

An examination of housing interventions among youth experiencing homelessness: an investigation into racial/ethnic and sexual minority status

C. Hill¹, H. Hsu², M. Holguin¹, M. Morton³, H. Winetrobe⁴, E. Rice¹

¹Suzanne Dworak Peck School of Social Work, University of Southern California, Los Angeles, CA 90089, USA

²School of Social Work, University of Missouri, Columbia, MO 65211, USA

³University of Chicago, Chicago, IL 60637

⁴Center for Artificial Intelligence in Society Operations Coordinator, Suzanne Dworak Peck School of Social Work, University of Southern California, Los Angeles, CA 90089, USA
Address correspondence to C. Hill, E-mail: Chynahil@usc.edu.

ABSTRACT

Objectives The purpose of this study is to explore main and interaction effects of minority and multiple minority statuses on exits from homelessness and the stability of homelessness exits over time.

Methods This study utilized the Homeless Management Information System administrative data of 10 922 youth experiencing homelessness collected from a convenience sample of 16 geographically diverse communities across the USA between 2015–17. Using multinomial logistic regression analyses and logistic regression, main effects and interaction effects of racial/ethnic minority identity and sexual/gender minority identity were examined on various homelessness exits ($n = 9957$) and housing sustainability ($n = 5836$).

Results Black youth, relative to White youth, were disproportionately exiting homelessness through incarceration ($P < 0.001$). Black and Latinx youth were less likely to successfully self-resolve their homelessness (both $P < 0.05$). Black heterosexual and Black and Latinx non-heterosexual youth were most frequently lost to the homeless system (all $P < 0.01$). Black youth, relative to White youth, were approximately half as likely to remain stably housed after returning to family ($P < 0.01$).

Conclusions With respect to housing exits and exit stability, Black and Latinx heterosexual youth are consistently at a disadvantage. Homelessness/housing systems and programs need to conduct a deeper investigation into how they implement and develop equitable outreach and engagement practices.

Keywords housing, social housing, young people

Introduction

As many as 4.2 million teens and young adults aged 13–25-year experience homelessness in the USA every year.^{1,13,18} Unfortunately, there are more youth experiencing homelessness (YEH) than there are resources available. As a result, communities use vulnerability assessment tools, such as the Next Step Tool (NST; details under the method section), to identify those in greatest need of housing. Youth with higher vulnerability often are prioritized with more resource intensive housing interventions.¹⁴ Among YEH, the most frequent homelessness exits that are supported by interventions provided by public resources are rapid re-housing (RRH) and permanent supportive housing (PSH).¹⁹ Communities that

provide such housing resources from the federal government are typically defined as continuums of care (CoCs). YEH are also exiting homelessness, independent of assistance from the CoC, by returning home or securing housing independently.¹⁴ Although studies of YEH are beginning to examine differences in exits from homelessness and the stability of exits from homelessness via coordinated systems of care,¹⁴ the

C. Hill
H. Hsu
M. Holguin
M. Morton
H. Winetrobe
E. Rice

relevance of identity to housing placements and subsequent stability require additional exploration.

It has been well documented that YEH are a heterogeneous population and disproportionately comprised of marginalized identities.^{1,2,22–24} The extant research has clearly shown that these marginalized identities (e.g. racial/ethnic minority, sexual minority, non-cisgender) are associated with experiencing homelessness.^{1,22} What is unclear is to what extent these identities are associated with exits from homelessness, especially when those exits are supported by the public resources available in CoCs. LGBT youth (especially LGBT youth of color) have limited visibility in studies of housing placements and outcomes.^{9,10,13,22} This is attributed to the fact that LGBT youth are often lost to follow-up as a result of safety issues in shelters.^{7,13} As such, there is a need for studies of youth homelessness to further explore the role of compounded identities (i.e. the intersection of race/ethnicity and sexual minority status) with respect to housing outcomes and the stability of these outcomes.

In a recent study, elevated rates of homelessness were associated with youth who identified as Black or Latinx.²² Furthermore, studies of youth homelessness are beginning to elucidate findings that highlight a relationship between minoritized identities and housing outcomes. Most notably, one study found that youth who identify as racial and ethnic minorities are less likely to remain housed when they attempted to return to family.¹⁴ Among youth of color, there is a 43% reduction in odds of ‘successfully’ remaining with family after exiting homelessness.¹⁴

In addition to youth of color, youth who identify as LGBT also face elevated risks of homelessness. A recent study found that LGBT youth were 120% more likely than other youth to be homeless.²² Reports suggest that as many as 40% of homeless youth identify as LGBT,^{8–10} with 68% of LGBT YEH attributing housing loss to family rejection.⁷ LGBT YEH have higher rates of victimization, substance use, mental health problems and suicidal acts than their heterosexual peers.²⁷ Additionally, youth who identify as LGBT report higher rates of housing instability^{7,10–12} and experience longer durations of homelessness.^{9,10}

In addition to race and sexual minority status, gender may differentiate homeless youth in terms of housing placements and stability. Although there is limited research that explores differences in housing placements by gender among YEH, we do know that as many as 62% of YEH in the USA are male.¹³ Among adults experiencing homelessness, recent literature attributes the number of men experiencing homelessness to an array of demographic and behavioral differences.^{34,35} For instance, relative to men, women are more likely to be members of marginalized groups, have children in their

custody and report lower rates of substance abuse, incarceration and felony convictions.^{34,35} Although the gendered nature of homelessness has not been explicitly explored among YEH, findings from adult literature suggests that elevated rates of substance abuse and incarceration may contribute to the prevalence of males in the youth homeless population.^{34,35} As YEH samples tend to be predominantly male, this warrants further exploration.

Considering previous findings, an intersectional approach is critical to exploring the role of compounded identities on exits from homelessness and the subsequent stability of these exits. Intersectionality, a term coined by Kimberle Crenshaw, argues that rather than one identity superseding another to create differential experiences, compounded identities interact to create differential experiences.¹⁶ For this study, intersectionality will allow for the examination of interactions that occur among multiple identities (i.e. race, gender and sexual orientation) to create differential experiences with housing placements and stability. This study seeks to explore the role of minoritized and compounded minoritized identities on exits from homelessness and the subsequent stability of these exits from homelessness.

Methods

Data source and participants

The current study used de-identified administrative data retrieved from the Homeless Management Information System (HMIS) database generated on 1 May 2017. This dataset originally included a total of 10 922 YEH from a convenience sample of 16 geographically diverse (i.e. covering all regions in the USA) communities, involving rural, suburban and urban areas across the US. Data from youth, such as demographic characteristics and housing records, were entered into the HMIS by local community providers. These communities were selected because they received NST training support from Orgcode and consented to allow researchers to access de-identified data. Community identity and participant identity were both kept confidential, although community type (urban, rural or suburban) was provided. All youth entered into the HMIS between 1 January 2015 and 1 May 2017 were included in the dataset. The first data entry point was on 4 January 2015, whereas the last data entry point was on 20 February 2017. Information captured by the dataset includes housing eligibility assessment dates, demographic information (e.g. age, race/ethnicity, sexual orientation), community type (e.g. rural, suburban and urban), NST score (i.e. a vulnerability score produced by a measurement widely adopted by homeless service providers

to prioritize housing resources),¹⁴ homelessness exits (e.g. PSH, RRH, family reunification), homelessness exit dates and return to homelessness dates if lost stable housing.

It should be noted that in the current study, not all YEH covered in the dataset were included in the data analyses. Youth who were deceased before exiting from homelessness ($n = 45$) were excluded from analyses. In addition, since it takes time for youth to exit homelessness, to be consistent with previous literature,¹⁴ youth assessed <180 days prior to 1 May 2017 were excluded from analyses, rendering a sample size of 9957. Finally, the current study defined stable homelessness exit as exiting homelessness without reentering the homeless system for at least 180 days. Thus, youth who exited homelessness <180 days before 1 May 2017 were excluded because we do not know if they returned to homelessness within the stable housing period. This yielded a final sample size of 5836. This study received institutional review board approval at the authors' institution.

Measurements

Outcomes of interest

The two major outcomes of interest in the current study are homelessness exit status and housing stability. Homelessness exit status is a nominal variable that includes seven categories: moved into PSH, moved into RRH, family reunification, self-resolved, youth who are waiting for a resource to become available and/or youth who have no identified or defined exit from homelessness, lost contact with homeless service providers and incarceration. Family reunification depicts youth who exit homelessness by reuniting with or receiving support from their family. Youth remaining in the homeless service system are youth who were entered into the HMIS at least 180 days prior to the data conclusion date but did not exit homelessness (e.g. still on the waitlist) by 1 May 2017. Youth who were categorized as lost contacts were youth who had been assessed for housing eligibility but have since lost contact with local homeless service providers.

In terms of housing stability, the current study focused on the four major homelessness exits: PSH, RRH, family reunification and self-resolved as depicted by previous literature.¹⁴ For each exit, duration of homelessness exit was calculated by subtracting homelessness exit date from the return to homelessness date. For youth who never returned to homelessness by the date, the dataset was generated, duration of homelessness exit was calculated by subtracting the homelessness exit date from 1 May 2017. Dichotomous variables representing stable housing were then derived with duration of homelessness exit greater than or equal to 180 days coded as 1, whereas others were coded as 0.

Independent variables

Given this study focuses on the intersectionality of race/ethnicity and gender/sex/sexual minority status, the major independent variables of interest included are race/ethnicity and a variable comprised of gender, sex and sexual minority status. Given White, Black, Latinx youth comprise the majority of youth who experience homelessness,²² we treated race/ethnicity as a 4-category nominal variable that includes White, Black, Latinx and multiracial/other race/ethnicity (i.e. Asian, Hawaiian/Pacific Islander, Native American). The gender, sex and sexual minority status variable is a dichotomous variable in which 1 represents lesbian, gay, bisexual, transgender, queer, questioning, intersex or two-spirit (LGBTQQI2), whereas 0 represents heterosexual. Given the limitation of existing administrative data, gender, sex and sexual minority status is captured under the LGBTQQI2 record rather than under the gender record in the current HMIS dataset used in the current study. As this is an administrative dataset, the LGBTQQI2 variable cannot be disaggregated because any youth who identified as LGBTQQI2 were lumped into a monolithic category. Additionally, although time to obtain housing is relevant to the discussion of housing placements and the outcomes of those placements, we are interested in where homeless youth exit to rather than the time it took homeless youth to obtain housing (an outcome that has been explored in a previous article³⁰). To explore the intersectionality of race/ethnicity and sexual orientation among youth on their homeless exit status and housing stability, an interaction term was derived by using race times sexual orientation.

Control variables

Although not the focus of this study, considering the important roles age, gender, neighborhood type and personal vulnerability play in impacting youth exiting homelessness,¹⁴ such factors are also included in the current study as control variables. Consistent with previous YEH housing literature,¹⁴ age is a dichotomous variable in which 1 represents youth aged 17 or younger, whereas youth aged 18–24 were coded as 0. Gender is a dichotomous variable with female coded as 1 and male coded as 0. Gender is included as a control variable rather than an independent variable because the main record only includes values for male or female. Neighborhood type is a nominal variable with three categories: rural, suburban and urban. Personal vulnerability is measured using the overall NST scores. The NST is a linear scoring system that incorporates 28 multiple-choice, dichotomous and frequency-type questions to assess a YEH's level of vulnerability.¹⁴ Youth are assigned a score between 0 and 17.¹⁴ Youth who score 8 or higher are recommended for PSH, a time-unlimited housing

program that includes wraparound social services.¹⁴ Youth who score between 4 and 7 are recommended for RRH, a time-limited housing with moderate service intensity.¹⁴ Youth who score between 0 and 3 are not recommended for housing programs or services.¹⁴

These questions cover the history of housing and homelessness, risks, socialization, daily functions and wellness. The higher NST score, the more vulnerable a youth is.

Analysis

To explore the intersectionality of race/ethnicity and gender/sex/sexual minority status and their association with homelessness exits and housing stability, we examined both main effects of racial/ethnic minority youth and sexual/gender minority youth and interaction effects, which characterize the experiences of multiple minority youth. In models where interaction effects were found to be significant, *post hoc* pairwise comparisons of specific sub-groups of YEH were explored to better elucidate experiences of multiple minority youth. Specifically, to examine disparities in homelessness exit status (a nominal outcome with more than two categories i.e. PSH, RRH, self-resolution, family reunification, pending homelessness exit, incarceration, lost contacts with the homeless service system), multinomial logistic regression analyses were conducted with the category of pending homelessness exit as the contrasting outcome. To explore disparities in housing stability, logistic regression models were conducted with PSH, RRH, family reunification and self-resolved, separately.

Results

Table 1 shows the descriptive statistics of all youth (10 922) included in the dataset. The majority of youth were at least 18 years old (age range 15–24), predominantly male and were from urban neighborhoods. Racial composition of youth in the dataset was diverse with White and Black youth being the majority racial groups. Over 30% of youth identified as LGBTQQI2. The average NST score was 6.4 (SD = 2.3). In terms of homelessness exit status, over 35% of youth received housing resources (i.e. PSH and RRH) and close to 24% were able to exit homelessness via reunification with their families or self-resolution. However, a considerable number of youths (over 38%) were lost to homeless service providers or remained on the waiting list for housing resources. Of those who exited homelessness into housing, 88% were stably housed for at least 180 days.

Table 2 illustrates the results of the multivariate multinomial logistic regression analysis with youth who were still

Table 1 Demographics and homelessness exit status of youth experiencing homelessness (N = 10 922)^a

	N	%
Independent variables		
Minor (<18 years old)	3303	30.24
Race/Ethnicity		
White	5212	47.72
Black	3382	30.97
Latinx	1656	15.16
Multiracial or others	672	6.15
Gender		
Female	2429	22.25
Male	8487	77.75
Sexual orientation		
LGBTQQI2	3319	30.39
Heterosexual	7603	69.61
Neighborhood type		
Rural	1591	14.57
Suburban	2046	18.73
Urban	7285	66.70
NST ^b Score (mean; SD)	6.43	2.33
Homelessness exit status ^c		
PSH	628	6.31
RRH	2872	28.86
Family	1250	12.56
Self-resolve	1140	11.46
Deceased	45	0.45
Incarcerated	211	2.12
Pending	2717	27.31
Lost to system	1087	10.92
Stably housed for 180+ days ^d	4361	87.97

^arepresents all youth experiencing homelessness from 16 communities across the USA included in the HMIS dataset between 1 January 2015 and 1 May 2017.

^bNST = Next Step Tool, vulnerability index to determine youth at most risk, higher the number, the more vulnerable.

^camong those youth who were assessed 11 February 2016 or earlier ($n = 9957$).

^damong those youth who exited to PSH, RRH, family or self-resolved by 11 February 16 or earlier ($n = 4957$).

pending homelessness exits as the contrasting outcome. Youth under age 18 were significantly less likely to exit homelessness via PSH (RRR = 0.24; 95% CI = 0.19, 0.32), RRH (RRR = 0.57; 95% CI = 0.51, 0.64), family reunification (RRR = 0.76; 95% CI = 0.65, 0.90) and self-resolution (RRR = 0.53; 95% CI = 0.44, 0.64), and significantly less likely to be incarcerated (RRR = 0.44; 95% CI = 0.31, 0.64) or lose contact with the homeless service system (RRR = 0.62; 95% CI = 0.53, 0.72) as compared with the reference outcome

Table 2 Correlates of specific homelessness exit as compared with waiting to exit homelessness among youth experiencing homelessness^{a,b}

	<i>PSH</i>		<i>Rapid re-housing</i>		<i>Family reunification</i>		<i>Self-resolved</i>		<i>Lost contact</i>		<i>Incarceration</i>	
	RRR	95% CI	RRR	95% CI	RRR	95% CI	RRR	95% CI	RRR	95% CI	RRR	95% CI
Independent variables												
Minor (<18 years old)	0.24***	0.19, 0.32	0.57***	0.51, 0.64	0.76**	0.65, 0.90	0.53***	0.44, 0.64	0.62***	0.53, 0.72	0.44***	0.31, 0.64
Race (ref = white)												
Black	1.10	0.82, 1.47	0.96	0.83, 1.11	0.67***	0.54, 0.84	0.78*	0.63, 0.96	1.14	0.94, 1.39	2.34***	1.47, 3.74
Latinx	0.69	0.46, 1.05	0.91	0.76, 1.10	0.62**	0.47, 0.82	0.75*	0.58, 0.98	0.88	0.68, 1.13	1.45	0.76, 2.75
Multiracial or other	0.83	0.48, 1.41	0.79	0.60, 1.06	0.95	0.66, 1.36	0.95	0.66, 1.38	1.30	0.92, 1.82	1.48	0.67, 3.29
race/ethnicity												
Sexual orientation (ref = heterosexual)												
LGBTQQI2	0.78	0.57, 1.06	0.92	0.78, 1.09	1.18	0.95, 1.46	0.68**	0.53, 0.87	0.71**	0.56, 0.91	0.79	0.46, 1.36
Gender (ref = male)												
Female	1.18	0.91, 1.53	1.07	0.93, 1.22	1.47***	1.24, 1.75	1.14	0.95, 1.38	1.39***	1.17, 1.64	1.28	0.89, 1.86
Neighborhood type (ref = rural)												
Suburban	1.24	0.86, 1.79	1.12	0.91, 1.37	0.37***	0.29, 0.47	0.67**	0.50, 0.88	0.87	0.68, 1.11	0.80	0.47, 1.36
Urban	1.33	0.97, 1.84	1.18	0.99, 1.41	0.21***	0.17, 0.26	0.51***	0.40, 0.64	0.64***	0.52, 0.80	0.80	0.51, 1.26
NST score	1.97***	1.87, 2.07	0.96**	0.93, 0.98	0.43***	0.41, 0.45	0.36***	0.34, 0.39	0.90***	0.87, 0.94	2.06***	1.92, 2.22
Race X LGBTQQI2												
Black LGBTQQI2	1.31	0.82, 2.08	0.98	0.75, 1.28	1.49*	1.02, 2.19	1.15	0.74, 1.79	1.53**	1.06, 2.19	1.08	0.53, 2.20
Hispanic LGBTQQI2	1.17	0.61, 2.25	0.98	0.71, 1.37	1.37	0.84, 2.22	0.82	0.46, 1.47	1.70**	1.08, 2.68	1.45	0.57, 3.68
Multiracial/Other	1.63	0.68, 3.89	1.40	0.83, 2.37	1.42	0.72, 2.81	1.87	0.87, 4.03	1.38	0.71, 2.65	1.81	0.55, 5.98
race/ethnicity LGBTQQI2												

^aOnly youth experiencing homelessness from 16 communities across the USA included in the HMIS dataset between 1 January 2015 and 1 May 2017, who were assessed at least 180 days before 1 May 2017 were included ($n = 9950$).

^bMultivariate multinomial logistic regression was conducted for this analysis.

* $P < 0.05$, ** $P < 0.01$, *** $P < 0.001$.

category, pending a homelessness exit. Female youth were significantly more likely to exit homelessness through family reunification (RRR = 1.47; 95% CI = 1.24, 1.75) and to be lost to the homeless service system (RRR = 1.39; 95% CI = 1.17, 1.64) as compared with pending on homelessness exit. Youth in suburban or urban neighborhoods, compared with rural youth, were significantly less likely to reunite with their families (RRR = 0.37; 95% CI = 0.29, 0.47; RRR = 0.21; 95% CI = 0.17, 0.26, respectively) or self-resolve (RRR = 0.67; 95% CI = 0.50, 0.88; RRR = 0.51; 95% CI = 0.40, 0.64, respectively) as compared with pending homelessness exits. Additionally, urban youth, compared with rural youth, were significantly less likely to be lost to the homeless service system (RRR = 0.64; 95% CI = 0.52, 0.80) as compared with pending on exiting homelessness in the system. Finally, higher vulnerability (i.e. higher NST score) youth were found to be significantly associated with higher likelihood of exiting homelessness via PSH (RRR = 1.97; 95% CI = 1.87, 2.07) or incarceration (RRR = 2.06; 95% CI = 1.92, 2.22) relative to waiting for exiting homelessness. On the other hand, higher vulnerability was also found to be associated with a significantly lesser likelihood of exiting homelessness via RRH (RRR = 0.96; 95% CI = 0.93, 0.98), family reunification (RRR = 0.43; 95% CI = 0.41, 0.45) or self-resolution (RRR = 0.36; 95% CI = 0.34, 0.39) relative to pending in the coordinated entry system. Youth with higher vulnerability were also significantly less likely to be lost by the homeless service system (RRR = 0.90; 95% CI = 0.87, 0.94) relative to waiting for exiting homelessness.

Overall, Black and Latinx youth compared with White youth were significantly less likely to exit through family reunification (RRR = 0.67; 95% CI = 0.54, 0.84; RRR = 0.62; 95% CI = 0.47, 0.82, respectively) or self-resolution (RRR = 0.78; 95% CI = 0.63, 0.96; RRR = 0.75; 95% CI = 0.58, 0.98, respectively) compared with pending in the homeless service system. Black youth, compared with White youth, were also significantly more likely to be incarcerated versus pending homelessness exit. Finally, overall, LGBTQQI2 youth were significantly less likely to self-resolve their homeless situation (RRR = 0.68; 95% CI = 0.53, 0.87) over pending in the homeless service system. Additionally, they are also significantly less likely to be lost to service providers (RRR = 0.71; 95% CI = 0.56, 0.91) as compared with pending on exiting homelessness.

The significant interaction term (i.e. race and sexual orientation) in Table 2 suggested that the association between racial identity and exiting homelessness via family reunification or being lost to the service providers as compared with pending in the system may be contingent upon their sexual orientation, and vice versa. Our *post hoc* pairwise

comparison analysis (results shown in Table 3) suggest that White LGBTQQI2 youth versus White heterosexual youth (Contrast = 0.02; 95% CI = 0.01, 0.04), Black LGBTQQI2 youth versus Black heterosexual youth (Contrast = 0.04; 95% CI = 0.02, 0.06), Latinx LGBTQQI2 youth versus Latinx heterosexual youth (Contrast = 0.03; 95% CI = 0.01, 0.06), and Latinx LGBTQQI2 youth versus Black heterosexual youth (Contrast = 0.03; 95% CI = 0.01, 0.06) showed significant higher probability of exiting homelessness via family reunification. On the other hand, Black heterosexual youth versus White heterosexual youth (Contrast = -0.02; 95% CI = -0.04, -0.01), Latinx heterosexual youth versus White heterosexual youth (Contrast = -0.02; 95% CI = -0.04, -0.01), Black heterosexual youth versus White LGBTQQI2 youth (Contrast = -0.02; 95% CI = -0.06, -0.03), Latinx heterosexual youth versus White LGBTQQI2 youth (Contrast = -0.05; 95% CI = -0.06, -0.03) and Latinx heterosexual youth versus Black LGBTQQI2 youth (Contrast = -0.04; 95% CI = -0.04, -0.02) had significantly lower probability in exiting homelessness via family reunification. In addition, Black heterosexual youth and Black LGBTQQI2 youth versus White heterosexual youth (Contrast = 0.02; 95% CI = 0.00, 0.05; Contrast = 0.02; 95% CI = 0.00, 0.05, respectively), Black heterosexual youth and Black LGBTQQI2 youth versus White LGBTQQI2 youth (Contrast = 0.05; 95% CI = 0.03, 0.08; Contrast = 0.07; 95% CI = 0.03, 0.10, respectively) and Latinx LGBTQQI2 youth versus White LGBTQQI2 youth (Contrast = 0.05; 95% CI = 0.01, 0.10) were found to have significantly higher probability to have lost contact with the homeless system; whereas White LGBTQQI2 youth versus White heterosexual youth (Contrast = -0.03; 95% CI = -0.05, -0.01) and Latinx heterosexual youth versus Black LGBTQQI2 youth (Contrast = -0.04; 95% CI = -0.08, -0.00) had significantly lower probability to be lost by the homeless system.

Table 4 shows the multivariate logistic regression analyses of the four major homelessness exits (i.e. PSH, RRH, family reunification, self-resolved). Higher vulnerability scores (i.e. higher NST score) were found to be consistently associated with elevated risk of unstable exits from homelessness (i.e. exit housing in <180 days) across all four major exits (PSH: OR = 0.74; 95% CI = 0.59, 0.93; RRH: OR = 0.75; 95% CI = 0.68, 0.84; Family reunification: OR = 0.62; 95% CI = 0.56, 0.69; Self-Resolved: OR = 0.54; 95% CI = 0.43, 0.67). Black youth compared with White youth were significantly less likely to stably exit homelessness via family reunification (OR = 0.46; 95% CI = 0.28, 0.77). Youth younger than 18 (OR = 0.18; 95% CI = 0.11, 0.30) and youth in urban or suburban communities (as compared with rural youth) were significantly less likely to remain housed for at least

Table 3 *Post hoc* race and sexual orientation pairwise comparison of adjusted predictions^a

	Family reunification		Lost contact	
	Contrast	95% CI	Contrast	95% CI
White LGBTQQI2 versus White heterosexual	0.02	0.01, 0.04	-0.03	-0.05, -0.01
Black heterosexual versus White heterosexual	-0.02	-0.04, -0.01	0.02	0.00, 0.05
Black LGBTQQI2 versus White heterosexual	—	—	0.04	0.01, 0.07
Latinx heterosexual versus White heterosexual	-0.02	-0.04, -0.01	—	—
Black heterosexual versus White LGBTQQI2	-0.04	-0.06, -0.03	0.05	0.03, 0.08
Black LGBTQQI2 versus White LGBTQQI2	—	—	0.07	0.03, 0.10
Latinx heterosexual versus White LGBTQQI2	-0.05	-0.06, -0.03	—	—
Black LGBTQQI2 versus Black heterosexual	0.04	0.02, 0.06	—	—
Latinx LGBTQQI2 versus White LGBTQQI2	—	—	0.05	0.01, 0.10
Latinx LGBTQQI2 versus Black heterosexual	0.03	0.01, 0.06	—	—
Latinx heterosexual versus Black LGBTQQI2	-0.04	-0.04, 0.02	-0.04	-0.08, -0.00
Latinx LGBTQQI2 versus Latinx heterosexual	0.03	0.01, 0.06	—	—

^aOnly significant pairwise comparison in expected probability difference are presented; all other variables were held as means.

180 days via self-resolution (OR = 0.43; 95% CI = 0.21, 0.91; OR = 0.37; 95% CI = 0.16, 0.84, respectively).

Discussion

Previous work

As heterogeneity among homeless youth has been well documented, this study sought to explore homelessness exit and the stability of housing placements among minoritized and multiple minoritized youth. Similar to previous work that establishes connections between marginalized identities characteristics and elevated risks of homelessness,^{3,4,33,34} our study further highlights the relevance of minoritized and compounded minoritized identities to exits from homelessness and the stability of exits from homelessness. Expanding upon previous conclusions, findings from this study further support that youths with marginalized identities exit homelessness in ways and at rates that do not mirror those of White, cisgender and heterosexual youth.¹⁴ Our results highlight the main effects of race and ethnicity. Specifically, we found Black and Latinx youth had fewer returns to family and fewer self-resolved exits from homelessness relative to White youth. Black youth had more exits from homelessness to incarceration relative to White youth. LGBTQQI2 youth were less likely to self-resolve, whereas fewer were lost to the homeless system relative to heterosexual youth.

Main findings

These data reveal important main effects for racial disparities in housing stability after youth exit homelessness. Black youth

not only have lower odds of exiting homelessness by returning to family, but also lower odds of remaining stably housed for 180 days or more if they do exit homelessness to family. This could reflect the lack of economic opportunities that disproportionately impact Black families and contribute to family conflict. Taken together, these results suggest that some Black youth need family reunification support. Fortunately, Milburn's STRIVE intervention may be a viable solution. STRIVE is a five-session program in which a social worker engages with family to develop conflict resolution skills and strengthen family connection and resilience.⁶ STRIVE's initial pilot consisted of 151 newly homeless youth, 83% of whom were Black or Hispanic.⁶

In addition to differences in main effects for exits from homelessness, the interaction of racial/ethnic minority status and sexual/gender minority status exposes additional disparities in the chances of youth exiting homelessness. Disparities with respect to being lost to homeless service providers and returning to family are both related to the complex interplay of multiple minority statuses. The convergence of these minority and often marginalized identities creates unique experiences that are separate and apart from the experiences of other YEH. Our pairwise comparisons revealed that Black heterosexual, Black LGBTQQI2 and Latinx LGBTQQI2 youth are most frequently lost. This suggests that CoCs may need to assess how they are being responsive and sensitive to the needs of Black and Latinx LGBTQQI2 youth and Black heterosexual youth so they can continue to engage with these youth and not lose them prior to successful homelessness exits. Latinx and Black heterosexual youth are the least likely

Table 4 Correlates of homelessness exit stability among youth experiencing homelessness^{a,b}

	<i>PSH^c</i>		<i>RRH^d</i>		<i>Family reunification^e</i>		<i>Self-resolved^f</i>	
	<i>OR</i>	<i>95% CI</i>	<i>OR</i>	<i>95% CI</i>	<i>OR</i>	<i>95% CI</i>	<i>OR</i>	<i>95% CI</i>
Independent variables								
Minor (<18 years old)	2.75	0.62, 12.11	0.79	0.55, 1.17	0.80	0.55, 1.17	0.18**	0.11, 0.30
Race (ref = White)								
Black	0.76	0.22, 2.61	1.22	0.84, 1.78	0.46**	0.28, 0.77	1.28	0.67, 2.43
Latinx	0.39	0.09, 1.58	0.70	0.46, 1.08	0.77	0.37, 1.57	2.04	0.83, 5.05
Multiracial or other race/ethnicity	0.32	0.06, 1.88	0.69	0.35, 1.37	0.48	0.22, 1.04	1.77	0.40, 7.84
Sexual orientation (ref = heterosexual)								
LGBTQQI2	0.66	0.20, 2.23	1.17	0.75, 1.83	0.81	0.49, 1.33	1.11	0.54, 2.29
Gender X LGBTQQI2								
Black LGBTQQI2	1.43	0.26, 7.76	0.54	0.28, 1.04	2.41	0.98, 5.90	0.46	0.14, 1.53
Hispanic LGBTQQI2	4.66	0.35, 62.69	1.45	0.63, 3.36	0.62	0.20, 1.86	0.45	0.07, 2.97
Multiracial/Other race/ethnicity LGBTQQI2	1.11	0.09, 13.44	1.21	0.36, 4.08	1.58	0.37, 6.87	0.28	0.03, 2.45
Gender (ref = male)								
Female	0.73	0.29, 1.83	1.27	0.89, 1.80	0.90	0.61, 1.34	0.73	0.43, 1.22
Neighborhood type (ref = rural)								
Suburban	0.24	0.04, 1.25	0.75	0.42, 1.31	0.66	0.40, 1.10	0.37*	0.16, 0.84
Urban	0.31	0.07, 1.49	0.66	0.40, 1.08	0.68	0.56, 1.05	0.43*	0.21, 0.91
NST score	0.74*	0.59, 0.93	0.75***	0.68, 0.84	0.62***	0.56, 0.69	0.54**	0.43, 0.67

^aHomelessness exit stability is defined as exiting homelessness via PSH, RRH, family reunification or self-resolution for at least 180 days.

^bMultivariate logistic regression analyses include only youth experiencing homelessness from 16 communities across the USA included in the HMIS generated between 1 January 2015 and 1 May 2017, who exited to PSH, RRH, family or self-resolved by 11 February 16 or earlier ($n = 4957$).

^c $n = 523$.

^d $n = 2436$.

^e $n = 1031$.

^f $n = 967$.

* $P < 0.05$, ** $P < 0.01$, *** $P < 0.001$.

to successfully exit homelessness to family. With respect to the stability of housing placements for 180 days or more, only one disparity emerged from the analysis. Black youth are approximately half as likely to remain stably housed after a return to family. This finding further suggests that programs may need to conduct a deeper dive into the dynamics of Black and Latinx families that promote or hinder the ability to return home.

Limitations

Many of the limitations of these data have been discussed elsewhere,^{14,30} so we focus on limitations specific to the current analyses. Although the study relies on an unprecedented longitudinal administrative dataset, the outcomes represent limited information in need of data improvement and future research. First, the full array of housing outcomes is not

included in the data. For the purposes of the study, stable housing outcomes are defined as youth either exiting to a program (i.e. PSH or RRH), exiting to a housing situation with family, or exiting on their own. Given that these data only cover 3 years, we cannot address long-term stability. Also, we speculate that a number of youths are returning to homelessness, which is not accounted for in HMIS if youth do not engage the housing assistance resources again. Given this study utilized administrative data, we were not able to explicitly identify or disaggregate gender/sex/sexual minority youth, as in the dataset; LGBTQQI2 covers both gender identification, sex and sexual orientation, which prevent a more nuanced analysis. Moreover, small numbers of racial minority groups, such as Native American or Asian American YEH, also limited our ability to look at all the nuances of race/ethnicity. An additional problem presented by the administrative

data is the lack of validity and reliability work on the NST itself. Rigorous evaluation of validity and reliability is not possible from data such as these where the tool is being used in the system to make placements, as causality is hopelessly confounded. Future work should attempt to explore reliability and validity of the NST tool but will require radically different study methods. Furthermore, the data does not include information about the quality of services delivered to youth or the frequency of contact. This information is critical in future research intending to address the disproportionate rate of youth of color found to be lost in the system. Finally, the HMIS dataset used in the current study does not include community-level information (e.g. population, estimates of number of individuals experiencing homelessness, housing availability), which may play a critical role in determining YEH's exit venues and their ability to stay housed. This lack of information also limits the generalizability of the findings, as we do not know exactly to which communities these results may generalize. Moreover, community-level data collection and data entry may vary from CoC to CoC, so sources of bias may also vary. Future studies should expand on the current study and take community-level characteristics into consideration with the goal to gain further understanding of system responses to homelessness.

Contributions

Nonetheless, the results and the interaction effects are informative and open avenues for further and more rigorous investigation of housing programs. Most imperative, our findings suggest that youth of color and LGBTQQI2 youth of color need additional attention. As YEH are disproportionately comprised of marginalized identities, existing programs need to be careful of replicating, within their spaces, disparities that exist outside housing programs in society at large. The complex interaction effects that emerge from these findings point to a need for further investigation using the lens of intersectionality. Future research employing mixed methods seem warranted to help uncover important themes and provide clarity of how, why, where and under what conditions minority and multiple minority YEH succeed or struggle in exiting homelessness and remaining stably housed. Researchers and providers could benefit by 'centering the voices' and engaging in authentic collaboration of youth of color and LGBTQQI2 youth with lived experiences of homelessness in better assessing and addressing persistent inequities.

Public health implications

We see intersectional disparities in housing outcomes in this study. As YEH are a heterogeneous population and disproportionately consist of marginalized identities, to improve the

health of YEH, homeless services providers should consider how various identities interact to create differential housing outcomes. We think that youth who hold multiple minority statuses, such as LGBTQ2I who are Black, may need housing interventions that specifically target their unique needs. In particular, greater efforts on the part of CoCs need to be made to maintain contact with Black heterosexual youth, Black LGBTQ2I youth and Latinx LGBTQ2I youth, as these three groups of youth are disproportionately falling away from contact with CoCs. We cannot house youth who we cannot locate when housing resources become available.

References

- 1 Morton MH, Dworsky A, Matjasko JL *et al.* Prevalence and correlates of youth homelessness in the United States. *J Adolesc Health* 2018;**62**:14–21.
- 2 Santa Maria D, Padhye N, Yang Y *et al.* Drug use patterns and predictors among homeless youth: results of an ecological momentary assessment. *Am J Drug Alcohol Abuse* 2018;**44**:551–60.
- 3 Barman-Adhikari A, Bowen E, Bender K *et al.* A social capital approach to identifying correlates of perceived social support among homeless youth. In: *Child & Youth Care Forum* 2016, 2016, 691–708.
- 4 Tyler KA, Schmitz RM, Ray CM. Role of social environmental protective factors on anxiety and depressive symptoms among Midwestern homeless youth. *J Res Adolesc* 2018;**28**:199–210.
- 5 Armstrong JM, Owens CR, Haskett ME. Mental health of homeless youth: Moderation by peer victimization and teacher support. *Child Psychiatry Hum Dev* 2018;**49**:681–7.
- 6 Milburn NG, Iribarren FJ, Rice E *et al.* A family intervention to reduce sexual risk behavior, substance use, and delinquency among newly homeless youth. *J Adolesc Health* 2012;**50**:358–64.
- 7 Durso LE, Gates GJ. Serving our youth: Findings from a national survey of services providers working with lesbian, gay, bisexual and transgender youth who are homeless or at risk of becoming homeless. *The Williams Institute* 2012.
- 8 Whitbeck LB, Chen X, Hoyt DR *et al.* Mental disorder, subsistence strategies, and victimization among gay, lesbian, and bisexual homeless and runaway adolescents. *J Sex Res* 2004;**41**:329–42.
- 9 Choi SK, Wilson BD, Shelton J *et al.* Serving our youth 2015: The needs and experiences of lesbian, gay, bisexual, transgender, and questioning youth experiencing homelessness. *The Williams Institute*, 2015.
- 10 Shelton J, DeChants J, Bender K *et al.* Homelessness and housing experiences among LGBTQ young adults in seven US cities. *Cityscape* 2018;**20**:9–34.
- 11 Abramovich A, Shelton J. *Where Am I Going to Go?: Intersectional Approaches to Ending LGBTQ2S Youth Homelessness in Canada & the US*. Canadian Observatory on Homelessness Press, 2017.
- 12 Cochran BN, Stewart AJ, Ginzler JA *et al.* Challenges faced by homeless sexual minorities: Comparison of gay, lesbian, bisexual, and transgender homeless adolescents with their heterosexual counterparts. *Am J Public Health* 2002;**92**:773–7.

- 13 Henry M, Watt R, Rosenthal L, *et al.* *The 2017 Annual Homeless Assessment Report (AHAR) to Congress: Part 1: Point-in-Time Estimates of Homelessness*. United States Department of Housing and Urban Development: Office of Community Planning and Development; 2017. <https://files.hudexchange.info/resources/documents/2017-AHAR-Part-1.pdf>.
- 14 Rice E, Holguin M, Hsu H-T *et al.* Linking homelessness vulnerability assessments to housing placements and outcomes for youth. *Cityscape* 2018;**20**:69–86.
- 15 Milburn NG, Rice E, Rotheram-Borus MJ *et al.* Adolescents exiting homelessness over two years: The risk amplification and abatement model. *J Res Adolesc* 2009;**19**:762–85.
- 16 Crenshaw K. Demarginalizing the intersection of race and sex: a Black feminist critique of antidiscrimination doctrine, feminist theory, and antiracist politics. *Feminist Legal Theory Routledge* 1989;57–80.
- 17 United States Interagency Council on Homelessness. *Homelessness in America: Focus on Youth*; 2018. https://www.usich.gov/resources/uploads/asset_library/Homelessness_in_America_Youth.pdf.
- 18 Henry M, Mahathey A, Morrill T, *et al.* *The 2018 Annual Homeless Assessment Report (AHAR) to Congress: Part 1: Point-in-Time Estimates of Homelessness*. United States Department of Housing and Urban Development: Office of Community Planning and Development; 2018. <https://files.hudexchange.info/resources/documents/2018-AHAR-Part-1.pdf>.
- 19 Padgett D, Henwood BF, Tsemberis SJ. *Housing First: Ending Homelessness, Transforming Systems, and Changing Lives*. USA: Oxford University Press, 2016.
- 20 Gao Y, Das S, Fowler P. *Homelessness Service Provision: A Data Science Perspective*. San Francisco, CA: Thirty-First AAAI Conference on Artificial Intelligence, 2017.
- 21 Page M. (2017). Forgotten youth: Homeless LGBT youth of color and the Runaway and Homeless Youth Act. *Northwest J Law Soc Policy* 2017;**12**(2):17.
- 22 Morton MH, Dworsky A, Samuels GM. *Missed opportunities: Youth homelessness in America. National Estimates*. Chapin Hall at the University of Chicago, 2017.
- 23 Barman-Adhikari A, Rice E. Social networks as the context for understanding employment services utilization among homeless youth. *Eval Program Plann* 2014;**45**:90–101.
- 24 Berdahl TA, Hoyt DR, Whitbeck LB. Predictors of first mental health service utilization among homeless and runaway adolescents. *J Adolesc Health* 2005;**37**(2):145–54.
- 25 Edidin JP, Ganim Z, Hunter SJ, Karnik NS. The mental and physical health of homeless youth: A literature review. *Child Psychiatry Hum Dev* 2012;**43**(3):354–75.
- 26 Ferguson KM. Exploring family environment characteristics and multiple abuse experiences among homeless youth. *J Interpers Violence* 2009;**24**(11):1875–91.
- 27 Keuroghlian AS, Shtasel D, Bassuk EL. Out on the street: a public health and policy agenda for lesbian, gay, bisexual, and transgender youth who are homeless. *Am J Orthopsychiatry* 2014;**84**(1):66.
- 28 Ringwalt CL, Greene JM, Robertson M, McPheeters M. The prevalence of homelessness among adolescents in the United States. *Am J Public Health* 1998;**88**(9):1325–9.
- 29 Boesky LM, Toro PA, Bukowski PA. Differences in psychosocial factors among older and younger homeless adolescents found in youth shelters. *J Prev Interv Community* 1997;**15**(2): 19–36.
- 30 Hsu HT, Rice E, Wilson J *et al.* Understanding wait times in rapid rehousing among homeless youth: A competing risk survival analysis. *J Prim Prev* 2019;**40**(5):529–44.
- 31 Yu V. Shelter and transitional housing for transgender youth. *J Gay Lesbian Ment Health* 2010;**14**(4):340–5.
- 32 Abramovich A. Preventing, reducing and ending LGBTQ2S youth homelessness: The need for targeted strategies. *Social Inclusion* 2016;**4**(4):86–96.
- 33 Cauce AM *et al.* The characteristics and mental health of homeless adolescents: Age and gender differences. *J Emot Behav Disord* 2000;**8**(4):230–9.
- 34 North CS, Smith EM. A comparison of homeless men and women: Different populations, different needs. *Community Ment Health J* 1993;**29**(5):423–31. <https://doi.org/10.1007/BF00754410>.
- 35 Montgomery AE, Szymkowiak D, Culhane DP. Gender differences in factors associated with unsheltered status and increased risk of premature mortality among individuals experiencing homelessness. *Womens Health Issues* 2017;256–63.