Published in final edited form as:

Psychiatr Rehabil J. 2011 ; 35(2): 141–144. doi:10.2975/35.2.2011.141.144.

Veterans Residing in Self-Governed Recovery Homes for Substance Abuse: Sociodemographic and Psychiatric Characteristics

J Millar, D.M. Aase, L.A. Jason, and J.R. Ferrar

Center for Community Research, DePaul University, Chicago, IL 60614, USA

Abstract

Objective—Veterans commonly experience both psychiatric and substance abuse problems following their reintegration into the community postwar. The present study describes a sample of veterans residing in self-governed recovery homes.

Methods—The sample of veterans ($n = 24$) were examined using psychiatric and demographic measures. Subsequent analyses compared veterans to non-veterans matched across multiple demographic characteristics.

Results—Veterans experienced high abstinence rates, as well as a reduction in anxiety and depression over time. Compared to non-veterans at baseline, veterans had higher levels of anxiety and self-reported suicide risk, as well as a lower income.

Conclusions and Implications for Practice—The psychiatric improvements of the veterans, as well as the relative rates of drug and alcohol abstinence between both groups, provide incentive for further research of this at-risk population as residents of self-governed recovery homes.

Keywords

veterans; OHs; recovery homes; posttraumatic stress disorder; substance abuse

Deployment to war and witnessing/participating in combat has historically been associated with mental health problems in returning veterans. Although the need for rehabilitative care is of major national concern, no research has evaluated veterans' outcomes after living in self-governed substance abuse recovery homes. Many issues that veterans encounter are more salient than for non-veterans; particularly substance abuse. Compared to the general population, veterans experience a higher rate of alcoholism (Bridevaux et al., 2004), as well as a lifetime of alcohol misuse and other substance-related problems (Dietz, 2007).

Among veterans, substance abuse is often associated with higher rates of premature mortality and psychiatric problems (Rosen, Kuhn, Greenbaum & Drescher, 2008). Additionally, substance abuse relapse is associated with traumatic combat experiences and PTSD symptoms. Recent studies suggested the current wars have led to significantly higher rates of PTSD than in previous wars (Fontana & Rosenheck, 2008). The return from war has also led to a large number of homeless veterans. Homeless veterans often experience both substance abuse and depressive symptomatology (Dietz, 2007). The homeless population is disproportionately represented by veterans, who constitute approximately one third of homeless individuals (Burt et al., 1999).

As a network of community-based recovery homes developed for maintaining abstinence from substance abuse, *Oxford Houses* (OHs) offer a democratic mutual-help setting without professional staff or time limits on duration of residence (Jason, Davis, Ferrari, & Anderson,

2007). Presently, there are over 1,300 OHs in the United States, and initial evaluations suggest that over 20% of residents are veterans (Oxford House Inc., 2007). When compared to traditional (staffed) recovery environments, OH residents have shown significantly better outcomes for substance use, employment, and incarceration (Jason, Olson, Ferrari, & Lo Sasso, 2006). Given past successes for individuals in OHs, a sample of veterans was examined in order to evaluate their experience.

Method

Participants were part of a convenience sample of 897 (293 females, 604 males) individuals residing in one of 212 OHs across the United States at the baseline assessment. Most surveys were administered to participants in their House, or at the 2001 OH Convention (Jason, Davis, et al., 2007). Participants received a \$15 payment. The study involved four assessments in four month intervals with a final follow-up of twelve months after the baseline assessment. In the present study, veterans within the sample ($n = 24$) were identified at the final follow-up. For comparative analyses, veterans in the sample were matched with 24 non-veterans based on gender, ethnicity, and age, as each of these characteristics has been associated with psychiatric and substance use issues in the extant literature. Demographic and other information about the matched sample are presented in Table 1.

Background demographic information for participants was obtained from selfreport items on the *Addiction Severity Index - Lite (ASI)* (McLellan et al., 1992). The ASI examines several areas commonly affected by substance abuse and has a test-retest reliability of .83 or higher (McLellan et al.).

Time in an OH was determined using Miller and Del Boca's (1994) *Form 90* during each follow-up assessment. Consistent with Jason, Davis, et al. (2007), information from all follow-up waves was used to create a dichotomous variable for whether or not each participant remained in an OH for six months during the period of the study. The variables utilized for abstinence longitudinally were the rates of change in cumulative abstinence for alcohol and drugs. Values were calculated between zero and one as a function of the number of days a participant was in the study and the number of days they reported any use of either drugs or alcohol. Lower slopes indicated some substance use, and values of one indicated complete abstinence during the study.

The *Global Appraisal of Individual Needs-Quick Screen (GAIN-QS)* (Titus & Dennis, 2000) was used to measure internalizing psychological symptoms. For the present study, three subscales were used: the *Depression Symptom Index* ($\alpha = 0.84$), the *Anxiety Symptom Index* ($\alpha = 0.88$) and the *Suicide Risk Index* ($\alpha = 0.81$; Titus & Dennis).

Results

Veteran Outcomes

Abstinence rates for the 24 veterans were high, with 87.5% reporting no alcohol use and 83.3% reporting abstaining from drugs throughout the course of the study. As prior research has indicated that spending six months in an OH is associated with lower levels of anxiety symptoms (e.g., Aase et al., 2005–2006), a one-way ANOVA was conducted to examine whether veterans remained in an OH at baseline predicted baseline psychological variables. Veterans who remained in an OH for six months or longer prior to baseline had lower depression scores ($M = 1.67$, $SE = .55$) than those who were there for less than six months. Duration of residence did not significantly predict anxiety scores ($p = .074$) or suicide risk scores ($p = 1.0$) among veterans at baseline.

To examine veterans' psychological functioning longitudinally, a repeated measures ANOVA was conducted for each psychological variable using baseline and 12-month follow-up scores. Baseline length of OH residence (continuous) was used as a covariate, and whether they remained in an OH for six months during the study was a predictor. No significant within-subjects effects of remaining in an OH for six months or longer for anxiety, depression, and suicide risk over time among the veteran subsample were found. However, regardless of length of OH residence, veterans experienced a reduction in anxiety ($M_s = 4.0$ vs. 2.46 ; $SE_s = .47$ vs. $.48$), $F(1, 21) = 10.39$, $p = .004$, and depression over time ($M_s = 2.50$ vs. 1.75 ; $SE_s = .40$ vs. $.33$), $F(1, 21) = 4.96$, $p = .03$.

Comparative Analyses

Table 1 highlights sociodemographic and mental health/substance abuse comparisons between veterans and non-veterans. A 2 (Duration of residence: less than six months vs. six months or more) X 2 (Veteran status: veteran vs. non-veteran) ANOVA was performed to examine potential impacts on anxiety symptoms. A significant main effect of duration of residence emerged, $F(1, 44) = 4.16$, $p = .048$. Based on the estimated marginal means, those who had been in an OH for six months or longer at the baseline assessment had significantly lower ($M = 2.50$, $SE = .46$) anxiety than those who had lived there less than six months ($M = 3.93$, $SE = .53$). However, this effect was not observed for depression symptoms or suicide risk scores. A similar repeated-measures analysis was conducted as with the veterans-only subsample to explore this phenomenon longitudinally. Baseline OH duration of residence was utilized as a covariate and veteran status was used as a predictor. Results followed a similar pattern: no significant effects were detected for remaining in an OH for six months or longer during the study or veteran status. However, there was a significant within-subjects interaction between veteran status and time for anxiety, such that while nonveterans had similar levels of anxiety at baseline and the one-year follow-up ($M_s = 2.37$ vs. 2.28 ; $SE_s = .50$ vs. $.53$), veterans experienced a reduction in anxiety over time ($M_s = 3.95$ vs. 2.45 ; $SE_s = .48$ vs. $.51$), $F(1, 41) = 4.96$, $p = .03$. This effect was not observed for depression or suicide risk.

Discussion

The purpose of this exploratory study was to describe a sample of veterans residing in OHs. Results indicate improvements in some psychiatric and substance use indicators during the veterans' residency. Veterans maintained high abstinence rates for both alcohol and drugs. When compared to nonveterans in OH, similar findings were observed. Veterans' anxiety and depression levels significantly lowered over time during the study. Thus, the OH environment may be conducive to the psychosocial requirements of the veteran population. Instead of typical group treatment environments, veterans are more willing to engage socially with other veterans, suggesting they may have stronger relationships with similar individuals (Laffeye, Cavella, Drescher & Rosen, 2008; Thoits, 1986). Situating veterans together in OHs may provide a favorable setting for recovery; a dynamic that should be examined in future research.

Results show psychiatric and socioeconomic differences between veterans and non-veterans. Veterans had a lower average income than non-veterans. It is possible that veterans' other issues resulted in an inability to maintain employment (Hoge et al., 2004), or that certain veterans were physically incapable as evidenced by their significantly higher disability compensation. Veterans reported having higher rates of anxiety symptoms than non-veterans at baseline; a common finding in studies of this population (Hoge et al., 2004; Erbes et al., 2007; Lapierre et al., 2007; Fontana & Rosenheck, 2008). Veterans also had higher levels of suicide risk compared to non-veterans; although symptom levels were low for veterans and no symptoms were endorsed for non-veterans. Between the two groups, there was no

difference in levels of depression, perhaps reflecting the general detrimental impact of substance abuse.

Several limitations of this study warrant consideration. The sample size was contingent on a small number of veterans as a secondary analysis within a convenience sample. Furthermore, no control group was utilized in the larger study. Supporting these findings are numerous other studies that have provided similar results among the veteran population. Further research should utilize a control condition to compare the overall differences in outcomes to the OH setting. Additionally, future studies might identify sources of service utilization among veterans given the heterogeneous nature of new veterans emerging from present global conflicts. Our results, however, provide a first look at veterans residing in OHs, which appear to be potentially effective environments for this population.

Acknowledgments

The authors appreciate the financial support for this study from the U.S. National Institute on Drug Abuse grants DA13231 and DA19935.

References

- Aase DM, Jason LA, Ferrari JR, Groh DR, Alvarez J, Olson BD, Davis MI. Anxiety symptoms and alcohol use: A longitudinal analysis of length-of-time in mutual help recovery homes. *International Journal of Self Help & Self Care*. 2005–2006; 4:19–33.
- Bridevaux IP, Bradley KA, Bryson CL, McDonnell MB, Fihn SD. Alcohol screening results in elderly male veterans: Association with health status and mortality. *Journal of the American Geriatrics Society*. 2004; 52:1510–1517. [PubMed: 15341553]
- Burt, MR.; Aron, L.Y.; Douglas, T.; Valente, J.; Lee, E.; Iwen, B. Summary report. Findings of the National Survey of Homeless Assistance Providers and Clients. Washington, DC: The Urban Institute; 1999. Homelessness: Programs and the people they serve.
- Dietz TL. Predictors of reported current and lifetime substance abuse problems among a national sample of U.S. homeless. *Substance Use and Misuse*. 2007; 42:1745–1766. [PubMed: 17934993]
- Erbes C, Westermeyer J, Engdahl B, Johnsen E. Post-traumatic stress disorder and service utilization in a sample of service members from Iraq and Afghanistan. *Military Medicine*. 2007; 172:359–363. [PubMed: 17484303]
- Fontana AF, Rosenheck RA. Treatment-seeking veterans of Iraq and Afghanistan: Comparison with veterans of previous wars. *The Journal of Nervous and Mental Disease*. 2008; 196:513–521. [PubMed: 18626291]
- Hoge CW, Castro CA, Messer SC, McGurk D, Cotting DI, Koffman RL. Combat duty in Iraq and Afghanistan, mental health problems, and barriers to care. *New England Journal of Medicine*. 2004; 351:13–22. [PubMed: 15229303]
- Jason LA, Davis MI, Ferrari JR, Anderson E. The need for substance abuse after-care: Longitudinal analysis of OH. *Addictive Behaviors*. 2007; 32:803–818. [PubMed: 16843612]
- Jason LA, Olson BD, Ferrari JR, Lo Sasso AT. Communal housing settings enhance substance abuse recovery. *American Journal of Public Health*. 2006; 96:1727–1729. [PubMed: 17008561]
- Jason LA, Olson BD, Ferrari JR, Majer JM, Alvarez J, Stout J. An examination of main and interactive effects of substance abuse recovery housing on multiple indicators of adjustment. *Society for the Study of Addiction*. 2007; 102:1114–1121.
- Laffey C, Cavella S, Drescher K, Rosen C. Relationships among PTSD symptoms, social support, and support source in veterans with chronic PTSD. *Journal of Traumatic Stress*. 2008; 21:394–401. [PubMed: 18720391]
- Lapierre CB, Schwegler AF, LaBauve BJ. Posttraumatic stress and depression symptoms in soldiers returning from combat operations in Iraq and Afghanistan. *Journal of Traumatic Stress*. 2007; 20:933–943. [PubMed: 18157882]

- McLellan AT, Kushner H, Metzger D, Peters R, Smith I, Grissom G, Pettinati H, Argeriou M. The fifth edition of the Addiction Severity Index. *Journal of Substance Abuse Treatment*. 1992; 9:199–213. [PubMed: 1334156]
- Miller WR, Del Boca FK. Measurement of drinking behavior using the Form 90 family of instruments. *Journal of Studies on Alcohol: Supplement*. 1994; 12:112–118. [PubMed: 7722987]
- Oxford House, Inc. Profile of Oxford House residents in fifteen jurisdictions. Oxford House, Inc; 2007.
- Rosen CS, Kuhn E, Greenbaum MA, Drescher KD. Substance abuse-related mortality among middle-aged male VA psychiatric patients. *Psychiatric Services*. 2008; 59:290–296. [PubMed: 18308910]
- Rosenheck RA, Fontana AF. Recent trends in VA treatment of posttraumatic stress disorder and other mental disorders. *Health Affairs*. 2007; 27:1720–1727. [PubMed: 17978391]
- Thoits PA. Social support as coping assistance. *Journal of Consulting and Clinical Psychology*. 1986; 54:416–423. [PubMed: 3745593]
- Titus, JC.; Dennis, ML. Global Appraisal of Individual Needs Quick Screen (GAIN-QS): Instructions for Version 1. Bloomington, IL: Chestnut Health Systems; 2000.

Table 1

Demographic and mental health information

Demographic Characteristic	Total % or Mean (SD) (N = 48)	Veterans (n = 24)	Non-veterans (n = 24)	Sig.
Age (in years)	43.37 (11.06)	43.44 (11.32)	43.3 (11.02)	
Sex				
Male	91.7%	91.7%	91.7%	
Female	8.3%	8.3%	8.3%	
Ethnicity				
Caucasian	54.2%	54.2%	54.2%	
African American	41.7%	41.7%	41.7%	
Other	4.2%	4.2%	4.2%	
Marital Status				
Never Married	35.4%	37.5%	33.3%	
Married	6.25%	8.3%	4.2%	
Separated	6.25%	8.3%	4.2%	
Divorced/Widowed	52.08%	45.85	58.3%	
Employment Status				
Full-Time	66.65%	62.5%	70.8%	
Part-Time	6.25%	8.3%	4.2%	
Unemployed	12.5%	16.7%	8.3%	
Retired or Disabled	14.6%	12.5%	16.7%	
Religion				
Protestant	22.9%	37.5%	8.3%	
Catholic	10.4%	12.5%	8.3%	
Other	54.2%	41.7%	66.7%	
None	12.5%	8.3%	16.7%	
Receive Pension for Physical Disability				**
No	85.4%	70.8%	100.0%	
Yes	12.5%	25.0%	0.0%	
Missing	2.1%	4.2%	0.0%	
Income (\$)				
Total Monthly Income	1220.77 (981.22)	904.12 (682.79)	1537.42 (1136.65)	*
Education Completed in years	13.20 (1.62)	13.12 (1.83)	13.27 (1.43)	
Months incarcerated in lifetime	22.38 (52.9)	28.33 (65.58)	16.43 (39.36)	
Baseline Depression	2.17 (1.88)	2.50 (2.04)	1.83 (1.67)	
Baseline Anxiety	3.17 (2.48)	4.00 (2.32)	2.33 (2.39)	*
Baseline Suicide Risk	.21 (.69)	.42 (.93)	.00 (.00)	*
Alcohol Abstinence Slope	.89 (.25)	.91 (.25)	.88 (.26)	
Drug Abstinence Slope	.91 (.22)	.90 (.24)	.92 (.20)	
Stayed in OH 6 months (prospectively during study)	50%	50%	50%	

Note.

Percentages do not add up to 100 when items were omitted by participants

*
p < .05 comparing veterans and non-veterans using X^2 analyses or a *t*-test

**
p < .01