



# HHS Public Access

Author manuscript

*Youth Soc.* Author manuscript; available in PMC 2021 July 23.

Published in final edited form as:

*Youth Soc.* 2020 March 1; 52(2): 272–287. doi:10.1177/0044118x18767032.

## Childhood Disadvantage, Social and Psychological Stress, and Substance Use Among Homeless Youth: A Life Stress Framework

Kimberly A. Tyler<sup>1</sup>, Rachel M. Schmitz<sup>2</sup>

<sup>1</sup>University of Nebraska–Lincoln, USA

<sup>2</sup>The University of Texas Rio Grande Valley, Edinburg, USA

### Abstract

We used a life stress framework to examine linkages between distal or primary stressors (e.g., child abuse) and proximal or secondary stressors (e.g., street victimization) and their association with substance use among 150 youth experiencing homelessness in the Midwestern United States. Results revealed that numerous primary stressors such as number of times youth ran from home and number of foster care placements were associated with secondary stressors, such as anxiety, total duration of homelessness, and street victimization. Only street physical victimization (e.g., been beaten up since leaving home) was associated with greater substance use. Our findings provide a more holistic picture of both distal and proximal life stressors that these young people experience and reveal the complexity of issues that service providers must acknowledge when working with this population.

### Keywords

stressors; childhood disadvantage; street environment; substance use; homeless youth

---

According to the Substance Abuse and Mental Health Services Administration (2016), “youth are the fastest growing segment of people experiencing homelessness and may be at greater risk of homelessness than any other age group” (p. 1). Risk factors associated with youth homelessness include family conflict and abuse (Tyler & Cauce, 2002; Tyler & Schmitz, 2017), mental health disorders (Brown, Begun, Bender, Ferguson, & Thompson, 2015), and substance misuse (Hadland et al., 2011). Relative to stably housed peers, a staggering 2 to 3 times more youth experiencing homelessness use substances (Kipke, Montgomery, & MacKenzie, 1993): 75% report lifetime alcohol and/or marijuana use (Bousman et al., 2005), and as many as one third engage in illicit drug use (Hadland et al., 2011). These disproportionately high substance use trends highlight a significant public health concern for these young people, as they can lead to adverse mental health

---

Reprints and permissions: [sagepub.com/journalsPermissions.nav](https://sagepub.com/journalsPermissions.nav)

**Corresponding Author:** Kimberly A. Tyler, Department of Sociology, University of Nebraska–Lincoln, 717 Oldfather Hall, Lincoln, NE 68588-0324, USA. [kim@ktresearch.net](mailto:kim@ktresearch.net).

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

consequences (Kidd & Carroll, 2007), prolonged substance abuse (Thompson, Bender, Ferguson, & Kim, 2015), and long-term homelessness (Auerswald & Eyre, 2002).

Although research has demonstrated that numerous youth experiencing homelessness engage in high rates of substance use (Hadland et al., 2011), there is a dearth of empirical studies that have examined both primary and secondary stressors and their associations with substance use. This is particularly crucial given that the life stress framework assumes that individuals who are exposed to one serious stressor (e.g., child sexual abuse) are likely to experience additional stressors. To address these gaps, we use data from 150 youth experiencing homelessness in the Midwestern United States to examine the linkages between primary stressors (i.e., *childhood disadvantage*, including the age at which youth first ran away from home, the number of times they ran away, child physical and sexual abuse, and number of foster care placements) with secondary stressors (e.g., *social and psychological stress* including duration of homelessness, difficulties finding basic necessities, street physical and sexual victimization, and anxiety and depressive symptoms). Associations between primary and secondary stressors are then examined in relation to youths' substance use. Identifying multiple stressors within the lives of these young people is important because it provides a more holistic picture of life stressors and it reveals the complexity of issues that service providers must consider when working with this vulnerable population.

## Risk Factors Associated With Substance Use

### Primary Stressors

Young people encountering homelessness experience numerous early or *primary stressors* that increase the likelihood that they will run away from home. We refer to these combined primary stressors (e.g., child abuse, foster care placement) as *childhood disadvantage* because they create adverse socioeconomic conditions and are linked to multiple negative outcomes. Specifically, running away from home more often is associated with more physical street victimization (Tyler, Gervais, & Davidson, 2013) and with major depression (Brown et al., 2015). Running away at an earlier age has also been linked to sexual assault among females (Tyler, Whitbeck, Hoyt, & Cauce, 2004). Youth who have experienced child physical and sexual abuse prior to running away were at greater risk of physical and sexual street victimization, respectively (Tyler & Melander, 2015). Moreover, experiencing more child abuse has been linked to higher levels of depressive symptoms (Bender, Ferguson, Thompson, & Langenderfer, 2014; Lim, Rice, & Rhoades, 2015).

Pathways to experiencing homelessness among youth often stem from childhood institutional living, such as foster care. Research has found that foster care youth have experienced more negative outcomes compared with their non-foster care counterparts (Taussig, 2002; Unrau & Grinnell, 2005; Vaughn, Ollie, McMillen, Scott, & Munson, 2007). In addition, homeless youth with a foster care history ran away from home more often compared with homeless youth without a history of foster care, and physically abused homeless youth experienced greater depressive symptoms regardless of foster care placement (Tyler & Melander, 2010). Early child abuse (Rew, Taylor-Seehafer, & Fitzgerald, 2001; Tyler & Melander, 2015) and foster care placement (Braciszewski & Stout, 2012;

Yoshioka-Maxwell, Rice, Rhoades, & Winetrobe, 2015) have been linked to substance use among homeless and non-homeless youth.

### Secondary Stressors

Young people combating homelessness also experience proximal or *secondary stressors* after they run away or leave home. These include *social stressors* (i.e., duration of homelessness, difficulties finding basic necessities, and victimization) and *psychological stressors* (i.e., depression and anxiety) that place them at further risk of substance misuse. Among homeless youth, depression (Hadland et al., 2011), anxiety (Milburn et al., 2009), and longer duration of homelessness (Unger, Kipke, Simon, Montgomery, & Johnson, 1997) were tied to elevated substance use. Females who experienced more physical street victimization also had greater alcohol use, while those who experienced more sexual street victimization were more likely to use marijuana (Tyler et al., 2013). Youth who had been victimized on the street were also more likely to have a substance use disorder (Thompson et al., 2015). Finally, those who lack basic necessities are thought to be at greater risk of negative outcomes in general (Milburn et al., 2009) and may turn to substance use to cope with stressful situations (Kidd & Carroll, 2007).

### Theoretical Background and Hypotheses

We use a “life stress framework” (Lin & Ensel, 1989; Pearlin, 1989), which emphasizes multiple levels of influence (individual, family, and environment) and both distal (primary stressors) and proximal (secondary stressors) risk factors. These complex elements are fundamental to understanding the relation between stressful life experiences and substance use among youth experiencing homelessness. The life stress framework assumes that individuals who are exposed to one serious stressor (e.g., child sexual abuse) will be exposed to additional stressors, which can then cluster together (Pearlin, 1989). Applied to the current study, we hypothesized that all childhood disadvantage variables (primary stressors), including age at which youth first ran away or left home, the number of times youth ran, higher rates of child physical and sexual abuse, and more foster care placements would be associated with social and psychological stressor variables (secondary stressors), including duration of homelessness (street time), difficulties finding basic necessities, higher rates of physical and sexual street victimization, and higher levels of anxiety and depression. Next, we hypothesized that secondary stressors (listed above) would be positively associated with elevated substance use. The model controls for respondent’s sex.

### Data and Method

We interviewed 150 youth in shelters and on the street from July 2014 to October 2015 in two Midwestern cities in the United States. Selection criteria required participants to be between the ages of 16 and 22 years and meet the definition of runaway or homeless. *Runaway* refers to youth below the age of 18 years who have spent the previous night away from home without the permission of parents or guardians (Ennett, Bailey, & Federman, 1999). *Homeless* youth, as inclusively defined by the 2015 reauthorization of the McKinney—Vento Homeless Assistance Act, includes those who lack *permanent* housing, such as having spent the previous night with a stranger, in a shelter or public place, on the street,

staying with friends, staying in a transitional facility or other places not intended as a domicile (National Center for Homeless Education & National Association for the Education of Homeless Children and Youth, 2017). All participants in the current study were unaccompanied youth, meaning they were not experiencing homelessness with family members or caregivers.

Four trained and experienced interviewers conducted the interviews (two in each city). Interviewers approached youth at shelters, food programs, and during street outreach endeavors and varied the times of the day that they went to these locations. Informed consent or assent was obtained from all participants, who were informed that they would need to complete all three parts of the study if they agreed to participate (i.e., baseline structured interview, 30 days of text messaging and a follow-up structured interview) reported elsewhere (Tyler and Olson, 2018). We report findings from the first part of the study, a baseline structured interview, which lasted 45 minutes and for which participants received a US\$20 gift card for completing. Service referrals were offered to all youth regardless of their participation. Less than 3% of youth ( $n = 5$ ) declined to participate or were ineligible. The university Institutional Review Board (IRB) at the first author's institution approved this study.

Because some respondents were minors, we applied for and received a waiver of parental consent from the IRB. A waiver of parental consent is an appropriate scientific approach with this population because many of the youth in this study would be considered mature minors. These youths have already made early transitions to adult behaviors and, in some cases, independence. With the waiver of parental consent, all study participants were deemed mature enough to give consent or assent.

## Measures

*Age first left home* was a single item that asked youth how old they were the first time they ran away or left home.

*Number of times run* was a single item that asked youth for the total number of times that they had ever run away or left home.

*Child physical abuse* was a summed scale of 16 items from the Conflict Tactics Scale (Straus, Hamby, Finkelhor, Moore, & Runyan, 1998). Youth were asked, for example, how frequently their caretaker shook them or kicked them hard (0 = *never* to 6 = *more than 20 times*). A mean scale was created where a higher score indicated more types of physical abuse ( $\alpha = .93$ ).

*Child sexual abuse* included seven items (adapted from Whitbeck & Simons, 1990) that asked youth how often any adult or someone at least 5 years older asked them, for example, to do something sexual or had them touch the adult sexually (0 = *never* to 6 = *more than 20 times*). Due to skewness, the seven items were first dichotomized (0 = *never* and 1 = *at least once*) and then a count variable was created where a higher score equaled a greater number of different types of sexual abuse experienced ( $\alpha = .92$ ). These same items have been used in

prior studies of homeless youth (Whitbeck & Simons, 1990;  $\alpha = .93$ ; Tyler & Melander, 2015;  $\alpha = .88$ ).

*Foster care* was a single item that measured the total number of times youth had lived in a different foster care home. Due to skewness, this variable was collapsed into the following: 0 = *no foster care homes*, 1 = *one foster care home*, 2 = *two different foster care homes*, 3 = *three to five different foster care homes*, and 4 = *six or more different foster care homes*.

*Street time* or duration of homelessness was a single item, which measured the total amount of time that youth had been away from home.

*Difficulties finding necessities* included four items created by the first author. Youth were asked how often they had trouble finding food, a place to stay, money for something they needed, and clothing or other basic essentials since leaving home (0 = *never* to 4 = *every day*;  $\alpha = .86$ ). Due to skewness, each item was dichotomized (0 = *never* and 1 = *at least 1–2 days per week*) and then summed. A higher score indicated a greater number of necessities youth had trouble finding.

*Street physical victimization* included six items such as “how often were you beaten up” and “how often were you robbed” since leaving home (0 = *never* to 3 = *many times*). A mean scale was created. Higher scores indicated greater physical street victimization ( $\alpha = .85$ ). These items have been used in prior studies of youth experiencing homelessness (Whitbeck & Simons, 1990;  $\alpha = .82$ ; Tyler et al., 2013;  $\alpha = .70$ ).

*Street sexual victimization* included four items such as “being touched sexually when they did not want to be” and “being forced to do something sexual” since leaving home (0 = *never* to 3 = *many times*;  $\alpha = .90$ ). Due to skewness, each item was dichotomized (0 = *never* and 1 = *at least once*) and then a count variable was created. A higher score indicated more different types of sexual street victimization (Tyler & Beal, 2010;  $\alpha = .83$ ).

*Anxiety* included 10 items from the Endler Multidimensional Anxiety Scale–State (Endler, Parker, Bagby, & Cox, 1991), and asked respondents how they felt about a particular situation when they are getting ready to start their day such as “I fear defeat” and “I am unable to focus on a task” (1 = *not at all true* to 5 = *completely true*). A mean scale was created so that higher scores indicated more anxiety ( $\alpha = .88$ ).

*Depressive symptoms* included 10 items from the Center for Epidemiological Studies Depression Scale (CES-D; Radloff, 1977). The CES-D, which asks about past week experiences, such as “I was bothered by things that don’t usually bother me” (0 = *never* to 3 = *5–7 days*). Certain items were reverse coded and then a mean scale was created where higher scores indicated more depressive symptomatology ( $\alpha = .79$ ).

*Substance use* asked respondents about frequency of lifetime alcohol and drug use for 12 substance types including, beer, wine, hard liquor, marijuana, methamphetamine, amphetamines, cocaine, heroin, hallucinogens, barbiturates, inhalants, and ecstasy (0 = *never*, 1 = *a few times*, 2 = *monthly*, 3 = *weekly*, 4 = *daily*). A mean scale was created where

higher scores indicated greater substance use ( $\alpha = .84$ ). This measure has been used in previous studies with this population (Hadland et al., 2011; Rew et al., 2001).

*Respondent sex* was coded 0 = *male* and 1 = *female*.

### Data Analytic Strategy

We first ran descriptive statistics (see Table 1). Next, we ran frequencies for the 12 types of substance use (see Table 2). We also ran bivariate correlations to examine the associations between all study variables (results not shown). Third, we estimated a fully recursive path model using the maximum likelihood estimator in Mplus 7.4 (Muthén & Muthén, 1998–2015) to examine the linkages between childhood disadvantage and social and psychological stressors with substance use. We report standardized beta coefficients in Figure 1 and Table 3. A  $p$  value of less than .05 is considered significant.

### Multivariate Results

Path analysis results for substance use (only significant paths given) shown in Figure 1 revealed that for the linkages between *childhood disadvantage* and *social stressors*, leaving home at an earlier age was associated with more time being homeless ( $\beta = -.541$ ;  $p < .01$ ). Leaving home less frequently ( $\beta = -.206$ ;  $p < .01$ ) and having had more foster care placements ( $\beta = .168$ ;  $p < .05$ ) was linked with more time being homeless. Leaving home at a later age was associated with more difficulties finding basic necessities ( $\beta = .257$ ;  $p < .01$ ). Males experienced more physical victimization on the street ( $\beta = -.266$ ;  $p < .01$ ) compared with females, whereas leaving home more often ( $\beta = .195$ ;  $p < .01$ ), experiencing more child physical abuse ( $\beta = .339$ ;  $p < .01$ ), and more foster care placements ( $\beta = .171$ ;  $p < .05$ ) were all significantly correlated with experiencing more physical victimization since being on the street. Experiencing more types of child sexual abuse was associated with more street sexual victimization ( $\beta = .256$ ;  $p < .01$ ).

In terms of the linkages between *childhood disadvantage* and *psychological stressors*, higher anxiety levels were positively linked with leaving home more often ( $\beta = .232$ ;  $p < .01$ ), experiencing more child physical abuse ( $\beta = .250$ ;  $p < .01$ ), and being female ( $\beta = .161$ ;  $p < .05$ ). Higher depressive symptomatology was associated with leaving home more often ( $\beta = .222$ ;  $p < .01$ ) and experiencing more child physical abuse ( $\beta = .223$ ;  $p < .01$ ). Experiencing more physical victimization on the street was strongly and positively associated with substance use ( $\beta = .389$ ;  $p < .01$ ). These variables explained 25% of the variance in substance use.

### Indirect Effects

Two variables were indirectly associated with substance use (see Table 3). First, the number of times youth ran away from home was significantly associated with substance use and with physical victimization. That is, running away from home more frequently is associated with more physical street victimization, and physical street victimization is positively associated with substance use. Second, child physical abuse was significantly associated with substance use and with physical victimization. In other words, experiencing more child physical abuse

is associated with experiencing more physical victimization on the street, and physical street victimization is positively associated with substance use.

## Discussion

We examined the associations between primary stressors (i.e., *childhood disadvantage*) with secondary stressors (e.g., *social and psychological stress*) and their associations with youths' substance use. We expected that primary and secondary stressors would be associated and that youth who have endured more street victimization would have higher rates of substance use. Our results are generally consistent with these expectations. Youth who experienced more street physical victimization also have higher rates of substance use, which coincides with previous research (Thompson et al., 2015; Tyler et al., 2013).

Our results reveal that youth who leave home at an earlier age also spend more time without a stable residence (i.e., street time). Moreover, we find that youth who leave home more often exhibited higher rates of both depressive symptoms and anxiety and experienced more physical street victimization. These findings are consistent with prior research, which shows that leaving home more often is associated with being physically victimized on the street (Tyler et al., 2013) and with depression (Brown et al., 2015). It is possible that youth who transition back and forth between home and various living arrangements (e.g., staying with friends, staying at a shelter, or on the street), spend more time on their own and this early street exposure increases one's likelihood of victimization (Tyler & Beal, 2010). In addition, daily survival is difficult and the longer youth are on the street, the greater their chances are for adverse health outcomes (Tyler, Schmitz, & Ray, 2017). Furthermore, not having a stable place to live is stressful and likely exacerbates youths' depression and anxiety (Slesnick, Zhang, & Brakenhoff, 2017).

Contrary to expectations, we did not find a significant association between leaving home at an earlier age and being sexually assaulted, which contrasts with earlier studies (Tyler et al., 2004). Given that we identified childhood sexual abuse as a strong correlate of sexual street victimization, it is possible that early sexual abuse is a more salient life experience than the age at which youth first leave home. In addition, the overall high-risk context of homelessness could override the role of leaving home at an earlier age in making youth more vulnerable to street sexual assault (Heerde, Scholes-Balog, & Hemphill, 2015). Our findings also show that being older when first leaving home is positively associated with having more difficulties finding basic necessities. Older aged youth may not come to the attention of authorities at the same rate of younger aged youth, and thus, older youth encounter more difficulties locating services. In addition, research has found that those who left home for the first time at an earlier age were more likely to run away multiple times (Tyler & Whitbeck, 2004); therefore, it is possible these youths have had more opportunities to come into contact with service agencies and know where to obtain services compared with youth who leave home at later ages.

Our results also reveal that youth who have experienced more childhood physical abuse also experience more revictimization on the street, and this is associated with higher levels of anxiety and depressive symptoms. The positive link between physical abuse and depressive

symptoms aligns with prior findings (Bender, Ferguson, et al., 2014; Lim et al., 2015). Young people who were sexually abused more often as children are also more likely to be revictimized sexually while out on the street, which is also consistent with prior research (Tyler & Melander, 2015).

Contrary to our expectations and prior research (Tyler & Melander, 2010; Unrau & Grinnell, 2005; Vaughn et al., 2007), the number of foster care placements was not related to anxiety or depression. This counterintuitive finding could relate to the quality of foster care placements rather than quantity, as homeless youths' satisfaction with their foster care placements positively shapes their mental well-being (Magnuson, Jansson, Benoit, & Kennedy, 2017). We did find, however, that foster care placement was associated with spending more time on the street and being physically victimized on the street. One possible explanation is that youth in foster care run away more frequently (Vaughn et al., 2007), and as a result spend more time on the street, and this increases one's risk of being victimized (Tyler & Beal, 2010).

Although we examined multiple secondary stressors, only physical victimization was significantly associated with homeless youths' substance use. Being victimized is highly traumatic, so youth may be using substances to cope (Kidd & Carroll, 2007). Also, it is plausible that some youth are victimized while self-medicating with substances (Bender, Thompson, Ferguson, & Langenderfer, 2014). Unexpectedly, none of the other secondary stressors were associated with substance use. One possible explanation for why depressive symptoms were not significant is because youth were asked about their feelings for only the "past week," whereas substance use included lifetime. In terms of our "street time" variable, it is possible that some youth were using substances before they left home, and so the amount of time on the street may not matter. Relatedly, it is possible that sexual victimization was not associated with substance because of its lower frequency compared with physical victimization (i.e., 32% vs. 85%, respectively). Finally, though some youth may have previously had high rates of substance use, they may no longer be using drugs but might still be experiencing street sexual victimization.

Our results are generally consistent with a life stress framework. The majority of our sample experienced numerous primary stressors, such as childhood abuse and at least one foster care placement. Moreover, many of these young people made early transitions away from home at a time when they were not fully prepared to do so. It is possible that childhood disadvantage is exacerbated over time, as many of these youth experience social and psychological stress and more proximal stressors, including street victimization and heightened levels of anxiety and depression.

In terms of limitations, data are self-reported and the retrospective nature of some measures may have resulted in recall bias. Also, our sample was from the Midwest and this group of young people experiencing homelessness may differ from those in other regions. Thus, our findings cannot be generalized to this broader population. Relatedly, though rates of child physical and sexual abuse and street victimization are similar for homeless youth in both the Midwest and larger metropolitan areas (e.g., Los Angeles, Austin, TX; Bender, Brown, Thompson, Ferguson, & Langenderfer, 2015), rates of illicit drug use in the current study are



lower compared with a Canadian study of west coast homeless youth (Hadland et al., 2011). However, it is possible that some youth in the current study succumbed to the social desirability bias and thus were likely to underreport their substance use. Another limitation is that though we defined number of times that youth ran away or left home as a stressor, it is also plausible that running away repeatedly is a reaction to family stress. Also, it is possible that using substances led to some youth running away rather than running away leading to substance use. Although our model implies a causal order, we are only examining associations among study variables. Finally, it is possible that reciprocal pathways may be occurring whereby being physically victimized on the street leads to substance use, and using substances may lead to victimization.

Despite these limitations, our study has numerous strengths and contributes to our understanding of substance use among homeless youth. First, examining both distal and proximal risk factors within youths' social environments using a life stress framework provides a more complete picture of the numerous stressors that these youth likely experience. In addition, we simultaneously examine social and psychological risk factors, which encompass both the individual and environmental level, and thus provide a wider perspective of factors that influence youths' lives. Moreover, identifying multiple risk factors is important because it reveals the complexity of issues that service providers must acknowledge when working with this vulnerable population.

Our findings have implications for service providers. Most importantly, programs are needed that specifically target abused young women and men. Given the high risk of revictimization among these young people (Tyler et al., 2004), interventions are needed to prevent victimization from becoming a recurring and "normative" event. If youth are using substances to cope (Kidd & Carroll, 2007), intervention programs that teach alternative coping strategies, such as counseling and developing problem-solving skills, may result in lowering their risk of revictimization as well as their likelihood of developing substance abuse problems. Because these youth often feel depressed and lonely, having supportive ties, positive role models, and other social supports can bolster youths' mental health (Tyler & Schmitz, 2017). In addition, if youth can stay connected to home-based social relationships, they have a greater chance of reintegrating into society, as opposed to becoming embedded in risky street networks (Auerswald & Eyre, 2002).

## Funding

The author(s) disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: This article is based on research funded by a grant from the National Institute on Drug Abuse (DA036806; Dr. Kimberly A. Tyler, principal investigator [PI]).

## Author Biographies

**Kimberly A. Tyler**, PhD, is a Willa Cather professor of Sociology at the University of Nebraska-Lincoln. Her research interests include homelessness, child abuse and neglect, partner violence, substance use, and other high-risk behaviors among adolescents and youth.

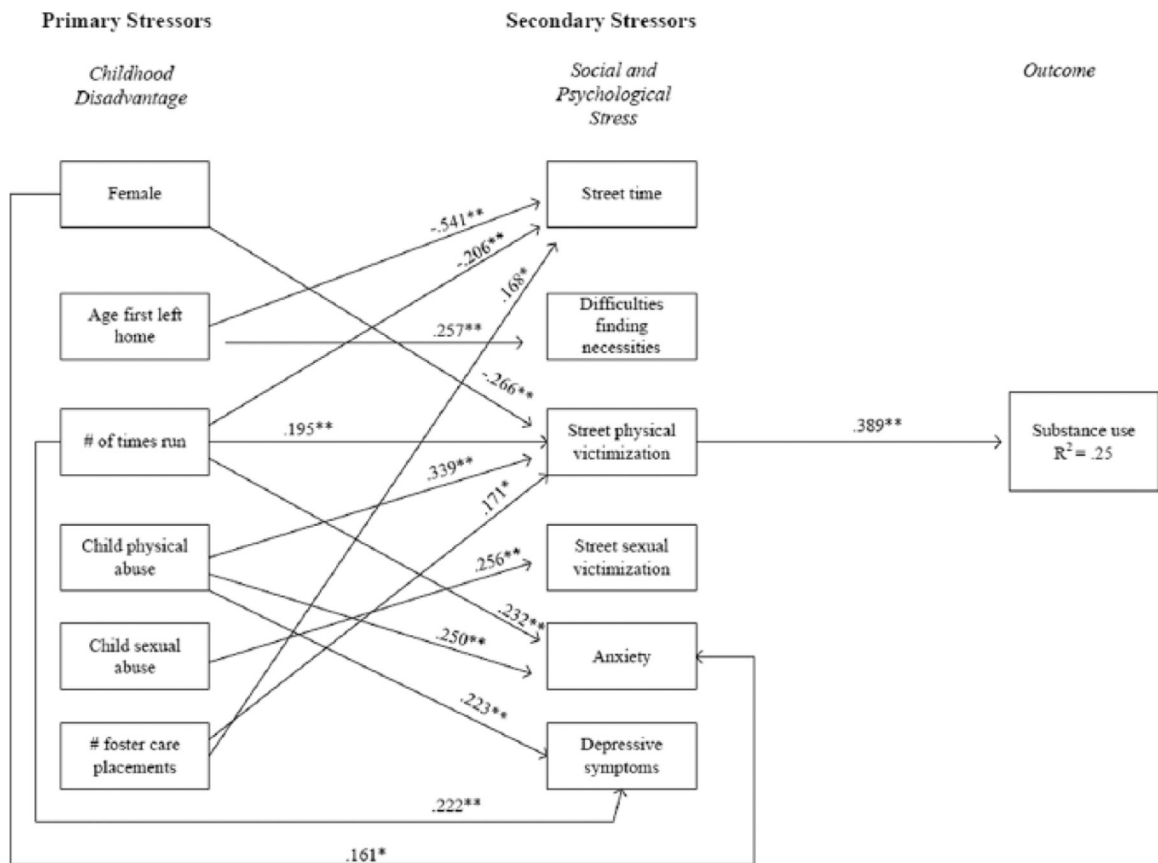
**Rachel M. Schmitz**, PhD, is an assistant professor of Sociology at the University of Texas Rio Grande Valley. Her research interests include gender and sexuality, the family, LGBTQ youth and young adults, and qualitative methods. She has recently published work in *Sexualities*, *Journal of Homosexuality*, and *Journal of Research on Adolescence*. Currently, she is conducting a study that qualitatively examines LGBTQ Latino/a young people's subjective interpretations of health within dominant societal frameworks that emphasize the risks they face.

## References

- Auerswald CL, & Eyre SL (2002). Youth homelessness in San Francisco: A life cycle approach. *Social Science & Medicine*, 54, 1497–1512. [PubMed: 12061484]
- Bender K, Brown SM, Thompson SJ, Ferguson KM, & Langenderfer L (2015). Multiple victimizations before and after leaving home associated with PTSD, depression, and substance use disorder among homeless youth. *Child Maltreatment*, 20, 115–124. [PubMed: 25510502]
- Bender K, Ferguson K, Thompson S, & Langenderfer L (2014). Mental health correlates of victimization classes among homeless youth. *Child Abuse & Neglect*, 38, 1628–1635. [PubMed: 24725619]
- Bender K, Thompson S, Ferguson K, & Langenderfer L (2014). Substance use predictors of victimization profiles among homeless youth: A latent class analysis. *Journal of Adolescence*, 37, 155–164. [PubMed: 24439621]
- Bousman CA, Blumberg EJ, Shilington AM, Hovell MF, Ji M, Lehman S, & Clapp J (2005). Predictors of substance use among homeless youth in San Diego. *Addictive Behaviors*, 30, 1100–1110. [PubMed: 15925120]
- Braciszewski JM, & Stout RL (2012). Substance use among current and former foster youth: A systematic review. *Children and Youth Services Review*, 34, 2337–2344. [PubMed: 23504534]
- Brown SM, Begun S, Bender K, Ferguson KM, & Thompson SJ (2015). An exploratory factor analysis of coping styles and relationship to depression among a sample of homeless youth. *Community Mental Health Journal*, 51, 818–827. [PubMed: 25821043]
- Endler NS, Parker JDA, Bagby RM, & Cox BJ (1991). Multidimensionality of state and trait anxiety: Factor structure of the Endler Multidimensional Anxiety Scales. *Journal of Personality and Social Psychology*, 60, 919–926. [PubMed: 1865327]
- Ennett ST, Bailey SL, & Federman EB (1999). Social network characteristics associated with risky behaviors among runaway and homeless youth. *Journal of Health and Social Behavior*, 40, 63–78. [PubMed: 10331322]
- Hadland SE, Marshal BD, Kerr T, Qi J, Montaner JS, & Wood E (2011). Depressive symptoms and patterns of drug use among street youth. *Journal of Adolescent Health*, 48, 585–590.
- Heerde JA, Scholes-Balog KE, & Hemphill SA (2015). Associations between youth homelessness, sexual offenses, sexual victimization, and sexual risk behaviors: A systematic literature review. *Archives of Sexual Behavior*, 44, 181–212. [PubMed: 25411128]
- Kidd SA, & Carroll MR (2007). Coping and suicidality among homeless youth. *Journal of Adolescence*, 30, 283–296. [PubMed: 16631925]
- Kipke MD, Montgomery SB, & MacKenzie RG (1993). Substance use among youth seen at a community-based health clinic. *Journal of Adolescent Health*, 14, 289–294.
- Lim C, Rice E, & Rhoades H (2015). Depressive symptoms and their association with adverse environmental factors and substance use in runaway and homeless youths. *Journal of Research on Adolescence*, 26, 403–417. [PubMed: 27616870]
- Lin N, & Ensel WM (1989). Life stress and health: Stressors and resources. *American Sociological Review*, 54, 382–399.
- Magnuson D, Jansson M, Benoit C, & Kennedy MC (2017). Instability and caregiving in the lives of street-involved youth from foster care. *Child & Family Social Work*, 22, 440–450.

- Milburn N, Liang L, Lee S, Rotheram-Borus MJ, Rosenthal D, Mallett S, ... Lester P (2009). Who is doing well? A typology of newly homeless adolescents. *Journal of Community Psychology*, 37, 135–147. [PubMed: 20174594]
- Muthén LK, & Muthén BO (1998–2015). *Mplus User's Guide* (7th ed.). Los Angeles, CA: Author.
- National Center for Homeless Education & National Association for the Education of Homeless Children and Youth. (2017). Definitions of homelessness for federal programs serving children, youth, and families. Retrieved from <https://nche.ed.gov/downloads/briefs/introduction.pdf>
- Pearlin LI (1989). The sociological study of stress. *Journal of Health and Social Behavior*, 30, 241–256. [PubMed: 2674272]
- Radloff LS (1977). The CES-D Scale: A Self-Report Depression Scale for research in the general population. *Applied Psychological Measurement*, 1, 385–401.
- Rew L, Taylor-Seehafer M, & Fitzgerald ML (2001). Sexual abuse, alcohol and other drug use, and suicidal behaviors in homeless adolescents. *Issues in Comprehensive Pediatric Nursing*, 24, 225–240. [PubMed: 11769208]
- Slesnick N, Zhang J, & Brakenhoff B (2017). Personal control and service connection as paths to improved mental health and exiting homelessness among severely marginalized homeless youth. *Children and Youth Services Review*, 73, 121–127. [PubMed: 28943689]
- Straus MA, Hamby SL, Finkelhor D, Moore DW, & Runyan D (1998). Identification of child maltreatment with the Parent-Child Conflict Tactics Scales: Development and psychometric data for a national sample of American parents. *Child Abuse & Neglect*, 22, 249–270. [PubMed: 9589178]
- Substance Abuse and Mental Health Services Administration. (2016). Behavioral health and homelessness resources. Retrieved from <https://www.samhsa.gov/homelessness-programs-resources/hpr-resources/youth>
- Taussig HN (2002). Risk behaviors in maltreated youth placed in foster care: A longitudinal study of protective and vulnerability factors. *Child Abuse & Neglect*, 26, 1179–1199. [PubMed: 12398855]
- Thompson SJ, Bender K, Ferguson KM, & Kim Y (2015). Factors associated with substance use disorders among traumatized homeless youth. *Journal of Social Work Practice in the Addictions*, 15, 66–89.
- Tyler KA, & Beal MR (2010). The high-risk environment of homeless young adults: Consequences for physical and sexual victimization. *Violence & Victims*, 25, 101–115. [PubMed: 20229696]
- Tyler KA, & Cauce AM (2002). Perpetrators of early physical and sexual abuse among homeless and runaway adolescents. *Child Abuse & Neglect*, 26, 1261–1274. [PubMed: 12464300]
- Tyler KA, Gervais SJ, & Davidson MM (2013). The relationship between victimization and substance use among homeless and runaway female adolescents. *Journal of Interpersonal Violence*, 28, 474–493. [PubMed: 22935946]
- Tyler KA, & Melander LA (2010). Foster care placement, poor parenting, and negative outcomes among homeless young adults. *Journal of Child and Family Studies*, 19, 787–794. [PubMed: 21243115]
- Tyler KA, & Melander LA (2015). Child abuse, street victimization, and substance use among homeless young adults. *Youth & Society*, 47, 502–519.
- Tyler KA, & Olson K (2018). Examining the feasibility of ecological momentary assessment using short message service surveying with homeless youth: Lessons learned. *Field Methods*, 30(2). Online March 2018.
- Tyler KA, & Schmitz RM (2017). Using cell phones for data collection: Benefits, outcomes, and intervention possibilities with homeless youth. *Children and Youth Services*, 76, 59–64. doi:10.1016/j.chilyouth.2017.02.031
- Tyler KA, Schmitz RM, & Ray CM (2017). Role of social environmental protective factors on anxiety and depressive symptoms among Midwestern homeless youth. *Journal of Research on Adolescence*, 28, 199–210. [PubMed: 29460358]
- Tyler KA, & Whitbeck LB (2004). Lost childhoods: Risk and resiliency among runaway and homeless adolescents. In Allen-Meares P & Fraser MW (Eds.) *Intervention with children and adolescents: An interdisciplinary perspective* (pp. 378–397). Boston, MA: Pearson.

- Tyler KA, Whitbeck LB, Hoyt DR, & Cauce AM (2004). Risk factors for sexual victimization among male and female homeless and runaway youth. *Journal of Interpersonal Violence*, 19, 503–520. [PubMed: 15104858]
- Unger JB, Kipke MD, Simon TR, Montgomery SB, & Johnson CJ (1997). Homeless youths and young adults in Los Angeles: Prevalence of mental health problems and the relationship between mental health and substance abuse disorders. *American Journal of Community Psychology*, 25, 371–394. [PubMed: 9332967]
- Unrau YA, & Grinnell R (2005). Exploring out-of-home placement as a moderator of help-seeking behavior among adolescents who are high risk. *Research on Social Work Practice*, 15, 516–530.
- Vaughn MG, Ollie MT, McMillen C, Scott L Jr., & Munson M (2007). Substance use and abuse among older youth in foster care. *Addictive Behaviors*, 32, 1929–1935. [PubMed: 17239547]
- Whitbeck LB, & Simons RL (1990). Life on the streets: The victimization of runaway and homeless adolescents. *Youth & Society*, 22, 108–125.
- Yoshioka-Maxwell A, Rice E, Rhoades H, & Winetrobe H (2015). Methamphetamine use among homeless former foster youth: The mediating role of social networks. *Journal of Alcohol & Drug Dependence*, 3, Article 197. doi:10.4172/2329-6488.1000197



**Figure 1.** Correlates of substance use (only significant paths shown).  
 $*p < .05$ .  $**p < .01$ .

Author Manuscript

Author Manuscript

Author Manuscript

Author Manuscript

**Table 1.**

## Descriptives.

	<i>n</i> (%)	<i>M</i> ( <i>SD</i> )
Demographics		
Female	77 (51%)	
Male	73 (49%)	
Primary stressors		
Child physical abuse		2.16 (1.38)
Child sexual abuse		1.53 (2.29)
Foster care placement		1.44 (1.47)
Age first left home		14.8 (3.30)
Number of times run		4.9 (6.32)
Secondary stressors		
Street time (in months)		31.5 (32.27)
Difficulties finding necessities		2.26 (1.48)
Street physical victimization		0.91 (0.81)
Street sexual victimization		0.43 (0.79)
Anxiety		2.24 (0.85)
Depressive symptoms		1.30 (0.62)
Substance use (lifetime)		0.68 (0.59)

**Table 2.**

Type and Frequency of Lifetime Substance Use.

How often have you:	Never	A few times	Monthly	Weekly	Daily
	<i>n</i> (%)	<i>n</i> (%)	<i>n</i> (%)	<i>n</i> (%)	<i>n</i> (%)
Drank beer	39 (26.5)	68 (46.3)	13 (8.8)	15 (10.2)	12 (8.2)
Drank wine	75 (51.0)	50 (34.0)	11 (7.5)	5 (3.4)	6 (4.1)
Drank hard liquor	30 (20.4)	54 (36.7)	24 (16.3)	22 (15.0)	17 (11.6)
Smoked marijuana	28 (19.0)	35 (23.8)	9 (6.1)	22 (15.0)	53 (36.1)
Used methamphetamines	120 (81.6)	13 (8.8)	2 (1.4)	2 (1.4)	10 (6.8)
Used amphetamines	124 (84.4)	14 (9.5)	1 (0.7)	1 (0.7)	7 (4.8)
Used cocaine	119 (81.0)	25 (17.0)	1 (0.7)	0 (0)	2 (1.4)
Used heroin	142 (96.6)	4 (2.7)	0 (0)	0 (0)	1 (0.7)
Used hallucinogens	113 (76.9)	20 (13.6)	8 (5.4)	2 (1.4)	4 (2.7)
Used barbiturates	134 (91.2)	5 (3.4)	4 (2.7)	2 (1.4)	2 (1.4)
Used inhalants	132 (89.8)	10 (6.8)	2 (1.4)	0 (0)	3 (2.0)
Used ecstasy/designer drugs	113 (76.9)	19 (12.9)	6 (4.1)	3 (2.0)	6 (4.1)

**Table 3.**

Full Model Results for Substance Use.

Variables	Direct effect		Indirect effect		Total effect	
	Estimate	SE	Estimate	SE	Estimate	SE
Female	-.131	.082	-.063	.048	-.194*	.080
Age first left home	-.016	.099	.073	.065	.058	.090
Number of times run	.156	.087	.101*	.047	.257**	.086
Child physical abuse	-.093	.089	.120*	.050	.028	.090
Child sexual abuse	.005	.087	.033	.045	.038	.091
Foster care placements	-.016	.087	.048	.044	.031	.091
Street time	-.128	.094	—	—	—	—
Difficulties finding necessities	-.135	.084	—	—	—	—
Physical victimization	.389**	.093	—	—	—	—
Sexual victimization	.128	.086	—	—	—	—
Anxiety	.030	.107	—	—	—	—
Depressive symptoms	-.018	.101	—	—	—	—

\*  $p < .05$ .\*\*  $p < .01$ .