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Cigarette, marijuana, and alcohol use and prior drug treatment among newly homeless young adults in New York City: relationship to a history of foster care

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Abstract

Background—This study examined whether a history of foster care was associated with the risk for substance use among newly homeless young adults, controlling for demographics and other risk factors.

Methods—Multiple logistic regression analyses, adjusted for controls, among consecutive admissions of 424 newly homeless young adults (18 to 21 years), determined the association between foster care and substance use.

Results—A history of foster care was reported by 35% of the sample. Alcohol, marijuana, and cigarettes were the most frequently used substances. After adjusting for demographics, childhood emotional, physical, and sexual abuse, prior arrest, unemployment, lack of high school diploma, and family drug use, homeless young adults with histories of foster care were: three times as likely to smoke cigarettes (AOR=3.09); more than three times as likely to use marijuana (AOR=3.30); and almost nine times as likely to have been in drug treatment (AOR=8.81) than those without such histories.

Conclusions—It is important to screen homeless young adults who exited foster care for substance use, particularly cigarettes and marijuana. Risk reduction interventions should be targeted and tailored to their substance prevention needs.

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Contributors

Drs. Thompson and Hasin designed the study and wrote the protocol. Dr. Thompson managed the literature searches and summaries of previous related work. Dr. Thompson undertook the statistical analysis. Dr. Thompson wrote the first draft of the manuscript. Both authors significantly contributed to, and have approved, the final manuscript.

Conflict of Interest

All authors declare that they have no conflicts of interest.

Keywords

substance use; foster care; homeless young adults

1. Introduction

An estimated 750,000 to 2 million Americans age 18 to 24 years experience homelessness in any given year (Ammerman et al., 2004). The prevalence of substance use disorders among these young adults is 3 to 4 times higher than that of their never-homeless counterparts (Reardon et al., 2003; Shelton et al., 2009), with about half having a history of alcohol disorders and approximately one third having a history of drug disorders (Koegel et al., 1996). Substance use has been linked to family dissolution, social isolation, and poor job performance, all of which contribute to homelessness (van den Bree et al., 2009). A better understanding of factors that increase the risk for substance use among homeless young adults may aid in developing appropriate prevention and treatment.

Childhood maltreatment, including childhood sexual abuse (Briere, 1988) and other adverse experiences (Felitti et al., 1998), increases risk for later substance use (Kendler et al., 2000; Nelson et al., 2006). Child maltreatment is a common reason for removing children from their homes and placing them in foster care (Garland et al., 1996). Other determinants of foster care placement include parental problems, such as substance abuse and incarceration. Most children and adolescents in foster care are removed from their homes for these reasons (Fowler et al., 2009; Zlotnick, 2009).

Foster care placement is associated with many traumatic experiences in its own right, including residential and educational instability (McMillen et al., 2003; Courtney and Dworsky, 2004) and decreased social, emotional, and financial support (Courtney and Dworsky, 2005), all associated with increased risk for homelessness and substance use (Caton et al., 2005; Shelton et al., 2009).

A history of foster care is reported by a high proportion of homeless young adults (Park et al., 2005; Fowler et al., 2009). Substance use among young adults who exited foster care has been consistently reported at rates higher than those in the general population (Simms et al., 2000; Thompson and Auslander, 2007; Vaughn et al., 2007). However, the association between a history of foster care and substance use among homeless young adults has received surprisingly little attention. Given the potential salience of substance use to poor outcomes of both foster care and homelessness, knowing whether a history of foster care adds to our understanding of substance use among homeless young adults is of high importance.

Specifically, no information is available on whether, after controlling for the influences of demographics and other potential risk factors, a history of foster care is associated with substance use among homeless young adults. To that end, the present study examined the substance use of homeless young adults seeking crisis shelter with and without histories of foster care placements. The purpose of the study was to examine the following hypotheses: (1) a history of foster care would be associated with substance use; and (2) foster care would remain related to substance use, controlling for demographics and other known risk factors, including childhood maltreatment, arrest, unemployment, lack of high school diploma, and family drug use.

2. Methods

2.1.Sample

Consecutive admissions of 424 young adults (18-21 years) who entered crisis shelter for the first time between October 1, 2007 and February 29, 2008 were evaluated. Data were obtained from detailed, structured, standardized intake psychosocial assessments, designed by the shelter. Demographic characteristics, including academic/employment history, substance use, self-reported histories of psychiatric/substance disorders and treatment, history of child abuse and being in foster care, and other variables, including social resources, physical health, and legal/immigration status were assessed. These assessments took approximately 90 minutes and were completed within a week of shelter admission, on paper forms, by shelter clinical staff, all with at least bachelor-level training. Because the data were obtained from intake evaluations, no shelter residents refused participation. The resulting final sample was 64% (n=271) male, 36% (n=152) female, 57% (n=242) Black, 26% (n=111) Hispanic, 7% (n=29) White, and 10% (n=42) other race. The Institutional Review Board of Columbia University Medical Center approved all study procedures.

2.2. Measures

Client records were coded and entered into SPSS 18.0. Clients were asked about current substance use with separate questions about each of the following types of substances: alcohol, marijuana, cigarettes, cocaine, crack, ecstasy, crystal methamphetamine, inhalants, heroin, hallucinogens, prescription drugs, and over-the-counter drugs. In each case, “current” was self-defined by the respondent. Three binary variables were created to represent use of alcohol, marijuana, and cigarettes (yes/no). Other substances were not analyzed, since < 1% of the sample reported their use. Clients were also asked if they ever received drug treatment, also analyzed as a binary variable.

To determine histories of childhood abuse, clients were asked if they were ever: “emotionally abused, such as, repeatedly intimidated, put down and criticized often, taken advantage of, frightened repeatedly, or controlled;” “physically abused, such as, beaten with a belt, extension cord, hands, or fists, kicked, pushed, or shoved;” and “sexually abused, such as, being touched sexually without your permission, being forced to touch someone sexually, or having sexual intercourse against your wishes.” Types of abuse were measured separately, as each has been shown to be independently associated with specific types of substance use (e.g., Nelson et al., 2006; Lansford et al., 2009; Kendler et al., 2000).

Clients were asked (yes/no) if they had ever been arrested, were currently employed, had graduated from high school, had family members who use drugs regularly, and had ever been placed in foster care. Age, race, and gender data were also obtained.

2.3. Data Analysis

Descriptive statistics were calculated for those with versus without histories of foster care. To determine the association of foster care with each substance use variable, unadjusted odds ratios (OR) were computed. We then determined whether associations remained after accounting for the influence of demographics and other risk factors, including childhood abuse, prior arrest (Jonson-Reid and Barth, 2000), unemployment (Courtney and Dworsky, 2004), lack of high school diploma (McMillen et al., 2003), and family drug use (Courtney and Dworsky, 2005). Multiple logistic regression analyses were then conducted to derive adjusted odds ratios (AOR) for each substance outcome. We also explored whether the effect of foster care on substance use was modified by race or gender through interaction terms.

3. Results

Alcohol (21%), marijuana (16%), and cigarettes (40%) were the most frequently used substances and 11% of the sample had received prior drug treatment. A history of foster care was reported by 35% of the sample. Descriptive statistics for demographics, substance use, childhood abuse, and other risk factors by history of foster care are presented in Table 1. Bivariate logistic regression analyses indicated that foster care was significantly associated with marijuana use, cigarette use, and prior drug treatment. After adjusting for demographic and other risk factors, homeless young adults with histories of foster care were three times as likely to smoke cigarettes (AOR=3.09), more than three times as likely to use marijuana (AOR=3.30), and almost nine times as likely to have been in drug treatment (AOR=8.81) than those without such histories. The interaction terms representing foster care and race or gender were not significant (Table 2).

4. Discussion

A history of foster care was significantly associated with an increased likelihood for cigarette use, marijuana use, and prior drug treatment among homeless young adults. Further, these relationships remained significant after controlling for the influence of demographics and other risk factors. To our knowledge, this is the first time this relationship has been demonstrated.

Cigarette and marijuana use both peak in young adulthood and each have significant health and behavioral consequences. The links of cigarette use to respiratory and cardiovascular diseases and a variety of cancers are widely known (e.g., NIDA (National Institute on Drug Abuse), 2009; Park et al., 2006) and cigarette use is highly prevalent among homeless individuals who use alcohol and marijuana (Baggett and Rigotti, 2010). Marijuana use is associated with impaired concentration, judgment, decision-making, and short-term memory (NIDA (National Institute on Drug Abuse), 2005), all barriers to the development of living skills needed to successfully transition from foster care to self-sufficiency (Iglehart, 1994; Fowler et al., 2009). Unsuccessful transition attempts can end in an inability to establish stable housing. Moreover, marijuana use increases risk for engaging in HIV sexual risk behaviors, particularly among older adolescents in foster care (Thompson and Auslander, in press).

A history of foster care was not significantly associated with alcohol use. However, research has shown that where one lives influences the substances he or she uses, with higher rates of tobacco and marijuana use reported among street and shelter young adults and higher rates of alcohol use reported among housed young adults (Greene et al., 1997). Thus, increased risk of alcohol use from a history of foster care may not develop until young adults become housed. Further, the shared experiences of homelessness may have neutralized this high-risk behavior and, therefore, a history of foster care did not confer additional risk for alcohol use. However, this finding does not minimize the need for alcohol prevention among this population (Forney et al., 2007; Park et al., 2006), so screening homeless young adults who exited foster care for cigarette, marijuana, *and* alcohol use remains important (White and Pitts, 1998; Wenzel et al., 2010).

As approximately 25,000 individuals exit foster care each year, efforts should be made to help those in care better begin the process of resolving their substance use problems prior to discharge. Organizations that provide services to homeless young adults should target those with histories of foster care and tailor services to their collective and individual substance use needs.

For example, brief motivational interventions, which have been shown to reduce alcohol, marijuana, and cigarette use among adolescents and young adults in a variety of settings (e.g., McCambridge and Strang, 2004; Carey et al., 2006; Peterson et al., 2006; Baer et al., 2007), may be feasible and effective (Thompson et al., in press). Research has shown that young adults are willing to talk about their cigarette, marijuana, and alcohol use and participate in interventions to reduce such use (e.g., Stern et al., 2007; Yoast, Fleming, and Balch, 2007; Baggett and Rigotti, 2009).

Limitations of the study are noted. Use of each substance was measured by a single (yes/no) item. Frequency of use, problematic use, and clinical diagnoses were not obtained, but these should be used in future studies of foster care among homeless young adults. However, as a substance use disorder must be diagnosed to receive drug treatment, having received drug treatment may more accurately reflect substance use profiles and serve as a proxy measure for problematic substance use, and our findings using this outcome variable were consistent with our findings on substance use. Types of childhood abuse were also measured by single (yes/no) items. However, clients were provided with examples of what each type of abuse entailed.

Another limitation is data were obtained by self-report (which could lead to under-reporting of substance use due to recall and response bias) and during intake assessment (which may lead to under-reporting due to fear of being denied services). Available data did not allow control for additional risk factors, such as aspects of clients' substance use history (Vaughn et al., 2007; Park et al., 2006; Greene et al., 1997), that may have impacted the results. The effect of these factors, as well as potential genetic influences, on the risk for substance abuse should be examined in future studies. The influence of psychiatric history may also be important, but the complexities of this area are beyond the scope of the present report and will be reported later.

This is the first study to investigate the relationship of a history of foster care with current substance use among homeless young adults, controlling for many of the other potential risk factors for substance use among this high-risk population. Further research is needed on the long-term trajectories of housing, substance use, and related risk factors among young adults who exit foster care.

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Table 1

Homeless young adult characteristics and experiences by history of foster care

Variables	Never Foster Care (N = 277)		Ever Foster Care (N = 147)	
	N	%	N	%
Demographics				
Age				
18	103	38.5	60	41.4
19	89	33.0	56	38.1
20	75	27.8	30	20.4
21	2	0.7	1	0.1
Race/Ethnicity				
Black	153	56.7	86	58.5
White	22	8.1	5	3.4
Hispanic	72	26.7	38	25.9
Other	23	8.5	18	12.2
Gender				
Female	174	64.4	91	62.3
Male	96	35.6	55	37.7
Substance Abuse				
Cigarette Use	94	35.2	72	50.0**
Marijuana Use	32	12.3	34	23.0**
Alcohol Use	55	22.3	26	20.2
Prior Drug Treatment	32	12.3	34	24.5**
Childhood Abuse				
Emotionally Abused	93	34.4	83	56.5***
Physically Abused	72	26.7	82	55.8***
Sexually Abused	37	13.7	45	30.6***
Other Risk Factors				
Prior Arrest	112	41.6	82	56.9***
Unemployed	201	75.0	125	85.0*
No HS Diploma	175	66.0	105	71.4
Family Drug Use	85	31.6	65	44.5**

Significant Chi-Square:

* $p < .05$

** $p < .01$

*** $p < .001$

Table 2

Unadjusted and adjusted odds ratios for history of foster care on substance use

Variables	Cigarette Use		Marijuana Use		Alcohol Use		Prior Drug Treatment	
	OR	AOR	OR	AOR	OR	AOR	OR	AOR
Demographic Covariates								
Age (0=18-19; 1=20-21)	1.36	1.38	1.22	1.49	1.77*	1.78	1.80	2.21*
Race (0=Other; 1=Black)	0.50**	0.62	1.18	1.24	0.87	0.90	0.89	1.42
Gender (0=Female; 1=Male)	3.53***	3.06***	2.09**	2.33*	2.55***	2.21*	3.17***	4.13*
Childhood Abuse Covariates								
Emotionally Abused	1.02	0.6	1.16	0.71	1.34	0.90	1.71	1.19
Physically Abused	1.44	1.08	1.61	1.29	2.22**	2.17*	1.80	0.78
Sexually Abused	1.23	1.29	0.80	0.64	1.30	1.39	1.32	1.01
Other Covariates								
Prior Arrest	2.89***	2.35**	2.76***	2.06*	1.93**	1.51	7.15***	6.29***
Unemployed	1.23	1.13	1.84	1.99	0.99	1.12	1.85	1.94
No HS Diploma	1.22	1.49	1.42	1.52	1.11	1.36	0.91	0.78
Family Drug Use	2.01**	1.65*	2.63***	2.24**	1.82*	1.38	2.84**	1.89
Foster Care (predictor of primary interest)	1.84**	3.09**	2.31**	3.30*	0.88	0.37	3.52***	8.81**
Interactions								
Foster Care-Race	0.66[a]	0.41	1.37[a]	0.93	1.40[a]	1.75	0.72[a]	0.51
Foster Care-Gender	0.82[b]	0.97	0.54[b]	0.42	1.22[b]	1.18	0.58[b]	0.38

* p < .05

** p < .01

*** p < .001

[a] model with foster care, race, and foster care-race interaction term as predictors

[b] model with foster care, gender, and foster care-gender interaction term as predictors