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# The impact of social ties on homelessness

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# **The Impact of Social Ties on Homelessness**

Kevin Corinth\* and Claire Rossi-de Vries

While almost all homeless people are poor, most poor people do not experience homelessness. We use a detailed national survey to explore the role of social ties—including connection to relatives, friends and religious community—in explaining why only a subset of poor adults fall into homelessness. We find that lifetime incidence of homelessness is reduced by 64 percent for individuals with strong ties along each of these dimensions. Ties to relatives are most important followed by ties to religious community, while ties to friends are not associated with reduced incidence of homelessness. We also find that among currently low-income individuals, social ties are not associated with income, providing evidence that our results are not explained by unobserved variation in historical depth of poverty that is potentially correlated with our measures of social ties.

Keywords: homelessness; poverty; social ties; family; religion

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## Introduction

In 2015, 1.48 million people slept in a homeless shelter at some point during the year in the United States (U.S. Department of Housing and Urban Development 2016*b*). On a single night in January, just over 176,000 people are found living in unsheltered locations (U.S. Department of Housing and Urban Development 2016*a*). Aside from depriving people of a basic need, homelessness is also associated with troubling consequences. For families, it can disrupt their children's education and stability, and for single adults it is associated with the costly use of emergency rooms, shelters and jails (Culhane, Metraux and Hadley 2002; Gubits et al. 2015). But while homelessness can be highly detrimental, it is also rare, even among those experiencing poverty. An illuminating consequence is that efforts to prevent homelessness from occurring have difficulty identifying people who would fall into homelessness without assistance. According to a study of a prevention program in Chicago, only two percent of people targeted for assistance would have entered a homeless shelter within six months if a prevention program had not existed (Evans, Sullivan and Wallskog 2016).

While there are likely a number of reasons for the unpredictability of homelessness—including bad luck—one important factor may be social ties.<sup>1</sup> Indeed, among all adults who were housed before entering a homeless shelter in 2015, 42 percent were staying with relatives and 33 percent were staying with friends (U.S. Department of Housing and Urban Development 2016*b*). Ties with community organizations and churches may also foster a stronger safety net that protects against especially severe shocks, either in providing moral support or resources when in need. While a significant body of research has analyzed the importance of social ties, most are limited to specific geographic areas and compare currently homeless people with those who are at risk of homelessness.

In this paper, we use a detailed national survey to assess the role of social ties in mitigating the lifetime risk of homelessness. Survey respondents are asked about prior incidence and duration of homelessness, incidence and duration of public assistance take-up, and various questions regarding social connection, including the ability to rely on relatives and friends and attendance of religious services. Given the large number of individuals surveyed and the

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<sup>1</sup> See O'Flaherty (2010) for a discussion of the empirical and theoretical justifications for modelling homelessness as bad luck.

oversampling of vulnerable groups, a significant number of formerly homeless individuals are identified.

Controlling for demographic factors, we find that strong social ties are highly effective in mitigating the risk of homelessness during adulthood. Individuals with strong ties to relatives, friends and religious community are 64 percent less likely to experience homelessness than individuals with weak ties along all dimensions. Ties to relatives are particularly important, reducing the incidence of homelessness by 48 percent alone. Religious ties alone reduce the incidence of homelessness by 33 percent and is marginally significant, while ties to friends increase homelessness by 7 percent but is not statistically significant. To put these results in context, never relying on public assistance as an adult reduces the incidence of homelessness by 78 percent. Strong social ties appear to be nearly as important as avoiding poverty, at least that which leads to reliance on public assistance programs, in mitigating the risk of homelessness.

An important caveat of these results is that social ties are reported after homelessness spells have been experienced. Thus, it is possible that homelessness either “uses up” social ties or strengthens them through greater utilization. However, the most recent homeless spell occurred at least 2.5 years ago for 75 percent of those who have experienced homelessness in their lifetimes, implying that the effect of homelessness on social ties would have to be highly persistent in order to explain our results. Another possible explanation for our results is that social ties are correlated with deep poverty, and given that we only observe the incidence and length of public assistance receipt, this could drive the association between social ties and homelessness. In order to test whether deep poverty can explain our results, we estimate semiparametric regressions of each social tie on current income among individuals with incomes of less than \$30,000. We find that current income is not discernibly associated with any of our measures of social ties, suggesting that deep poverty is not driving our results.

Finally, we analyze the role of social ties in determining the length of homelessness experienced over the lifetime. Strong ties to relatives are associated with fewer days spent homeless, while strong ties to friends and religious community are positively associated with the length of homelessness. However, none of these estimates are statistically significant. Ultimately, relatively limited variation in homelessness length provides only enough power to detect very large effects.

There are several limitations in this paper. First, homelessness is self-reported and subject to imperfect recall. This may introduce substantial measurement error in reports of the length of homelessness in particular, leading to less precision in our estimates. Second, personal definitions of homelessness and self-assessment of the strength of social ties may vary among survey respondents. If personal definitions of homelessness are correlated with social ties, for example, the effects we estimate would be biased. Third, the survey is representative of the housed population and therefore excludes currently homeless individuals. But given that the vast majority of people who have ever experienced homelessness during their lifetime are not currently homeless, this should have little effect on our results. We find that 5 percent of the U.S. adult population has experienced homelessness, but less than 0.2 percent of the U.S. adult population is currently homeless (U.S. Department of Housing and Urban Development 2016*b*). Fourth, we are unable to rule out the possibility that unobserved characteristics of individuals correlated with social ties actually drive the reductions in homelessness we observe. While we show evidence that deep poverty does not drive our results, there may be other important omitted factors.

This paper relates most directly to a literature exploring the determinants of homelessness. A number of studies find that macro-level factors such as housing prices, climate and homelessness and housing policies impact homeless population sizes (e.g., Honig and Filer 1993; Cragg and O’Flaherty 1999; Quigley, Raphael and Smolensky 2001; O’Flaherty and Wu 2006; Raphael 2010; Byrne et al. 2013; Corinth 2017; Hanratty 2017). Others identify individual-level factors such as race, gender and substance abuse problems that predict the incidence and duration of homelessness, along with whether it is sheltered or unsheltered (Early 1999; Allgood and Warren 2003; Early 2004; Early 2005). Greenberg and Rosenheck (2010) use the same data we use to estimate the determinants of the lifetime incidence of homelessness; however, they do not consider social ties. Also, recent research on homelessness prevention programs has found that short-term assistance can be highly effective in preventing homelessness, but at the same time, that identifying those who would enter homelessness without assistance is difficult (Rolston et al. 2013; Evans, Sullivan and Wallskog 2016, Goodman, Messeri and O’Flaherty 2016).

A number of studies have considered the role of social ties in particular, generally comparing samples of currently homeless individuals within a city to similar people who are not

currently homeless. Currently homeless households typically have greater contact with social support networks, but they find it more difficult to rely on others for deeper needs including housing and financial resources (Bassuk and Rosenberg 1988; Shinn, Knickman and Weitzman 1991; Shinn et al. 1998; Shinn et al. 2007). It is also more common for homeless households to live further away from relatives (Lehmann et al. 2007). While currently homeless families appear to differ in some ways from housed families, Toohey, Shinn and Weitzman (2004) find that five years after entering a New York City shelter, formerly homeless mothers have social ties that are similar to poor mothers who never experienced homelessness. In one study that focuses on families at risk of homelessness rather than the currently or recently homeless, Fertig and Reingold (2008) find that low levels of support from family increases the risk of future homelessness. Some have studied childhood indicators as well, finding that homeless adults are more likely to have experienced familial separation and abuse as children (Bassuk and Rosenberg 1988; Herman et al. 1997; Shinn et al. 1998). The current paper builds on this literature by analyzing the role of social ties across various dimensions—family, friends and religious community—in mitigating the lifetime incidence of homelessness in a nationally representative sample. The results suggest that weak social ties are important in predicting lifetime incidence of homelessness.

The paper proceeds as follows. Section 2 discusses the data and methodology. Section 3 presents results. Section 4 discusses results and their policy implications. Section 5 concludes.

### **Data and methodology**

We use data from a set of surveys sponsored by the National Institute of Mental Health, collectively known as the Collaborative Psychiatric Epidemiology Surveys (CPES). Three separate, nationally representative surveys—the National Comorbidity Survey Replication (NCS-R), the National Survey of American Life (NSAL), and the National Latino and Asian American Study (NLAAS)—were administered between 2001 and 2003. Because they ask many of the same questions, the surveys can be combined and reweighted to still provide a nationally representative sample and improve statistical power. Our paper uses both the NCS-R and the NSAL because they contain questions about prior incidence of homelessness and social ties. The NCS-R was administered between 2001 and 2002, an updated and more detailed version of the original National Comorbidity Survey conducted between 1990 and 1992. The NSAL was

administered between 2001 and 2003 and was intended to study differences in mental health and service use between African American and white respondents.

In our sample of all American adults 18 years or older, our main dependent variable is lifetime incidence of homelessness as an adult. Individuals are asked whether they have ever been homeless and for how long since turning 18 years old. It is important to note that homelessness is not explicitly defined for respondents, and so it may be interpreted differently across individuals. Table 1 indicates that 5 percent of Americans have experienced homelessness at some point in adulthood, with somewhat higher rates for men than women. The median length of time spent homeless is 90 days, while the average is 286 days.

The key explanatory variables are measures of social ties. These include the degree to which individuals rely on relatives, the degree to which they rely on friends, and frequency of attendance at religious services. Table 2 indicates that individuals who have experienced homelessness are much less likely to rely on relatives, and also significantly less likely to rely on friends or frequently attend religious services. Among those who have experienced homelessness, those with longer durations are slightly less likely to rely on relatives, but more likely to rely on friends and attend religious services.

Other variables are shown in Table 3. Social ties are converted into indicator variables here and in regression analysis. We use receipt of public assistance during adulthood as a proxy for the incidence of poverty. We also observe the number of years during which public assistance was received. Of course, an unavoidable limitation of this proxy for poverty is that individuals who faced poverty and fell through safety net programs would not be covered. Among ever homeless women, 68 percent received public assistance as an adult, compared to just 34 percent of ever homeless men. In some specifications we use receipt and duration of public assistance during childhood to control for differences in childhood environments that may be correlated with social ties and that affect adult homelessness. Because these variables are restricted to the NCS-R only, this cuts our sample size almost in half. Both males and females who ever experienced homelessness as an adult were more likely to rely on public assistance as a child, and conditional on receipt, received it for more years.

Other control variables include marital status, whether an individual has any children, educational outcomes, disabilities (mental, physical and learning) and race. Ever homeless individuals are less likely to be married, more likely to have children, less educated, and more



likely to suffer from disabilities. It is especially important to control for age given that older respondents have longer time horizons over which they may have experienced homelessness, and because different age cohorts may have different experiences. It is widely believed that homelessness in the United States started to become much more common starting in the early 1980s (O’Flaherty 1996). The fact that ever homeless individuals are younger than those who never experienced homelessness suggests that cohort effects dominate time horizon effects.

Most of our analysis focuses on the impact of social ties on the incidence of homelessness as an adult. We generally estimate equations of the form

$$\Pr(H_i = 1|S_i, X_i) = \sum_{i=1}^3 \alpha_i S_i + \beta X_i + \epsilon_i \quad (1)$$

where  $H_i$  is a binary variable equal to one if individual  $i$  has experienced homelessness for at least one day since turning 18 years old and equal to zero otherwise;  $S_i$  are social tie indicators including reliance on relatives, reliance on friends and attendance of religious services; and  $X_i$  is a vector of control variables. In some specifications, we take the logit transformation in order to estimate a logistic regression. Furthermore, because women and men may experience different forms of homelessness (i.e., sheltered versus unsheltered) and they may utilize social ties differently, we generally estimate specifications separately for each gender.

An implicit assumption in equation (1) is that social ties are fixed attributes of individuals. That is because social ties are assessed at the time of the survey, which is necessarily after spells of homelessness were experienced. If homelessness either draws down or builds up social ties, our estimates may not be informative about the protective power of strong social ties. As Table 4 shows, however, most homeless spells are relatively distant events. For example, among all individuals who experienced homelessness as an adult, 75 percent have not been homeless for at least 2.5 years. As long as the impact of homelessness on social ties is not highly persistent, our results are unlikely to be a result of homelessness weakening social ties.

A remaining potential problem is that our measures of social ties could be correlated with unobservable characteristics of individuals that in turn affect lifetime incidence of homelessness. In particular, it is possible that social ties are correlated with the depth of poverty experienced over the lifetime, and that deep poverty is actually driving homelessness. In order to address this concern, we test whether current income is associated with social ties among individuals with relatively low current incomes, controlling for observable characteristics included in equation

(1). Following Robinson (1988), we employ a semiparametric regression to uncover any associations in this income range, estimating equations of the form

$$\Pr(S_i = 1|M_i, X_i) = \theta(M_i) + \beta X_i + \epsilon_i \quad (2)$$

where  $M_i$  is current household income and  $\theta$  is an unknown function.

Finally, we estimate the association between social ties and the length of homelessness among those who have ever experienced it. Here we estimate equations of the form

$$\log(D_i) = \sum_{i=1}^3 \alpha_i S_i + \beta X_i + \epsilon_i \quad (3)$$

where  $D_i$  is the total number of days spent homeless since turning 18 years old. It is possible that stronger social ties lead to shorter spells, although there are theoretical and empirical reasons that suggest otherwise. O’Flaherty (2010) argues that the best predictor of homelessness tomorrow is homelessness today and that individual characteristics will have much less explanatory power.

### Results

Table 5 presents regression results on the determinants of the lifetime incidence of homelessness.<sup>2</sup> OLS estimates imply that strong ties with relatives reduce the incidence of homelessness by 4.3 percentage points, strong religious ties reduce homelessness incidence by 2.0 percentage points, and strong ties to friends have no effect. Ties to relatives and religious community are both statistically different from zero at the one percent level. Altogether, strong social ties across all three dimensions reduces the lifetime incidence of homelessness by 6.3 percentage points. That is 56 percent as large as the 10.8 percentage point reduction from never relying on public assistance (assuming an average of 3.2 years on public assistance), suggesting that social ties are very important in mitigating the risk of homelessness. Results are similar for both women and men, although ties to relatives are more important for women, and religious ties are more important for men.

Results from the logit model are similar, with ties to relatives being the most important followed by religious ties, and with the effect of ties to friends not differing statistically from zero. Table 6 indicates the predicted probabilities of homelessness among individuals with

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<sup>2</sup> Estimates for control variables for these and other specifications are included in the appendix.

different strengths of social ties and prior receipt of public assistance, and otherwise average characteristics. For an individual with weak social ties who has received public assistance (for the average length among recipients), the probability of homelessness is 0.20. If that same person had strong social ties across all three dimensions, the probability of homelessness falls to 0.07, or a 64 percent reduction. If the individual instead had weak social ties but never had to rely on public assistance, his probability of homelessness is 0.05, which is a 78 percent reduction. In other words, our logit estimates imply that strong social ties are almost as important as never relying on public assistance in mitigating the risk of homelessness.

Including measures of childhood poverty in Appendix Table A2—incidence and duration of public assistance receipt during childhood—does little to affect results. Given that the sample size is cut in half, standard errors are somewhat larger. However, coefficient estimates are quite similar though slightly attenuated.

One specific concern with these estimates may be that the depth of poverty experienced during childhood or adulthood is correlated with our measures of social ties and drives the differences in homelessness. Incidence and duration of public assistance receipt may not adequately control for this. While we do not observe historical incomes levels and thus cannot control for them, we do observe current income levels. As a partial test of the importance of income levels in driving our results, Appendix Table A3 adds current income to baseline specifications. Although higher current income is associated with significantly lower likelihoods of homelessness, estimates of the impact of social ties are only slightly smaller. On the basis of OLS estimates with the full sample, for example, the impact of strong ties with relatives falls from 4.3 to 4.1 percentage points, and the impact of strong religious ties falls from 2.0 to 1.9 percentage points.

Of course, controlling for current income does not alleviate concerns that social ties are correlated with historical income levels independent of current income levels. Thus, we directly test whether individuals with very low incomes have weaker social ties compared with individuals with relatively higher incomes. Table 7 shows the association between current income and social ties among individuals with annual incomes below \$30,000, controlling for observable characteristics used in our specifications. Whether entering income linearly or in uniform buckets, a significant association is not apparent. We also employ a semiparametric regression to allow more flexibility in the relationship between income and social ties. Figure 1,

Figure 2 and Figure 3 show the estimated relationship between income and social ties holding constant other control variables. Inverse associations between income and social ties are not apparent.

Our final analysis estimates the association between social ties and the length of homelessness among those who have experienced it. Results are shown in Table 8, where the dependent variable is the natural logarithm of days spent homeless. None of the social tie variables are statistically significant.

### **Discussion**

Our results suggest that strong social ties are very important in protecting against the risk of homelessness. According to our baseline specification, strong ties to relatives, friends and religious community reduce the lifetime incidence of homelessness by 64 percent. Among the social ties we consider, ties to relatives are by far the most important, alone reducing the lifetime incidence of homelessness by 48 percent. This could reflect the willingness of family members and other relatives to lend money and other resources, or potentially, to allow an individual to move in with them when negative shocks occur. However, 75 percent of people who were previously housed stay with family or friends before turning to homeless shelters, implying that many people who can find others to stay with temporarily nonetheless end up falling into homelessness. Thus, strong ties with relatives may reflect the ability to live for longer periods of time or in higher quality situations with relatives, and not simply the ability to stay with others at all. Meanwhile, strong ties to friends do not reduce the incidence of homelessness, further suggesting that more sustained or higher quality support is necessary. Finally, religious ties are relatively important, potentially reflecting deeper community or support networks.

A different interpretation of our baseline impact estimates, of course, is that homelessness itself may cause social ties to weaken, especially if they are “used up.” Or alternatively, our measures of social ties may be correlated with other individual characteristics that drive reductions in homelessness. That the majority of homeless spells are relatively distant in the past offers some evidence against the possibility that our results are explained by homelessness reducing social ties, assuming that any such effect is transitory. We also show that among those individuals with low incomes, the poorest do not have weaker social ties, suggesting that our

results are not driven by correlation between social ties and deep poverty. Nonetheless, we cannot rule out the importance of other unobserved characteristics in driving our results.

To the extent that results reflect causal relationships, the most basic implication would be that strengthening social ties, particularly among relatives, would substantially reduce homeless populations. Symmetrically, might the rise in homelessness in the United States that has occurred over the past several decades be a result of weakening social ties? While reliable historical homeless counts are not available, it is widely believed that homelessness first started rising beginning the early 1980s (see, for example, O’Flaherty (1996)). By several measures, family ties were declining during this time as well. The percent of births to unmarried women was 5.3 in 1960, 10.7 in 1970, 18.4 in 1980, and 28.0 in 1990 (Ventura and Bachrach 2000). The percent of the population 15 years of age or older that was married was 68 percent in 1960, 64 percent in 1970, 61 percent in 1980, and 59 percent in 1990; divorce rates were 2 percent, 3 percent, 6 percent and 8 percent for the same years (United States Census Bureau 2016). It is certainly plausible that the combination of young adults entering adulthood who were increasingly born to unmarried women, the greater number of young, unmarried mothers, and more unmarried men and women overall contributed to the growth in homelessness during this time period. Given the strong estimated relationship between social ties and homelessness, the extent to which our results can explain the rise in homelessness depends on the extent to which our measures are reflected by these societal trends. Further research should explore whether weakening of specific social ties can explain changes in homeless population sizes across the United States.

Policy implications of our results are less clear without clear evidence that policies can appreciably strengthen social ties. An indirect lever, however, may be to reduce penalties for relying on relatives in safety net programs. The Supplemental Nutrition Assistance Program (SNAP) and housing assistance programs in particular levy substantial penalties on individuals and families for living with others (Ellen and O’Flaherty 2007; Corinth 2015). Randomized controlled trials find that housing assistance programs in particular lead to substantial reductions in household sizes (Mills et al. 2006; Gubits et al. 2016). And although recipients of housing assistance themselves have very low likelihoods of becoming homeless, they may be less able or willing to assist relatives who face threats of homelessness compared to modified safety net programs with smaller penalties for living with others.

Another important policy implication of our results is that the people who experience homelessness are disproportionately those with weak social ties. That may make encouragement to rely on relatives for assistance a less tenable means of escaping homelessness unless it is paired with other assistance. At the same time, to the extent that interventions help people utilize social ties while at the same time strengthening them, this could lead to long-term reductions in reentry into homelessness. He, O’Flaherty and Rosenheck (2010) find that shared housing arrangements among formerly homeless adults are associated with no change in social support but are associated with improvements in mental health.

### **Conclusion**

We study the role of social ties in mitigating the lifetime incidence of homelessness. We find that ties to relatives are the most important in reducing homelessness, followed by participation in religious services and ties to friends. Current income is not associated with social ties among lower income individuals, suggesting that results are not based on correlation between social ties and unobserved depths of poverty that drive homelessness. Our results suggest that weakening social ties could have played a role in the rise in homelessness in recent decades, but that reliance on social ties to assist those who currently fall into homelessness may be ineffective without additional support.

## Appendix

Table A1: Determinants of lifetime incidence of homelessness

	OLS			Logit (odd ratios)		
	All	Female	Male	All	Female	Male
Age	-0.000340* (0.000200)	-0.000390** (0.000197)	-0.000379 (0.000351)	0.988* (0.00650)	0.988 (0.00887)	0.988 (0.00823)
Married	-0.0234 (0.0151)	-0.00242 (0.0179)	-0.0617*** (0.0229)	0.669 (0.194)	0.974 (0.406)	0.395*** (0.142)
Children	0.00753 (0.0124)	-0.00445 (0.0159)	0.0382** (0.0179)	1.129 (0.327)	0.768 (0.372)	1.861* (0.679)
High school	-0.0134 (0.0132)	0.0169 (0.0129)	-0.0456** (0.0223)	0.755 (0.198)	1.518 (0.472)	0.432** (0.160)
Some college	-0.0100 (0.0136)	0.00213 (0.0105)	-0.0193 (0.0248)	0.861 (0.225)	1.035 (0.307)	0.791 (0.294)
College	-0.0309** (0.0125)	-0.00841 (0.0101)	-0.0527** (0.0217)	0.341*** (0.116)	0.501 (0.217)	0.263*** (0.120)
Mental dis.	0.0647*** (0.0188)	0.0769*** (0.0216)	0.0278 (0.0352)	2.498*** (0.567)	3.502*** (0.976)	1.442 (0.525)
Physical dis.	-0.00539 (0.0124)	0.0175 (0.0147)	-0.0372* (0.0202)	0.877 (0.213)	1.357 (0.396)	0.507 (0.218)
Learning dis.	0.0294 (0.0211)	0.00880 (0.0218)	0.0655* (0.0335)	1.603* (0.427)	1.088 (0.423)	2.551*** (0.882)
Black	0.0124 (0.0168)	0.00102 (0.0177)	0.0362 (0.0300)	1.264 (0.386)	1.034 (0.469)	1.512 (0.644)
Hispanic	-0.0133 (0.00873)	-0.00420 (0.00876)	-0.0190 (0.0147)	0.812 (0.172)	1.016 (0.281)	0.678 (0.204)
Female	-0.0304*** (0.00796)			0.419*** (0.0906)		
Social ties/welfare	X	X	X	X	X	X
Observations	6963	4005	2958	6963	4005	2958
R <sup>2</sup> /Pseudo R <sup>2</sup>	0.080	0.093	0.099	0.169	0.203	0.170

Note: Dependent variable is a dichotomous variable equal to one if the individual ever experienced homelessness as an adult and equal to zero otherwise. Odds ratios are shown for logistic regressions. Robust standard errors in parentheses. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

Table A2: Determinants of lifetime incidence of homelessness, including childhood welfare

	OLS			Logit (odd ratios)		
	All	Female	Male	All	Female	Male
Rely on relatives	-0.0393*** (0.0134)	-0.0479*** (0.0160)	-0.0266 (0.0203)	0.476*** (0.107)	0.373*** (0.111)	0.564* (0.191)
Rely on friends	0.00567 (0.0100)	-0.00211 (0.0107)	0.0128 (0.0165)	1.201 (0.286)	0.943 (0.280)	1.327 (0.489)
Religious	-0.0154* (0.00800)	-0.0100 (0.00802)	-0.0174 (0.0138)	0.661* (0.150)	0.690 (0.200)	0.659 (0.223)
Ever welfare	0.0905*** (0.0215)	0.0516*** (0.0168)	0.194*** (0.0551)	5.344*** (1.418)	5.207*** (1.803)	7.272*** (2.849)
Welfare years	0.00502 (0.00424)	0.00759* (0.00436)	0.000787 (0.0110)	1.040 (0.0279)	1.056* (0.0305)	1.013 (0.0488)
Welfare as child	-0.00595 (0.0291)	0.0160 (0.0326)	-0.0467 (0.0498)	1.236 (0.524)	1.945 (1.032)	0.804 (0.472)
Child welfare years	0.00879 (0.00543)	0.00627 (0.00537)	0.0113 (0.00844)	1.063 (0.0442)	1.037 (0.0523)	1.080 (0.0633)
Controls	X	X	X	X	X	X
Observations	3599	2181	1418	3599	2181	1418
R <sup>2</sup> /Pseudo R <sup>2</sup>	0.085	0.087	0.126	0.186	0.207	0.212

Note: Dependent variable is a dichotomous variable equal to one if the individual ever experienced homelessness as an adult and equal to zero otherwise. Control variables include age, sex, marital status, presence of children, completion of high school, some college and college, mental physical and learning disabilities and race. Odds ratios are shown for logistic regressions. Robust standard errors in parentheses. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$



Table A3: Determinants of lifetime incidence of homelessness, including current income

	OLS			Logit (odd ratios)		
	All	Female	Male	All	Female	Male
Rely on relatives	-0.0409*** (0.0125)	-0.0563*** (0.0171)	-0.0196 (0.0176)	0.483*** (0.0994)	0.339*** (0.0953)	0.685 (0.196)
Rely on friends	0.00501 (0.00900)	0.00807 (0.0106)	-0.000314 (0.0144)	1.126 (0.231)	1.236 (0.366)	0.931 (0.268)
Religious	-0.0190** (0.00747)	-0.0168* (0.00921)	-0.0180 (0.0117)	0.630** (0.132)	0.601* (0.184)	0.660 (0.187)
Ever welfare	0.0789*** (0.0196)	0.0423** (0.0170)	0.172*** (0.0491)	4.120*** (1.060)	3.580*** (1.338)	6.016*** (1.993)
Welfare years	0.00775** (0.00372)	0.00949** (0.00388)	0.00573 (0.00974)	1.054** (0.0233)	1.061** (0.0280)	1.033 (0.0430)
Ln(income)	-0.0112*** (0.00391)	-0.00898** (0.00445)	-0.0131** (0.00655)	0.814*** (0.0585)	0.819* (0.0867)	0.810** (0.0759)
Controls	X	X	X	X	X	X
Observations	6803	3910	2893	6803	3910	2893
R <sup>2</sup> /Pseudo R <sup>2</sup>	0.080	0.094	0.099	0.170	0.206	0.171

Note: Dependent variable is a dichotomous variable equal to one if the individual ever experienced homelessness as an adult and equal to zero otherwise. Control variables include age, sex, marital status, presence of children, completion of high school, some college and college, mental physical and learning disabilities and race. Odds ratios are shown for logistic regressions. Robust standard errors in parentheses. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

Table A4: Determinants of length of homelessness

	All	Female	Male
Age	0.0181 (0.0139)	0.0124 (0.0196)	0.0376** (0.0164)
Married	-0.264 (0.378)	0.270 (0.508)	-0.723 (0.530)
Children	0.251 (0.393)	-0.0483 (0.605)	0.649 (0.518)
High school	-0.279 (0.324)	-0.0887 (0.418)	-0.230 (0.406)
Some college	-0.313 (0.297)	0.442 (0.402)	-0.646* (0.374)
College	0.00845 (0.406)	0.582 (0.600)	-0.373 (0.558)
Mental dis.	0.0431 (0.378)	-0.488 (0.560)	0.361 (0.478)
Physical dis.	-0.210 (0.407)	0.312 (0.493)	-0.420 (0.668)
Learning dis.	-0.310 (0.415)	0.284 (0.701)	-0.411 (0.495)
Black	0.309 (0.378)	1.680*** (0.557)	-0.471 (0.500)
Hispanic	-0.212 (0.277)	-0.0529 (0.489)	-0.262 (0.353)
Female	-0.355 (0.288)		
Social ties/welfare	X	X	X
Observations	300	158	142
R <sup>2</sup>	0.081	0.203	0.132

Note: All specifications are estimated with ordinary least squares. Dependent variable is the natural logarithm of the number of days experiencing homelessness since turning 18 years old. Robust standard errors in parentheses. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

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Table 1: Lifetime homelessness incidence and duration

Variable	All	Female	Male
Proportion ever homeless	.050	.042	.060
Days homeless among those ever homeless			
Average	286	253	314
10 <sup>th</sup> percentile	7	3	7
25 <sup>th</sup> percentile	30	14	30
50 <sup>th</sup> percentile	90	60	90
75 <sup>th</sup> percentile	330	240	365
90 <sup>th</sup> percentile	730	540	730
Observations	506	266	240

Note: Data sources are NCS-R and NSAL.

Table 2: Social ties by homelessness incidence and duration

Variable	Never homeless	Ever homeless		
		All	Short-term	Long-term
Rely on relatives				
Not at all/Never	.08	.22	.20	.23
Little/Not too often	.10	.17	.16	.18
Some/Fairly often	.19	.22	.23	.21
A lot/Very often	.64	.39	.41	.38
Rely on friends				
Not at all/Never	.10	.16	.19	.14
Little/Not too often	.15	.22	.22	.22
Some/Fairly often	.29	.27	.30	.25
A lot/Very often	.47	.35	.29	.39
Attend religious services				
Less than once a year	.17	.32	.33	.32
A few times a year	.27	.32	.38	.28
1 to 3 times a month	.16	.14	.11	.17
About once a week	.26	.13	.13	.14
More than once a week	.14	.08	.05	.10
Observations	9367	506	216	290

Note: Short-term homelessness is defined as homelessness experienced for less than 90 days (but at least one day). Long-term homelessness is defined as homelessness experienced for at least 90 days. Data sources are NCS-R and NSAL.

Table 3: Means of variables

Variable	Female		Male	
	Never homeless	Ever homeless	Never homeless	Ever homeless
Social ties				
Rely on relatives <sup>a</sup>	.85	.59	.80	.62
Rely on friends <sup>b</sup>	.78	.63	.73	.61
Attend religious services <sup>c</sup>	.60	.35	.51	.36
Welfare variables				
Welfare as adult	.18	.68	.07	.34
Years of welfare as adult <sup>d</sup>	3.3	6.1	2.5	2.3
Welfare as child	.09	.29	.08	.20
Years of welfare as child <sup>d</sup>	5.4	7.7	5.7	7.0
Control variables				
Age	46.6	39.7	44.3	41.5
Married	.78	.67	.73	.63
Have children	.77	.85	.71	.74
High school	.31	.43	.30	.25
Some college	.29	.22	.26	.31
College	.23	.06	.25	.10
Mental disability	.07	.30	.05	.14
Physical disability	.09	.19	.09	.16
Learning disability	.04	.15	.05	.18
Black	.12	.20	.10	.21
Hispanic	.11	.14	.14	.12
Observations	5374	266	3993	240

Note: <sup>a</sup> Dummy variable equal to one if rely on relatives some/fairly often or a lot, and zero otherwise. <sup>b</sup> Dummy variable equal to one if rely on friends some/fairly often or a lot, and zero otherwise. <sup>c</sup> Dummy variable equal to one if attend church at least 1 to 3 times a month, and zero otherwise. <sup>d</sup> Only those who have ever received welfare are included in average. Data sources are NCS-R and NSAL, except for childhood welfare variables which are only available in the NCS-R.



Table 4. Distribution of years since last homeless

Percentile	Number of years
5 <sup>th</sup> percentile	0
10 <sup>th</sup> percentile	1
25 <sup>th</sup> percentile	2.5
50 <sup>th</sup> percentile	6
75 <sup>th</sup> percentile	15
90 <sup>th</sup> percentile	23
95 <sup>th</sup> percentile	29
Observations	156

Note: Sample is only individuals who have experienced at least one day homeless since turning 18 years old. Data source is NSAL only because the NCS-R does not include this question.

Table 5: Determinants of lifetime incidence of homelessness

	OLS			Logit (odd ratios)		
	All	Female	Male	All	Female	Male
Rely on relatives	-0.0428*** (0.0124)	-0.0574*** (0.0171)	-0.0225 (0.0173)	0.460*** (0.0929)	0.325*** (0.0912)	0.644 (0.181)
Rely on friends	0.00276 (0.00889)	0.00673 (0.0104)	-0.00319 (0.0143)	1.090 (0.220)	1.213 (0.355)	0.904 (0.258)
Religious	-0.0202*** (0.00742)	-0.0167* (0.00923)	-0.0205* (0.0116)	0.614** (0.126)	0.605 (0.185)	0.639 (0.180)
Ever welfare	0.0832*** (0.0193)	0.0447*** (0.0167)	0.178*** (0.0480)	4.527*** (1.123)	3.865*** (1.428)	6.554*** (2.094)
Welfare years	0.00784** (0.00363)	0.00965** (0.00379)	0.00556 (0.00920)	1.055** (0.0226)	1.063** (0.0262)	1.030 (0.0397)
Controls	X	X	X	X	X	X
Observations	6963	4005	2958	6963	4005	2958
R <sup>2</sup> /Pseudo R <sup>2</sup>	0.080	0.093	0.099	0.169	0.203	0.170

Note: Dependent variable is a dichotomous variable equal to one if the individual ever experienced homelessness as an adult and equal to zero otherwise. Control variables include age, sex, marital status, presence of children, completion of high school, some college and college, mental physical and learning disabilities and race. Odds ratios are shown for logistic regressions. Robust standard errors in parentheses. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

Table 6: Predicted probability of lifetime incidence of homelessness

Ever welfare	Social ties			Prob. of homelessness			Pct. change in prob.		
	Relatives	Friends	Religion	All	Female	Male	All	Female	Male
X				.204	.162	.289			
X	X			.105	.059	.207	-0.48	-0.63	-0.28
X		X		.218	.190	.268	0.07	0.17	-0.07
X			X	.136	.104	.206	-0.33	-0.35	-0.29
X	X	X	X	.073	.044	.131	-0.64	-0.73	-0.55
				.045	.038	.055	-0.78	-0.76	-0.81

Note: Probabilities are predicted based on logistic regressions in Table 5. For all predictions, all control variables are set at their (weighted) sample mean. The welfare years variable is set to zero when the individual is assumed to never have received public assistance, and is set to the average years of public assistance conditional on ever receiving public assistance when the individual is assumed to have received public assistance.

Table 7: Association between social ties and income

	Relatives	Friends	Religion	Relatives	Friends	Religion
Income in thousands of \$	1.007 (0.00863)	0.998 (0.00779)	1.002 (0.00764)			
\$0-\$2,999				-	-	-
\$3,000-\$5,999				0.671 (0.236)	1.113 (0.343)	0.408*** (0.131)
\$6,000-\$8,999				1.052 (0.331)	0.816 (0.240)	0.534** (0.156)
\$9,000-\$11,999				1.230 (0.370)	1.162 (0.329)	0.486** (0.141)
\$12,000-\$14,999				0.862 (0.288)	0.789 (0.258)	0.465** (0.147)
\$15,000-\$17,999				0.764 (0.253)	0.791 (0.243)	0.494** (0.143)
\$18,000-\$20,999				1.224 (0.412)	1.367 (0.388)	0.655 (0.197)
\$21,000-\$23,999				1.076 (0.304)	0.890 (0.238)	0.733 (0.200)
\$24,000-\$26,999				1.089 (0.378)	0.957 (0.311)	0.703 (0.213)
\$27,000-\$29,999				1.104 (0.326)	0.910 (0.248)	0.658 (0.179)
Controls	X	X	X	X	X	X
Observations	2533	2527	2486	2533	2527	2486
Pseudo R <sup>2</sup>	0.043	0.067	0.043	0.047	0.071	0.054

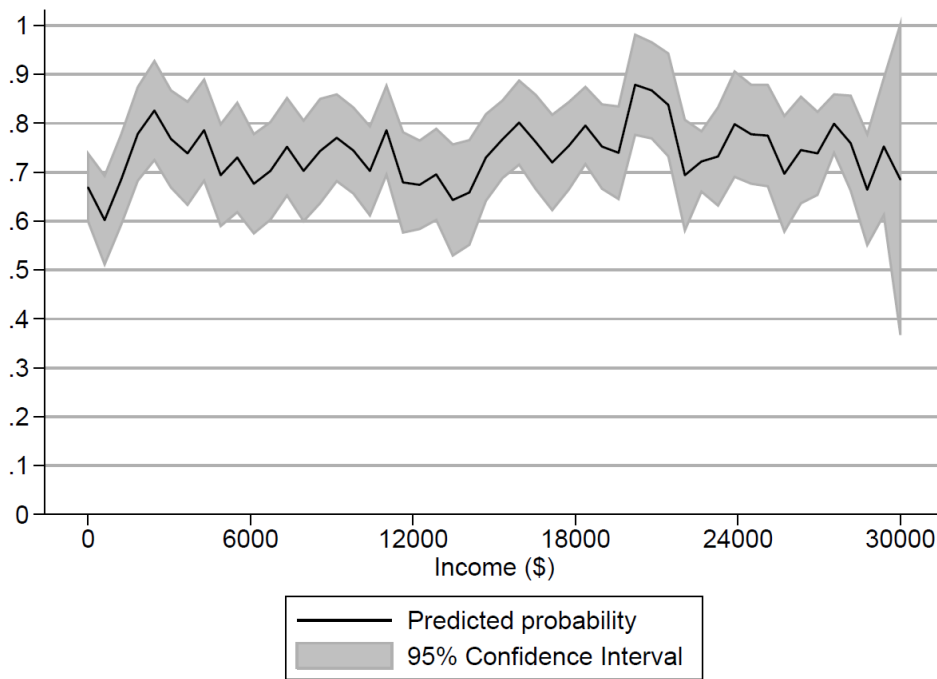
Note: All specifications are estimated with logistic regression. Dependent variable is a dichotomous variable equal to one if the social tie is strong and equal to zero otherwise. Control variables include age, sex, marital status, presence of children, completion of high school, some college and college, mental physical and learning disabilities and race. Sample is restricted to individuals with household incomes of less than \$30,000. Odds ratios are shown. Robust standard errors in parentheses. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

Table 8: Determinants of length of homelessness

	All	Female	Male
Rely on relatives	-0.391 (0.284)	-0.574 (0.420)	-0.0549 (0.292)
Rely on friends	0.373 (0.260)	0.540 (0.402)	0.288 (0.324)
Religious	0.292 (0.300)	0.427 (0.464)	0.199 (0.367)
Ever welfare	-0.0231 (0.273)	0.243 (0.479)	-0.0995 (0.386)
Welfare years	0.000209 (0.0334)	0.00517 (0.0349)	-0.0481 (0.0459)
Controls	X	X	X
Observations	300	158	142
R <sup>2</sup>	0.081	0.203	0.132

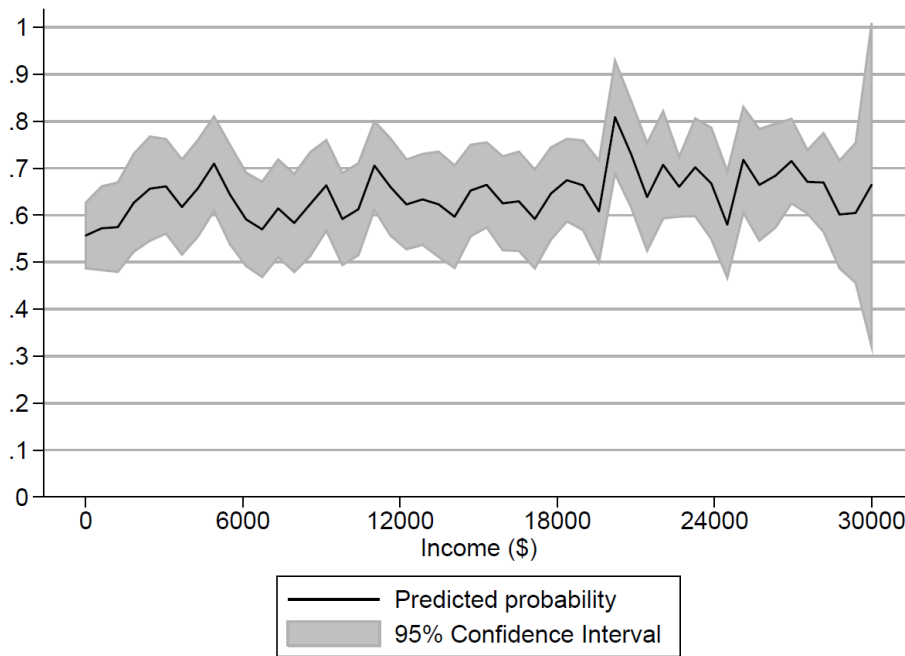
Note: All specifications are estimated with ordinary least squares. Dependent variable is the natural logarithm of the number of days experiencing homelessness since turning 18 years old. Control variables include age, sex, marital status, presence of children, completion of high school, some college and college, mental physical and learning disabilities and race. Robust standard errors in parentheses. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

Figure 1. Predicted probability of strong ties to relatives by income



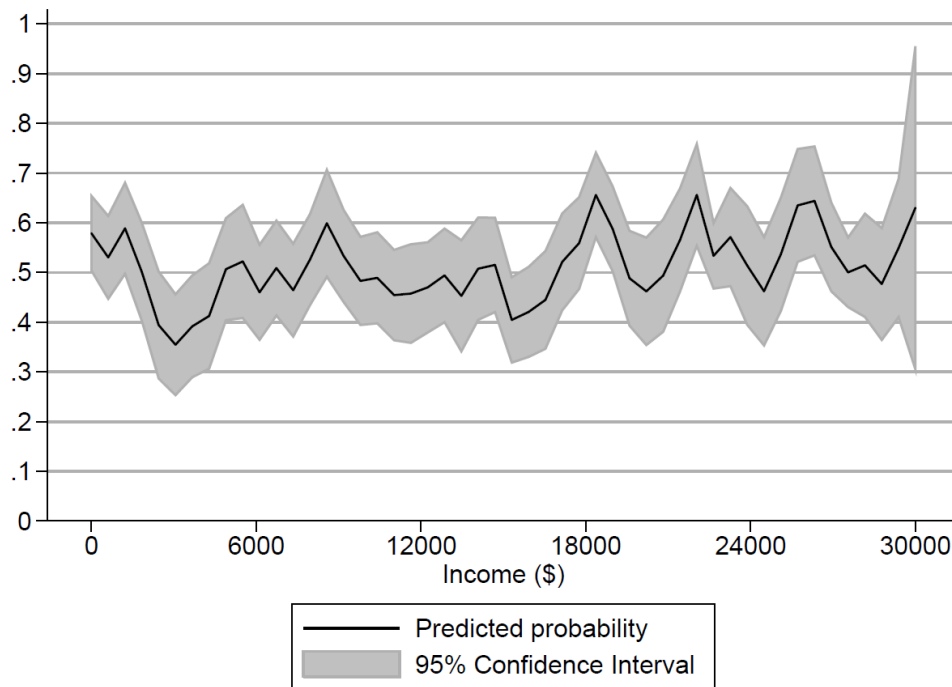
Note: The figure above shows the predicted probability of strong ties to relatives and the associated 95 percent confidence interval over household income. Estimates are based on the semiparametric regression developed in Robinson (1988). All control variables are entered linearly, while the strength of the tie is allowed to vary nonparametrically with income.

Figure 2. Predicted probability of strong ties to friends by income



Note: The figure above shows the predicted probability of strong ties to friends and the associated 95 percent confidence interval over household income. Estimates are based on the semiparametric regression developed in Robinson (1988). All control variables are entered linearly, while the strength of the tie is allowed to vary nonparametrically with income.

Figure 3. Predicted probability of frequent religious attendance by income



Note: The figure above shows the predicted probability of frequent religious attendance and the associated 95 percent confidence interval over household income. Estimates are based on the semiparametric regression developed in Robinson (1988). All control variables are entered linearly, while the strength of the tie is allowed to vary nonparametrically with income.