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Sexual risk, substance use, mental health, and trauma experiences of gang-involved homeless youth[☆]

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ABSTRACT

This study examined the associations of sexual risk behaviors, substance use, mental health, and trauma with varying levels of gang involvement in a sample of Los Angeles-based homeless youths. Data were collected from 505 homeless youths who self-reported various health information and whether they have ever identified as or been closely affiliated with a gang member. Multivariable logistic regression assessed associations of lifetime gang involvement with risk taking behaviors and negative health outcomes. Results revealed seventeen percent of youths have ever identified as a gang member and 46% as gang affiliated. Both gang members and affiliates were at greater risk of many negative behaviors than non-gang involved youths. Gang members and affiliates were more likely to report recent methamphetamine use, cocaine use, chronic marijuana use, having sex while intoxicated, and symptoms of depression, symptoms of post-traumatic stress disorder. They were also more likely to have experienced childhood sexual abuse and witnessing family violence. Gang members were more likely to ever attempt suicide, experience recent partner violence, and report physical abuse during childhood. Results suggest that lifetime gang involvement is related to a trajectory of negative outcomes and amplified risk for youths experiencing homelessness. Additionally, being closely connected to a gang member appears to have just as much of an impact on risk as personally identifying as a gang member. Given the lack of knowledge regarding the intersection between youth homelessness and gang involvement, future research is needed to inform policies and programs that can address the specific needs of this population.

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Annual statistics in the United States suggest that there are 1.6 million homeless youths (Ringwalt, Greene, & Robertson, 1998; Toro, Dworsky, & Fowler, 2007) and an estimated 1.4 million active gang members in the United States (Federal Bureau of Investigation, 2011). Although seemingly disparate populations, homeless youth and gangs intersect (De Rosa et al., 1999; Harper, Davidson, & Hosek, 2008). Previous research has found that approximately 15% of homeless youth identify as a gang member and 32% are affiliated with gang members (Yoder, Whitbeck, & Hoyt, 2003). This exceeds the cumulative gang involvement in a nationally representative sample, in which 8% of individuals were ever in a gang by their early 20s and 18% were affiliated with a gang (Pyrooz, 2014). However, very little is known about gang involved homeless youth. These data on

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prevalence of gang membership among homeless youth are from the Midwest Homeless and Runaway Adolescent Project gathered in 1996 (Whitbeck & Hoyt, 1999; Yoder et al., 2003). Thus, there is much to be learned about gang involved homeless youth.

Background

Gang involvement is an epidemic that continues to affect the health of many youth and young adults in the United States. Gangs, and the youth involved in them, are frequently classified along various domains including of level of organization, the group's major activity, organizational history, nature and degree of criminality, or extensiveness of rule and rituals (Valdez, 2003). Although, there is not an overall consensus on how to define youth gangs, the definitions attempt to capture varying degrees of structure, permanence and seriousness (Howell & Moore, 2010). A youth gang can be frequently defined by the following parameters: has at least five members, generally aged 11–24; members share an identity, typically linked to a name; members view themselves as a gang, and are recognized by others as a gang; the group has some sort of permanence and has some degree of organization; the group is involved in an elevated level of criminal activity. Youth gangs are also often distinguished based on level of organization with the major types being street gangs (i.e. those formed on the streets in US which can have a national presence often involved in the drug market) or neighborhood/local gangs (smaller groups connected to territory that are subsets of or imitate larger gangs). These are distinct from predominately adult gangs such as prison gangs (organizations originated in penal system) and Outlaw Motorcycle Gangs (OMGs; organizations that use their motorcycle clubs for criminal enterprises; FBI, 2011).

Gang membership and gang affiliation are known determinants of increased rates of risk-taking behaviors, including sexual risk behaviors (Brooks, Lee, Stover, & Barkley, 2009; Browne et al., 2014; Sanders et al., 2013) and substance use (Cepeda et al., 2012; Knox & Tromanhauser, 1999). Membership is associated with higher rates of unprotected sex, unprotected sexual intercourse with a new acquaintance, sexual intercourse with someone suspected of having or known to have a sexually transmitted disease, and having sex while incarcerated (Browne et al., 2014; FBI, 2011). Membership is also associated with higher rates of substance use, including crack cocaine, heroin, speedball, injection drug use, and polydrug use (Cepeda et al., 2012; Knox & Tromanhauser, 1999). Gang membership is also closely linked to greater mental health symptoms (Corcoran, Washington, & Meyers, 2005; Evans, Albers Macari & Mason, 1996; Kelly, 2010). In a sample of incarcerated youth, gang-identifying youths reported greater rates of suicide attempts, homicidal thoughts, hallucinations, delusions, repetitive thoughts, and experiences of trauma such as childhood maltreatment (Corcoran et al., 2005).

Regardless of desistance, identifying as a gang member has negative effects throughout the life course (Krohn, Ward, Thornberry, Lizotte, & Chu, 2011). Individuals who reported membership during adolescence were approximately 2 times more likely to report poor health at 27 years of age and 3 times more likely to meet criteria for drug abuse and dependence in adulthood (Gilman, Hill, & Hawkins, 2014). Adolescent membership in a youth street gang has important, long-lasting effects not only on continuation of criminal behaviors but also opportunities for adult success in major conventional social roles. Individuals with more gang involvement during adolescence are more likely to experience problems transitioning from adolescence to adulthood. These empirical studies demonstrated how gang membership affects youths throughout the life course by placing youths on a trajectory of risky behavior and negative consequences that affects adult functioning. There is evidence that for many of these outcomes, youths who do not claim gang membership but are closely affiliated with gang members are also at increased risk of negative outcomes. For example, girls who have sexual partners who are gang members have higher rates of inconsistent condom use, unprotected sex with multiple or unknown partners, exchange sex (sex in exchange for things such as money, shelter, drugs or food), sex under the influence of drugs or alcohol, and experiences of rape (Browne et al., 2014).

To date, very little is known about homeless youths who identify as or affiliate with gang members. However, gang involved homeless youths are distinguishable from non-gang involved homeless youths. Homeless youths who identify as gang members tend to be younger, have lower levels of parental monitoring and higher levels of childhood physical abuse, and are more likely to have been suspended from school compared to non-gang involved homeless youth (Yoder et al., 2003). In a sample of Chicago-based homeless African American boys, gang-identifying youths had higher rates of negative mental and physical health outcomes compared to non-gang involved homeless youths, including higher levels of depression and anxiety, social and violent behavior, and lifetime alcohol and marijuana use (Harper et al., 2008). The motivation for gang association may be to access more support provided by peers in the gang. For homeless youths, gangs offer a sense of family and protection for members (Harper et al., 2008; Yoder et al., 2003). However, these two studies (Harper et al., 2008; Yoder et al., 2003) appear to constitute the depth of the field's knowledge regarding gang involved homeless youth. Given the relationship of high-risk health behaviors and outcomes with both gang involved and homeless youth populations, there is a need for more empirical research, particularly in Los Angeles. Often distinguished as the street gang capital of the United States, Los Angeles features an estimated 100,000 gang members and one half of all homicides are reported to be a gang related (Delaney, 2006).

Theoretical approach: Risk Amplification and Abatement Model (RAAM)

The risk amplification and abatement model (RAAM; Milburn et al., 2009) can be used to understand how gang involvement may impact the lives of homeless youths. This model considers a homeless youth's background and posits that

present day behavioral outcomes of homeless youth are influenced differentially by engagement in negative or positive socialization experiences throughout the life course across various domains of social organizations, including peers, family interactions, social services, and formal institutions (i.e., schools, criminal justice systems, and child protective systems). For homeless youth, continued interaction with negative socializing agents, including delinquent peers such as gang members, can amplify the risk of antisocial outcomes, including illicit substance use, sexual risk taking, exposure to trauma and increased negative mental health outcomes and on the contrast interaction with positive or pro-socializing agents can be protective agents, abating these risks (Milburn et al., 2009; Rice, Kurzban, & Ray, 2012; Rice, Milburn, & Rotheram-Borus, 2007; Rice, Milburn, Rotheram-Borus, Mallett, & Rosenthal, 2005; Unger et al., 1998; Whitbeck, Hoyt, & Yoder, 1999). Gang involvement is considered as a function of the peer domain within RAAM because gangs are inherently informal peer network. Gangs can act as a surrogate family, providing basic needs for youths from dysfunctional backgrounds (Vigil, 2003). Many youth identify with a gang to access social supports that are unavailable from other sources such as family, school, and non-delinquent peers (REgan, 2013; Yoder et al., 2003). Homeless youth may become involved in gangs for similar reasons. Homeless youths are known to have small and unstable peer networks (Ennett, Bailey, & Federman, 1999). Identification with a gang or close affiliation may offer a sense of family and protection for homeless youths. Yet the risk amplification and abatement model suggests that homeless youths' interaction with delinquent peers such as gang members will increase risk taking behaviors and experiences of related negative outcomes.

The current study used data collected from Los Angeles-based homeless youth to explore how lifetime gang involvement – either as a self-identified member or a self-identified affiliate – is related to a variety of present day risk behaviors and negative outcomes. The following specific research questions will be addressed: are homeless youth who identify as gang members or gang affiliates more likely to report a variety of risk behaviors and negative outcomes compared to their non-gang involved counterparts? The study will also explore whether gang involved homeless youth are more likely to have experience childhood trauma.

Methods

Data from two panels of the Youth net study (N = 505) were used in the current study. Youths were recruited in 2012 and 2013 from two Los Angeles day-service drop-in agencies serving homeless youths (Rice, 2010). Both agencies provide weekday services to eligible homeless youths, including basic needs, medical and mental health care, case management, and referrals and connections to other programs such as housing services. All youths who entered the service agencies during the data collection period were invited to participate in the study. Each youth signed a voluntary consent form. A consistent pair of research staff members was present during the entirety of data collection. Only one staff member was responsible for approaching youth for recruitment to ensure that all youths were approached into the study. The staff member maintained her own tracking system for approaching youths. As youths were consented into the study they were given an anonymous identification code using a combination of their initials and birthdates which was used as a tracking method to prevent youths from completing the survey multiple times during each data collection period per site. The study, a computerized self-administered survey, which included an audio-assisted version for participants with low literacy and could be completed in English or Spanish. The computerized survey included approximately 200 questions and took an average of 1 h to complete. All participants received \$20 in cash or gift cards as compensation for their time. The institutional review board of the University of Southern California approved all procedures and waived parental consent for minors without parents or guardians. Further detail regarding data collection is documented in several publications (Rice, 2010; Rice, Barman-Adhikari, Milburn, & Monro, 2012).

Measures

Gang membership and affiliation

The current study is focused on the impact on lifetime gang involvement. Participants self-reported if they were currently or had ever been a gang member. Participants also reported whether or not they had joined a gang prior to homelessness. Recent studies have shown that youths who self-report being in a gang either formerly or currently are more similar than those who report never being in a gang with respect to demographic and risk factors (Gilman et al., 2014). Youth self-report of membership is a common assessment approach and has been validated through several studies (Curry, Decker, & Egley, 2002; Esbensen, Winfree, He & Taylor, 2001; Thornberry, 2003). Participants also self-reported in *three separate questions* if they had ever been a gang affiliate, i.e., had a family member, romantic partner, or close friend who is a gang member. These questions were aggregated to determine those that were closely affiliated with gang members but had never identified as a member themselves. The research team developed this measure of gang affiliation.

Sociodemographic variables

Participants were asked to report their age, race and ethnicity, sexual orientation, current living situation, and city of origin. Participants were asked to select the race and ethnicity with which they identified from the following categories: American Indian or Alaska Native, Asian, Black or African American, Native Hawaiian or other Pacific Islander, White, or Latino or Hispanic. Due to few responses, American Indian or Alaska Native, Asian, and Native Hawaiian or other Pacific Islander, were coded into an inclusive category titled *other*. The resulting race and ethnicity variable had four categories. Six

participants who identified as transgender were coded based on the gender with which they currently identified (e.g., male-to-female transgender was coded as female), resulting in a binary category for gender. Participants were asked to identify their sexual orientation, with response options of homosexual (gay or lesbian), queer, bisexual, heterosexual (straight), or questioning or unsure. Sexual orientation was then coded into two categories: heterosexual and LGBTQ (homosexual, queer, bisexual, transgender, questioning or unsure). The six respondents who identified as transgender were coded as a sexual minority in this category.

Youths experiencing literal homelessness were defined as those who reported currently staying in a shelter (emergency or temporary), a stranger's home, hotel, motel, street, beach, tent or campsite, abandoned building, car, or bus. Youth who were not experiencing literal homelessness reported staying elsewhere, such as at a relative's home, transitional living program, group home or sober living facility. This definition of literal homelessness is derived from work done by [Tsemberis, McHugo, Williams, Hanrahan, and Stefancic \(2007\)](#). Participants were asked what they consider to be their place of origin, coded as from Los Angeles or elsewhere. Participants were also coded for the field site where baseline data were collected, either Santa Monica/Venice or Hollywood.

Trauma

Participants were asked various questions to assess childhood trauma, including physical abuse (having been hit, punched, or kicked very hard at home, excluding ordinary fights between brothers and sisters); witnessing family violence (seeing a family member being hit, punched, or kicked very hard at home, excluding ordinary fights between brothers and sisters); and sexual abuse (having an adult or someone much older touch their private sexual body parts in an unwanted way). Participants that responded affirmatively to any of these questions were coded as having experienced childhood abuse. Intimate partner violence and interpersonal violence measures were adapted from the Center for Disease Control and Prevention's Youth Risk Behavior Survey (YRBS; [Eaton et al., 2012](#)). Intimate partner violence was assessed with the question: "During the past 12 months, did your boyfriend or girlfriend ever hit, slap, or physically hurt you on purpose?" and interpersonal violence was assessed with the question: "During the past 12 months, how many times were you in a physical fight?" Each response was dichotomized and did not distinguish between violent victimization or perpetration.

Mental health

Depression was measured using a 10-item version of the Center for Epidemiological Studies Depression Scale ([Radloff, 1977](#)). Cumulative scores greater than 7 indicated current depressive symptoms. PTSD symptomatology was assessed with the Primary Care PTSD Screen ([Prins et al., 2003](#)) in reference to the previous month. Participants were asked if they ever seriously considered attempting suicide (ideation) or made a plan about how to attempt suicide during the previous 12 months. Those who responded affirmatively were coded as having experienced suicide ideation. Participants were asked how many times they had attempted suicide during the previous 12 months and were categorized as zero times versus one or more times.

Sexual risk behaviors

Lifetime and recent risky sexual behaviors were assessed using items from the YRBS, which have been tested for reliability and validity ([Brenner, Collins, Kann, Warren & Williams, 1995](#)), including condom use, concurrent sexual partners, and sex under the influence of drugs or alcohol. Exchange sex for money or drugs, a place to stay, food or meals, or anything else was also assessed.

Substance use

YRBS items were also used to assess recent drug use. Participants indicated whether they had used cocaine, methamphetamine (meth), ecstasy, or heroin during the previous 30 days. Participants also reported recent prescription drug abuse or injection of any type of drug. Prescription drug abuse was assessed by asking how many times a participant had taken a prescription drug without a doctor's prescription or used more of the drug or used it more often than prescribed. Participants who reported binge drinking (having five or more drinks of alcohol in a row within a couple of hours) on 6 or more days during the previous month were coded as high-risk alcohol users.

Data analyses

The aim of the current study was to determine the impact of lifetime gang involvement on present day risk behaviors and negative health outcomes of homeless youths as well as determine likelihood of experiencing childhood trauma. The analysis occurred in two stages. First, chi-square analyses were used to identify any significant differences between rates of self-reported behaviors across the three groups at the univariable level. Any behavior that was significantly different at the $p < 0.05$ level was included as an outcome variable in the second series of analyses. Next, a multivariable logistic regression model was created to determine how gang membership or affiliation compared to non-involvement was independently associated with each of the 12 selected outcomes identified in the first stage. Multivariable models controlled for demographic variables of age, race, sexual orientation, literal homelessness, and city of origin. Participants with missing data for any of the included model variables were excluded from the analyses. Final subsample size, Akaike information criterion, and adjusted R-squared are reported for each model. All analyses were performed in SAS version 9.3 ([SAS Institute Inc., 2014](#)).

Results

In this sample of homeless youths ($N = 505$), seventeen percent identified as ever being a gang member and 46.0% identified as being gang affiliated. For affiliates, 37.5% had family members, 25.4% had romantic partners, and 58.8% had friends that had been in a gang. Of the youths who reported being in a gang, approximately one third were current gang members at the time of data collection and 82.0% had joined before becoming homeless. Prevalence rates and means for control, substance use, sexual risk, mental health, and trauma variables are shown in Table 1. Chi-square results revealed significant differences in proportion distributions across the three groups. Youth from the Hollywood data collection site represented a larger proportion of gang involved youth in the sample ($\text{Chi. Sq} = 25.07, p < 0.001$). Non-involved youths were more likely to be White ($\chi^2 = 12.18, p < 0.01$). Gang members were more likely to be Latino ($\chi^2 = 7.10, p < 0.05$) and non-involved youths were more likely to be from Los Angeles ($\chi^2 = 3.92, p < 0.01$). Significantly more gang involved youth disclosed recent methamphetamine use ($\chi^2 = 9.26, p < 0.01$), cocaine use ($\chi^2 = 7.23, p < 0.05$), and chronic marijuana use ($\chi^2 = 9.86, p < 0.01$) compared to non-involved youth. Significantly more gang involved youth disclosed recent sex under the influence ($\chi^2 = 11.93, p < 0.001$), depression symptoms ($\chi^2 = 17.03, p < 0.001$), suicide attempts ($\chi^2 = 6.31, p < 0.05$), PTSD symptoms ($\chi^2 = 38.70, p < 0.001$), interpersonal violence ($\chi^2 = 34.07, p < 0.001$), intimate partner violence ($\chi^2 = 20.63, p < 0.001$), and all three childhood trauma variables – physical abuse ($\chi^2 = 21.21, p < 0.001$), sexual abuse ($\chi^2 = 9.40, p < 0.01$), and witnessing family violence ($\chi^2 = 21.48, p < 0.001$).

Multivariable logistic regressions revealed that gang membership and gang affiliation were associated with higher rates of risk behaviors and negative outcomes compared to non-gang involved homeless youths. Gang affiliates were more than twice as likely to report meth use ($\text{OR} = 2.25, p < 0.01$), cocaine ($\text{OR} = 2.23, p < 0.001$), and chronic marijuana use ($\text{OR} = 2.44, p < 0.001$) compared to non-involved youths (see Table 2). Gang members were more than 3 times more likely to report

Table 1
Descriptive statistics for homeless gang members, gang affiliates and non-involved youths.

	Total	Non-involved	Affiliate	Member	Chi Sq	Missing
	<i>n</i> (%)	<i>n</i> (%)	<i>n</i> (%)	<i>n</i> (%)		<i>n</i>
Total	505	187 (37.03)	232 (45.94)	86 (17.03)	–	0
Age ^a	21.4 (5.52)	21.7 (2.16)	21.0 (12.11)	21.5 (2.29)	–	0
Site ^b	296 (58.61)	84 (44.92)	149 (64.22)	63 (73.26)	25.07***	0
Female	140 (27.72)	52 (27.81)	67 (28.88)	21 (24.42)	0.62	0
Male	365 (72.28)	135 (72.19)	165 (71.12)	65 (75.58)	0.62	0
LGBT	128 (25.35)	51 (27.27)	53 (22.84)	24 (27.91)	1.43	0
Race and ethnicity						
White	199 (39.41)	92 (49.20)	80 (34.48)	27 (31.40)	12.18**	0
Black	116 (22.97)	41 (51.93)	57 (24.57)	18 (20.93)	0.65	0
Latino	60 (11.68)	16 (8.56)	27 (11.64)	17 (19.77)	7.10*	0
Other	130 (25.74)	38 (20.32)	68 (29.31)	24 (27.91)	4.63	0
Literal homelessness	353 (70.46)	133 (71.51)	160 (69.87)	60 (69.77)	0.16	4
From Los Angeles	207 (41.90)	134 (71.66)	147 (45.94)	42 (48.84)	3.92**	11
Substance use (previous 30 days)						
Methamphetamine	118 (23.60)	30 (16.13)	66 (28.45)	22 (26.83)	9.26**	5
Injection drugs	42 (8.42)	13 (7.03)	22 (9.52)	7 (8.43)	0.83	6
Prescription drugs	95 (18.96)	28 (15.05)	50 (21.55)	17 (20.48)	2.99	4
Binge drinking	62 (12.53)	20 (10.93)	32 (13.91)	10 (12.20)	0.84	10
Heroin	54 (10.87)	21 (11.35)	22 (9.61)	11 (13.25)	0.91	8
Cocaine	80 (16.06)	19 (10.33)	46 (19.83)	15 (18.29)	7.23*	7
Ecstasy	72 (14.37)	21 (11.29)	33 (14.22)	18 (21.69)	5.05	4
Marijuana (chronic use)	244 (48.80)	73 (39.67)	124 (53.45)	47 (55.95)	9.86**	5
Sexual risk						
Sex under the influence (last encounter)	183 (36.53)	51 (27.57)	91 (39.57)	41 (47.67)	11.93**	4
Unprotected sex (last encounter)	241 (47.72)	80 (42.78)	115 (49.57)	46 (53.49)	3.29	0
Concurrent partners	171 (33.86)	52 (27.81)	87 (37.50)	32 (37.21)	4.86	0
Exchange sex (lifetime)	72 (15.93)	18 (11.46)	37 (17.29)	17 (20.99)	4.18	53
Mental health and trauma						
Depression	367 (72.67)	116 (62.03)	182 (78.45)	69 (80.23)	17.03***	0
Suicidal ideation	98 (19.68)	26 (13.90)	51 (21.98)	21 (24.42)	5.67	7
Suicide attempt	56 (11.20)	13 (7.03)	29 (12.50)	14 (16.87)	6.31*	5
PTSD	186 (40.65)	39 (23.08)	104 (47.06)	46 (61.33)	38.70***	40
Interpersonal violence	271 (34.42)	75 (40.54)	131 (56.96)	65 (78.31)	34.07***	7
Physical abuse	169 (34.42)	46 (25.14)	79 (34.80)	44 (54.32)	21.21***	14
Sexual abuse	110 (22.87)	27 (15.25)	60 (26.67)	23 (29.11)	9.40**	24
Witnessed family violence	154 (31.56)	36 (20.11)	80 (34.93)	38 (47.50)	21.48***	17
Intimate partner violence	94 (58.61)	32 (17.49)	32 (13.91)	30 (36.59)	20.63***	10

Note. LGBT = lesbian, gay, bisexual, and transgender; PTSD = posttraumatic stress disorder.

^a Figures reflect M (SD).

^b Hollywood site as reference.

Table 2

Multivariable regression analyses of drug use and sexual risk for homeless gang members and affiliates compared to non-involved youths.

	Meth (n = 491)		Cocaine (n = 490)		Marijuana (n = 491)		Sex under influence (n = 490)	
	OR	95% CI	OR	95% CI	OR	95% CI	OR	95% CI
Gang member	1.90	0.98, 3.67	1.83	0.84, 3.98	3.20***	1.75, 5.87	2.99***	1.67, 5.40
Gang affiliate	2.25**	1.35, 3.76	2.23***	1.22, 4.06	2.44***	1.55, 3.84	1.97**	1.25, 3.10
Age	1.02	0.92, 1.13	1.09	0.97, 1.22	0.91	0.83, 1.00	0.91*	0.83, 0.99
Site ^a	1.29	0.78, 2.15	0.92	0.51, 1.65	0.43***	0.27, 0.68	0.84	0.53, 1.34
Male	1.29	0.76, 2.22	0.61	0.34, 1.10	1.25	0.77, 1.03	2.24**	1.35, 3.71
Race and ethnicity ^b								
Black	0.34**	0.17, 0.69	0.60	0.27, 1.34	0.27***	0.15, 0.47	0.33***	0.18, 0.61
Latino	0.88*	0.42, 1.84	1.53	0.66, 3.52	0.28***	0.14, 0.57	0.73	0.37, 1.44
Other	0.78	0.45, 1.36	1.20	0.63, 2.28	0.67	0.40, 1.12	0.57*	0.34, 0.96
LGBT	1.85*	1.09, 2.16	0.92	0.49, 1.72	0.85	0.52, 1.40	1.33	0.80, 2.19
From Los Angeles	0.71	0.43, 1.17	0.89	0.50, 1.57	0.84	0.54, 1.30	0.91	0.58, 1.42
AIC	532.30		435.13		616.38		619.65	
R ²	0.09		0.06		0.21		0.13	

Note. AIC = Akaike information criterion, an indicator of model fit; LGBT = lesbian, gay, bisexual, and transgender.

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.^a Hollywood site as reference.^b White as reference.

chronic marijuana use (OR = 3.20, $p < 0.001$). In addition, gang members were 3 times more likely (OR = 2.99, $p < 0.001$) and gang affiliates were twice as likely (OR = 1.97, $p < 0.01$) to report having sex under the influence of drugs or alcohol during their last sexual encounter.

Gang members and affiliates were both more likely to report depressive and PTSD symptoms compared to non-involved youths (see Table 3). Gang members had 6 times greater odds of PTSD symptoms (OR = 5.95, $p < 0.01$) and were 2.5 times more likely to have attempted suicide than non-involved youths (OR = 2.48, $p < 0.05$). Gang members were 6 times more likely (OR = 6.04, $p < 0.01$) and gang affiliates were twice as likely (OR = 2.10, $p < 0.01$) to report recent involvement in interpersonal violence (see Table 4). Gang membership was related greater odds in reporting all surveyed types of childhood trauma including physical abuse (OR = 3.178, $p < 0.01$), sexual abuse (OR = 1.94, $p < 0.05$) and witnessing family violence (OR = 3.25, $p < 0.001$; see Table 4). Gang affiliates had twice the odds of reporting experiences of childhood sexual abuse (OR = 2.16, $p < 0.05$). Gang members were more than 3 times more likely to experience intimate partner violence during the previous year (OR = 3.29, $p < 0.001$).

Discussion

The analyses revealed that a history gang involvement is prevalent among homeless youths. The rate of gang membership and affiliation in this Los Angeles-based sample was higher than previous studies (Harper et al., 2008; Yoder et al., 2003).

Table 3

Multivariable regression analyses of mental health and physical violence experiences of homeless gang members and affiliates compared to non-involved youths.

	Depression (n = 494)		PTSD (n = 458)		Suicide Attempt (n = 491)		Interpersonal violence (n = 490)	
	OR	95% CI	OR	95% CI	OR	95% CI	OR	95% CI
Gang member	3.39**	1.73, 6.63	5.95**	3.18, 11.14	2.48*	1.07, 5.72	6.04**	3.21, 11.39
Gang affiliate	2.71**	1.70, 4.32	3.21**	1.99, 5.16	1.65	0.81, 3.33	2.10**	1.38, 3.17
Age	0.98	0.88, 1.08	0.98	0.89, 1.07	0.88	0.77, 1.02	0.98	0.90, 1.07
Site ^a	0.70	0.42, 1.18	0.88	0.54, 1.53	1.29	0.65, 2.53	0.87	0.55, 1.36
Male	0.76	0.45, 1.28	0.53*	0.33, 0.87	0.95	0.47, 1.90	1.14	0.72, 1.79
Race and ethnicity ^b								
Black	0.61	0.33, 1.10	1.32	0.73, 2.39	0.54	0.21, 1.39	0.74	0.43, 1.28
Latino	0.72	0.34, 1.51	1.61	0.78, 3.31	0.71	0.25, 2.04	0.75	0.38, 1.49
Other	0.95	0.52, 1.73	1.56	0.91, 2.70	1.48	0.73, 3.00	1.08	0.65, 1.80
LGBT	1.67	0.97, 2.89	1.77*	1.07, 2.92	1.17	0.58, 2.38	1.11	0.69, 1.78
From Los Angeles	0.65	0.40, 1.03	0.69	0.43, 1.10	1.00	0.53, 1.90	0.75	0.49, 1.15
AIC	554.23		577.51		353.15		652.66	
R ²	0.11		0.17		0.07		0.11	

Note. AIC = Akaike information criterion, an indicator of model fit; LGBT = lesbian, gay, bisexual, and transgender; PTSD = posttraumatic stress disorder.

* $p < 0.05$; ** $p < 0.001$.^a Hollywood site as reference.^b White as reference.

Table 4

Multivariable regression analyses of childhood trauma and intimate partner violence experiences of homeless gang members and affiliates compared to non-involved youths.

	Physical abuse		Sexual abuse		Witnessed family violence		Intimate Partner violence	
	<i>(n</i> = 483)		<i>(n</i> = 469)		<i>(n</i> = 481)		<i>(n</i> = 486)	
	OR	95% CI	OR	95% CI	OR	95% CI	OR	95% CI
Gang member	3.78***	2.11, 6.79	2.16*	1.07, 4.37	3.25***	1.78, 5.93	3.29***	1.76, 6.16
Gang affiliate	1.62	1.03, 2.56	1.94*	1.12, 3.37	1.94**	1.21, 3.11	0.82	0.47, 1.44
Age	0.93	0.85, 1.02	0.92	0.82, 1.03	0.93	0.84, 1.02	0.95	0.85, 1.06
Site ^a	0.98	0.61, 1.57	2.22**	1.27, 3.87	1.27	0.78, 2.06	0.73	0.41, 1.29
Male	0.94	0.56, 1.52	0.53*	0.31, 0.89	0.64	0.40, 1.03	0.86	0.49, 1.52
Race and ethnicity ^b								
Black	0.56	0.31, 1.03	0.33**	0.15, 0.70	0.89	0.49, 1.63	0.88	0.44, 1.77
Latino	1.27	0.64, 2.53	0.52	0.22, 1.22	1.33	0.66, 2.68	0.81	0.35, 1.89
Other	0.84	0.50, 1.41	1.05	0.59, 1.89	1.10	0.64, 1.89	0.68	0.36, 1.31
LGBT	1.65*	1.01, 2.69	2.69***	1.57, 4.63	1.35	0.83, 2.21	1.54	0.84, 2.74
From Los Angeles	0.65	0.41, 1.03	0.60	0.35, 1.04	0.89	0.56, 1.41	0.98	0.57, 1.68
AIC	605.58		466.06		586.03		466.75	
R ²	0.1110		0.1989		0.1014		0.0866	

Note. AIC = Akaike information criterion; LGBT = lesbian, gay, bisexual, and transgender.

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

^a Hollywood site as reference.

^b White as reference.

More than half of the sample had been involved in a gang at some point. Results from the current study illustrate the impact of gang membership and affiliation on the health of homeless youths in Los Angeles. The results capture the diverse risk profile related to gang involvement, particularly with regard to drug use, sexual risk, and mental health. Homeless gang members and affiliates also experienced higher levels of violence and trauma in a population that already experiences higher rates than the general youth population. This study confirms that gang involvement – either by membership or affiliation – should be included within the peer domain of the Risk Amplification and Abatement Model (Milburn et al., 2009) for homeless youths. Results show that lifetime gang involvement is significantly associated with an increase in present day risk taking behaviors and negative outcomes.

This study is unique in that it delineated between self-identified members and self-identified gang affiliates and compared them to non-involved homeless youths. Analyses revealed that for many health and behavioral health risks, gang affiliates also demonstrated an increased risk as did gang members as compared to non-involved youths. Previous research on non-homeless gang affiliates has highlighted the fact that being closely affiliated with a gang is associated with risk similar to identifying as a gang member (Browne et al., 2014). This study confirmed that this is true for homeless youths. Participants closely affiliated with a gang were at greater risk of heavy marijuana use, sex under the influence, depression, and PTSD, similar to gang members. They also had similar experiences of child sexual abuse, witnessing family violence, and interpersonal violence. In terms of recent methamphetamine and cocaine use, gang affiliates exhibited more risk than non-involved youths but this was not true for gang members. However, this could be a function of low cell size because there were many more youths in the sample who identified as affiliates versus members. Future research should further explore this finding and compare the direct differences between gang affiliates and members in the homeless youth population.

These data also highlight the increased risk of identifying as a gang member as opposed to an affiliate. Unlike gang affiliates, self-identifying gang members are at increased risk of childhood physical abuse, intimate partner violence, and suicide attempts, as compared to non-involved youth. A large body of research (Delsol & Margolin, 2004; Eriksson & Mazerolle, 2015; Franklin & Kercher, 2012; McKinney, Caetano, Ramisetty-Mikler, & Nelson, 2009; Widom, Czaja, & Dutton, 2014) has linked the experience of childhood physical abuse (frequently co-occurring with other types of childhood maltreatment such as sexual abuse and witnessing family violence) and intimate partner violence, often referred to as the intergenerational transmission of violence. It is possible that the early experience of childhood physical abuse differentiates a youth from identifying as a gang member versus an affiliate. This childhood experience of violence, leading to the violence and relational patterns formed in the context of gang membership, may contribute to the likelihood of experiencing partner violence in intimate relationships. It is also worth noting that gang members and affiliates had similarly larger odds of poor mental health outcomes of depression and PTSD (up to 6 times greater), but only gang members were at higher risk of suicide compared to non-involved youth. Gang membership may have a unique influence related to a greater risk of suicide attempts compared to non-involved youths. This hazardous trajectory of childhood trauma could be an indicator of poor coping strategies in the face of mental health issues and relational conflict. It is clear that gang members, former or current, constitute a subgroup in the homeless youth population that is at imminent risk of poor outcomes, including serious injury or death.

Although this study was focused on the impact of lifetime involvement, the results also indicated variation in the experiences of gang membership among homeless youths. For youths who had identified as gang members, the trajectory and

timing of gang involvement and homelessness appears to be important. The majority of gang members reported joining a gang before becoming homeless and many did not identify as a gang member at the time of data collection, i.e. when they were receiving homelessness services. Findings imply that for many youth in the sample joining a gang may be a function of neighborhood or family environments. It is possible that desisting from a gang was not necessarily the cause of a youth's homelessness but could likely be a contributing factor. For many gang members that desist from a gang, this can be an abrupt process involving cutting off social ties and often physically leaving their neighborhood or moving to another city. For youths without the necessary resources or functioning skills, homelessness could be a likely result of desistance of this nature. It also appears that for a smaller portion of the subpopulation, joining a gang and identifying as a gang member had some importance in the street life context, possibly indicating that gangs are a function of protection or camaraderie on the street. There was also significant variation among gang affiliates and the differences in risk among affiliation via friends, family, or romantic partners remains unclear. For many youth, these affiliations were co-occurring, i.e., those who had family members in a gang also had friends in a gang. The exploration of heterogeneity in involvement and affiliation in this study is cursory because the data is limited. However, this study provides promising new questions and directions for research with this population. Future research should use qualitative or mixed methods to provide more in-depth knowledge regarding the context and new questions for homeless youth gang involvement.

It should be noted that this study has limitations. First, these data are cross-sectional, so causality cannot be implied. Data were also derived from a sample of drop-in, service-seeking, Los Angeles-based homeless youths. Caution should be used when generalizing findings to homeless youth samples in other geographic areas, particularly because gangs and gang membership are related closely to geographic factors. It is also possible that the findings are not generalizable to other types of homeless youths, including sheltered individuals or youths not accessing services. The current study was a general risk assessment and measures of mental health, trauma, and violence were abbreviated. Additionally, data relied on self-report from youths; it is possible that gang membership was underreported or over reported.

Despite the preliminary nature of the data, there are many important implications for future research. Considering the lack of knowledge regarding the intersection of homeless youths and youth gang membership, the results have vast implications for public health. In a population already at high risk, identifying as a gang member or affiliate is related to greater risk across many health and behavioral health domains. This demonstrates the need for specific interventions to address gang involvement in this high-risk group such as screening for a history of gang membership during homeless youth services intake, trauma-informed mental health services that considers gang histories, and the potential for specialized housing considerations for youth with histories of gang involvement. Future research in this field should be prioritized to inform policies and programs that can address the specific needs of this population.

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