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Explaining Service Use and Residential Stability in Supported Housing

Problems, Preferences, Peers

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Background: The behavioral model of health service use identified health needs, service preferences (predispositions), and service availability (enabling factors) as important predictors, but research has not conceptualized consistently each type of influence nor identified their separate effects on use of substance abuse and mental health services or their value in predicting service outcomes.

Objectives: To test hypotheses predicting use of substance abuse and mental health services and residential stability and evaluate peer specialists’ impact.

Research Design: Randomized trial of peer support added to standard case management in VA-supported housing program (Housing and Urban Development-VA Supportive Housing program).

Subjects: One hundred sixty-six dually diagnosed Veterans in Housing and Urban Development-VA Supportive Housing program in 2 cities.

Measures: Average VA service episodes for substance abuse and mental illness; residential instability; preferences for alcohol, drug, and psychological services; extent of alcohol, drug, and psychological problems; availability of a peer specialist.

Results: Self-assessed health needs, mediated by service preferences, and assignment to a peer specialist predicted use of VA behavioral health services and residential stability, as did chronic medical problems, sex, and race.

Conclusions: The behavioral model identifies major predictors of health service use and residential stability, but must recognize the mediating role of service preferences, the differing effects of alcohol and drug use, the unique influences of social background, and the importance of clinical judgment in needs assessment. Service availability and residential stability can be increased by proactive efforts involving peer specialists even in a health care system that provides services without a financial barrier.

Key Words: health services, peer support, supported housing, substance abuse, mental illness

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Research guided by Andersen and Aday’s “behavioral model” has identified needs, predisposing factors, and enabling factors as key influences on health service use.1–5 The model’s value for improving service use and service outcomes can be further enhanced by identifying the key elements of these 3 influences and by distinguishing their roles in different behavioral health services and in shaping service outcomes.6,7

This research tests the influence of needs, predisposing factors, and enabling factors on use of services for substance abuse and mental illness as well as residential stability among formerly homeless Veterans enrolled in the Housing and Urban Development-VA Supportive Housing program (HUD-VASH). The analysis extends prior research by operationalizing predisposition with direct measures of service preferences, considering case manager as well as Veteran perceptions of support needs, varying service availability in a randomized design, and focusing on the primary goal of service use in this population: housing stability.7

INFLUENCES ON USING BEHAVIORAL HEALTH SERVICES

Multiple studies of behavioral health services use among homeless Veterans and others identify health problem severity—“need” in the Anderson and Aday model—as a key predictor.2–4,6,8–10 Tests of the Anderson and Aday model also identify “predispositions” as predicting service use when operationalized as preferences for substance abuse and mental
INFLUENCES ON RESIDENTIAL STABILITY

Increasing residential stability is the primary goal of housing programs like HUD-VASH, and influences identified in the behavioral model of health services use also predict variation in housing outcomes. Among need indicators, substance abuse is a common predictor of less housing stability after rehousing, but serious mental illness is not. Lack of interest in support services ("predispositions") predicts less housing stability—but only among those who are judged by case managers as needing more support services. The availability of peer specialists may help overcome these challenges by encouraging behavioral health service use by those at greatest risk of housing instability. As in the prediction of health service use, sociodemographic characteristics help to explain residential stability, with formerly homeless African Americans experiencing more residential instability.

THE CURRENT STUDY

Six hypotheses are tested: 3 about predictors of service use and 3 about predictors of residential stability. Service use: (1) Higher levels of perceived behavioral health problems predict more use of the corresponding health care services; (2) Higher levels of importance attached to behavioral health care treatment predict more use of the corresponding health care services; (3) Assignment to a peer specialist increases use of behavioral health services compared with those not randomized to a peer specialist; Residential stability: (4) More severe substance abuse decreases residential stability; (5) More Veteran disinterest in staff support decreases residential stability if their clinicians rate them as needing more help; (6) Assignment to a peer specialist increases residential stability compared with those not randomized to a peer specialist.

METHODS

A randomized trial evaluated the impact of adding peer specialists to existing HUD-VASH teams. Research participants had received housing vouchers (Section 8 certificates paying rent above 30% of income) in the HUD-VASH program and were identified by case managers or medical records as having a history of abusing alcohol and/or drugs and of a cooccurring mental illness. Potentially eligible Veterans at 2 VA medical centers (in the Boston and Pittsburgh areas) were informed about the project and those who consented to participate (N = 166) were surveyed at baseline and then randomized to receive either standard HUD-VASH services (N = 81) or these same services enhanced with a peer specialist for a 9-month period (N = 85). Those declining to participate often did not want to work with a peer specialist or believed they already had good housing prospects. Interviews were conducted at baseline and then at ~6 and 9 months after enrollment.

HUD-VASH guidelines require Veterans to have at least 1 contact with their case manager each month for review of their service needs and housing situation, although not for the formal provision of VA mental health or other services (they are eligible for these services but are not required to use them). Those assigned to the experimental condition were expected to meet weekly with their peer specialist over 40 sessions, 20 that involved structured psychoeducation-based discussions and 20 that were unstructured (to focus on issues of current concern), although the median number of sessions was only 12. Although there was some turnover in peer specialists in the early months of the project, 2 peer specialists—1 White and 1 African American—delivered services to most of the Veterans at 1 site and 1 White peer specialist provided most of these services to Veterans at the other site. Peer specialists were assigned to Veterans participating in the research project based on availability, so there was no matching by race or other characteristics. All procedures were reviewed and approved by the Veterans Administration Central Institutional Review Board.

Measures

The dependent variable for hypotheses 1–3 is the number of behavioral service episodes during the 9-month treatment period after randomization. Service records indicating all episodes of health care at the 2 sites were obtained from VA’s National Patient Care Database for all 166 enrolled Veterans. Using VA “stop codes” (Decision Support System Identifiers), 80% of the service records were for substance abuse or mental illness, which are the foci of this analysis (the records did not distinguish integrated services for alcohol and drug abuse or include a dual-diagnosis code). Service episodes were then counted for the 3 months before study enrollment and for the 9 months after enrollment—when most participants completed the project (some continued to receive services for another 3 mo due to interruptions in their period of service caused by peer specialist turnover).

The dependent variable for hypotheses 4–6 is residential instability. Housing history was collected at each interview with the Residential TimeLine Follow-Back method, focused only on the preceding 30 days. Residential instability was measured with a count of days not spent in either HUD-VASH housing or other housing within the past 30 days at baseline and then at both the 6-month and final
Sample Characteristics

Veterans participating in the study were older and largely male, with almost equal proportions African American and White (Table 1). Participants had experienced alcohol and/or drug problems an average of 2–3 out of the previous 30 days.

Analysis

As the dependent variables are counts with overdispersion (variance > mean) in the dependent variable, the multivariate analyses use negative binomial regression. Strength of effects are indicated with the exponent of the slope coefficient, interpreted as the expected change in log count of service use incidents with a 1-unit increase in the predictor (values < 1.00 indicate a negative slope).

Effects on service use are specified by entering potential predictors in 3 increasingly inclusive models: (1) service needs, controlling for sociodemographic characteristics; (2) model 1, adding service preferences; (3) model 2, adding assignment to the peer specialist condition (as well as service use before baseline, so that past use is controlled in the prediction of service usage after randomization).

Before the analysis, extreme outliers in the counts of service use were removed from the analysis. As indicated in Figure 1, there were 4 extreme outliers with values above the recommended exclusion criteria (60 instances of service use) in the distribution of substance abuse service use, but just 1 in the distribution of mental health service use. The number of cases in each model is limited to the cases available after listwise deletion of cases missing on any of the importance or other variables, to facilitate comparison between the 3 models for both dependent variables.

For the analysis of housing stability, we again present 3 models of increasing complexity. Model 1: baseline predictors of days homeless reported during the project at both follow-up interviews. Model 2: test of effect of providing a peer specialist by adding this indicator to the model and controlling for baseline days homeless. Model 3: test of peer specialists’ ability to lessen the risk of homelessness due to greater severity of drinking, drug use, and psychiatric problems at baseline by adding multiplicative terms to represent each of these possible interactions to the other predictors in model 2.
predictors of service use

Service preference (0 = not at all; 4 = extremely important)

- Importance of treatment for alcohol problems: 1.8 ± 1.34
- Importance of treatment for drug problems: 1.6 ± 1.36
- Importance of treatment for psychological problems: 2.6 ± 1.54

- Staff help in housing (1 = prefer; 5 = oppose): 2.7 ± 1.1
- Case manager rated support need (5 = much better than the scale midpoint between strongly preferring staff support and strongly preferring no staff support, whereas case managers’ mean rating of the Veterans’ need for staff support was also about at the scale midpoint between recommending high and low support. The Veteran and staff ratings of need for support were not correlated (r = -0.011). On average, the sample spent just 1.7 days unhoused in the 30 days before baseline.

Predictors of Service Use

Frequency of alcohol use but not frequency of drug use predicted more use of VA substance abuse services (model 1, Table 2). By contrast, the importance attached to services for drinking and drug problems predicted more service use and partially explained the effect of alcohol use (model 2). Those Veterans randomized to peer specialist services subsequently used more VA substance abuse services, even controlling for prior service use (model 3). Controlling for prior service use partially explained the effect of importance attached to treatment for drug use but did not explain the effect of importance attached to treatment for alcohol problems (model 3).

Frequency of psychological problems, having a chronic medical problem, and being female predicted VA mental health service use (see model 1, Table 3). Importance attached to mental health services also predicted use of mental health services and explained somewhat the effect of number of psychological problems (model 2). Veterans randomized to peer specialist services subsequently used significantly more mental health services than those randomized to case management (model 3).
Veterans who reported more psychological problems experienced somewhat better residential stability, but other problem severity indicators had no effect (model 1, Table 4). Those expressing disinterest at baseline in staff help in housing but who were rated by their case manager as needing help were almost 6 times more likely to experience residential instability than others (Exp(β) = 5.98); independent of this effect, those who felt less need for staff help were subsequently more residually stable. By contrast, attaching more importance to treatment for alcohol use problems at baseline predicted more residential stability during the project. African American respondents were more residually stable than White respondents.

Prior use of more substance abuse services predicted less residential stability, although randomization to a peer specialist had no main effect (model 2). However, residential stability improved among those randomized to a peer specialist if they had reported more psychiatric symptoms at baseline (model 3). There was no such interaction with baseline frequency of drinking.

**DISCUSSION**

As predicted by the behavioral model of health service use, service need (problem severity), service preferences (predispositions), and service availability (assignment to a peer specialist) predicted use of health services for substance abuse and psychological problems. Although the strength of these influences varied and some were contingent on other factors, each was at least somewhat independent of the others. Our operationalization of need and predisposing factors with self-report measures of problem severity and treatment interest make these results readily interpretable and replicable, while our randomized design provides compelling evidence of peer specialists’ value.

Our service use findings also suggest new considerations for research and policy based on the Anderson and Aday model. Service preference was a much stronger predictor of service use for both substance abuse and psychological problems than was problem severity. Preference should therefore be included in any test of the Anderson and Aday model and motivational interviewing or similar approaches using peer specialists are likely to be effective for increasing behavioral health service use.

Influences on mental health service use were more complex than anticipated by the Anderson and Aday model. While importance attached to treatment was a strong independent predictor, the effect of self-reported mental health problems was only of marginal significance—and much weaker than that of chronic medical problems—possibly reflecting the frequency of somatization of mental health problems in the United States. Additional research is needed to determine why psychiatric symptoms themselves had little effect on mental health service use, but anecdotal reports from local staff suggest that the specific mental health services available at these sites did not match Veterans’ expectations. Conversely, a separate analysis showed that worse psychiatric symptoms at baseline (objectively measured) predicted greater engagement with the peer specialists themselves, presumably because these peers’ services did match expectations. The greater propensity of White and female Veterans to use mental health services was independent of the other influences and consistent with findings of other research.

Extension of the Anderson and Aday model to the prediction of residential stability improves understanding of the meaning of service use. Those who rated treatment for alcohol problems as more important may have been more oriented to help-seeking and therefore more stable in housing, whereas the reverse was true for those who rejected staff help recommended by their case managers. Our research design did not permit identification of reciprocal effects between service use and residential stability during the project, but the value added by our peer specialists indicates that services can improve residential stability. The higher levels of residential stability experienced by those with more psychiatric services (model 3). Men also tended to report less service use than women.
symptoms at baseline were not predicted, but are consistent with the results of research on Housing First approaches that indicate serious mental illness does not preclude residential stability when confounding effects of substance abuse are controlled.19,38,39

Including peer specialists in the model also clarified the role of severity of behavioral health problems. Veterans with more severe alcohol or drug problems at baseline were subsequently less residually stable only if they had not been assigned to a peer specialist. Drug problems in particular increase legal and financial challenges to housing retention that could have increased receptivity to and effectiveness of peer support.

In contrast, those with more psychiatric symptoms experienced more residential instability if they were randomized to a peer specialist. Anecdotal reports indicated that peer specialists facilitated hospitalization or temporary placement in VA group living quarters for Veterans experiencing psychiatric crises, which may have accounted for the association with more time unhoused. Our research design did not permit specification of the timing of the services relative to variation in residential stability, so we could not distinguish instances of increasing service use due to worsening behavioral health problems from instances of proactive help-seeking in order to resolve those problems.

The higher levels of residential stability experienced by African American Veterans suggest that the HUD-VASH program has eliminated (at least at these 2 locations) the elevated risk of housing insecurity that African Americans have faced due to discriminatory practices, even in supportive housing programs.22 This would be consistent with the earlier Boston McKinney Project’s finding that randomization to group housing uniquely improved housing stability among African American homeless persons with serious mental illness compared with those randomized to independent apartments.19

Three measurement limitations should be addressed in future research. More refined measures of health problems than our single questions from the ASI could help to specify the effects of needs, while the influence of case manager ratings of support needs is one clear indication of the importance of a multidimensional approach to identifying needs.40 The differences we found in relation to alcohol and drug use also make it clear that separate measures and hypotheses are needed to predict service use for both types of substance abuse—and we recommend that the VA make this distinction in its centralized service records.

We also recommend a longer follow-up period than the 9 months of our project to identify predictors of housing instability.19,41,42 Of course, generalization of our results must be limited to those in the VA health care system and to services accessible within that system,43 but the value of peer specialists for increasing service use that we have identified is consistent with findings outside the VA-supported housing program.7,10–13,15,20,44

Both the Center for Medicare and Medicaid Services and the Department of Veterans Affairs recommend consumer choice and using peer specialists in behavioral health services.45–48 Our research supports these recommendations: consumers who prefer behavioral health services are more likely to receive them, their preferences are consistent with their self-assessed behavioral health needs, and peer specialists can increase consumers’ use of available services.20 In addition, we have shown that peer specialists’ help can improve residential stability among those with more drug problems, while disinterest in support is a strong indicator of subsequent residential instability. Given that patients tend to feel more open, accepted, and hopeful when working with peer specialists compared with traditional clinical providers, peer specialists may also better improve treatment interest and connect preferences to needs in a way that improves residential stability.34,49

We urge consideration of more use of peer specialists, more intensive programs to reduce use of addictive substances—including more training for peer specialists in coping with substance abuse among those they serve, more programs like motivational interviewing5 to increase service interest, and ongoing research that can better track Veterans’ specific behavioral health care needs, interests, and supports.50

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REFERENCES

15. Craig T, Doherty I, Jamieson-Craig R, et al. The consumer-employee as a consumer choice and using peer specialists in behavioral health services.45–48 Our research supports these recommendations: consumers who prefer behavioral health services are more likely to receive them, their preferences are consistent with their self-assessed behavioral health needs, and peer specialists can increase consumers’ use of available services.20 In addition, we have shown that peer specialists’ help can improve residential stability among those with more drug problems, while disinterest in support is a strong indicator of subsequent residential instability. Given that patients tend to feel more open, accepted, and hopeful when working with peer specialists compared with traditional clinical providers, peer specialists may also better improve treatment interest and connect preferences to needs in a way that improves residential stability.34,49

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