



## Risk and protective factors contributing to homelessness among foster care youth: An analysis of the National Youth in Transition Database



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### ABSTRACT

Homelessness is a pervasive problem among youth aging out of the foster care system. Many of these youth exit the system without any concrete plans for their future and wind up suffering bouts of homelessness. Although a growing body of literature has begun to look at the factors that contribute to homelessness among this population, less has been written about the factors that guard against homelessness. Furthermore, most of the studies have been confined to a particular geographic area. Using data from the National Youth in Transition Database (NYTD), combined with the Adoption and Foster Care Analysis Reporting System (AFCARS), the present study provides an analysis of the risk and protective factors contributing to homelessness among a nationwide sample of foster care youth at age 21, 29% of whom had experienced homelessness. The findings indicate that the strongest protective factors against homelessness were having a connection to an adult and remaining in foster care until age 21. Other protective factors included having at least a high school education, being currently enrolled in school, and having a full-time job. On the other hand, the strongest risk factors contributing to homelessness were having been incarcerated, as well as having been referred for substance abuse. Other significant risk factors were having a runaway history, having received public food assistance, and being emotionally disturbed. Given these findings, child welfare agencies should make greater efforts to ensure that youth have an adult in their life whom they can trust and turn to for help, as well as encourage youth to remain in care until they are better prepared for life on their own.

### 1. Introduction

The transition to adulthood can pose myriad problems for foster care youth. Many of these youth struggle to find their footing once they leave care, experiencing negative outcomes in a range of areas. Among the indicators of their struggles to self-sufficiency are having lower levels of academic achievement, 20% lower employment rates, earnings that are about half as much as other young adults, greater reliance on public assistance, and higher rates of poverty than other youth (Berzin, Rhodes, & Curtis, 2011; Okpych & Courtney, 2014). Combined, these factors make it difficult for foster care youth to achieve economic self-sufficiency after exiting the system, with the result being a greater propensity to experience housing instability, including bouts of homelessness (Okpych & Courtney, 2014).

Nearly 20,000 youth exited the foster care through emancipation in 2017, which is aging out of the system between the ages of 18 and 21, depending on state regulations (U.S. Department of Health and Human Services, 2018). Many of these youth leave the child welfare system before any plans for permanency can be achieved, which may make them more vulnerable to homelessness (Bender, Yang, Ferguson, & Thompson, 2015; Fowler, Toro, & Miles, 2009). Although there are no nationally agreed upon figures for the rates of homelessness among this population of former foster care youth, a number of studies have provided valuable estimates.

There is considerable variation in estimates of the rates of homelessness of foster care youth, in part because definitions of homelessness vary. Section 330 of the Public Health Service Act (42 U.S.C., 254b), for example, defines homelessness as “an individual without permanent housing who may live on the streets; stay in a shelter, mission, single room occupancy facilities, abandoned building or vehicle; or in any other unstable or non-permanent situation”. This definition can be expanded to include couch surfing, which includes “those who are sharing housing of others due to loss of housing, economic hardship, or a similar reason” (42 U.S.C., 11434a(2)(A)&(B)(i)). Definitions of homelessness that include couch surfing usually result in higher estimates, because there are youth who use this as an alternative to going to a shelter, which they consider a last resort (McLoughlin, 2013).

A study of youth aging out of the foster care system in the Midwest (Dworsky & Courtney, 2009), revealed that 14% experienced an episode of homelessness, most within the first six months of leaving care. In this case, homelessness was defined as having spent one or more nights “sleep[ing] in a place where people weren’t meant to sleep, or sleep[ing] in a homeless shelter, or [not having] a regular residence in which to sleep” (p. 30). An update of this study (Dworsky, Napolitano, & Courtney, 2013) indicated that 36% of youth aging out of foster care in the Midwest had been homeless at least once by the age of 26, as compared to about 4% of all youth and young adults aged 18 to 26. Furthermore, a multi-site study by Bender et al. (2015) found that over

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one-third of youth seeking homeless services in Denver, Austin, and Los Angeles had a history of foster care involvement. Moreover, a study in Oklahoma found that 26% of youth had experienced some form of homelessness after aging out of that state's foster care system (Crawford, McDaniel, Moxley, Salehezadeh, & Cahill, 2015).

Some of the latest homelessness estimates come from Courtney et al. (2018), who found that nearly 25% of foster care youth in California had experienced homelessness by age 21. A relatively restrictive definition of homelessness was used to attain this estimate, cited as being in a "homeless shelter or in a place where people were not meant to sleep because they had no place to stay" for at least one night or more (p. 20). Among this same sample of youth, however, over 33% reported that they engaged in couch surfing for a place to stay.

The purpose of the current study is to provide a national estimate for the rate of homelessness among foster care youth, using data from the National Youth in Transition Database (NYTD) and the Adoption and Foster Care Analysis Reporting System (AFCARS), as well as identify the risk and protective factors associated with homelessness among this population.

## 2. Literature review

Despite the lack of a definitive estimate of the rate of homelessness among foster care youth, all of the studies mentioned above point to an unacceptably high incidence of the problem. Although identifying the prevalence of the problem is an important step, understanding what contributes to homelessness among this population is even more crucial. Yet, until the seminal study by Dworsky and Courtney (2009), which was among the first to examine both the occurrence and predictors of homelessness among foster care youth, little was known about the potential risk and protective factors that affected the likelihood of these youth becoming homeless. This study used longitudinal data to examine the occurrence and predictors of homelessness among a sample of youth who had aged out of the foster care system in Iowa, Wisconsin, and Illinois. The results of their model showed that youth who had run away from care, had been in a group care setting, had experienced physical abuse prior to entering care, and had reported delinquent behavior were more likely to become homeless. In terms of the protective factors, Dworsky and Courtney (2009) identified feeling close to at least one adult family member and perceiving more social support as reducing the odds of becoming homeless upon leaving care.

In their update of the 2009 study, Dworsky et al. (2013) discovered that the principal risk factors contributing to homelessness included running away while in foster care, displaying delinquent behaviors, having a history of childhood physical abuse, and having a mental health disorder. Berzin et al. (2011) also found that drug use contributed to homelessness. Moreover, Shah et al. (2017) indicated that those youth who were parents and had recently experienced housing instability were twice as likely to become homeless a year after leaving foster care. In addition, youth who had a criminal conviction (Fowler et al., 2009) or otherwise been involved in the juvenile justice system (Shah et al., 2017) were more likely to become homeless.

Connections to adults and permanency, or the lack thereof, have also been associated with the risk for homelessness. Shah et al. (2017) discovered that those who had gone through a disrupted adoption were more likely to become homeless, whereas youth who had experienced placement with a relative were less likely to become homeless. Similarly, Crawford et al. (2015) found that youth whose last placement type was a state shelter had a 55% greater odds of becoming homeless than those who had been in a family or kinship placement. Tyler and Schmitz (2013) also made the connection between foster care youth and homelessness and having insecure attachments to adults.

Having a greater number of foster care placements has been well documented in the literature as a risk factor for homelessness (Crawford et al., 2015; Dworsky et al., 2013; Fowler et al., 2009; Fowler, Marcal, Zhang, Day, & Landsverk, 2017; Shah et al., 2017; Tyler & Schmitz,

2013). Placement instability can prevent youth from developing strong ties to caregivers or develop supportive relationships with adults (Stott, 2012). Dworsky et al. (2013) also suggest that instability in placements may limit youths' ability to connect with resources in the community, such as programs to provide housing assistance.

Educational status has also been linked to homelessness risk, as low educational attainment (Berzin et al., 2011), and more specifically being a high school dropout (Fowler et al., 2009) has been determined to contribute to homelessness among foster care youth, whereas those youth with a higher grade point average were found less likely to become homeless (Shah et al., 2017). Those with less than a high school education tend to be at a substantial disadvantage compared to those with higher levels of education, and typically suffer from reduced financial resources (Berzin et al., 2011). For example, the unemployment rate for those with less than a high school education was 6.5% in 2017, or over two and a half times that of those with a bachelor's degree (2.5%). The figures are similarly striking for earnings. Full-time workers with less than a high school education had median weekly earnings of \$520, compared to \$1173 for those with a bachelor's degree (Bureau of Labor Statistics, 2018).

There also tends to be an association between foster youth with mental health challenges, as well as those who had experienced abuse, and homelessness, although the direction is not always clear. Dworsky et al. (2013) found the odds of becoming homeless were higher for those youth having symptoms of a mental health disorder, and Fowler et al. (2009) made this association for youth having emotional and behavioral problems, as well as those experiencing physical and sexual abuse. White et al. (2011) revealed that foster care youth who had been homeless were three times more likely to screen positively for post-traumatic stress disorder (PTSD) than those youth who had not been homeless. Bender et al. (2015) discovered that foster care youth who were homeless were highly likely to meet criteria for mental health disorders, including depression, substance use disorder, and PTSD. Moreover, Crawford et al. (2015) found that youth had over three times the odds of becoming homeless if they had accessed mental health or substance abuse services.

In addition, demographic characteristics of the youth such as being male (Dworsky et al., 2013), identifying as LGBT (Forge, Hartinger-Saunders, Wright, & Ruel, 2018; Wilson, Cooper, Kastanis, & Nezhad, 2014), and being African American (Shah et al., 2017), were also supported in the literature as being associated with the risk for homelessness.

Protective factors related to homelessness have received less attention in the literature. Research has found, however, that many foster care youth develop a sense of self-reliance (Samuels & Pryce, 2008), and the majority of these youth express optimism about their futures (Courtney, Piliavin, Grogan-Kaylor, & Nesmith, 2001). Shpiegel (2016) examined the phenomenon of resiliency among youth in foster care, as measured by six domains: educational attainment, avoidance of teen pregnancy, homelessness, mental illness, substance use and criminal involvement. The findings suggested that stable, long-term placements for youth are key to fostering competent functioning in the transition to adulthood.

Although the above discussion reveals that the literature about the potential risk factors associated with homelessness among foster care youth has expanded considerably over the past decade, the literature on protective factors still lags behind. Another drawback to the literature is that many of these studies have been limited in geographic scope. Certain states or cities have received considerable research attention (notably the Midwest, California, and Washington State), while fewer studies have been done from a national perspective. This may be attributed to the lack of data on the national level from which to conduct the analyses.

A major change in national data collection efforts arose as a result of the John H. Chafee Foster Care Independence Program (Public Law 106-169), which required the Administration for Children and Families

to establish a data collection system on youth outcomes. The National Youth in Transition Database (NYTD) arose from this law, where, beginning in 2010, states had to collect demographic and outcome information on youth transitioning out of foster care and follow them over time (U.S. Department of Health and Human Services, 2012). The outcomes component examines well-being, financial, and educational results for the youth. This complemented data that was already being collected from the Adoption and Foster Care Analysis Reporting System (AFCARS), which also required states to collect data on all children in foster care.

### 2.1. Current study

The present study examines the risk and protective factors for homelessness among youth aging out of the foster care system, using a combination of NYTD and AFCARS data. Using these data, it was also possible to provide a national estimate of the rate of homelessness among this population, a figure that has been noticeably missing from the literature. This may be attributable to data on foster care youth homelessness not being systematically collected on a national basis until the launch of NYTD in 2011.

Although there is a growing body of research that has examined the causes of homelessness among the foster youth population, few studies have done so from a national perspective, whereas NYTD and AFCARS data provide the advantage of drawing from youth in all 50 states. While the numerous regional studies done to date have offered illuminating evidence of foster care youth homelessness, they may not have captured the experiences of youth in parts of the country that have received less research attention. Another contribution of the current study is that it gives equal focus to exploring the protective factors that guard against homeless as the risk factors that contribute to it, while much of the literature has tended to place more emphasis solely on the risk factors. Policy makers may benefit from greater attention to what works to prevent homelessness among these youth.

Below are the research questions:

- What percentage of foster care youth experienced homelessness by age 21 and how does this figure compare to regional estimates of homelessness?
- What are the top five risk factors for homelessness among youth aging out of care?
- What are the top five protective factors against homelessness for youth aging out of care?

## 3. Methods

### 3.1. Data

The present study uses data from the NYTD outcome file and the AFCARS annual foster care file to assess the risk and protective factors for homelessness among foster care youth on a national basis. Data from the first cohort of youth in the NYTD were provided in 2011 when youth were age 17 at baseline, with follow-up data collected on these youth at two-year intervals, at age 19 in 2013, and at age 21 in 2015, using longitudinal survey data. States have the discretion to choose the method for administering the outcome survey to youth, such as in person, online, by mail, or over the phone, as long as the survey is administered directly to the youth and no else can answer on their behalf (National Data Archive on Child Abuse and Neglect, 2016). Youth participation in the survey is strictly voluntary. Data from the AFCARS foster care files are collected semi-annually by states on all children in foster care, regardless of eligibility for Title IV-E funds. States are required to collect case-level information for children served by the foster care system and submit all of their adoption and foster care data to the Children's Bureau electronically during two reporting periods each year (National Data Archive on Child Abuse and Neglect,

2019).

### 3.2. Sample

For the purposes of this analysis, data from cohort 1, wave 3 of the NYTD were used, when the youth were age 21 in 2015. These data were merged with the AFCARS foster care file from 2011 by matching the encrypted unique child identification number for each youth, which are the same in each file, to create a single data file with one complete record for each youth. AFCARS data from 2011 were used to correspond with the baseline year of NYTD when youth were age 17. This was done to provide a more complete set of complementary data on the youth, given that AFCARS only collects data on youth up to the point of discharge, and many youth leave the system at age 18, either by choice or by state mandate. If the AFCARS data from 2015 had been used, when the youth were age 21, a large number of missing cases would have resulted.

Both datasets contain data from all 50 states, the District of Columbia, and Puerto Rico. Those youth in the NYTD cohort are a sample from the baseline population who have self-selected to participate in the survey. As a result, the cohort may not be representative of the baseline of all youth at 17 in foster care. For wave 3, the response rate averaged 24% of the baseline population. The response rate is defined as "the number of youth who were eligible for the age 21 follow-up and who responded to the survey divided by the number of youth in the Baseline Population" (National Data Archive on Child Abuse and Neglect, 2016, p. 13). There was significant variation by state, with Arizona having the lowest response rate of 3%, whereas Maryland and Rhode Island each had the highest response rate at 73%. Part of the reason for the large variation in response rate by state is that some states sample, using statistically random sampling techniques. So although the response rate compared to the baseline may be quite low in these states, the random sampling technique lends to there being a more representative cohort of youth (National Data Archive on Child Abuse and Neglect, 2016).

Of the baseline population of 30,009 youth in the NYTD, 7082 participated in the outcome survey, either fully or partially, at age 21 in 2015 and were considered eligible for the age 21 follow-up survey. There were a variety of reasons that youth did not participate, with the most common reasons being the youth were unable to be located, or the youth declined to participate. Only these 7082 youth were included in the analysis.

### 3.3. Data analysis

Data from the combined NYTD and AFCARS file were analyzed using SPSS. To examine which factors either contributed to, or guarded against, the incidence of homelessness among the foster care youth, binary logistic regression, forward conditional method was performed. As a first step, however, the correlation between homelessness and a wide range of variables (23 in total), those considered to be both protective and risk factors, was conducted to see what were statistically significant (see Tables 1 and 2). Only those variables that had a statistically significant correlation with homelessness were included in the regression model ( $p < .05$ ). There were 18 such variables. A brief description about the measure used in the analysis are included in the Appendix A.

### 3.4. Variables

Among the outcome information collected in the NYTD are employment, education, health status, substance abuse referral, incarceration, financial assistance received, as well as whether the youth had ever experienced homelessness. A youth is considered homeless if he or she "had no regular or adequate place to live". The definition "includes situations where the youth is living in a car or on the street, or

**Table 1**  
Demographics.

Variable	Number	%	Correlation Coefficient
Race (n = 7080)			0.026* (nonwhite reference group)
White	4111	58.1%	
Black	2550	36.0	
Asian	118	1.7	
American Indian/Alaskan	280	4.0	
Hispanic (of any race)	1176	17.1	
Other/Unknown	489	6.9	
Sex (n = 7082)			0.004
Male	3239	45.7	
Female	3843	54.3	
Highest Educational Level (n = 6945)			0.133** (other than none of the above reference group)
High school or GED	4923	70.9	
Vocational certificate/license	372	5.4	
Associate degree	149	2.1	
Bachelor degree or higher	27	0.4	
None of the above	1474	21.2	
Current Placement Setting (n = 6832)			0.093**
Pre-adoptive home	103	1.5	
Foster home	3809	55.8	
Group home	1100	16.1	
Institution	1029	15.1	
Supervised independent living	220	3.2	
Runaway	262	3.8	
Trial home visit	309	4.5	
Lifetime total days in foster care (n = 6135)	1542.97 (SD = 1393.33)		-0.009
Total number of removals (n = 6863)	1.47 (SD = 0.83)		0.018

Note: Correlation coefficients refer to the correlation between homelessness and the corresponding variable.

- \* Correlation is significant at the 0.05 level (2-tailed).
- \*\* Correlation is significant at the 0.01 level (2 tailed).

staying in a homeless or other temporary shelter” (NYTD Outcomes File Codebook, p. 39). For youth in wave 3 at age 21, the question on homelessness only refers to the youth’s experiences over the past two years, since their last interview at age 19.

Data from the AFCARS file included information about the youths’ history in foster care. Among the variables were reasons why the youth had been removed from the home and placed in child welfare; total days in foster care; total number of removals; reason for discharge; current placement setting; as well as reported disabilities. Neither dataset contained information about the total number of moves while in care, which as mentioned in the literature review, has been shown to be a strong predictor of future homelessness. The closest information is a variable on the total number of removals, although this does not reflect movements the youth made while still in care.

#### 4. Results

##### 4.1. Descriptive statistics

A description of the sample of youth is provided in Table 1 (N = 7082). There were more females (54.3%) than males, and in terms of race/ethnicity, the majority (58.1%) were white, followed by black/African American (36.0%), and Hispanic/Latino ethnicity (17.1%), who could be of any race. As for the highest educational level attained, most reported that they had completed high school or a GED (70.9%), while 5.4% said that they had a vocational license or certificate, and 2.5% noted that they had an associate or bachelor’s degree. In addition, 21.2% of participants stated that they had not achieved any of

**Table 2**  
Risk and Protective Factors and Correlation with Homelessness.

Variable	Number	%	Correlation Coefficient
Homeless (n = 6874)			1.000
Yes	1991	29.0	
Current School Enrollment (n = 6927)			-0.098**
Yes	2202	31.8	
Current Full Time Employment (n = 6904)			-0.075**
Yes	1781	25.8	
Current Part Time Employment (n = 6860)			-0.080**
Yes	1956	28.5	
Employment Skills (n = 6915)			-0.009
Yes	2176	31.5	
Current Foster Care Enrollment (n = 7082)			-0.151**
Yes	1248	17.6	
Connection to Adult (n = 6899)			-0.158**
Yes	6190	89.7	
Substance Abuse Referral (n = 6781)			0.167**
Yes	731	10.8	
Incarceration (n = 6868)			0.262**
Yes	1521	22.1	
Children (n = 6891)			0.079**
Yes	1919	27.8	
Emotionally Disturbed (n = 6793)			0.059**
Yes	2481	36.5	
Clinically Diagnosed Disability (n = 6088)			-0.023
Yes	3139	51.6	
Public Food Assistance (n = 6855)			0.170**
Yes	1969	28.7	
Public Housing Assistance (n = 6830)			0.045**
Yes	428	6.3	
Public Financial Assistance (n = 6816)			0.067**
Yes	543	8.0	
Removal – Neglect (n = 6755)			-0.036**
Yes	2983	44.2	
Removal – Sex Abuse (n = 6755)			-0.041**
Yes	637	9.4	
Removal – Inadequate Housing (n = 6755)			-0.026*
Yes	505	7.5	

Note: Correlation coefficients refer to the correlation between homelessness and the corresponding variable.

- \* Correlation is significant at the 0.05 level (2-tailed).
- \*\* Correlation is significant at the 0.01 level (2 tailed).

these educational levels.

Data from the AFCARS file provided information on the youths’ experiences in the foster care system. It is important to recognize that the AFCARS data were drawn from when the youth were age 17 in 2011, as opposed to the NYTD data, which contained data from when the youth were age 21 in 2015. Therefore, data on the youths’ status in foster care may not have covered their full experience in the foster care system; rather it was a reflection of where they were at age 17. Accordingly, the placement setting for the youth at age 17 was predominantly in a foster home (55.8%), followed by a group home (16.1%), or an institution (15.1%). Other placement settings included a trial home visit (4.5%), supervised independent living (3.2%), and a pre-adoptive home (1.5%). Of particular note, 3.8% of youth were reported as runaways. The lifetime total days in foster care, through age 17, was 1543 (SD = 1393.33), which equates to about 51 months or 4.2 years. The total number of removals, which is the total number of times that the youth was removed from the home, was 1.5 (SD = 0.83), although this ranged from 1 removal to as many as 17. No data were available on the number of placement changes, however.

A number of variables in the analysis were considered as either protective or risk factors with regard to homelessness. A total of 1991 youth, or 29.0% of the respondents noted that they had experienced



**Table 3**  
Predictive Factors for Homelessness (N = 5786).

	B	S.E.	Wald	df	Sig.	Exp(B)	95% CI	
							Lower	Upper
Highest Education High School or Above (1)	-0.324	0.075	18.653	1	0.000	0.723	0.625	0.838
Current Enrollment in Education (1)	-0.250	0.072	12.154	1	0.000	0.779	0.677	0.896
Full-time Employment (1)	-0.263	0.079	11.224	1	0.001	0.769	0.659	0.897
Part-time Employment (1)	-0.151	0.075	4.061	1	0.044	0.860	0.743	0.996
Foster Care Status – In Care (1)	-0.553	0.105	27.647	1	0.000	0.576	0.468	0.707
Connection to Adult (1)	-0.884	0.096	84.953	1	0.000	0.413	0.342	0.498
Substance Abuse (1)	0.735	0.096	58.999	1	0.000	2.086	1.729	2.517
Incarceration (1)	0.946	0.075	157.868	1	0.000	2.575	2.221	2.984
Food Assistance (1)	0.671	0.070	92.465	1	0.000	1.956	1.706	2.243
Emotionally Disturbed (1)	0.254	0.065	15.062	1	0.000	1.289	1.134	1.465
Removal – Sexual Abuse (1)	-0.224	0.113	3.956	1	0.047	0.799	0.641	0.997
Removal – Inadequate Housing (1)	-0.357	0.127	7.894	1	0.005	0.700	0.545	0.898
Current Placement			11.634	2	0.003			
Current Placement – Group Home/Institution (1)	0.074	0.069	1.153	1	0.283	1.077	0.941	1.232
Current Placement – Runaway (2)	0.515	0.153	11.373	1	0.001	1.673	1.240	2.256
Constant	-0.264	0.126	4.404	1	0.036	0.768		

homelessness since their last survey at age 19. This figure is similar to the 26% found by Crawford et al. (2015) for foster care youth in Oklahoma, and the 25% found by Courtney et al. (2018) in California.

Table 2 provides information on those variables considered to be protective and risk factors with regard homelessness. As reported by the youth at age 21, 31.8% were currently enrolled in school, 25.8% were employed full time, and 28.5% were employed part time. In addition, 17.6% were enrolled in the foster care system, and 89.7% said they had a connection to an adult. Furthermore, at age 21, 10.8% of the youth had been referred for substance abuse, 22.1% had been incarcerated, and 27.8% had children. With respect to public assistance receipt, 28.7% had received public food assistance, 6.3% had received public housing assistance, and 8.0% had received public financial assistance. Once again, the AFCARS data provided additional information on the youth at age 17 in 2011, at which point 36.5% were considered emotionally disturbed, 44.2% had been removed from the home for neglect, 9.4% for sexual abuse, and 7.5% for inadequate housing.

#### 4.2. Binary logistic regression

Table 3 provides the results of a logistic regression predicting homelessness, using both protective and risk factors. Results reveal a statistically significant effect ( $p < .05$ ) for a total of 13 variables, with these representing a combination of risk and protective factors (N = 5786). Five variables were dropped from the equation because they did not show statistically significant effects ( $p > .05$ ): having children, having received public housing assistance, having received public financial assistance, removal from the home due to neglect, and race, with nonwhite as the reference group.

With respect to the protective factors, the strongest predictor of a guard against homelessness was having a connection to an adult, as the odds of being homeless were 58.7% lower for youth who had a connection to an adult, as opposed to those youth who did not. The second strongest predictor of avoiding homelessness was foster care status. Those youth who were in foster care at age 21 had a 42.4% lower odds of becoming homeless than those who were no longer in foster care. Other predictive factors to guard against homelessness were education and employment status. Specifically, youth whose highest level of educational attainment was high school or above were associated with a 27.8% lower odds of becoming homeless than those with less than a high school education. Similarly, youth who were currently enrolled in school had a 22.1% lower odds of becoming homeless than those not enrolled in school. In terms of employment status, those youth with a full-time job had a 23.1% lower odds of becoming homeless, and those with a part-time job had a 14.0% lower odds of being homeless than

youth who were not employed.

As for the risk factors, the strongest predictor of homeless was having been incarcerated, followed by having substance abuse issues. For youth who had been incarcerated, the odds of becoming homeless were 157.5% higher than the odds for youth who had not been incarcerated, and for youth who had been referred for substance abuse, the odds of becoming homeless were 108.6% higher than the odds of those who had not. Other strong predictors were having received public food assistance, where the odds of being homeless were 95.6% higher than those not receiving this assistance, and having a runaway history, which put the youth at 67.3% higher odds of being homeless than those who had not run away. Also significant was youth who were classified as being emotionally disturbed, with these youth having 28.9% higher odds of being homeless than youth who were not emotionally disturbed.

Two variables which were anticipated to be risk factors for homeless, actually showed to lower the odds of the youth being homeless. These were youth having been removed from the home for sexual abuse reasons, and having been removed for reasons of inadequate housing. For those youth removed for sexual abuse reasons, the odds of being homeless were 20.1% lower than for those who had not been removed for this reason. Similarly, for youth who were removed for reasons of inadequate housing, the odds of being homeless were 30.0% lower than for youth who had not been removed for this reason. Possible explanations for these counterintuitive results will be touched upon in the discussion section.

#### 5. Discussion

The present study aimed to determine the risk and protective factors for homelessness among a national sample of foster care youth at age 21. Although there is a growing body of literature that illustrates the factors that both contribute to, and guard against homelessness for foster care youth, much of these analyses have been performed on a geographically limited sample of youth. Using data from the NYTD and the AFCARS, both of which collect data on youth in all 50 states, analysis could be performed on a geographically diverse sample of youth, with representation throughout the entire United States.

The findings revealed six factors that showed to significantly protected against homelessness, five factors that were significant risk factors to homelessness, and two factors that provided confounding results. The key protective factors against homelessness were having a connection to an adult, remaining in the foster care system until age 21, having at least a high school diploma, being currently enrolled in school, and being employed full time or part-time. These findings

demonstrate how important it is for foster care youth to develop permanent connections to a positive adult role model, a notion supported by Dworsky and Courtney (2009), as well as Tyler and Schmitz (2013), who demonstrated a connection between insecure attachments to adults and homelessness. The results also speak to the value of extending foster care to youth beyond their 18th birthday, which the majority of states have now done since federal funding made this possible in 2008. The results also support the value of youth attaining at least a high school degree, remaining in school to pursue a higher-level degree, and obtaining a steady, full-time job, all of which can help the youth achieve economic security, and thereby remain stably housed.

The main risk factors for homelessness were having been incarcerated, having a substance abuse referral, receiving public food assistance, youth whose placement setting at age 17 was classified as a runaway, and being emotionally disturbed. These risk factors generally align with that of previous studies. For example, Berzin et al. (2011); Bender et al. (2015); Crawford et al. (2015) all found a connection between homelessness and substance use, and Fowler et al. (2009); Shah et al. (2017) drew this association with juvenile justice involvement. In addition, Dworsky and Courtney (2009) point to running away from care as a principal risk factor for homelessness, and Dworsky et al. (2013); Fowler et al. (2009); Bender et al. (2015); Crawford et al. (2015) all make a connection between homelessness and having emotional problems or a mental health disorder.

Although one may expect that youth who had to rely on various forms of public assistance were more likely to be homeless, only those having received public food assistance showed a significant effect. Neither having received public housing assistance, nor having received public financial assistance were found to be significant predictors of homelessness. A possible explanation is that only a small percentage of youth had received these forms of assistance: 6% received public housing assistance and 8% received public financial assistance, whereas nearly 30% of youth had received public food assistance.

There were also a number of variables that, according to the literature, were expected to be risk factors for homelessness, but no significant associations were found. These included having children, removal from the home due to neglect, and race. The most surprising, perhaps, is that there was no association between the number of removals from the home and homelessness. Although total number of removals from the home is not the same as total number of placements, there is likely to be a correlation between the two. The literature has strongly supported a connection between having a greater number of foster care placements and homelessness (Crawford et al., 2015; Dworsky et al., 2013; Fowler et al., 2009, 2017; Shah et al., 2017; Tyler & Schmitz, 2013). Accordingly, it was expected that the number of removals from home would be a predictor of homelessness as well, as the disruption and trauma associated with multiple removals could foretell negative outcomes. A possible explanation is that the average number of removals among the youth in this sample was relatively low, at 1.5 per youth, and it only represented the number of removals through age 17.

As mentioned in the findings, there were two factors, having been removed from the home for sexual abuse reasons, and having been removed for reasons of inadequate housing, that counterintuitively showed to lower the odds of being homeless. Although these contradict finding from the literature on sexual abuse as a predictor of homelessness (Fowler et al., 2009), as well as parental housing stability (Shah et al., 2017), a careful look at the data could provide some explanations. Cross tabulations reveal that a very small sample of youth ( $n = 144$ ) had experienced both homelessness and removal for sexual abuse reasons, and a similarly small number of youth ( $n = 125$ ) had experienced homelessness and removal for inadequate housing, out of a total of 5786 youth who were included in the regression. Given these numbers, it could be misleading to draw conclusive results from the data. A larger sample size could produce different results.

### 5.1. Implications for practice, policy and research

One of the primary findings from this study is that having a supportive relationship with an adult provides the strongest protection against homelessness. This aligns with one of the goals of the Chafee program, which is to help youth who are in care at age 14 or older to achieve meaningful, permanent connections with a caring adult, as well as an overriding objective of child welfare policy to enable permanency for children (Fernandes-Alcantara, 2019). Even if youth aging out of the system are unable to achieve permanency in terms of adoption or reunification with family, the child welfare system can still help youth regain a sense of safety, security, and stability in their lives by encouraging them to cultivate healthy relationships. These relationships can be fostered by avoiding the casual moving around of youth in care, and by helping the youth maintain connections to birth or foster families, even in the absence of permanency arrangements (Rittner, Affronti, Crofford, Coombs, & Schwam-Harris, 2011). Having stability in placements not only enhances the chances of foster care youth having a warm and redeeming relationship with a caregiver, i.e., a secure attachment, continuity of care has also been shown to lead to more positive educational and employment outcomes (Stein, 2006).

The study's finding that youth remaining in care until age 21 as a major protective factor against homelessness is also in line with current child welfare policy. Thanks to the Fostering Connections to Success and Increasing Adoptions Act of 2008, states can receive Title IV-E reimbursement for the costs associated with supports for young people to remain in foster care to age 21, as long as they meet certain criteria. As of May 2019, the Department of Health and Human Services had approved plans for 28 states and the District of Columbia to extend care (Fernandes-Alcantara, 2019). Even if youth can remain in care until age 21 in these states, many still choose to exit the system at age 18. The challenge for child welfare workers is to help these youth understand when staying in care for a few more years may be in their best interests.

The study's findings with respect to continuing education and attaining full time employment as protective factors are also supported by recent policy changes. The Education and Training Voucher (ETV) program, which provides youth with up to \$5000 a year to help pay for postsecondary education, has recently been amended to include young adults up to age 26, up from age 23 (Fernandes-Alcantara, 2019). U.S. government data indicate that only 65% of youth with foster care histories eventually graduate from high school by age 21 (DOE & HHS, 2016), as compared to 87% of all youth aged 18–24 (National Center for Education Statistics, 2017). The policy change reflects the acknowledgement that youth in care have a propensity to fall behind in educational attainment and be older than their peers at grade level, and thus need added time to complete postsecondary degrees.

Although the study's findings support these recent policy changes for older youth in care, more can be done to ensure that the policies are reaching their maximum effectiveness. For example, future research can do more in depth surveys of youth to understand their reluctance to stay in care beyond age 18, even if it might prove beneficial for them to do so. In addition, more research can be done on ways to promote the fostering of positive adult relationships for older youth in care, particularly those for whom family reunification or adoption are less likely.

### 5.2. Limitations

Although a strength of the NYTD is that it provides information on youth from all 50 states, a limitation is that the youth in the follow-up survey at age 21 only represented about 24% of the total baseline population of foster care youth. Therefore, it could be problematic to draw conclusions about the experiences of all foster care youth at age 21 from this sample. The degree to which the sample is truly representative of the foster care youth population is questionable, particularly in light of the fact that the most cited reason why youth did not participate in the follow-up survey is that they could not be located. It is plausible that a

number of youth who could not be located were unable to be found because they were homeless. As a result, the share of the population that experienced homelessness could have been seriously under-reported.

Moreover, a limitation to the AFCARS data is that it may not have given a complete picture of the foster care experiences of some youth since 2011 data were used, when the youth were 17. As mentioned above, this was done to ensure that the maximum number of cases could be matched, since many youth leave care at age 18, and AFCARS does not track youth after discharge. It is possible, therefore, that variables such as lifetime total days in foster care and total number of removals could have that shown a significant correlation with homelessness had the complete record of the youth, through age 21, been available.

## 6. Conclusion

The combination of the NYTD and the AFCARS data provided information on the experiences of thousands of foster care youth from all across the United States. This enabled an analysis of the risk and protective factors contributing to homelessness on a national sample of youth. Many of the findings aligned with that found in the literature from previous studies, that the odds of becoming homeless were greater for those youth who had been involved with the criminal justice system, used drugs, had a runaway history, and were emotionally disturbed. Also displaying higher odds were youth who had received public food

assistance. Conversely, youth had substantially lower odds of becoming homeless if they had a connection to an adult, or remained in care until they turned 21. Youth were also less likely to become homeless if they were employed full time, had at least a high school diploma, or were currently enrolled in school. Although the literature is less expansive with respect to these protective factors, the findings nonetheless point to reasonable expectations.

Given the findings from this study, child welfare workers should take steps to ensure that all youth have a connection to at least one supportive adult before they leave care. This adult could serve as a safety net for youth, perhaps providing them with a place to stay or financial assistance, or at least emotional support should they encounter problems with their housing situation. Similarly, child welfare workers should encourage youth to remain in care and secure some added support until they are better prepared to begin life on their own. At the same time, greater efforts need to be made to help youth attain at least a high school diploma, and to remain enrolled in school to secure a higher degree if at all possible. Youth also need help finding and maintaining jobs, particularly full-time ones that provide financial security. Taken together, these efforts can make major strides in stemming the odds that foster care youth will experience homelessness.

## Declaration of Competing Interest

The authors declared that there is no conflict of interest.

## Appendix A

### Appendix of measures used in analysis

Homeless	Youth had no regular or adequate place to live, such as living in a care, on the street, or staying in a shelter.
Current School Enrollment	Youth is enrolled in and attending high school, GED classes, or postsecondary vocational training or college.
Current Full Time Employment	Youth is employed at least 35 h per week.
Current Part Time Employment	Youth is employed between 1 and 34 h per week.
Employment Skills	Youth completed an apprenticeship, internship, or other on-the-job training in the past year.
Current Foster Care Enrollment	Youth is in foster care on the date of the outcome data collection.
Connection to Adult	Youth knows an adult, who is easily accessible to them, to go to for advice or guidance when there is a decision to make or problem to solve. Excludes spouses, partners, boyfriends or girlfriends, and current caseworkers.
Substance Abuse Referral	Youth was referred for an alcohol or drug abuse assessment or counseling, either as a self-referral or by an adult.
Incarceration	Youth was confined in a jail, prison, correctional facility, or juvenile detention facility in connection with a crime.
Children	Youth has given birth to a child or fathered any children.
Emotionally Disturbed	A condition exhibiting characteristics such as an inability to build satisfactory interpersonal relationships, inappropriate types of behavior, or a pervasive mood of unhappiness or depression. Diagnosis based on the DSM III.
Clinically Diagnosed Disability	A qualified professional has clinically diagnosed the child as having a least one disability.
Public Food Assistance	Youth is receiving food stamps or WIC.
Public Housing Assistance	Youth is living in government-funded public housing or receiving a government-funded housing voucher.
Public Financial Assistance	Youth is receiving ongoing cash welfare payments from the government.
Removal – Neglect	Child’s removal from home due to negligent treatment, including failure to provide adequate food, clothing, or shelter.
Removal – Sex Abuse	Child’s removal from home due to sexual abuse or exploitation by a person responsible for the child.
Removal – Inadequate Housing	Child’s removal from home due to substandard, overcrowded, or unsafe housing conditions, including homelessness.

Source: NYTD Outcomes file codebook, 2016 and AFCARS Foster care file codebook, 2016.

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