress Disorder. Its internal consistency is .92 and its kappa test-retest reliability is .74. Scores are positively associated with measures of depression (i.e., Beck Depression Inventory) and anxiety (i.e., State-Trait Anxiety Inventory).

An alcohol dependence variable was adapted from the Rapid Alcohol Problems Screen (Cherpitel, 2000). In a sample of emergency room users, positive responses to any item on this scale identified alcohol dependence with 93% sensitivity and 87% specificity. Finally, a drug dependence variable was adapted from the Drug Abuse Screening Test (Skinner, 1982; Yudko, Lozhkina, and Fouts, 2007). This test is correlated with the theoretically related Addiction Severity Index-Psychiatric Composite Score (r = .40; Cocco and Carey, 1998). It also displays sensitivity scores between 41% and 95% and specificity scroes between 68% and 99% (Carey et al., 2003).

In the interest of model parsimony, measures of alcohol and drug dependence were combined into a single substance dependence dummy variable. The Psychosocial Challenge Index was measured continuously. This index is a count of psychological and social circumstances related to housing instability. Such circumstances include health, mental health, and substance use challenges, intimate partner violence, felony history, and institutional experience (Gubits et al., 2015).

Interpersonal Disruption. Dummy variables in this category included: a variable indicating the respondent experienced interpersonal violence during adulthood; two family

separation variables indicating the respondent was currently separated from a child or a partner; and past eviction or landlord problems.

Childhood experiences. This category included two dummy variables for any homeless episode in childhood and any foster care experience in childhood.

Housing Stability History and Barriers. Dummy variables in this category included any homeless episode in the previous five years and any previous doubling up experience. The Housing Barriers Index was measured continuously. This index was a count of 15 factors that families entering shelter might perceive as impediments to stable housing. Such factors included unemployment, insufficient income, previous evictions or lease violations, insufficient transportation, and family composition (Gubits et al., 2015).

Returns to Housing Instability. Three dummy variables were used to measure returns to housing instability. The first was a variable indicating that a family spent a night in emergency shelter in the 12-months preceding the follow-up survey. Data for this variable came from program usage data based primarily on homeless management information systems at participating sites. Homeless management information systems are electronic databases that collect basic information on homeless assistance program users. In this study, data from these systems were supplemented by Family Options 6- and 12-month tracking surveys, Public and Indian Housing Information Center files, and Tenant Rental Assistance Certification System files (Gubits et al., 2015). The second and third housing instability dummy variables measured self-reported homelessness in the six months preceding follow-up and self-reported doubling up during those six months. Data for both variables came from the Family Options Study 20-month follow-up survey.

Analyses

Three risk models were created for each housing instability outcome by regressing outcomes on the baseline family characteristics in Table 1. Predictor variables were chosen for full model inclusion using the following methods. First, all models included dummy variables corresponding to the twelve Family Options intervention sites to control for differential returns to housing instability in different sites. Second, each model included any Table 1 predictor that was correlated to a given outcome variable at $p < .1$.

Model Reduction Via Backward Regression

After developing full models, final models were created using backward logistic regression. In this method, non-significant variables were removed from full models until only predictors that were significant at $p < .05$ remained. Next, each eliminated variable was individually reintroduced to its final model to verify its non-significance in the context of other variables. All previously excluded variables remained non-significant. In some models, all participants at one study site experienced the same outcome. As a result, maximum likelihood estimates were biased and parameter estimates diverged to infinity. Firth's penalized likelihood approach was used to correct for separation in these models. This approach limits parameter estimates by penalizing maximum likelihood estimates and has demonstrated superior inferential utility relative to competing solutions to separation (Heinze & Schemper, 2002). The final models for families assigned to usual care and those who leased up with long-term housing subsidies are are shown in Tables 2 and 3, respectively.

FIGURE 1--Final Model ROC Curves for Usual Care Outcomes

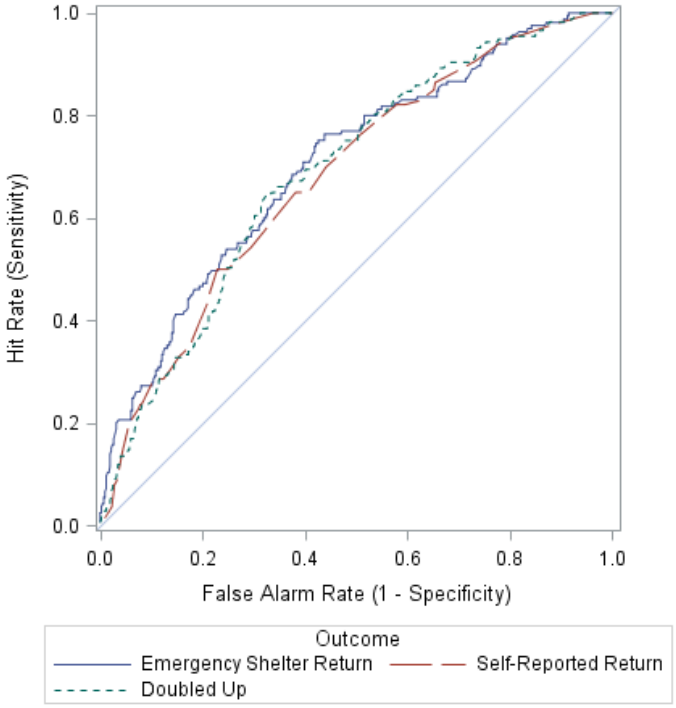
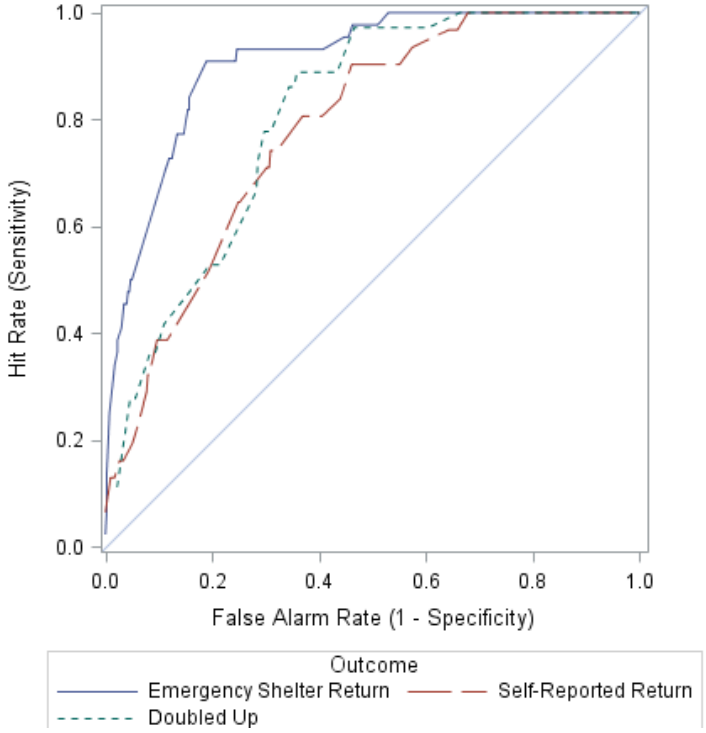


FIGURE 2--Final Model ROC Curves for Long-Term Housing Subsidy Outcomes



Testing Model Efficiency

Next, the efficiency of the final models was tested. Efficiency was judged according to the hit rates and false alarm rates of each model. Receiver-operating characteristic curves were used to graphically present each model's hit rates and false alarm rates for all possible cutoff points. In this study, each predictive model corresponds to a curve that is compared to a line of zero diagnosticity. This latter line represents the predictive utility offered by chance. As hit rates for a given curve increase and false alarm rates decrease, the space between the curve and the line of zero diagnosticity grows. This space, called the Area Under the Curve, indicates the overall efficiency of the predictive model.

Results

Usual Care Sample

Risk factors for housing instability were first examined in the usual care sample (N = 578). Table 2 reports individual and final model relationships between each housing stability outcome and all family characteristics predicting any outcome at $p < .05$. It also provides the prevalence of each characteristic in the total usual care sample and among respondents experiencing each outcome. Figure 1 shows receiver operating characteristic curves for each final model. Efficiency is determined by comparing the height of a curve on the vertical axis (i.e., hit rate) to its corresponding position along the horizontal axis (i.e., false alarm rate). Curves approaching the upper-left corner of the figure reflect strong predictive models, while those near the middle line reflect weak predictive models.

Three variables contributed to the final returns to emergency shelter model (n = 165). Odds of returning to shelter were higher for heads of household who were older or had previous homelessness experiences. Receiving SSI or SSDI benefits was associated with a lower chance

of returning to shelter. Two variables contributed to the final self-reported returns to homelessness model (n = 140). Odds of this outcome were increased for families who had a child separated from the family or whose head of household had not worked in the previous 24 months. Three variables contributed to the final self-reported doubling up model (n = 177). As for emergency shelter returns, age predicted doubling up experiences. However, in this case younger respondents were more likely to double up. Variables associated with higher odds of doubling up included previous doubling up experiences and substance dependence. The Psychosocial Challenge Index score was associated with higher odds of doubling up as an individual variable, but did not contribute in the context of other variables. As Figure 1 shows, the areas under the curve for the final emergency shelter returns, self-reported homelessness returns, and doubled up models were .70, .68, and .69, respectively. Together, they indicate that one could correctly predict between 25% and 28% of returns to housing instability if accepting the 10% false positive rate from Shinn et al. (1998). The appropriateness of using that rate in the present study is discussed below.

Long-term Housing Subsidy Sample

Risk factors were next examined among participants who leased up with long-term housing subsidies (N = 446). Table 3 reports the prevalence of each characteristic for each housing instability outcome and in the overall long-term subsidy sample. Also reported are individual and final model relationships between each housing instability outcome and all Table 1 characteristics predicting any outcome at $p < .05$. Importantly, each housing instability outcome was relatively rare among families who had leased up with long-term subsidies, affecting under 10% of the sample.

TABLE 2—Predictors of Returns to Homelessness Among Participants Randomly Assigned to Usual Care (N = 578): 12 U.S. Communities, September 2010-October 2013

		Emergency Shelter (AUC = .70)				Self-Report (AUC = .68)				Doubled (AUC = .69)			
Predictor	Prevalence in Full Usual Care Sample (%)	Emergency Shelter Group Prevalence Deviation (%)	Individual *OR*	Final Model *OR*	Final Model *CI*	Self-Report Group Prevalence Deviation (%)	Individual *OR*	Final Model *OR*	Final Model *CI*	Doubled Group Prevalence Deviation (%)	Individual *OR*	Final Model *OR*	Fin Mo *C*
SSI/SSDI	12.27	-5.73	**0.37****	**0.30*****	[0.16, 0.57]	-2.38	0.73			-2.86	0.61†		
Previously homeless	62.82	+6.63	**1.69****	**1.70****	[1.17, 2.46]	+4.08	1.14			-1.16	0.90		
Previously doubled	84.87	-1.45	0.84			+0.26	1.03			+6.21	**2.63*****	**2.23****	**[1.3 3.7**
Substance Abuse	21.07	-0.18	1.11			+3.30	1.10			+7.41	**1.58***	**1.53***	**[1.0 2.2**
Any child not with family	23.19	+3.19	1.30			+11.31	**2.04*****	**2.02*****	[1.37, 3.00]	+5.37	1.30		
No work in 24 months	33.03	+4.76	1.31			+7.58	**1.63****	**1.61***	[1.12, 2.31]	-0.08	1.03		
Fair or poor health	30.89	-5.19	0.79			+0.88	1.05			+2.93	1.14		
Two or more adults in shelter	29.98	+1.22	0.91			-3.49	0.74			-1.64	0.86		
Any felony	13.70	+0.04	1.23			+3.57	1.13			+3.32	1.14		
Age, *M* (*SD*)	31.27 (10.41)	+1.58 (+0.93)	**1.03****	**1.04*****	[1.02, 1.06]	+0.37 (-0.27)	1.01			-1.48 (-0.95)	**0.96*****	**0.97****	**[0.9 0.9**
Challenge Index, *M* (*SD*)	2.25 (2.10)	-0.18 (+0.02)	0.99			+0.19 (+0.16)	1.03			+0.34 (+0.10)	**1.11***		

Notes. † $p < .10$; * $p < .05$; ** $p < .01$; *** $p < .001$. All analyses control for study site. Psychosocial Challenge Index score significantly contributes to the final doubled up moc when substance abuse is excluded. In this scenario, doubled up AUC remains .69, and odds ratios for age, previous doubling up experiences, and Psychosocial Challenge Index score are 0.97** [0.95, 0.99], 2.17** [1.27, 3.69], and 1.11* [1.02, 1.22], respectively.

TABLE 3—Predictors of Returns to Homelessness Among Participants Leased Up with Long-Term Subsidies (*N* = 446): 12 U.S. Communities, September 2010-October 2013

		Emergency Shelter (AUC = .91)				Self-Report (AUC = .78)				Doubled (AUC = .81)			
Predictor	Prevalence in Full Usual Care Sample (%)	Emergency Shelter Group Prevalence Deviation (%)	Individual *OR*	Final Model *OR*	Final Model *CI*	Self-Report Group Prevalence Deviation (%)	Individual OR	Final Model *OR*	Final Model *CI*	Doubled Group Prevalence Deviation (%)	Individual *OR*	Final Model *OR*	Fina Mod *CI*
SSI/SSDI	9.82	-2.26	0.81			+3.16	1.25			+1.52	1.06		
Previously homeless	63.54	-2.80	1.08			+15.20	**2.21***			+19.64	**2.89***	**2.67***	**[1.1 6.06**
Previously doubled	84.15	-11.63	**0.27****	**0.29****	**[0.12, 0.70]**	+12.98	**5.30***	**5.38***	**[1.11, 26.10]**	+10.04	2.63		
Substance Abuse	16.87	-1.90	1.11			+5.25	1.62			+2.36	1.12		
Any child not with family	24.89	+1.86	1.84			+18.06	**2.48****	**2.20***	**[1.09, 4.44]**	+14.91	1.88 †		
No work in 24 months	32.09	+9.88	1.86 †			+8.41	1.47			+17.84	**2.26***	**2.07***	**[1.08 3.95**
Fair or poor health	29.92	+17.30	**3.22****	**3.72*****	**[1.76, 7.87]**	+10.96	1.35			+4.69	1.06		
Two or more adults in shelter	26.00	+19.46	**4.58*****	**4.67*****	**[2.16, 10.10]**	-3.79	0.88			+0.82	1.18		
Any felony	12.09	+3.61	**3.04***			+14.34	**2.70***	**2.41***	**[1.06, 5.49]**	3.90	1.07		
Age, *M* (*SD*)	30.07 (8.86)	+1.20 (-0.25)	1.02			+0.77 (-0.72)	1.01			+0.69 (+0.83)	1.01		
Challenge Index, *M* (*SD*)	2.17 (1.99)	-0.19 (+0.38)	1.08			+0.74 (+0.21)	1.15			+0.81 (+0.23)	**1.20***		

Notes. † $p < .10$; * $p < .05$; ** $p < .01$; *** $p < .001$. All analyses control for study site.

Three variables contributed to the final returns to emergency shelter model (n = 44). Odds of returning to shelter were lower for respondents who had previously doubled up and higher for respondents reporting poor or fair health or multiple sheltered adults in the family. Felony history was associated with higher odds of returning to shelter as an individual variable, but not in the context of other variables in the model. Three variables contributed to the final self-reported returns to homelessness model (n = 31). As with emergency shelter returns, previous doubling up experiences and past felonies were both associated with higher odds of return. However, separation from a child in shelter was also associated with higher odds of return. Past homelessness was associated with higher odds of return as an individual variable only. Two variables contributed to the final self-reported doubling up model (n = 36). Once again, previous homelessness was associated with higher odds of experiencing the outcome. Odds of doubling up were also higher among respondents who had not worked in the previous 24 months. The Psychosocial Challenges Index score was associated with higher odds of doubling up as an individual variable only. As Figure 2 shows, the areas under the curve for the final emergency shelter returns, self-reported returns, and doubled up models were .91, .78, and .81, respectively. Together, the models indicate that one could correctly predict approximately 38% of self-reported returns to homelessness or instances of doubling up if accepting Shinn et al.'s (1998) 10% false positive rate. However, one could predict nearly 70% of returns to emergency shelter with the same false positive rate.

Discussion

Usual Care Sample

Overall, findings support O'Flaherty's "bad luck" argument that observable characteristics beyond poverty are poor predictors of transitions into homelessness. Among

sheltered homeless families receiving usual care, few family characteristics predicted returns to housing instability. Receiver-operating characteristic curves for the usual care sample indicate that one one can only correctly predict about a quarter of returns to housing instability while maintaining a false alarm rate of 10%. Importantly, using a predictive cutoff corresponding to a 10% false alarm rate is not universally desirable. One could use this study's models to predict more returns to housing instability by also accepting a higher false alarm rate and a less efficient allocation of prevention resources. Conversely, one could preserve resources by predicting fewer returns to housing instability, though doing so would result in more families going without needed assistance. Deciding where to place a prediction cutoff in models like these is a political, moral, and practical act. Those who perform it must consider the personal and societal costs of housing instability as well as alternative uses of resources.

Usual care findings suggest that past experiences of a particular type of housing instability predict future experiences of that same type. For example, families with past homeless episodes returned to shelter more frequently than other families, and those who had previously doubled up were more likely than other families to double up again. These findings add to previous research that suggests past housing instability predicts future instability (Greer et al., 2016; Shinn et al., 1998), along with a vast social science literature suggesting that past behavior is a good predictor of subsequent behavior.

Age predicted both returns to emergency shelter and doubling up experiences, although in opposite directions. The finding that younger heads of household doubled up more frequently is consistent with previous research (Pilkauskas, Garfinkel, & McLanahan, 2014). As heads of household get older, access to reasonable doubling up options may decline, leading them to return to shelter instead of staying with family or friends. Though both age effects were

statistically significant, each had a limited influence on housing instability outcomes. A 10-year increase in age was associated with 48% higher odds of returning to emergency shelter and 26% lower odds of doubling up.

Findings offered some support for the systemic construction of poverty and housing instability. Receiving economic assistance in the form of SSI or SSDI reduced a family's likelihood of returning to emergency shelter. Consistent with the moral and therapeutic constructions of poverty, substance dependence predicted doubling up and long-term unemployment predicted self-reported returns to homelessness. However, as poverty historians remind us, these relationships can only be understood within the context of systemic influnces like limited job opportunities and low wages (O'Connor, 2001).

The finding that families with children separated at shelter entry experienced more self-reported returns to homelessness highlights the challenges of "invisible mothers" navigating childcare while homelessness (Barrow & Laborde, 2008). Previous research notes that homelessness may be a strong contributor to child separations in families experiencing homelessness (Cowal, Shinn, Weitzman, Stojanovic, & Labay, 2002). Furthermore, caregivers living away from one child at shelter entry may also be more likely to become separated from more children during the course of housing instability. Caregivers who are separated from all children may become ineligible for services reserved for families with children, increasing their likelihood of returning to homelessness.

Long-term Housing Subsidy Sample

In a previous experimental study, offers of long-term housing subsidies led to large reductions in returns to housing instability, though some families still returned (Gubits et al., 2015). It is possible that the few families who returned despite long-term subsidies had more

noticeable family-level housing barriers than families in general. In this study, each long-term subsidy model, especially the one predicting emergency shelter returns, improved on its usual care counterpart. Nevertheless, the modest predictive power of these models is consistent with O'Flaherty's "bad luck" argument. Receiver-operating characteristic curves in the long-term subsidy group indicate that one can predict about 38% of self-reported returns to homelessness or doubling up episodes while maintaining a 10% false alarm rate. This approximates Shinn et al.'s (2013) hit rate at that same false alarm rate. One could predict nearly 70% of returns to emergency shelter at this false alarm rate, approximating the results of Shinn et al. (1998).

Findings again offer some support for the systemic construction of poverty and housing instability. One example is the disappearance of the protective effect of disability income among families receiving long-term subsidies. In the systemic construction of poverty, disability income reduces returns to housing instability by increasing the ratio of income to housing cost. However, subsidies hold families' housing costs to 30 percent of income irrespective of disability income, making disability income less important. Long-term unemployment's influence on doubling up experiences arguably offers support for the moral construction of poverty. However, as in the usual care sample, unemployment failed to predict multiple outcomes.

Some variables that did not predict housing instability among families receiving usual care did predict instability among those receiving long-term subsidies. For example, reporting a felony at shelter entry also predicted self-reported returns to homelessness among families leased up with long-term subsidies but not among those in usual care. One explanation is that those with felonies at shelter entry may be more likely to violate anti-drug clauses common in publically subsidized leases (Housing Authority of the City of Alameda, 2016). Indeed, among those self-reporting returns to homelessness from long-term subsidized housing, felony history was highly

correlated with drug use in the six months before follow-up, $r = .44$, $p = .01$. Post-hoc regression analysis revealed that the predictive power of felony history on returns to homelessness became non-significant when introducing recent drug use into the model. In that same model, recent drug use significantly predicted homeless reentry, $OR = 7.46$, 95% CI [2.16, 25.72], $p < .01$. Importantly, these findings are post-hoc associations. There is no direct evidence that drug-related lease violations caused individual cases of homeless reentry. Furthermore, neither alcohol nor substance dependence at the time of shelter entry were associated with returns to emergency shelter.

Some results of this study were unexpected. For example, it is not clear why previous doubling up experiences were associated with lower odds of returning to emergency shelter among families receiving long-term subsidies. However, one explanation is that returns to other forms of housing instability served as alternatives to returns to emergency shelter, lowering the odds of that outcome. Previous doubling up experiences were significantly correlated with self-reported returns to homelessness, $r = .10$, $p = .04$, and marginally correlated with subsequent doubling up experiences, $r = .08$, $p = .09$.

Also unexpected was the finding that families with multiple adults were more likely to return to emergency shelter. Wood et al. (1990) report similar findings. However, they explain their findings with policies that have since changed. At the time of their publication, the authors noted that two-parent families often did not qualify for programs like Medicaid, Homeless Family Assistance Program (HFAP), and Aid to Families with Dependent Children (AFDC).

However, in 1996 the Personal Responsibility and Work Opportunity Act (PRWOA), replaced AFDC with Temporary Assistance for Needy Families (TANF). Part of PRWOA's purpose was to encourage marriage and family stability, and TANF accordingly treats one- and

two-parent families similarly in most states. Importantly, some states require two-parent families to have a disabled member before extending TANF benefits, and others employ additional requirements such as wait periods for two-parent families. Also, staff may be less likely to suggest TANF benefits to two-parent families due to a perception that they need less financial assistance than single-parent families (Hahn, Giannarelli, Kassabian, & Pratt, 2016). However, exploratory post-hoc regression indicated that two-adult families were not significantly less likely to receive TANF than other families. Interestingly, two-adult families were *more* likely to receive SSI than other families when controlling for study site, $OR = 2.88$, $p < 0.01$

Alternatively, partners in shelter with mothers experiencing homelessness may serve as a destabilizing force. Writing after the passage of PRWOA, Shinn et al. (1998) found that being married or living with a partner increased mothers' likihood of requesting shelter. Partners may increase the likelihood of returning to shelter by increasing the number of family members capable of committing a lease violation. Lease agreements are often written such that terminations can result from the activity of any household member (Housing Authority of the City of Alameda, 2016). Additional adults may also be more difficult for mothers to support financially, especially if those adults do not contribute to household earnings.

Policy Recommendations

Findings suggest several policy directions for increasing housing stability among families leaving homelessness. First, long-term housing subsidies should be used to help families avoid returns to emergency shelter. Recent experimental evidence indicates that long-term subsidies reduce housing instability, intimate partner violence, substance abuse, and psychological distress while supporting family preservation (Gubits et al., 2015). Also, access to affordable healthcare, reliable employment, and effective substance dependence treatment may reduce housing

instability. Finally, expanding access to SSI and SSDI income for families with disabilities may increase housing stability for those without long-term housing subsidies. The SSI/SSDI Outreach, Access, and Recovery program sponsored by the Substance Abuse and Mental Health Services Administration has a successful history of accomplishing this goal among individuals experiencing homelessness, and should be explicitly evaluated among families (Dennis, Lassiter, Connelly, & Lupfer, 2011).

REFERENCES

Barrow, S. M., & Laborde, N. D. (2008). Invisible mothers: Parenting by homeless women separated from their children. *Gender Issues, 25*(3), 157-172. doi:10.1007/s12147-008-9058-4

Bassuk, E. L., Buckner, J. C., Perloff, J. N., & Bassuk, S. S. (1998). Prevalence of mental health and substance use disorders among homeless and low-income housed mothers. *American Journal of Psychiatry*, *155*(11), 1561-1564. doi:10.1176/ajp.155.11.1561

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. doi: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*. Washington, DC: American Institutes for Research.

Carey, K., Carey, M., & Chandra, P. (2003). Psychometric evaluation of the Alcohol Use Disorders Identification Test and short Drug Abuse Screening Test with psychiatric patients in India. *Journal of Clinical Psychiatry, 64*(7), 767–774. doi:10.4088/JCP.v64n0705

Cherpitel, C. J. (2000). A brief screening instrument for problem drinking in the emergency room: The RAPS4. *Journal of Studies of Alcohol, 61*(3), 447-449.

Cocco, K., & Carey, K. (1998). Psychometric properties of the Drug Abuse Screening Test in psychiatric outpatients. *Psychological Assessment, 10*(4), 408–414. doi:10.1037/1040-3590.10.4.408

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

Culhane, D. P., Metraux, S., Park, J. M., Schretzman, M., & Valente, J. (2007). Testing a typology of family homelessness based on patterns of public shelter utilization in four US jurisdictions: Implications for policy and program planning. *Housing Policy Debate, 18*(1), 1-28. doi:10.1080/10511482.2007.9521591

Cutuli, J. J., Herbers, J. E., Rinaldi, M., Masten, A. S., & Oberg, C. N. (2010). Asthma and behavior in homeless 4-to 7-year-olds. *Pediatrics*, *125*(1), 145-151.

Dennis, D., Lassiter, M., Connelly, W.H., & Lupfer, K.S. (2011). Helping adults who are homeless gain disability benefits: The SSI/SSDI Outreach, Access, and Recovery (SOAR) program. *Psychiatric Services, 62*(11), 1373-1376.

Foa, E. B., Cashman, L., Jaycox, L., & Perry, K. (1997). The validation of a self-report measure of posttraumatic stress disorder: The Posttraumatic Diagnostic Scale. *Psychological Assessment, 9*(4), 445-451.

Goodman, L. A. (1991). The prevalence of abuse among homeless and housed poor mothers: A comparison study. *American Journal of Orthopsychiatry*, *61*(4), 489-500. doi:10.1037/h0079287

Gowan, T. (2010). *Hobos, hustlers, and backsliders: Homeless in San Francisco*. Minneapolis, MN: University of Minnesota Press.

Greenberg G. A., Hoblyn J., Seibyl C., & Rosenheck R. A. (2006) Housing outcomes for hospitalized homeless veterans. *Journal of Health Care for the Poor and Underserved, 17*(2), 425--440. doi:10.1353/hpu.2006.0061

Greer, A. L., Shinn, M., Kwon, J., & Zuiderveen, S. (2016). *Targeting services to individuals most likely to enter shelter: Evaluating the efficiency of homelessness prevention.*

Gubits, D., Shinn, M., Bell, S., Wood, M., Dastrup, S., Solari, C. D.,…& Spellman, B. E. (2015). *Family options study: Short-term impacts of housing and services interventions for homeless families*. Washington, DC: HUD.

Gubits, D., Shinn, M., Wood, M., Bell, S., Dastrup, S., Solari, C. D.,…& Kattel, U. (2016). *Family options study: 3-year impacts of housing and services interventions for homeless families*. Washington, DC: HUD.

Hahn, H., Giannarelli, L., Kassabian, D., & Pratt, E. (2016). *Assisting two-parent families through TANF* (OPRE Report No. 2016-56). Retrieved from Urban Institute website: http://www.urban.org/sites/default/files/publication/81851/2000837-Assisting-Two-Parent-Families-Through-TANF.pdf

Heinze, G., & Schemper, M. (2002). A solution to the problem of separation in logistic regression. *Statistics in Medicine, 21*(16), 2409-2419. doi:10.1002/sim.1047

Henry, M. Watt, R., Rosenthal, A., & Shivji, A. (2016). The 2016 annual homeless assessment report to Congress (AHAR): Part 1: Point-in-time estimates of homelessness. Washington, DC: U.S. Department of Housing and Urban Development.

Housing Authority of the City of Alameda. (2016). Termination of Assistance and Tenancy. Administrative plans, policies, and procedures (pp. 12-1-12-18). Alameda, CA: Housing Authority of the City of Alameda.

Hudson, C. G., & Vissing, Y. M. (2010). The geography of adult homelessness in the US: Validation of state and county estimates. *Health and Place, 16*(5), 828-837. doi:10.1016/j.healthplace.2010.04.008

Kerker, B. D., Bainbridge, J., Kennedy, J., Bennani, Y., Agerton, T., Marder, D.,…& Thorpe, L. E. (2011). A population-based assessment of the health of homeless families in New York City, 2001-2003. *American Journal of Public Health, 101*(3), 546-553. doi:10.2105/AJPH.2010.193102

Kertesz, S. G., Baggett, T. P., O'Connell, J. J., Buck, D. S., & Kushel, M. B. (2016). Permanent supportive housing for homeless people—Reframing the debate. *The New England Journal of Medicine, 375*, 2115-2117. doi:10.1056/NEJMp1608326

Kessler, R. C., Barker, P. R., Colpe, L. J., Epstein, J. F., Gfroerer, J. C., Hiripi,…& Zaslavsky, A. M. (2003). Screening for serious mental illness in the general population. *Archives of General Psychiatry, 60*(2), 184–189. doi:10.1001/archpsyc.60.2.184

Lin, J., & Smith. N. (2004a). Section IV: Repeat shelter use among families who exit shelter in New York City. In N. Smith, Z. D. Flores, J. Lin, & J. Markovic (Eds.), *Understanding family homelessness in New York City: An in-depth study of families' experiences before and after shelter*. New York, NY: Vera Institute of Justice. Retrieved from www.vera.org

Lin, J., & Smith, N. (2004b). Section V: An in-depth examination of families who exit to subsidized housing from shelter in New York City. In N. Smith, Z. D. Flores, J. Lin, & J. Markovic (Eds.), *Understanding family homelessness in New York City: An in-depth study of families' experiences before and after shelter*. New York, NY: Vera Institute of Justice. Retrieved from www.vera.org

O'Connor, A. (2001). *Poverty knowledge: Social science, social policy, and the poor in twentieth-century U.S*. history. Princeton, NJ: Princeton University Press.

O'Flaherty, B. (2010). Homelessness as bad luck: Implications for research and policy. In I. Gould Ellen and B. O'Flaherty (Eds.), How to House the Homeless (pp. 143-182). New York, NY: Russell Sage Foundation.

Perlman, S., & Willard, J. (2012). *Estimated annual cost of child homelessness in Pennsylvania*. Retrieved from http://works.bepress.com/ staci perlman/9

Pilkauskas, N. V., Garfinkel, I., & McLanahan, S. S. (2014). The prevalence and economic value of doubling up. Demography, 51(5), 1667-1676. doi:10.1007/s13524-014-0327-4

Rodriguez, J. (2013). *Homelessness recurrence in Georgia*. Atlanta, GA: Georgia Department of Community Affairs. Retrieved from www.dca.state.ga.us/housing/.../HomelessnessRecurrenceInGeorgia.pdf

Schwarz, K. B., Garrett, B., Hampsey, J., & Thompson, D. (2007). High prevalence of overweight and obesity in homeless Baltimore children and their caregivers: A pilot study. *Medscape General Medicine*, *9*(1), 48.

Shinn, M., Baumohl, J., & Hopper, K. (2001). The prevention of homelessness revisited. *Analyses of Social Issues and Public Policy, 1*(1), 95-127. doi:10.1111/1530-2415.00006

Shinn, M., Greer, A.L., Bainbridge, J., Kwon, J., & Zuiderveen, S. (2013). Efficient targeting of homelessness prevention services for families. *American Journal of Public Health, 103*(S2), S324-S330. doi:10.2105/AJPH.2013.301468

Shinn, M., Schteingart, J. S., Williams, N. C., Carlin-Mathis, J., Bialo-Karagis, N., Becker-Klein, R., & Weitzman, B. C. (2008). Long-term associations of homelessness with children's well-being. *American Behavioral Scientist, 51*(6), 789-809. doi:10.1177/0002764207311988

Shinn, M., Weitzman, B. C., Stojanovic, D., Knickman, J. R., Jiménez, L., Duchon, L., . . . Krantz, D. H. (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. doi:10.2105/AJPH.88.11.1651

Skinner, H. A. (1982). The Drug Abuse Screening Test. *Addictive Behavior* 7(4), 363 371. doi:10.1016/0306-4603(82)90005-3 doi:http://dx.doi.org.proxy.library.vanderbilt.edu/10.1037/1040-3590.9.4.445

Smith, N. A. A., & Flores, Z. D. (2005). Section III: Struggling to make ends meet pre-shelter experiences of homeless families in New York City. In N. Smith, Z. D. Flores, J. Lin, & J. Markovic (Eds.), *Understanding family homelessness in New York City: An in-depth study of families' experiences before and after shelter*. New York, NY: Vera Institute of Justice. Retrieved from www.vera.org

Stojanovic, D., Weitzman, B. C., Shinn, M., Labay, L.E., & Williams, N. P. (1999). Tracing the path out of homelessness: The housing patterns of families after exiting shelter. *Journal of Community Psychology, 27*(2), 199-208. doi:10.1002/(SICI)1520-6629(199903)27:2<199::AID-JCOP7>3.0.CO;2-G

U.S. Interagency Council on Homelessness (2015). "Opening Doors: Federal Strategic Plan To Prevent and End Homelessness." Retrieved from http://www.epaperflip.com/aglaia/viewer.aspx?docid=1dc1e97f82884912a8932a3502c37c02.

Weinreb, L. F., Buckner, J. C., Williams, V., & Nicholson, J. (2006). A comparison of the health and mental health status of homeless mothers in Worcester, Mass: 1993 and 2003. *American Journal of Public Health*, *96*(8), 1444-1448. doi:10.2105/AJPH.2005.069310

Weitzman, B. C., Knickman, J. R., & Shinn, M. (1992). Predictors of shelter use among low-income families: Psychiatric history, substance abuse, and victimization. *American Journal of Public Health, 82*(11), 1547-1550. doi:10.2105/AJPH.82.11.1547

Wong, Y. I., Culhane, D. P., & Kuhn, R. (1997). Predictors of exit and reentry among family shelter users in New York City. *Social Service Review, 71*(3), 441-462. Retrieved from http://www.jstor.org/stable/30012627

Wood, D., Valdez, R. B., Hayashi, T., & Shen, A. (1990). Homeless and housed families in Los Angeles: A study comparing demographic, economic, and family function characteristics. *American Journal of Public Health, 80*(9), 1049-1052. doi:10.2105/AJPH.80.9.1049

Yu, M., North, C. S., LaVesser, P. D., Osborne, V. A., & Spitznagel, E. L. (2008). A comparison stud of psychiatric and behavior disorders and cognitive ability among homeless and housed children. *Community Mental Health Journal, 44*(1), 1-10. doi:10.1007/s10597-007-9100-0

Yudko, E., Lozhkina, O., & Fouts, A. (2007). A comprehensive review of psychometric properties of the Drug Abuse Screening Test. *Journal of Substance Abuse Treatment, 32*(2), 189-198. doi:10.1016/j.jsat.2006.08.002

Zlotnick, C. (2009). What research tells us about the intersecting streams of homelessness and foster care. *American Journal of Orthopsychiatry, 79*(3), 319-325. doi:10.1037/a0017218