The Neighborhood Environments of Mutual-help Recovery Houses: Comparisons by Perceived Socio-economic Status

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Abstract

This study examined the setting/House-level characteristics of 160 self-governed, mutual-support substance abuse recovery homes (OHs) across the U.S. These dwellings were located in four different neighborhood types: upper/middle class ($n = 23$ Houses), urban working/lower class ($n = 71$ Houses), suburban upper/middle-class ($n = 39$ Houses), and suburban working/lower class ($n = 27$ Houses). Interior dwelling characteristics and amenities located within a 2-block radius were similar across the four neighborhood types. However, Houses in urban, working, and lower class neighborhoods reported more alcohol/drug intoxicated persons. Most importantly, despite the greater potential for environmental temptations and easier access for substances, none of the neighborhood factors including neighborhood socio-economic status significantly predicted relapse rates over a 12 month period.

Keywords

Oxford House; group homes; environmental factors; neighborhoods

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Oxford House (OH) is a residential, community-based option for individuals dealing with substance abuse problems (see Ferrari, Jason, Davis, Olson, & Alvarez, 2004; Jason, Ferrari, Davis, & Olson, 2006a). A low cost, self-run, democratic recovery home model, OH grew since 1975 to over 1,250 homes across the USA, Canada, and Australia. Regarding the operation and maintenance of OHs, no professional staff is involved, enabling residents to create their own rules for communal governance. Residents live together in a democratic, single-sex home and provide each other with a supportive abstinent mutual-support network. The residents may stay indefinitely, provided that they pay rent, abstain from alcohol and drug use, and avoid disruptive behavior (Ferrari et al). Failure to comply with these guidelines is grounds for expulsion from the OH. Residents continually support each other to find and maintain employment, as members rely on this income source to pay rent.

Ferrari and colleagues focused on setting/House-level variables within OHs. Ferrari, Jason, Sasser, Davis, and Olson (2006b) found many similarities within the physical structures and interior/exterior designs of U.S. OHs. These House characteristics and amenities created a sense of home not often found in traditional treatments centers. Ferrari et al. (2004) found that both Illinois OHs and therapeutic communities prohibited self-injurious behaviors (e.g., physical self-harm or over medication of drugs) or destructive acts (e.g., destroying site

property or others' possessions). OHs, however, more typically permitted residents greater personal freedoms.

The Oxford House national organization dictated that new Houses be established in safe, low crime, economically stable neighborhoods with minimal opportunities for relapse (Oxford House, 1988). Ferrari, Jason, Blake, Davis, and Olson (2006a) found that regardless of geographic location, U.S. and Australian OHs were situated in communities that had access to public amenities (e.g., grocery stores, hospitals, and restaurants) and little illegal drug and crime activity. Local communities reported that OH residents blended well into the neighborhood and made good neighbors (Jason, Roberts, & Olson, 2005). The majority of OH neighbors interviewed gained resources, friendships, or a greater sense of security following contact with the OH residents. No evidence of property devaluation was found for neighborhoods including OHs. In fact, those who knew of the OH saw an increase in property value over an average of 3 years.

Research has fairly thoroughly examined the relationship between OHs and the surrounding community. None of the studies cited above, however, explored how the socio-economic status of the surrounding community specifically affected the outcomes of these residential settings. Studies indicate that lower neighborhood socio-economic status is negatively related to individual mental health and perceived health (Drukker & van Os, 2003). More specifically, living in a lower socioeconomic neighborhood was linked to heart disease, diabetes, obesity (Brown, Guy, & Broad, 2005), smoking (Brown et al.; Chuang, Cubbin, Ahn, & Winkleby, 2005; Shohaimi et al., 2003), alcohol/ drug problems (Brown et al.; Smart, Adlaf, & Walsh, 1995), risky sexual behaviors (Baumer & South, 2001), and less access to exercise resources and facilities (Estabrooks, Lee, & Gyurcsik, 2003). Thus, this paper focused on how neighborhood characteristics such as socio-economic status impacted abstinence outcomes for residents of OHs. In addition, no previous study examined how environmental temptations (e.g., neighborhoods with easy access for drugs or the presence of intoxicated persons on the streets) influenced the probability of abstinence among these residents. The present study explored these environmental issues within a U.S. nationwide sample of OHs that differed on the social-economic characteristics of their neighborhoods. In addition, the long-term sobriety rates of these OHs were examined over a 12 month period.

Method

Oxford Houses in the Present Study

Data for the present study were from a 16-month NIDA-funded community evaluation of residents living in one of 213 U.S. OHs (see Jason et al., 2007, for details). We only included the 160 OHs for which we had environmental and substance use data from the majority of House residents, representing 75.1% of OHs in the original 213 sample. Previous studies indicated that independent judges reliably categorized and assessed setting characteristics (see Ferrari et al., 2006a; 2006b). Based on responses from OH representatives on an environmental audit, we grouped the current sample by socio-economic status in this manner: 23 OHs (18 men's homes, 5 women's homes) located in an urban and upper/middle class neighborhood, 71 urban and working/lower class OHs (47 men's homes, 24 women's homes), 39 suburban and upper/middle class OHs (27 men's homes, 12 women's homes), and 27 suburban and working/lower class OHs (20 men's homes, 7 women's homes).

Preliminary *chi square analysis* indicated that the four socio-economic groups did not significantly differ by gender. The present sample reflected 70.0% men and 30.0% women facilities, a ratio consistent with other U.S. Oxford House samples (see Jason, Ferrari, Davis,

& Olson, 2006a). A *MANOVA* on several descriptive variables indicated no significant difference among these four groups regarding the number of years the setting was in operation, geographic region, the number of adult or child residents within an OH, or the type of substances abused (i.e., alcohol, drug, poly-substance). These dwellings operated as an OH an average of 7.06 years (*SD* = 3.77) and located in a variety of U.S. geographic locations. Furthermore, these OH dwellings included an average of 7.12 adults (*SD* = 1.95) with few if any children (*M* = 0.13, *SD* = 0.57). Adult residents identified as former alcohol (*M* = 14.8%, *SD* = 19.1) or drug users (*M* = 32.7%; *SD* = 32.7), but mostly poly-substance users (*M* = 58.2%, *SD* = 36.8).

Environmental Audit

The survey used in the present study was a brief version of a reliable instrument developed and utilized by Ferrari et al. (2004; 2006a; 2006b) for use with group recovery dwellings. This environmental audit requested responses to forced choice and frequency items in a number of domains, including *demographic-static information* about the House members such as the percentage of residents in recovery from alcohol, drugs, and poly-substances, plus the number of inhabitants within an OH. Sections of this audit gathered information on the *interior and immediate exterior OH characteristics*. Respondents walked through the home and recorded the number of certain features commonly found in homes (e.g., bedrooms, kitchen, yard). The next section focused on the amenities found within the immediate 2-block radius of the OH (see Ferrari et al., 2006b). Respondents were asked if they would encounter various amenities in their neighborhood (e.g., police station, hospital, mall) if they "walked around the block." Finally, respondents reported on the *characteristics of the surrounding neighborhood* (e.g., empty buildings, clean streets, drug dealers on the streets).

Cumulative Abstinence Rates of Oxford Houses

We also assessed the cumulative abstinence rates of the men and women in this U.S. national Oxford House sample. Individuals were tracked over a 12 month period; some persons stayed in an OH while others moved out (either by their own means or due to eviction for violating House rules/relapsing). For each OH in the study, we computed the mean cumulative abstinence rate for either alcohol and drug use across four measurement waves at 4-month intervals (see Jason et al., 2007). Controlling for initial time spent in OH, we measured the average rate of change in cumulative abstinence for each House, represented by latent slope variables. Slopes closer to 1.00 indicated longer lengths of sobriety (i.e., less use/relapse) for OH members over one year. Jason et al. effectively calculated abstinence rates for individuals in recovery, and we altered this process to assess setting/House-level abstinence. The average slopes for House-level alcohol and drug abstinence were significantly related (*r* = 0.89, *p* < .001), and we combined abstinence from alcohol and drugs together into one variable.

Procedure

The environmental audits were mailed to the OH Presidents of all 213 OHs. No identifiable information about any individual OH resident was requested, and confidentially was maintained for all data. Most surveys were completed and returned by postage paid mail from the House President (60.2%) or another House officer (31.6%; e.g., Secretary or Treasurer) with a small package of coffee subsequently sent for House participation. Pilot testing indicated that it took less than 20 minutes to complete and mail the survey, collected over a four month period. An *ANOVA analysis* was conducted to test whether OHs in the four neighborhood types differed with respect to 12-month House-level cumulative abstinence rates. In addition, a *linear regression analysis* tested whether the presence of the

reported environmental variables (i.e., immediate neighborhood amenities and community factors) predicted 12-month House-level cumulative abstinence rates.

Results

We initially conducted preliminary analyses (*chi square* and *ANOVA: p* levels set at 0.01 to control for Type 1 error) comparing the 160 OHs included in the present study with the 51 OHs omitted from the study on setting variables. No significant differences were obtained regarding gender of the residents, proportion of residents in recovery from alcohol versus drug use, length of time the setting operated as an OH, geographic region of the home, or economic status of the neighborhood. Moreover, there was no significant difference between the included and excluded OHs regarding average rates of cumulative abstinence from alcohol and drugs within the settings.

Immediate Amenities and Community Characteristics

Tables 1 and 2 present the mean percentage of OHs in each socio-economic group reporting the presence of observed immediate amenities and community conditions. *Chi-square analyses* indicated no significant differences across the four classes on immediate amenities and observed neighborhood characteristics. However, significant differences existed between the four classes regarding the presence of intoxicated persons, χ^2 (3, $n = 157$) = 20.57, $p < .001$, "drugged" persons, χ^2 (3, $n = 158$) = 21.47, $p < .001$, and empty building lots on the streets, χ^2 (3, $n = 157$) = 11.25, $p = .01$. OHs in urban working/lower class areas most frequently reported their presence.

Neighborhood Factors and Cumulative Abstinence

The mean cumulative abstinence slope for the OHs was 0.91 (*SD* = 0.11), which approached total abstinence (a value of 1.00) over the 12 month timeframe. This low rate of use may not be surprising given that any substance use led to expulsion from Oxford House. However, while most OHs reported little use overall, only 34.5% of OHs maintained complete abstinence over the entire two year period. An *ANOVA analysis* indicated that OHs in the four neighborhood types did not differ with respect to cumulative abstinence rates. A *regression analysis* examined whether the presence/absence of the reported environmental variables discussed above (i.e., immediate neighborhood amenities and community factors) predicted 12-month House-level cumulative abstinence rates. As shown in Table 3, none of the variables, including neighborhood socio-economic status, significantly predicted mean slopes of cumulative setting/House-level abstinence from alcohol and drugs.

Power Analyses

Because many of the above analyses supported the null hypothesis, we conducted *post hoc power analyses* (see Cohen, 1988) to determine if our findings related to a lack of statistical power. For the chi-square analyses, with an *n* of 160, results indicated fairly large power (.76) to detect "medium" effect sizes (*p* < .01, one-tailed for all analyses). With 160 OHs, medium power existed for the ANOVA analysis (.52) and the regression analysis (.47). These findings suggested the null regression findings were likely not due to lack of statistical power. Supporting the null hypothesis was desirable in this study because it demonstrated that OHs were similar and effective across a range of environmental settings.

Discussion

Within a U.S. national sample of Oxford Houses, we found remarkable similarity regarding interior/exterior dwelling characteristics and operational procedures across different socio-economic neighborhoods. These results replicated other studies with different, smaller

samples of OH residents (e.g., Ferrari et al., 2004; Jason et al. 2003), and were consistent with other studies on the ecological impact of recovery dwellings for successful abstinence post treatment (Hitchcock, Stainback, & Roque, 1995; Huselid, Self, & Gutierres, 1991; Smith, Meyers, & Miller, 2001). It seems that a grassroots approach for the expansion of a mutual support program on addiction recovery may effectively meet the personal needs of residents, regardless of community socio-economic status (Jason et al., 2006a).

Our environmental data demonstrated considerable similarity in the local neighborhood amenities near and around our sample of OHs despite being located in different socio-economic neighborhoods. OHs were located in communities where residents accessed resources and conveniences facilitated adjustment toward independent and substance-free lifestyles. Together with the dwelling characteristics, an OH may become a "home" for men and women residents looking to develop a sense of community while living in safe and sober physical dwellings (Ferrari, Jason, Olson, Davis, & Alvarez, 2002).

There were several methodological limitations in the present study. For instance, it was not possible to obtain data from every participant in each OH; therefore, we used a conservative method to ensure a sufficient number of participants in each home. It may have been useful to obtain estimates related to other characteristics of the OHs (e.g., housing prices or U.S. census neighborhood data), to confirm the socio-economic characteristics of the neighborhoods. Future studies might acquire information from all OH members and more economic information about the neighborhoods. We only examined variables within the immediate (i.e., 2-block radius) House environment; future studies might focus on OH settings within a larger ecological framework. Finally, future research assessing neighborhood characteristics of recovery homes should consider a sample of individuals who engage in greater substance use.

Nevertheless, OH residents remained "clean and sober" from alcohol or drugs at the one year mark despite important neighborhood environmental differences that may promote relapse. Specifically, some settings had easier access for illegal substances and greater environmental temptations that might prompt alcohol/drug use (e.g., OHs located in lower class urban areas had the highest proportion of intoxicated/drugged persons observed on the streets). It is remarkable that despite neighborhood socio-economic status or other neighborhood variables, Oxford Houses maintained high cumulative abstinence rates over a 12 month period. These findings strongly suggest that the Oxford House model of recovery effectively maintained abstinence across a variety of environmental settings, whether middle class, wealthy, or less prosperous.

Acknowledgments

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Table 1

Mean Percentage of Oxford Houses Reporting Immediate Access to Amenities by Neighborhood Socio-economic Status

	Urban		Suburban	
	Upper/middle ($n = 23$)	Working/lower ($n = 71$)	Upper/middle ($n = 39$)	Working/lower ($n = 27$)
Police station	4.5	15.9	33.3	24.0
Medical clinic	36.4	24.6	23.1	24.0
Hospital	27.3	20.3	10.3	16.0
Social Welfare Dept.	9.1	10.1	2.6	12.0
Homeless shelter	0.0	11.6	0.0	4.0
Homeless food service	9.1	10.1	2.6	8.0
Well lit streets, at night	100.0	95.8	94.9	85.2
Public parking	95.7	95.8	94.9	100.0
Public transportation	95.7	98.6	87.2	81.5
Gas/service station	50.0	69.6	71.8	60.0
Library	13.6	27.6	30.8	24.0
Large supermarket	45.5	37.7	48.7	40.0
Large shopping mall	18.2	7.3	20.5	16.0
Mini-market/strip mall	54.5	68.1	56.4	40.0

Table 2

Mean Percentage of Oxford Houses reporting Community Conditions by Neighborhood Socioeconomic Status

	Urban		Suburban	
	Upper/middle (*n* = 23)	Working/lower (*n* = 71)	Upper/middle (*n* = 39)	Working/lower (*n* = 27)
Economically depressed feeling	8.7	15.7	0.0	14.8
Empty buildings or lots[*]	8.7	18.8	0.0	3.7
Streets deserted during the day	21.7	31.4	31.6	25.9
Streets deserted during the night	34.8	38.6	52.6	29.6
Other buildings are well kept	91.3	87.1	100.0	92.6
Streets clean/free of litter	91.3	80.3	100.0	85.2
Trees/greenery planted on streets	91.3	88.4	92.1	92.6
Homeless persons observed sleeping in the neighborhood at night	8.7	8.8	0.0	3.7
Homeless persons seen 'hanging-out' on streets during the day	13.0	14.5	0.0	3.7
Pawn shops visible	17.4	25.3	5.3	18.5
Intoxicated persons observed on streets[**]	17.4	37.7	2.6	11.1
Drug persons observed on streets[**]	17.4	40.0	2.6	14.8
Drug dealing observed on streets	13.0	27.1	5.3	11.5

[*]
p < .01

[**]
p < .001.

Table 3

Summary of Linear Regression Analysis for Neighborhood Variables Predicting Cumulative Abstinence

Neighborhood variable	B	$SE\ B$	β
Neighborhood socio-economic status	0.01	0.02	0.10
Police station	0.06	0.05	0.22
Medical clinic	0.00	0.04	-0.01
Hospital	0.02	0.05	0.08
Social Welfare Dept.	-0.01	0.07	-0.02
Homeless shelter	-0.05	0.07	-0.13
Homeless food service	0.06	0.06	0.17
Well lit streets at night	0.01	0.10	0.02
Public parking	-0.02	0.08	-0.04
Public transportation	-0.03	0.08	-0.05
Gas/service station	-0.03	0.04	-0.14
Library	-0.05	0.04	-0.20
Large supermarket	-0.07	0.05	-0.29
Large shopping mall	0.08	0.05	0.25
Mini-market/strip mall	-0.02	0.04	-0.09
Economically depressed feeling	0.03	0.08	0.09
Empty buildings or lots	0.06	0.07	0.13
Streets deserted during the day	0.00	0.04	0.00
Streets deserted during the night	0.05	0.03	0.21
Other buildings are well kept	0.07	0.08	0.16
Streets clean/free of litter	0.06	0.09	0.16
Trees/greenery planted on streets	0.04	0.01	0.11
Homeless persons observed sleeping in neighborhood at night	-0.14	0.08	-0.34
Homeless persons seen 'hanging-out' on streets during the day	0.17	0.09	0.48
Pawn shops visible	0.00	0.06	0.01
Intoxicated persons observed on the streets	0.10	0.15	0.37
Drug persons observed on streets	-0.11	0.15	-0.41
Drug dealing observed on streets	0.07	0.05	0.26

n = 160 dwellings