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Predictors of Homelessness Among Street Living Youth

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Abstract

While few studies have identified predictors of exiting homelessness among adults, even fewer studies have attempted to identify these predictors among homeless youth. The current study explored predictors of change in homelessness among 180 homeless youth between the ages of 14 and 22, recruited through an urban drop-in center. All youth were assessed at baseline, 3 and 6 months. The sample included 118 males and the reported ethnicity included Latino ($n = 54$), Anglo ($n = 73$), Native American ($n = 24$), African American ($n = 6$) and mixed ethnicity or “other” ($n = 23$). Four distinct patterns of change in homelessness were identified among youth which included those who (1) had fairly low rates of homelessness at each follow-up point, (2) started in the mid-range of homelessness, increased at 3 months and sharply declined at 6-months (MHL), (3) reported high rates of homelessness at baseline and low rates at each follow-up point (HLL), and finally, (4) remained consistently homeless across time (HMH). These patterns of change were most strongly predicted by social connections and engagement in HIV risk behaviors. The findings from this study suggest that developing trust and linkages between homeless youth and service providers may be a more powerful immediate target of intervention than targeting child abuse issues, substance use and mental health problems.

Keywords

Homeless youth; Exiting homelessness; Adolescence

Introduction

Homelessness is a widespread challenge in the United States with 12% of the homeless population consisting of adolescents (National Alliance to End Homelessness 2006). According to one representative survey, the annual prevalence of homelessness among adolescents is 7.6% (Ringwalt et al. 1998) making adolescents the single most susceptible age group to experience homelessness (Robertson and Toro 1998). Compared to housed youth, high rates of substance use, mental health problems, teen pregnancy, suicide and high-risk behaviors among homeless youth have been amply noted by researchers (Ennett et al. 1999; Kamieniecki 2001; Molnar et al. 1998).

From a developmental perspective, adolescents are concerned with issues of identity and identity formation (Erikson 1968). From an ecological perspective (Bronfenbrenner 1979) adolescents are concerned with local activity settings, which help them achieve some resolution

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to their identity crisis. For instance, adolescents must deal with linkages back to families, and the development of personal relationships that will eventually lead to intimacy. The problems that homeless, compared to non-homeless, adolescents deal with are much more about immediate activities. Their attempts to resolve problems within the context of their meso-systems (e.g., drug use, victimization, loss of links to positive activity settings—including families) likely impact identity formation.

Most homeless adults are past their identity crisis (whether there is resolution or they remain in a state of confusion), and are more concerned with issues of generativity (Erikson 1968). Adults are facing issues of stagnation or taking care of future generations. The problems of homeless adults revolve more around family activity settings, including the possibility of establishing families, maintaining families for support, but especially developing resources to support self and family. Adult homeless are then more concerned with housing and the cycle of housing and homelessness that they fall into (Haber and Toro 2004). Because their problem is housing, adults may actually want to make links to institutions that can be of use to them in attaining housing (Haber and Toro 2004). So while adolescents might be more likely to avoid linkages with social agencies, adults may be more likely to attempt to overcome barriers to establishing those linkages.

Predictors of Time Spent Homeless

Researchers have identified several correlates of adolescent homelessness including family problems and risk behaviors. Child abuse increases the likelihood that a youth will become homeless (Kaufman and Widom 1999; Sullivan and Knutson 2000). Leaving home because of physical and sexual abuse, family violence and high conflict among family members is often reported by homeless youth (Lindsey et al. 2000). Sullivan and Knutson (2000) found in their sample that neglect was not significantly associated with homelessness. Leaving home may be more related to a traumatogenic influence than to a lack of supervision (Sullivan and Knutson 2000). Moreover, peer networks built by homeless youth while living on the streets can influence engagement in risky behaviors, such as survival sex and drug use (Ennett et al. 1999). Since, youth who have a highly developed social network on the street may be less inclined to leave street life, risky behavior resulting from deviant peer affiliation may be associated with longer homelessness (Ennett et al. 1999).

Some evidence suggests that gender, ethnicity and coping skills may be associated with spending time on the streets. In particular, Yoder et al. (2001) found that males and Anglo youths are more likely than females and non-Anglo youths to spend time on the streets after running away. One study found that more negative and stressful life events lead homeless adolescent males to use less effective coping skills than housed males (Votta and Manion 2004). Ineffective coping skills and their associated negative effects may prevent homeless individuals from seeking treatment services and accessing other resources that may assist them in exiting homelessness (Rayburn et al. 2005).

Exiting or Change in Homelessness

While a limited number of studies have begun to examine predictors of change in homelessness among adults, no study was found which examined predictors of change in homelessness among adolescents and young adults. Even among the adult homeless, although many studies have identified risk and protective factors for the occurrence of homelessness, predictors of exiting/change in homelessness are less understood (Caton et al. 2005; Dworsky and Piliavin 2000; Shinn et al. 1998). Piliavin et al. (1993) proposed that the following areas contribute to the course of homelessness: impaired functioning from substance use and mental illness; low human capital from lack of education and poor job history; disaffiliation from society, family and friends; cultural identification with homelessness and diminished economic resources.

Limited support for the predictive value of these variables has been found by researchers studying exit from homelessness (e.g., Piliavin et al. 1993; Shinn et al. 1998; Zlotnick et al. 2003). In fact, Shinn et al. (1998) found that subsidized housing was virtually the only predictor of residential stability after shelter involvement. Individual characteristics were more important in predicting shelter requests than in predicting later stability.

Further, findings from some studies do not converge. Two studies indicate that substance abuse and mental illness reduce the likelihood of exiting homelessness (Caton et al. 2005; Dworsky and Piliavin 2000) while Calsyn and Rodes (1994) in a survey of 300 homeless adults found that psychiatric history and a history of institutional placement did not predict exit from homelessness. Yet, findings from some studies converge. Several studies report that age predicts both length of time since first homeless and the current length of homelessness with older adults having longer homeless episodes (Calsyn and Rodes 1994; Caton et al. 2005). However, homeless minors cannot sign a lease for housing, and being 18 years or older might be associated with reduced homelessness among youth. Adult studies consistently show that those with access to a social service worker or who utilize community services are more likely to exit homelessness (Dworsky and Piliavin 2000; Zlotnick et al. 2003; McBride et al. 1998) as are those with greater family support (Caton et al. 2005; Zlotnick et al. 2003).

Current Study

The goal of this study was to identify predictors of change in homelessness over a 6-month period among street living youth who accessed a community drop-in center. This was an exploratory study, but based upon the literature reviewed, it was expected that reduced homelessness over time would be predicted by (1) older age, (2) absence of sexual/physical abuse, (3) being non-Anglo, (4) being female, (5) lower frequency of substance use, (6) fewer runaway episodes, (7) fewer mental health diagnoses, (8) fewer HIV risk behaviors and (9) more coping skills. All youth were engaged through a drop-in center but those receiving more intensive treatment services through the drop-in and those showing greater system connection including more education, employment and medical care days (e.g., social stability) at baseline were expected to show reduced homelessness over time as well. This study can provide information about whether predictors of homelessness are similar to those that predict change in homelessness. Also, findings from this study can begin to address the scarcity of information needed to direct intervention efforts for adolescents and young adults living on the streets.

Methods

Participants

Referrals to the project were obtained through a drop-in center for homeless youth. All participants were involved in a larger study examining therapy outcome with homeless youth. Hence, all youth in this sample agreed to the possibility of treatment. Inclusion criteria for youth: (1) between the ages of 14–22, (2) had been living in the area for at least 3 months, with plans to remain for at least 6 months, (3) met DSM-IV criteria for Alcohol or other Psychoactive Substance Use Disorders, as assessed by the Computerized Diagnostic Interview Schedule for Children (CDISC; Shaffer 1992), and (4) met criteria for homelessness as defined by the Department of Health and Human Services as “a situation in which a youth has no place of shelter and is in need of services and shelter where he or she can receive supervision and care” (Runaway and Homeless Youth Program/Title 45, 1999, p. 300). Youth were not eligible for the study if there was evidence of unremitted psychosis, as determined by the CDISC, or other condition, which would impair their ability to understand and participate in the research.

Our sample ($n = 180$) consisted of 118 (66%) males and 62 (34%) females. The average age of the youth was 19.21 ($SD = 2.14$). Self-identified ethnicity of the youth was 54 (30%) Latino/

a, 73 (41%) Anglo, 24 (13%) Native American, 1 (1%) Asian, 6 (3%) African American, and 22 (12%) “other” or mixed race. Only 21 (12%) were currently enrolled in school at the time of intake assessment. One hundred forty-eight (82%) youth had ever been arrested, 57 (32%) reported ever being in a gang and 90 (44%) reported ever attempting suicide. Reports of sexual (58, 32%), and physical abuse (80, 44%) were also high among these youth. Number of youth with diagnoses of alcohol abuse or dependence (based on CDISC) was 122 (68%), marijuana abuse or dependence was 148 (82%), and other substance abuse or dependence was 84 (47%).

Procedure

Potentially eligible youth were screened for participation in the study through a drop-in center. The drop-in center offered food, showers, clothing, a place to rest during the day, and case management that linked youth with community resources at the youth’s request. Forty youth each day accessed drop-in services, and it was open 8 h per day. The assessment battery was administered by the research assistant (RA) to those eligible who consented to participate. The data from this study came from a larger study to investigate treatment efficacy for homeless youth (Slesnick et al. 2007).

The youth was the only data source for all cases. Follow-up interviews were completed at 3 and 6 months post-intake. Follow-up rates were 73% (131/180) at 3 months and 87% (156/180) at 6 months. The assessment, including the diagnostic battery, required approximately 2 h to complete and was conducted in offices within the drop-in center. Youth were offered a care package at the completion of their baseline assessment, which included toiletries, a blanket, socks, underwear, and food items, and were compensated \$50 for each follow-up assessment. The University of New Mexico’s institutional review board (IRB) provided approval for the conduct of this study.

Materials

A Demographic Questionnaire assessing a set of core variables used to characterize and compare samples was administered by the examiner. These demographic items included age, gender, self-identified ethnicity, number of previous runaway and homeless episodes, age of first runaway or homeless episode, and physical and sexual abuse. Because Latino ethnicity was the dominant ethnic minority group in this sample, and because few studies examine non-Anglo outcomes, we included Latino/a, Anglo, and “other” as exploratory predictors. Physical abuse was determined by the question “Has anyone ever hurt you physically—enough to leave marks or bruises or burns?”; sexual abuse was measured by the question, “Has anyone ever touched you sexually in a way that made you feel uncomfortable OR hurt you OR that was against your will?” If the youth answered either of these questions in the affirmative, the interviewer probed the nature of the event to confirm that abuse had occurred, who the perpetrator was, their age, the length of the abuse, age of the youth when the abuse occurred, and if the abuse was reported to authorities. For the purposes of this study, whether physical or sexual abuse occurred (Yes or No) was used as a predictor in the analyses. Also, random assignment of youth to treatment or no treatment (treatment as usual) in the larger trial was used as a predictor of change in homelessness.

The Health Risk Questionnaire incorporated items from the Health Risk Survey (Kann et al. 1989) and the Homeless Youth Questionnaire (Johnson et al. 1996), which, together, address a wide range of HIV-attitudes, knowledge and risk behaviors. Johnson et al. (1996) examined seven specific HIV/AIDS risk factors that were included in the Health Risk Questionnaire: (a) IV drug use; (b) multiple sexual partners; (c) high-risk sexual partners; (d) irregular condom use, defined as whether or not the respondent or partner usually uses a condom; (e) anal sex; (f) survival sex; and (g) ever having had an STD. Johnson et al. (1996) aggregated these risk factors into an overall risk index, which is a simple count of the number of risk factors reported

by the youth (range 0–7; $\alpha = .76$). In the current study, we utilized the same aggregate for lifetime risk as well as risk within the past 3 months as predictors. Internal reliability for this sample was $\alpha = .73$ for the HIV risk subscale.

The Form 90, developed for NIAAA funded Project Match (Miller and DelBoca 1994) was the primary measure of quantity and frequency of drug and alcohol use. This measure uses a combination of the timeline follow-back method (Sobell and Sobell 1992) and grid averaging (Miller and Marlatt 1984). This tool has shown excellent test–retest reliability for indices of drug use in major categories (Tonigan et al. 1997; Westerberg et al. 1999) including with runaway substance abusing adolescents (Slesnick and Tonigan 2004) with kappas for different drug classes ranging from .74 to .95. For the current study, the Form 90 provided the percent days of substance use and homelessness during the assessment periods. In addition, the Form 90 yielded an index of social stability, which included the percent days within the study period of employment, education, and medical care.

Shaffer's CDISC (1992) is a computerized instrument consisting of 263 items measuring the criteria for DSM IV diagnoses. CDISC was developed specifically to diagnose children and adolescents, is prominent in the field (Winters and Stinchfield 1995) and was administered to youth by the RA. Number of diagnoses obtained from CDISC was used as a predictor. The adolescent version of the Coping Inventory for Stressful Situations (CISS; Endler and Parker 1990) was used to measure youths' coping strategies. The CISS consists of 48 items to be rated on a 1 (not at all) to 5 (very much) point Likert-type scale. The three factor-analytically derived subscales were included as predictive measures: (1) task-oriented coping, (2) emotion-oriented coping, (2) avoidance-oriented coping. Higher total scores on each subscale indicate a greater degree of coping activity for the person on that dimension. Reliabilities for the three subscales have been reported at .90, .88, and .83, respectively (Parker and Endler 1992). In the current sample reliabilities were .92, .89, and .85.

Results

Data Analysis Strategy

Since change in homelessness has rarely been examined in an adolescent/youth sample, we used a fairly exploratory analysis strategy. First we simply reviewed the raw data. Figure 1 provides the data points for the three time points for a random selection of the sample. These pictures become mostly black with large samples. Thus, we selected half of the sample for the figure so that the picture would be clearer. Figure 1 shows variability in the change in percent homeless days at baseline and over the course of 6 months. It appears that there are some adolescents who started high, dropped in percent homeless days within the period and then went back up; some showed a fairly consistent percent of homeless days during the period, while others showed a decrease and still others showed an increase.

Given the sample size and the exploratory nature of this analysis, we elected to do a cluster analysis to determine if there were distinguishable groups in terms of their change in homeless days across the period of the study. We used a two-step cluster analysis first, and then used a quick cluster approach with SPSS in an attempt to verify the first set of results. We then used multinomial regression to see if baseline characteristics of the participants could be used to predict cluster membership.

The two-step cluster analysis identified four clusters or groups by their scores on percent days homeless within the period for each of the three data collection points (baseline, 3 months and 6 months post-baseline). The quick cluster procedure when set to identify four clusters, identified the same four clusters with the same cluster membership for each participant with one exception. The final cluster means from both procedures are presented in Table 1, and a 4

$\times 4$ table for cluster membership by each procedure is also provided. From these results a four-cluster solution appears to be stable.

The first cluster or group appears to be those who had fairly low rates of homeless days in each period (20%, 11%, and 4%, respectively), which we named the Low group. The second cluster started out at 60% days homeless within the last 90 days at baseline, increased to 86% at the next data collection and then decreased to about 6% at the last follow-up period. This group was named the Medium (baseline)-High (3-months)-Low (6-months) (MHL) group corresponding to percentage of homeless days at each assessment point. The third group was nearly 100% homeless at baseline (96%), and at both follow-up periods was at 8% days homeless, which we named the High-Low-Low (HLL) group. The fourth group remained consistently homeless through all data collection points (72%, 58%, and 84%, respectively), which we named the High-Medium-High (HMH) group.

Thus, there appear to be distinct patterns of change in homelessness for this group of youth. The next question was what might predict these patterns. We used multinomial logistic regression to determine what demographic and other characteristics would predict the likelihood of being in a particular group. Multinomial logistic regression determines the odds of group membership in comparison to a reference group. In this instance, we selected the Low group, or the group with the lowest percent days homeless throughout the study period as the reference group. Thus, the resulting log odds of membership in another group are in comparison to this group of youth.

In order to assess multicollinearity we computed a correlation matrix of the continuous independent variables. This can be seen in Table 2. The independent variables used to predict cluster membership appear to be fairly independent of each other. Substance abuse was positively related to age only. Social stability was not related to the other independent variables, the coping subscales were intercorrelated. Only emotion-focused coping was related to the CDISC and HIV risk. Thus, multicollinearity did not appear to be a factor in the regression analysis.

We used a direct entry method and used age, gender, ethnicity, whether there was a history of physical and/or sexual abuse, whether the participant was randomly assigned to the treatment condition or treatment as usual (TAU) condition, HIV risk, social stability, number of times runaway, coping skills, and number of diagnosable disorders according to the CDISC. The full model was significant ($\chi^2(45) = 87.69; p < .001$). The pseudo r -square statistics suggest that this model explains a significant amount of variability (Cox and Snell $R^2 = .51$; Nagelkerke $R^2 = .55$). The most significant variables in the model were HIV risk, social stability, and ethnicity. The model correctly classified 58.2% of the cases, with 67.9% of those in the reference group (Low) correctly classified, 54.3% in the Medium-High-Low group correctly classified, 54.3% in the High-Low-Low group correctly classified and 58.3% in the High-Medium-High group correctly classified. Thus, the model was best at predicting those who would be in the Low group.

Table 3 provides the unstandardized B, significance, and the Odds Ratio (OR) for predicting cluster membership compared to the reference group (Low group). For the Medium-High-Low group, the log odds of being in this group decreased with increases in social stability at baseline. For every unit change in social stability there was a .104 decrease in the odds of being in the Medium-High-Low group versus the Low group. This converts to a probability .094 for being in the Medium-High-Low group for every unit decrease in social stability at baseline. Males were much more likely to be in this group than females (OR males = 6.32). Female's OR was thus .16 (the reciprocal of males' OR). This converts to a probability of .86 of being in the Medium-High-Low group compared to the Low group if the participant is a male, while the

probability for a female participant to be in the Medium-High-Low group in comparison to the Low group was .14.

Treatment group tended toward significance ($p = .067$) with the log odds of being in the Medium-High-Low group .291 by treatment group. The OR for the treatment group was .291, while the OR for the TAU group was 3.43. These convert to the probability of being in the Medium-High-Low group if in the treatment group to .22 and the probability of being in the Medium-High-Low group if the participant was in the TAU group to .77.

The parameter estimate for being Latino/a predicting membership in the Medium-High-Low group was significant as well ($p = .043$) and was negative. The odds ratio was .133. Thus, participants who were Latino/a were less likely to be in the Medium-High-Low group in comparison to the Low group.

Predictors for being in the High-Low-Low group in comparison to the Low group were social stability and ethnicity. Again, with increases in baseline social stability, participants were less likely to be in the High-Low-Low group in comparison to the Low group. With each unit increase in social stability the participant was .01 times less likely to be in the High-Low-Low group in comparison to the Low group. Being Anglo also made it less likely to be in the High-Low-Low group than in the Low group. The odds ratio was .12, which converts to a .107 decrease in probability of being in the High-Low-Low group if the participant is Anglo in comparison to being in the Low group.

Membership in the High-Medium-High group was best predicted by HIV risk, social stability, and ethnicity. The odds ratio for HIV risk was 3.75 and the parameter estimate was positive, suggesting that with each unit increase in HIV risk the odds of being in the High-Medium-High group versus the Low group increased by a factor of 3.75. This converts to a probability of .79. The odds ratio for social stability was .086 and the estimate was negative. Again this suggests that for every unit increase in social stability the odds of being in the High-Medium-High group versus the Low group decreases by a factor of .086. The probability for this is .079. Finally, both being Anglo and being Latino/a were negatively related to being in the High-Medium-High group. Thus those in the “other” ethnicity category were more likely to be in the High-Medium-High group in comparison to the Low group than either Anglo or Latino/a participants. The probability of being in the High-Medium-High versus the Low group if the participant was in the “other” race/ethnicity category was .87.

Discussion

This study explored predictors of change in homelessness over a period of 6 months among a convenience sample of street living youth engaged through a community drop-in center. Four distinct patterns of change in homelessness were identified. The most consistent predictor of group membership was level of connection to social systems (or social stability) as measured by the baseline percent days of education, employment, and medical care received in the assessment period. The more connections youth had with these social systems, both formal and informal, at the beginning of the study, the more likely they were to decrease the number of homeless days and to start with fewer homeless days in general. Involvement in these social systems suggests that those youth possess a level of trust and skills to navigate the broader mainstream system. Trust and navigation skills likely enhance stabilization and reintegration efforts. Similarly, intensive treatment marginally predicted membership in the Medium-High-Low group. Research with adult homeless individuals suggests that supportive connections with others, including community service agencies is an important factor for returning to stable living arrangements (Raleigh-DuRoff 2004) and this study supports those findings. In particular, the findings here suggest that more intensive treatment for those with medium and

higher baseline levels of homelessness compared to low levels of baseline homelessness may be especially potent.

The factor that predicted membership in the consistently high homeless group was HIV risk. In other words, the participants who had the highest percentage of homeless days throughout the study were those who were engaging in the riskiest behaviors at baseline. Possibly, the high-risk behaviors are associated with a tendency towards passive suicidal behavior or greater entrenchment in the street subculture. Certainly, future research will need to examine mediators of high-risk behaviors on homelessness such as assertion and coping skills, peer relations or depression. It is likely that these potential mediators, rather than the HIV risk behavior itself, reduce a youth's likelihood of leaving the streets.

The patterns of change in percent homeless days in the period can also be predicted by demographic characteristics of the participants. Males were more likely to be in a group that started off at a "mid" level of homeless days, reported a higher percentage of homeless days at the three month follow-up and then showed a steep decrease in homelessness at the six month follow-up in comparison to the group who started with fewer homeless days and remained at a low level of homelessness. Latino/a participants had a somewhat different pattern of homelessness than Anglo participants and both were less likely to be in the group that had a consistently high number of homeless days.

Some research could help explain the gender and ethnicity differences observed in this study. Schweitzer and Hier (1994) found that homeless adolescent males perceived lower levels of maternal support than females, and Van Dusen et al. (1983) found that males may be more susceptible than females to environmental distress. Thus, males may be more likely to leave home for the streets because of conflictual family situations, or to those situations that are often associated with leaving more stable housing for the streets. However, living on the streets is also associated with significant levels of environmental stress, and males may thus be more likely to leave the streets than females as a means of escaping environmental distress.

In regard to ethnicity, Slesnick et al. (2002) found that Latino runaway adolescents reported less substance use and greater levels of familism than Anglo youths. High levels of familism, or strong identification with and attachment to family members and a traditional culture, has been shown to deter Latino youths from delinquent behavior (Sommers et al. 1993). Familism likely serves a protective role against chronic homelessness (through connection to culture and family), though more research is needed to explore this further. Native Americans and those reporting "mixed" ethnicity comprised the majority of the non-Anglo and non-Latino/a category, and this group showed the worst outcomes. While gender and ethnicity cannot be targets of intervention directly, future research might indicate that the impact of these demographic variables on change in homelessness are mediated by other variables such as susceptibility to environmental distress, coping, and family/cultural attachment.

Substance use, mental health problems, runaway episodes, age, childhood abuse, and coping skills did not predict change in homelessness among this sample of youth. While older age may be associated with longer homeless episodes among adults, it was not predictive of change in homelessness among youth. Because youth present with different developmental and contextual struggles by the nature of their age and lower social status in our society, it is not unexpected that patterns of change in homelessness would differ from that of adults. Also, it appears that different mechanisms are involved when becoming homeless than when exiting homelessness. This suggests that prevention efforts should target different areas of risk than should intervention efforts. For example, while child abuse is consistently identified as a predictor of adolescent homelessness, resolution of this trauma may not negatively impact stabilization efforts, at least in the short-term. Instead, immediate intervention or therapeutic

focus may be more effective when targeted towards youth reporting high HIV risk behaviors and low levels of system connection.

Limitations

Several limitations should be considered when interpreting the findings of this study. The sample was small, and this limited the analyses that could be conducted in order to fully examine change in homelessness among these youth. For example, with a larger sample, latent class growth models might be the most appropriate statistical methods to utilize, as there may be groups that change differently than other groups, and the change may not be linear. Additionally, the participants in this study were recruited as a sample of convenience from a drop-in center and were amenable to intervention efforts. Since these youth were accessing services and willing to receive further services, they may not represent the entire population of street-living youth, especially those that refuse to access drop-in center services. While the longitudinal data collection method in this study allows for the examination of changes in homelessness over time, the follow-up period was short, and a longer follow-up period would provide a better analysis of change in homelessness. Finally, validity of self-report data is always a concern, however great care was taken to build trust among youth and to create a non-threatening environment. Even with these limitations, this study provides useful information regarding change in youth homelessness. One strength of this study is that a diverse sample of treatment seeking, street living, homeless youth were included. The participants were ethnically diverse and reported a wide range of mental health, risk behaviors, and homeless experiences.

Summary

Securing housing is an important goal for homeless youth and service providers. Much research identifies homelessness as a risk factor for a variety of problems including mortality, substance use, victimization, and physical and mental health problems. However, adolescent minors who sever connections with family or the foster care system have difficulty obtaining the guardian consent necessary to obtain permanent housing. Even with guardian consent or adult status, many of these adolescents and young adults face challenges obtaining housing due to the lack of stable employment and often, substance use or mental health problems. Without housing, successfully addressing substance use, mental health, employment and education is especially challenging.

The main finding of the current study is that the baseline connection to the broader system was associated with better housing outcomes, suggesting that the development of linkages should be an early target of intervention—possibly even more so than focusing on substance use, mental health, and child abuse history. While HIV risk was also predictive of consistently high rates of homelessness across time, engagement in high-risk behaviors may also reflect strong linkages, but to the street subculture. The social ecological model (Bronfenbrenner 1979) notes that the development of linkages or connections among people—service providers and homeless youth—is necessary in order for individuals to move between such systems as the streets, mental health agencies, and stable housing. If connections or linkages are not facilitated through the development of trust and shared goals, then the potential to intervene in the lives of homeless youth will likely suffer. Moreover, given the multiple barriers and struggles that youth experience (transportation, financial, education, health issues, trauma histories, etc.), coordination and linkages among service providers is likely nearly as important in achieving successful stabilization as the connection and linkage between providers and youth.

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Fig. 1.
Percentage of homeless days in the period over the three time points for of a random selection
of 50% of the sample

Table 1
Final cluster centers for the two-step and quick cluster analyses with cluster membership

Percent days homeless	Cluster		MHL		HLL		HMH	
	2-Step	Quick	2-Step	Quick	2-Step	Quick	2-Step	Quick
Baseline	.22	.20	.58	.60	.96	.96	.72	.72
3 month follow-up	.09	.11	.85	.86	.076	.08	.58	.58
6 month follow-up	.02	.04	.06	.06	.077	.08	.85	.84
Cluster membership (n)	Quick cluster		MHL		HLL		HMH	
Low	Low							
Two-step	29		0		0		0	
MHL	1		36		0		0	
HLL	0		0		38		0	
HMH	0		0		0		22	

Table 2

Correlation matrix of continuous independent variables

	Substance abuse	Social stability	Avoid cope	Emotion cope	Task cope	HIV risk	C-DISC	Runs	Age
Subs abuse	—								
Soc stability	-.07	—							
Avoid cope	-.04	.00	—						
Emotion cope	.06	.14	.33**	—					
Task cope	.11	-.05	.51**	.05	—				
HIV risk	.09	-.07	.15	.20*	-.07	—			
C-DISC	.06	-.07	-.00	.20*	.11	.07	—		
Num. runs	.16	-.05	.02	-.02	.01	.10	.11	—	
Age	.28**	-.14	-.00	.02	.08	.15	.00	.04	—

* Note. $p < .05$,

**
 $p < .01$

Table 3
Parameter estimates for each cluster with odds ratio for all variables in the equation

Cluster	<i>B</i>	<i>p</i> -value	OR
<i>MHL compared to Low</i>			
HIV risk	.79	.093	1.00
Social stability	-2.26	.006	.104
C-DISC	-.189	.477	.828
Avoid coping	.021	.558	1.02
Emotion coping	.019	.497	1.02
Task coping	.000	.993	1.00
Substance use	.011	.275	1.01
Number of runs	-.033	.166	.967
Age	-.070	.690	.933
Male	1.84	.034	6.32
Female	—	—	—
Anglo	-1.00	.244	.368
Latino/a	-2.01	.043	.133
Other	—	—	—
No sex abuse	-.439	.591	.645
Sex abuse	—	—	—
No physical abuse	.300	.670	1.35
Physical abuse	—	—	—
Treatment	-1.23	.067	.291
TAU	—	—	—
<i>HLL compared to Low</i>			
HIV risk	.54	.260	1.71
Social stability	-4.56	.000	.010
C-DISC	-.351	.222	.704
Avoid coping	.021	.585	1.02
Emotion coping	.047	.087	1.04
Task coping	.017	.542	1.01
Substance use	.013	.204	1.01
Number of runs	-.008	.631	.992
Age	-.010	.958	.990
Male	.401	.632	1.49
Female	—	—	—
Anglo	-2.14	.024	.117
Latino/a	-1.78	.078	.168
Other	—	—	—
No sex abuse	.578	.517	1.78
Sex abuse	—	—	—
No physical abuse	.140	.853	1.15
Physical abuse	—	—	—
Treatment	-1.16	.110	.313
TAU	—	—	—
<i>HMH compared to Low</i>			
HIV risk	1.32	.009	3.75
Social stability	-2.45	.014	.086
C-DISC	-.051	.867	.950
Avoid coping	.019	.639	1.02
Emotion coping	-.004	.889	.996
Task coping	.001	.977	1.00
Substance use	.020	.086	1.02
Number of runs	.006	.727	1.00
Age	-.056	.782	.945
Male	1.48	.127	4.39
Female	—	—	—
Anglo	-2.26	.017	.104
Latino/a	-3.34	.003	.035
Other	—	—	—
No sex abuse	-.304	.753	.738
Sex abuse	—	—	—
No physical abuse	1.19	.158	3.30
Physical abuse	—	—	—
Treatment	-.005	.995	.995
TAU	—	—	—

Note. – These are redundant categories within the analysis and estimates are not calculated