Published in final edited form as:

Psychiatr Serv. 2012 September 1; 63(9): . doi:10.1176/appi.ps.201100405.

Psychiatric disorders and treatment among newly homeless young adults with histories of foster care

Ronald G. Thompson Jr., Ph.D. and Deborah S. Hasin, Ph.D.

Abstract

Objective—While foster care placement is often preceded by stressful events such as childhood abuse, foster care itself often exposes children to additional severe stressors. A history of foster care, as well as the childhood abuse that often precedes it, is common among homeless young adults. However, whether a history of foster care elevates the likelihood of psychiatric disorders and treatment among homeless young adults, after adjustment for childhood abuse, is unknown. This study examined whether a history of foster care was associated with psychiatric disorders, prior psychiatric counseling, prescription of psychiatric medications, and prior psychiatric hospitalization among newly homeless young adults, controlling for childhood abuse and other covariates.

Methods—Among a consecutive sample of 424 newly homeless young adults (18 to 21 years) in a crisis shelter, logistic regression analyses determined the associations between foster care and any psychiatric disorder (affective, anxiety, personality, psychotic) and psychiatric treatment, adjusted for demographics, childhood abuse, substance abuse, prior arrest, unemployment, lack of high school diploma, and histories of psychiatric disorders and drug abuse among biological relatives.

Results—Homeless young adults with histories of foster care were 70% more likely to report any psychiatric disorder (AOR=1.70) and twice as likely to have received mental health counseling for a psychiatric disorder (AOR=2.17), been prescribed psychiatric medication (AOR=2.26), and been hospitalized for psychiatric problems (AOR=2.15) than those without such histories.

Conclusions—Histories of foster care should trigger screening for psychiatric disorders among homeless young adults to aid in the provision of treatment (counseling, medication, hospitalization) tailored to their psychiatric needs.

Introduction

Homeless young adults are at elevated risk for psychiatric disorders (1, 2), with affective and anxiety disorders nearly twice as likely compared to housed individuals around the same age (3, 4). Psychiatric disorders are associated with considerable impairment in functioning (5) that may impede the development of independent living skills and efforts to obtain and retain housing (6–8). Better understanding the factors that increase the risk for psychiatric disorders among homeless young adults is of considerable importance and may point the way to delivery of more effective services.

A history of foster care is one risk factor for psychiatric disorders among homeless young adults that has received little attention, even though such a history is reported by a

Disclosures of Conflict of Interest

None for any author.

disproportionate number of homeless young adults (8–11). Among the estimated 25,000 older adolescents and young adults who exit foster care each year, psychiatric disorders have been consistently reported at rates higher than those in the general population (12–17). Additionally, older adolescents in foster care utilize mental health services at 10–20 times the rate of those older adolescents who live at home and 5–8 times the rate of those who live in poverty (18–21).

Moreover, older adolescents still in foster care have exceptionally high rates of lifetime psychiatric hospitalization, up to 42% of 17 year olds in foster care (19, 22, 23). Among foster care adolescents in residential treatment in New York City, those with histories of psychiatric hospitalization are more likely to have histories of being prescribed medication (24); rates of psychotropic medication prescription/use for samples of adolescents in foster care range from 13% to 37%, as compared to the approximately 4% among the general adolescent population (19, 22). Given that psychiatric disorders are likely to result in poor outcomes for homelessness (3, 25), understanding whether a history of foster care is associated with psychiatric disorders and treatment for these disorders (psychiatric counseling, medication, and hospitalization) among homeless young adults is highly important. However, no study to date has performed this investigation.

To conduct such an investigation, the circumstances that commonly give rise to foster care placement should be taken into account. Of the over 500,000 individuals currently placed in the U.S. foster care system, most were removed from their homes due to neglect, caretaker absence, physical abuse, and/or sexual abuse (26–28). The long-term consequences of childhood abuse in terms of risk for later psychopathology have been documented extensively (29–31). Thus, studies of the associations among a history of foster care and psychiatric disorders (and treatment for these disorders) should account for the influence of childhood abuse.

Another important factor to take into account is substance abuse. Both childhood abuse (29, 30) and history of foster care (32) increase the risk for later substance abuse, which occurs more often among adolescents and young adults who exited foster care than among the general population (12, 33–37). Because substance use disorders are considerably more prevalent among homeless young adults than their housed counterparts (3, 4, 38) and since substance and psychiatric disorders are highly associated in the general population (39, 40), substance abuse should also be accounted for when examining the relationship between foster care and psychiatric disorders and treatment among homeless young adults.

While foster care placement is typically preceded by stressful events, this placement and foster care itself often exposes children to additional severe stressors. Removal from home and placement into foster care with strangers can be stressful and associated with many additional traumatic experiences, such as frequent residential and school changes (41) and further neglect and abuse of different types than those experienced with biological parents (42, 43). These experiences can have additional devastating and long-lasting emotional and psychological effects over and above exposure to childhood abuse (44, 45). However, whether a history of foster care elevates the likelihood of psychiatric disorders and treatment among homeless young adults, after adjustment for childhood abuse, is unknown. Thus, this study examined whether a history of foster care was associated with psychiatric disorders, prior psychiatric counseling, prescription of psychiatric medications, and prior psychiatric hospitalization, controlling for childhood abuse and other covariates, among newly homeless young adults seeking crisis shelter in New York City. Specifically, the following hypothesis was tested: *A history of foster care would be associated with increased likelihood of psychiatric disorders and treatment among homeless young adults, controlling for demographic characteristics, childhood emotional, physical, and sexual abuse, substance*

abuse, and other known risk factors (arrest, unemployment, lack of high school diploma, and histories of psychiatric disorders and drug abuse among biological relatives).

Methods

Procedures

Data were obtained from structured psychosocial assessments given at intake at the Crisis Shelter at Covenant House New York (CHNY), the largest provider of crisis, transitional living, and community-based educational and employment services to young adults who are homeless or at immediate risk of becoming homeless in New York City (NYC). The Crisis Shelter provides emergency services, shelter, case management, and referrals to supportive services for young adults 18 to 21 years of age.

After receiving informed consent, psychosocial assessments were conducted as part of regular service provision by shelter clinical staff, all of whom had at least bachelor-level training. The assessment utilized a structured instrument developed by CHNY. Sections of this instrument included: childhood abuse, foster care placement, school and work, health and mental health, drug and alcohol use, legal issues, and family histories of psychiatric disorders and drug abuse. The assessment took 1 to 1.5 hours.

The daily shelter census report was used to identify clients who entered the shelter for the first time between October 1, 2007 and February 29, 2008. A sample of 424 young adults (18–21 years) who entered the crisis shelter for the first time during the specified time period were evaluated. The Institutional Review Board of Columbia University Medical Center approved all study procedures. Assessment information was coded and entered into SPSS/PASW Statistics, version 18.0.

Evaluation Methods

Primary Outcomes

Lifetime Psychiatric Disorders: Clients were asked if they had ever been diagnosed with the following disorders: depression, bipolar, post-traumatic stress disorder, anxiety, oppositional defiant disorder, attention deficit disorder, borderline personality, schizophrenia, and psychosis. Given the distribution of psychiatric disorders in the sample, a binary variable was created indicating client endorsement of *any of these psychiatric disorders*. **Lifetime Psychiatric Treatment.** Clients were asked if they ever *received psychiatric counseling, psychiatric medication via prescription*, and if they had ever been *hospitalized for psychiatric problems*.

Predictor of Primary Interest

History of Foster Care: Clients were asked if they had ever been *placed in foster care* (yes/no).

Covariates

Childhood Abuse: Clients were asked if, prior to age 18 years, they had been: “*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 and analyzed separately, as each has been shown to be independently associated with specific types of psychiatric and substance use disorders (29, 30, 46).

Substance Abuse: Three separate 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 (32). As a proxy measure for any substance use disorder, clients were asked if they had ever *received drug treatment*, also analyzed as a binary variable (32). **Other Covariates.** Additional control variables included the following: ever *arrested* (47), currently *unemployed* (48), *graduated from high school* (17), and *histories of psychiatric disorders and drug abuse among biological relatives* (i.e., biological parents or other family members) (49), all known to be associated with psychiatric disorders, substance abuse, childhood abuse, and homelessness (31). Data on *age, race, and gender* were ascertained as well.

Sample—In terms of demographic characteristics, 271 (64%) of the sample were male, 152 (36%) female, 242 (57%) black, 111 (26%) Hispanic, 29 (7%) white, and 42 (10%) other race. A history of foster care was reported by 147 (35%) of the sample; 179 (42%) reported childhood emotional abuse, 157 (37%) physical abuse, and 83 (20%) sexual abuse. Alcohol (n=81; 21%), marijuana (n=66; 16%), and cigarettes (n=166; 40%) were the most frequently used substances; 46 (11%) of the sample had received prior drug treatment (32). Descriptive statistics for demographic characteristics, childhood emotional, physical, and sexual abuse, and substance abuse for those with and without histories of foster care are presented in Table 1.

Data Analysis—To determine the association of foster care with each psychiatric variable, unadjusted odds ratios (OR) were first computed. To then determine whether associations remained after accounting for the influence of demographic characteristics, history of childhood abuse, substance abuse, and other risks, multiple logistic regression analyses were conducted to derive adjusted odds ratios (AOR) for each psychiatric outcome (*diagnosed with any psychiatric disorder, received prior psychiatric counseling, prescribed psychiatric medication, hospitalized for psychiatric problems*) to determine the unique contribution of foster care to predicting psychiatric problems in this population.

Results

Of the sample, 130 (31%) reported having been diagnosed with any psychiatric disorder, 149 (36%) had received prior psychiatric counseling, 87 (21%) were prescribed psychiatric medications, and 70 (17%) had been hospitalized for psychiatric problems. Specific psychiatric disorders for those with and without histories of foster care are also presented in Table 1.

Bivariate logistic regression analyses indicated that a history of foster care was significantly associated with having any psychiatric diagnosis, receiving psychiatric counseling, being prescribed psychiatric medication, and being hospitalized for psychiatric problems. After adjusting for race, gender, age, childhood emotional, physical, and sexual abuse, alcohol, marijuana, and cigarette use, prior drug treatment, and other risk factors (prior arrest, unemployment, no high school diploma, histories of psychiatric disorders and drug abuse among biological relatives), compared to homeless young adults without histories of foster care, homeless young adults with histories of foster care were over 70% more likely to report any psychiatric disorder (AOR=1.70) and two times as likely to have received mental health counseling for a psychiatric disorder (AOR=2.17), been prescribed psychiatric medication (AOR=2.26), and been hospitalized for psychiatric problems (AOR=2.15; Table 2).

Discussion

Among homeless young adults, a history of foster care significantly increased the likelihood of having a diagnosis of affective, anxiety or psychotic psychiatric diagnosis, receiving psychiatric counseling, being prescribed psychiatric medication, and being hospitalized for psychiatric problems. Further, these relationships remained strong and significant after controlling for the influence of childhood abuse and other risk factors. To our knowledge, this is the first time the relationship between a history of foster care and psychiatric disorders among homeless adults has been demonstrated.

To better understand why a history of foster care remained a significant predictor of psychiatric outcomes, even after adjusting for controls, the context of foster care and additional negative experiences likely to be endured by those in its care should be given further consideration. Life in foster care, is one of general instability, with the number of residential placements ranging from an average of 2.4 to 9.5 (41, 50) and known to be linked to increased psychiatric problems and treatment (18). With each move, foster care adolescents report experiencing a loss of control over the direction of their lives (51), being further disconnected from peers, families, and social institutions (52), and reliving the trauma of separation from family. All of this occurs during a developmental period characterized by rapid physical changes, cognitive and emotional maturation, and heightened sensitivity to peer and romantic relationships (53). Thus, many learn to not trust and not form new attachments, leaving already compromised mental health to deteriorate further.

High rates of placement into group homes and residential treatment centers have been reported for older adolescents in foster care, with approximately 40% of older adolescents in NYC residing in such congregate care (54). The majority in these placements report experiences of peer-on-peer violence, stealing of personal items, unsafe physical conditions, and inappropriate staff behavior (use of corporal punishment, restraints, and isolation, bullying, and strip searches). These basic safety issues often translate into externalizing behaviors problems, such as aggressiveness, disobedience, and running away (54). Unfortunately, these behaviors, in turn, affect placement stability and subsequent psychiatric status and treatment (55, 56). Additionally, prior studies have shown that many foster care adolescents are unhappy with the way in which psychiatric medications are prescribed and tend to discontinue taking psychiatric medications (and attending psychiatric treatment) of their own volition after discharge (57).

Despite high need and service use rates, little is known about the impact of psychiatric treatment on psychiatric outcomes among older adolescents in foster care (58). Additionally, several studies have concluded that mental health services, in fact, are actually underutilized by adolescents in foster care (42, 59) or are untested treatments and possibly inappropriate for their needs (18, 60, 61). Improper hospitalization can have negative effects, such as the loss of social competence, opportunities to form meaningful relationships, and independence, and stigmatization (62). There has also been an increasing trend to divert those who would usually have been served by mental health programs and the juvenile justice system to foster care (16) where placements in residential treatment centers can be arranged. Unfortunately, research suggests that individual behavioral and emotional problems may be exacerbated in congregate care settings by peer problem behaviors and lack of individualized caregiver attention (63).

Study limitations are noted. Data were obtained by self-report (which could lead to under reporting of psychiatric disorders and 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). Under reporting could also be due to poor insight into personal behaviors or simply being unaware of a diagnosis having been made. Neglect, a frequent reason for removal from the home and placement in foster care, was not covered but should be in future studies. Types of childhood abuse were measured by single (yes/no) items. However, to improve reporting, clients were provided with examples of what each type of abuse entailed. Psychiatric and substance abuse variables were coded as single (yes/no) items and clinical diagnoses were not obtained, limiting the comparability of findings to studies that employed elaborated diagnostic measures. Histories of psychiatric disorders and drug abuse among biological relatives were measured by single (yes/no) items (i.e., *Have your biological parents or other family members been diagnosed with psychiatric disorders? Do your biological parents or other family members have drug abuse problems?*). Future research in this area should be more specific as to which family members have psychiatric disorders or abuse drugs. Additionally, data were not available to examine the reasons respondents were removed from their families, whether their biological mothers had abused substances when pregnant with the respondent, the age respondents entered foster care, length of time they spent in foster care, and number and types of residential and educational placements. As each of these factors has been shown to increase the risk for subsequent psychiatric disorders, the effect of these factors, as well as potential genetic influences, on the risk for psychiatric disorders should be included in future research. Also, The sample for this study was comprised only of residents of a crisis shelter for young adults. Homeless young adults with foster care histories may have a greater likelihood of adverse experiences in foster care (e.g., placement changes, failure of permanence) than individuals with more positive foster care experiences, who may be more likely to successfully transition to independent living rather than homelessness. Therefore, future studies that include individuals with histories of foster care who are not homeless are needed to determine if the results are more broadly generalizable, as well as studies that determine which specific foster care experiences are related to housing instability and homelessness. However, despite these limitations, this study is important because it is the first to identify the association between a history of foster care and psychiatric disorders among homeless young adults, a highly vulnerable population, indicating that further investigation of this relationship is warranted and important.

Conclusion

This study found that a history of foster care was associated with increased risk for psychiatric disorders and treatment among homeless young adults, even after adjusting for many relevant controls. Given these findings, the child welfare system should increase its efforts to better begin the processes of resolving client psychiatric problems prior to discharge from foster care and planning for their aftercare treatment. Histories of foster care should trigger screening for psychiatric disorders among homeless young adults to aid in the provision of treatment (counseling, medication, hospitalization) tailored to their psychiatric needs. As homeless young adults without foster care histories also have high rates of psychiatric problems, they should be screened for psychiatric disorders and receive individualized treatment as well. Improved coordination and continuity of services between the child welfare, mental health, and young adult homelessness service systems are needed to ensure that all young adults have stable housing, employment training and opportunities, and treatment for psychiatric problems. Further research is required on the most efficient and effective psychiatric (64) and psychopharmacological treatment (65) to improve the long-term trajectories of housing stability and psychiatric disorders among homeless young adults who exit foster care.

Acknowledgments

The authors thank the clients and staff of Covenant House New York. Support for the project was provided by R21AA017862, K23DA032323, U01AA018111, K05AA014223, and the New York State Psychiatric Institute.

References

1. Unger J, Kipke M, Simon T, et al. Homeless youths and young adults in Los Angeles: Prevalence of mental health problems and the relationship between mental health and substance abuse disorders. *American Journal of Community Psychology*. 1997; 25:371–394. [PubMed: 9332967]
2. Kushel MB, Yen IH, Gee L, et al. Homelessness and health care access after emancipation: results from the Midwest Evaluation of Adult Functioning of Former Foster Youth. *Archives of Pediatrics & Adolescent Medicine*. 2007; 161:986–993. [PubMed: 17909143]
3. Reardon ML, Burns AB, Preist R, et al. Alcohol use and other psychiatric disorders in the formerly homeless and never homeless: prevalence, age of onset, comorbidity, temporal sequencing, and service utilization. *Substance Use & Misuse*. 2003; 38:601–644. [PubMed: 12747399]
4. Shelton KH, Taylor PJ, Bonner A, et al. Risk factors for homelessness: evidence from a population-based study. *Psychiatric Services*. 2009; 60:465–472. [PubMed: 19339321]
5. Angold A, Costello EJ. Depressive comorbidity in children and adolescents: empirical, theoretical, and methodological issues. *American Journal of Psychiatry*. 1993; 150:1779–1791. [PubMed: 8238631]
6. Iglehart A. Adolescents in foster care: predicting readiness for independent living. *Children and Youth Services Review*. 1994; 16:159–169.
7. Park J, Metraux S, Brodbar G, et al. Public shelter admission among young adults with child welfare histories by type of service and type of exit. *Social. 2004 Service Review* June;:284–303.
8. Park J, Metraux S, Culhane D. Childhood out-of-home placement and dynamics of public shelter utilization among young homeless adults. *Children and Youth Services Review*. 2005; 27:533–546.
9. Roman, N.; Wolfe, P. *Web of failure: The relationship between foster care and homelessness*. Washington, DC: National Alliance to End Homelessness; 1995.
10. Fowler PJ, Toro PA, Miles BW. Pathways to and from homelessness and associated psychosocial outcomes among adolescents leaving the foster care system. *American Journal of Public Health*. 2009; 99:1453–1458. [PubMed: 19542038]
11. Zlotnick C. What research tells us about the intersecting streams of homelessness and foster care. *American Journal of Orthopsychiatry*. 2009; 79:319–325. [PubMed: 19839669]
12. Pilowsky DJ, Wu LT. Psychiatric symptoms and substance use disorders in a nationally representative sample of American adolescents involved with foster care. *Journal of Adolescent Health*. 2006; 38:351–358. [PubMed: 16549295]
13. Auslander W, McMillen J, Elze D, et al. Mental health problems and sexual abuse among adolescents in foster care: Relationship to HIV risk behaviors and intentions. *AIDS and Behavior*. 2002; 6:351–359.
14. Trupin EW, Tarico VS, Low BP, et al. Children on child protective service caseloads: prevalence and nature of serious emotional disturbance. *Child Abuse & Neglect*. 1993; 17:345–355. [PubMed: 8330221]
15. Pilowsky D. Psychopathology among children placed in family foster care. *Psychiatric Services*. 1995; 46:906–910. [PubMed: 7583500]
16. Landsverk, J.; Garland, A. Foster care and pathways to mental health services. In: Curtis, P.; Dale, G., editors. *The Foster Care Crisis: Translating Research into Practice and Policy*. Lincoln, NE: University of Nebraska Press; 1999. p. 193–210.
17. McMillen C, Auslander W, Elze D, et al. Educational experiences and aspirations of older youth in foster care. *Child Welfare Journal*. 2003; 82:475–495.
18. Bellamy JL, Gopalan G, Traube DE. A national study of the impact of outpatient mental health services for children in long-term foster care. *Clinical Child Psychology and Psychiatry*. 2010; 15:467–479. [PubMed: 20923897]

19. Raghavan R, Inoue M, Ettner SL, et al. A preliminary analysis of the receipt of mental health services consistent with national standards among children in the child welfare system. *American Journal of Public Health*. 2010; 100:742–749. [PubMed: 19608950]
20. Harman JS, Childs GE, Kelleher KJ. Mental health care utilization and expenditures by children in foster care. *Arch Pediatr Adolesc Med*. 2000; 154:1114–1117. [PubMed: 11074852]
21. Kerker BD, Dore MM. Mental health needs and treatment of foster youth: barriers and opportunities. *American Journal of Orthopsychiatry*. 2006; 76:138–147. [PubMed: 16569139]
22. Raghavan R, Lama G, Kohl P, et al. Interstate variations in psychotropic medication use among a national sample of children in the child welfare system. *Child Maltreatment*. 2010; 15:121–131. [PubMed: 20410022]
23. McMillen JC, Scott LD, Zima BT, et al. Use of mental health services among older youths in foster care. *Psychiatric Services*. 2004; 55:811–817. [PubMed: 15232022]
24. Dale N, Baker AJ, Anastasio E, et al. Characteristics of children in residential treatment in New York State. *Child Welfare Journal*. 2007; 86:5–27.
25. Ammerman, S.; Ensign, J.; Kirzner, R., et al. *Homeless Young Adults Ages 18–24: Examining Service Delivery Adaptations*. Nashville: National Health Care for the Homeless Council, Inc; 2004.
26. Curtis, P.; Dale, G. *The Foster Care Crisis: Translating Research into Policy and Practice*. Washington, DC: Child Welfare League of America; 2001.
27. U.S. Department of Health and Human Services: Children's Bureau. The AFCARS (Adoption and Foster Care Analysis and Reporting System) Report. 2005. Available from: <http://www.acf.hhs.gov/programs/cb/publications/afcars/report9.pdf>
28. Garland AF, Landsverk JL, Hough RL, et al. Type of maltreatment as a predictor of mental health service use for children in foster care. *Child Abuse & Neglect*. 1996; 20:675–688. [PubMed: 8866114]
29. Kendler KS, Bulik CM, Silberg J, et al. Childhood sexual abuse and adult psychiatric and substance use disorders in women: an epidemiological and cotwin control analysis. *Archives of General Psychiatry*. 2000; 57:953–959. [PubMed: 11015813]
30. Nelson EC, Heath AC, Lynskey MT, et al. Childhood sexual abuse and risks for licit and illicit drug-related outcomes: a twin study. *Psychological Medicine*. 2006; 36:1473–1483. [PubMed: 16854248]
31. Oswald SH, Heil K, Goldbeck L. History of maltreatment and mental health problems in foster children: a review of the literature. *Journal of Pediatric Psychology*. 2010; 35:462–472. [PubMed: 20007747]
32. Thompson RG, Hasin DS. 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. *Drug and Alcohol Dependence*. 2011; 117:66–69. [PubMed: 21288659]
33. Thompson RG Jr. Auslander WF. Substance use and mental health problems as predictors of HIV sexual risk behaviors among adolescents in foster care. *Health Soc Work*. 2011; 36:33–43. [PubMed: 21446607]
34. Simms MD, Dubowitz H, Szilagyi MA. Health care needs of children in the foster care system. *Pediatrics*. 2000; 106:909–918. [PubMed: 11044143]
35. Substance Abuse and Mental Health Services Administration: Results from the 2003 National Survey on Drug Use and Health: national findings (DHHS Publication No. SMA 04-3864). Substance Abuse and Mental Health Services Administration. Available from: <http://www.drugabusestatistics.samhsa.gov/nsduh.htm>
36. Thompson RG Jr. Auslander WF. Risk factors for alcohol and marijuana use among adolescents in foster care. *Journal of Substance Abuse Treatment*. 2007; 32:61–69. [PubMed: 17175399]
37. Vaughn MG, Ollie MT, McMillen JC, et al. Substance use and abuse among older youth in foster care. *Addictive Behaviors*. 2007; 32:1929–1935. [PubMed: 17239547]
38. Koegel, P.; Burnham, MA.; Baurnohl, J. The causes of homelessness. In: Baumohl, J., editor. *Homelessness in America*. New York: Oryx Press; 1996.
39. Hasin DS, Stinson FS, Ogburn E, et al. Prevalence, correlates, disability, and comorbidity of DSM-IV alcohol abuse and dependence in the United States: results from the National Epidemiologic

- Survey on Alcohol and Related Conditions. *Archives of General Psychiatry*. 2007; 64:830–842. [PubMed: 17606817]
40. Compton WM, Thomas YF, Stinson FS, et al. Prevalence, correlates, disability, and comorbidity of DSM-IV drug abuse and dependence in the United States: results from the national epidemiologic survey on alcohol and related conditions. *Archives of General Psychiatry*. 2007; 64:566–576. [PubMed: 17485608]
 41. Havlicek J. Lives in motion: A review of former foster youth in the context of their experiences in the child welfare system. *Children and Youth Services Review*. 2011; 33:1090–1100. [PubMed: 21643470]
 42. Pecora PJ, Jensen PS, Romanelli LH, et al. Mental health services for children placed in foster care: an overview of current challenges. *Child Welfare Journal*. 2009; 88:5–26.
 43. Bruskas D. Children in foster care: a vulnerable population at risk. *Journal of Child and Adolescent Psychiatric Nursing*. 2008; 21:70–77. [PubMed: 18429837]
 44. Beitchman JH, Zucker KJ, Hood JE, et al. A review of the short-term effects of child sexual abuse. *Child Abuse & Neglect*. 1991; 15:537–556. [PubMed: 1959086]
 45. Beitchman JH, Zucker KJ, Hood JE, et al. A review of the long-term effects of child sexual abuse. *Child Abuse & Neglect*. 1992; 16:101–118. [PubMed: 1544021]
 46. Lansford JE, Dodge KA, Pettit GS, et al. Does physical abuse in early childhood predict substance use in adolescence and early adulthood? *Child Maltreatment*. 2010; 15:190–194. [PubMed: 20019026]
 47. Jonson-Reid M, Barth R. From placement to prison: The path to adolescent incarceration from child welfare supervised foster or group care. *Children and Youth Services Review*. 2000; 22:493–516.
 48. Courtney, M.; Dworsky, A. Midwest evaluation of adult outcomes of former foster youth: Conditions of youth preparing to leave state care. Chicago, IL: Chapin Hall Center for Children, University of Chicago; 2004.
 49. Courtney, M.; Dworsky, A. Midwest evaluation of the adult functioning of former foster youth: Outcomes at age 19. Chicago, IL: Chapin Hall Center for Children, University of Chicago; 2005.
 50. Dworsky A. The economic self-sufficiency of Wisconsin's former foster youth. *Children and Youth Services Review*. 2005; 27:1085–1118.
 51. Unrau Y, Seita J, Putney K. Former foster youth remember multiple placement moves: A journey of loss and hope. *Children and Youth Services Review*. 2008; 30:1256–1266.
 52. Hyde J, Kammerer N. Adolescents' perspectives on placement moves and congregate settings: Complex and cumulative instabilities in out-of-home care. *Children and Youth Services Review*. 2009; 31:265–273.
 53. Newman, B.; Newman, P. Development through the life course: A psychosocial approach. Belmont, CA: Wadsworth Centrage Learning; 2009.
 54. Freundlich M, Avery RJ, Padgett D. Care or scare: the safety of youth in congregate care in New York City. *Child Abuse & Neglect*. 2007; 31:173–186. [PubMed: 17316792]
 55. Pecora PJ. Why current and former recipients of foster care need high quality mental health services. *Administration and Policy in Mental Health*. 2010; 37:185–190. [PubMed: 20229142]
 56. Collado C, Levine P. Reducing transfers of children in family foster care through onsite mental health interventions. *Child Welfare Journal*. 2007; 86:133–150.
 57. McMillen JC, Raghavan R. Pediatric to adult mental health service use of young people leaving the foster care system. *Journal of Adolescent Health*. 2009; 44:7–13. [PubMed: 19101453]
 58. Leon SC, Uziel-Miller ND, Lyons JS, et al. Psychiatric hospital service utilization of children and adolescents in state custody. *Journal of the American Academy of Child & Adolescent Psychiatry*. 1999; 38:305–310. [PubMed: 10087692]
 59. Leslie LK, Landsverk J, Horton MB, et al. The heterogeneity of children and their experiences in kinship care. *Child Welfare Journal*. 2000; 79:315–334.
 60. Dworsky A, Courtney M. Addressing the mental health service needs of foster youth during the transition to adulthood: how big is the problem and what can states do? *Journal of Adolescent Health*. 2009; 44:1–2. [PubMed: 19101450]

61. Stahmer AC, Leslie LK, Hurlburt M, et al. Developmental and behavioral needs and service use for young children in child welfare. *Pediatrics*. 2005; 116:891–900. [PubMed: 16199698]
62. Snowden JA, Leon SC, Bryant FB, et al. Evaluating psychiatric hospital admission decisions for children in foster care: an optimal classification tree analysis. *Journal of Clinical Child & Adolescent Psychology*. 2007; 36:8–18. [PubMed: 17206877]
63. Hobbs GF, Hobbs CJ, Wynne JM. Abuse of children in foster and residential care. *Child Abuse Negl*. 1999; 23:1239–1252. [PubMed: 10626608]
64. Leon SC, Lyons JS, Uziel-Miller ND, et al. Evaluating the use of psychiatric hospitalization by residential treatment centers. *Journal of the American Academy of Child & Adolescent Psychiatry*. 2000; 39:1496–1501. [PubMed: 11128325]
65. Breland-Noble AM, Elbogen EB, Farmer EM, et al. Use of psychotropic medications by youths in therapeutic foster care and group homes. *Psychiatric Services*. 2004; 55:706–708. [PubMed: 15175471]

Table 1

Homeless young adult characteristics, experiences, and psychiatric disorders by history of foster care.

Variables	Never Foster Care (N = 277)		Ever Foster Care (N = 147)	
	N	%	N	%
Demographics [†]				
Age				
18	103	39	60	41
19	89	33	56	38
20	75	28	30	20
21	2	1	1	<1
Race/Ethnicity				
Black	153	57	86	59
White	22	8	5	3
Hispanic	72	27	38	26
Other	23	9	18	12
Gender				
Female	174	65	91	62
Male	96	36	55	38
Psychiatric Disorders				
Major Depressive Disorder	12	5	14	10
Bi-Polar Disorder I	5	2	8	5
PTSD	1	<1	3	2
Anxiety Disorder	4	2	2	1
Oppositional Defiant	0	0	1	<1
Attention Deficit	5	2	5	3
Any Psychiatric Diagnosis	68	25	61	42 ***
Prior Psychiatric Counseling	75	28	73	50 ***
Prescribed Psychiatric Meds	35	13	51	35 ***
Prior Psychiatric Hospitalization	29	11	41	28 ***
Childhood Abuse [‡]				
Emotionally Abused	93	34	83	57 ***
Physically Abused	72	27	82	56 ***
Sexually Abused	37	14	45	31 ***
Substance Abuse [‡]				
Smoke Cigarettes	94	35	72	50 ***

Variables	Never Foster Care (N = 277)		Ever Foster Care (N = 147)	
	N	%	N	%
Use Marijuana	32	12	34	25***
Drink Alcohol	55	22	26	20
Prior Drug Treatment	17	6	28	19***
Other Covariates [†]				
Prior Arrest	112	42	82	57***
Unemployed	201	75	125	85*
No HS Diploma	175	66	105	71
Family Psychiatric Disorders	55	20	52	35**
Family Drug Use	85	32	65	45**

[†]Previously reported (Thompson & Hasin, 2011)

* Significant Chi-Square: $p < .05$;

**
 $p < .01$;

 $p < .001$

Table 2

History of foster care and psychiatric outcomes: unadjusted (OR) and adjusted (AOR) odds ratios, with 95% confidence intervals (CI).

Variables	Any Psychiatric Disorder			Psychiatric Counseling			Psychiatric Medications			Psychiatric Hospitalization						
	OR	CI (95%)	AOR	CI (95%)	AOR	CI (95%)	OR	CI (95%)	AOR	CI (95%)	OR	CI (95%)	AOR	CI (95%)		
Foster Care	2.11 ^{**}	1.37–3.23	1.70 [*]	1.01–2.89	2.61 ^{***}	1.71–3.97	2.17 ^{**}	1.23–3.80	3.57 ^{***}	2.19–5.85	2.26 [*]	1.15–4.45	3.22 ^{***}	1.90–5.46	2.15 [*]	1.05–4.37
Demographic Covariates																
Age (0=18–19; 1=20–21)	1.07	.67–1.71	.73	.39–1.38	.97	.62–1.54	.78	.42–1.47	.90	.52–1.55	.50	.22–1.14	.75	.41–1.39	.47	.19–1.16
Race (0=Other; 1=Black)	.63 [*]	.41–.95	.60	.36–1.03	.54 ^{**}	.36–.81	.55 [*]	.32–.93	.44 ^{**}	.27–.72	.54	.28–4.05	.43 ^{**}	.26–.73	.33 ^{**}	.16–.68
Sex (0=Female; 1=Male)	1.47	.96–2.25	.95	.52–1.74	1.07	.70–1.62	.94	.51–1.74	1.82 [*]	1.12–2.93	2.12 [*]	1.02–4.40	.85	.49–1.47	.71	.32–1.57
Childhood Abuse																
Emotionally Abused	2.16 ^{***}	1.42–3.28	1.39	.77–2.51	4.16 ^{***}	2.72–6.35	3.29 ^{***}	1.83–5.91	3.87 ^{***}	2.34–6.40	2.78 ^{**}	1.31–5.89	3.49 ^{***}	2.02–6.01	1.90	.88–4.09
Physically Abused	2.19 ^{***}	1.43–3.34	1.18	.65–2.13	2.79 ^{***}	1.84–4.23	.94	.52–1.71	3.52 ^{***}	2.15–5.74	1.34	.66–2.74	3.37 ^{***}	1.98–5.73	1.37	.64–2.90
Sexually Abused	1.55	.94–2.56	1.07	.54–2.09	2.47 ^{***}	1.51–4.04	1.13	.58–2.31	3.05 ^{***}	1.79–5.19	2.11	.97–4.62	3.36 ^{***}	1.92–5.88	1.85	.85–4.02
Substance Abuse																
Cigarette Use	1.95 ^{**}	1.28–2.98	.97	.55–1.74	1.32	.88–1.99	.84	.46–1.52	3.31 ^{***}	2.02–5.43	2.05 [*]	1.01–4.16	2.27 ^{**}	1.34–3.83	1.07	.50–2.28
Marijuana Use	2.67 ^{***}	1.56–4.58	1.32	.62–2.80	1.83 [*]	1.07–3.13	.91	.41–2.03	1.94 [*]	1.07–3.51	.40	.14–1.13	2.04 [*]	1.09–3.83	.48	.17–1.40
Alcohol Use	2.06 ^{**}	1.24–3.42	1.77	.94–3.33	2.36 ^{**}	1.43–3.90	2.38 ^{**}	1.24–4.55	2.33 ^{**}	1.33–4.09	2.00	.93–4.28	1.74	.94–3.21	1.51	.67–3.42
Prior Drug Treat	4.63 ^{***}	2.44–8.78	2.67 [*]	1.13–6.32	3.90 ^{***}	2.01–7.58	2.24	.91–5.53	6.26 ^{***}	3.23–12.10	4.38 ^{**}	1.64–11.75	5.03 ^{***}	2.57–9.83	3.83 [*]	1.36–10.84
Other Covariates																
Prior Arrest	2.37 ^{***}	1.55–3.63	1.64	.94–2.87	1.73 ^{**}	1.15–2.59	1.14	.65–2.02	2.33 ^{**}	1.43–3.80	1.11	.55–2.22	1.65	.98–2.77	1.30	.63–2.70
Unemployed	1.19	.71–2.00	1.08	.58–2.03	1.36	.82–2.25	1.49	.78–2.85	1.90	.98–3.67	1.78	.75–4.21	2.35 [*]	1.08–5.11	1.90	.76–4.80
No HS Diploma	1.35	.86–2.13	.96	.54–1.70	1.51	.97–2.35	1.20	.66–2.18	1.62	.94–2.78	1.49	.70–3.24	1.31	.74–2.33	1.18	.54–2.58
Family Psychiatric D/O	3.13 ^{***}	1.98–4.95	2.41 ^{**}	1.38–4.20	3.36 ^{***}	2.12–5.31	2.57 ^{**}	1.46–4.55	2.87 ^{***}	1.74–4.75	2.08 [*]	1.06–4.10	2.95 ^{***}	1.73–5.05	2.07 [*]	1.04–4.11

Variables	Any Psychiatric Disorder			Psychiatric Counseling			Psychiatric Medications			Psychiatric Hospitalization						
	OR	CI (95%)	AOR	CI (95%)	AOR	CI (95%)	OR	CI (95%)	AOR	CI (95%)	AOR	CI (95%)				
Family Drug Use	2.04**	1.33–3.11	1.33	.76–2.34	2.47***	1.63–3.75	1.37	.78–2.42	1.95**	1.21–3.16	.81	.40–1.64	2.05**	1.22–3.45	1.29	.63–2.65

* p < .05;
** p < .01;
*** p < .001