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Organizational determinants of boundary spanning activity in outpatient substance abuse treatment programmes

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Abstract

Objectives—Substance abuse treatment programmes depend on boundary spanning to identify opportunities and threats, and represent their interests to stakeholders such as licensing entities and regulators. This study sought to identify director, client, unit and market factors associated with active director boundary spanning.

Methods—Using data from the 1995, 1999–2000 and 2005 waves of a national survey of outpatient substance abuse treatment units, generalized estimating equation regression models tested associations between predictors and five aspects of directors' self-reported boundary spanning.

Results—Directors licensed as substance abuse treatment counsellors spent more time than average consulting with other treatment providers and making presentations in the community. Older directors spent less time consulting with other treatment providers, making community presentations and liaising with monitoring organizations. The few associations between client unemployment and director boundary spanning were positive; the two associations between the percentage of clients who were African-American and boundary spanning were negative. Private ownership and being based in larger organizations were negatively associated with some types of boundary spanning. Perceived competition for public support was positively associated with all measures of boundary spanning.

Conclusion—Directors of treatment organizations may improve treatment practices and political leverage by directly, but selectively, interacting with key external stakeholders.

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There is little dispute that drug abuse is a major societal and health services problem in the USA and elsewhere. Further, numerous studies have shown that drug use is often accompanied by a variety of related mental health, clinical, public health and social co-occurring conditions.^{1,2} The dominant form of treatment delivery, outpatient substance abuse treatment (OSAT) programmes, are thus often dependent on a variety of treatment technologies, providers, regulatory and licensing requirements to mount successful treatment programmes for their clients. An under-researched, but critical responsibility of substance abuse treatment programme directors is managing relations with important external entities, such as other treatment providers, community groups, licensing and accrediting organizations, professional peers and regulators.³ These activities, collectively termed boundary spanning, are especially important for substance abuse treatment units for at least four reasons. Firstly, new evidence is continually emerging about what types of treatment practices are most effective.^{4,5} Research suggests that most innovations diffuse primarily through interpersonal networks external to the adopting organizations.⁶

Secondly, substance abuse treatment units are typically small organizations⁷ that are heavily dependent on stakeholders, such as referring agencies, licensing and accrediting entities and legislators for clients, information about treatment modalities and the discretion to adapt those modalities to client needs, and payment.^{8–11} More active boundary spanning may yield earlier information about possible referral, licensing and regulatory changes and thus better preparation for such changes, as well as potentially shape how those changes unfold.

Thirdly, boundary spanning may create appropriate demand for treatment services. Because only a minority of those diagnosed with substance abuse actually receive treatment.¹² One of the field's greatest challenges is inadequate demand relative to need. Effective boundary spanning may reduce the stigma associated with addiction¹³ and thus improve both reimbursement policies and individuals' willingness to seek and stay in treatment. In this manner, boundary spanning may decrease the gap between need and demand for substance abuse treatment services.

Finally, individuals who abuse substances often have additional sources of vulnerability or co-morbidities that merit coordination with external actors. More active boundary spanning and coordination among agencies serving common populations may also improve system responses to emerging trends. For instance, drug courts are handling case loads with increasingly severe addictions.¹⁴ Courts that work closely with treatment unit leadership may develop more adaptive solutions to such challenges.

Despite the importance of boundary spanning as an activity for substance abuse treatment units and their leaders, there is currently no empirical information about the level of such activities or what factors are associated with variation across units. This study seeks to provide foundational information about boundary spanning in substance abuse treatment programmes by addressing the following question: which attributes of OSAT unit directors, client populations, organization and markets are associated with more active boundary spanning activities by unit directors?

Director attributes

Directors' attributes may indicate one or both of the following factors relevant to boundary spanning activities: (1) their attitudes, and (2) their ability. In other words, some directors may be more inclined than others toward boundary spanning for their units, perhaps, because of differing beliefs about leadership roles and/or self-efficacy in that capacity.¹⁵ In addition, some directors may be better able to represent their units because of superior skills and/or credibility with external actors.¹⁶ In this analysis, we consider the following director attributes: university-based education, licensure as a treatment provider, organizational tenure, and age.

There is evidence that directors with advanced education will be more interested in and be able to boundary span than those directors with less formal education. Degree programmes build analysis and leadership skills, thus increasing both self-efficacy and prospects of success. Degree programmes also promote social networks that may facilitate boundary spanning tasks. Two previous large sample regression studies have found some associations between substance abuse unit leaders' education and strategic behaviours.^{17,18} More educated leaders may also experience greater success in boundary spanning because others accord them more respect. Network analyses within four large substance abuse treatment agencies revealed that opinion leaders tended to have more postgraduate education and more professional credentials than other counsellors.¹⁹

The effects of director licensing on boundary spanning may be similar to those associated with director university education. That is, directors who secure licenses in substance abuse treatment are likely to be interested in staying current in their field and those inclinations should be reinforced through their experiences as treatment providers. Directors may also build leadership and relationship building skills through these programmes and their subsequent provider experience, albeit less than would be obtainable through university degree programmes. Knudsen and Roman²⁰ found formal education of staff, but not licensing, associated with innovation in a national sample of substance abuse treatment centres.

Similar to education and licensing, greater tenure may support the development of boundary spanning skills and credibility. In addition, having more experience in their positions should provide the foundation needed to develop interpersonal relationships that make inter-agency ties work.²¹

Conversely, there is some evidence supporting the notion that older unit directors would be less progressive and thus less favourably disposed toward boundary spanning. In a VA hospitals study, for example, Young, Charns, and Shortell²² found a negative association between administrator age and total quality management adoption, an innovation that requires active advocacy. The previously referenced large study of USA public organizations, however, did not find any association.²³

Client characteristics

Given the small size of most OSAT units, we expected that directors with more complex client populations would work actively with external partners to secure needed resources and services for their clients.^{24–27} There is also evidence that African-American clients have different treatment needs than other racial/ ethnic groups.²⁸ We considered this to be another form of client complexity potentially warranting more active boundary spanning by the director, e.g. consultation with other treatment providers about how they were tailoring treatment for African-American clients.

Organizational attributes

In addition to the attributes of the directors and their clients, there is also a range of unit attributes that may affect how actively directors span organizational boundaries. For instance, studies have shown differences in prevention strategies between methadone and ‘drug free’ substance abuse treatment programmes.^{18,29} Unit ownership may also affect boundary spanning because of how units are embedded in governance structures: a recent study found that for-profit, not-for-profit and public substance abuse treatment units responded differently to managed care.³⁰ Finally, treatment units based in larger organizations such as hospitals or mental health centres may have different boundary spanning patterns because of parent organization priorities and/or because others within the parent organization assume primary external brokering responsibilities.³¹

Market

As small organizations heavily dependent on their environments, OSAT units should be very responsive to their competitive challenges. Substance abuse treatment relies heavily on government funding, which is vulnerable to vicissitudes in public support for this form of health care. As a result, we might expect that directors would respond to competition for public support with higher levels of boundary spanning activities.

Methods

Sample

Data were from outpatient drug abuse treatment units surveyed in 1995, 1999–2000 and 2005 as part of the National Drug Abuse Treatment System Survey (NDATSS). The NDATSS is a longitudinal study of OSAT units conducted by the Institute for Social Research at the University of Michigan. In the NDATSS, an OSAT unit is formally defined as a physical facility with a majority of resources (>50%) dedicated to treating individuals with substance abuse problems (including alcohol and other drugs) on an outpatient basis. The sample does not include programmes run by the Veteran’s Administration or by correctional facilities.

The NDATSS uses a mixed panel design, which combines elements from panel and cross-sectional designs.³² After screening and non-response, 618 organizations completed interviews in the 1995 wave, 745 organizations completed interviews in 1999–2000 wave,

and 566 organizations completed interviews in 2005, having had response rates of 88–90%, respectively. New sample units in each wave were randomly selected so that, when combined with the panel, the full sample for a given year would be representative of the USA outpatient treatment system in a given year. In the pooled sample, responses were available on director boundary spanning activity for between 1869 observations for contributing to policy-making and 1886 observations for consulting with other treatment providers. After list-wise deletion, the final analytic sample sizes ranged from 1611 unit-years for contributing to policy-making and 1625 observations for consulting with other treatment providers.

Trained staff conducted the survey from the University of Michigan Survey Research Centre after approval by the University's institutional review board. All respondents provided informed consent prior to the beginning of interviews. Extensive interviewer training on the survey instruments was conducted, as well as two pretests for each study wave. Interviewers used frequent probes and follow-up questions. When necessary, respondents were re-contacted for clarification.

Measures

Boundary spanning was assessed as the number of hours the programme director spent weekly in each of the following activities:³ consulting with and exchanging information with other providers of treatment;⁴ making public presentations and appearances in the community;⁵ liaising with organizations that monitor or license the unit;⁶ engaging in activities with professional or occupational associations; and⁷ contributing to policy-making at the local or state level. Boundary spanning hours were converted to ordinal categories to deal with skewed distributions. Table 1 describes all study measures. Bivariate correlations (maximum 0.32) and variance inflation factors (highest 1.25) indicated the absence of collinearity among predictors.

Analytic strategy

We employed ordinal logistic regression to analyse the associations between the predictors and the amount of time directors reported devoting to each type of boundary spanning activity. Because the research design was longitudinal, with most units having observations from three data waves (1995, 1999–2000 and 2005), we used generalized estimating equations (GEE) to account for correlation among repeated measures on the same unit over time.³³ GEE corrects the standard errors of the regression coefficient estimates using the sandwich method, which yields robust results regardless of specification of within-unit correlation. The analysis was conducted using PROC GENMOD procedure in SAS 9.1.3. All significance tests were two-tailed.

To account for possible differences across waves in levels of each outcome, we included a dummy variable for observations from 1995 and 1999–2000, with the referent group being 2005 observations.

Results

Means and standard deviations for each study variable are provided in Table 2 for all units combined ($n = 1929$), including facilities responding in 1995, 1999–2000 and 2005. Negative coefficients for the 1999–2000 wave in the multiple regression results (Table 3) indicate that after controlling for all covariates, directors became more active in liaising with monitoring organizations and contributing to policy-making between 1999–2000 and 2005.

Director characteristics

Additional results in Table 3 show that, contrary to expectation, directors with more formal education spent less time consulting with other treatment providers and liaising with monitoring organizations. There was partial support for the expectation that directors licensed as substance abuse counsellors would be more active boundary spanners; these individuals reported more time consulting with other treatment providers, making community presentations and participating with professional associations. Director tenure was not significantly associated with any of the five categories of boundary spanning activity. Older directors spent less time consulting with other treatment providers, making community presentations and liaising with monitoring organizations.

Client characteristics

Contrary to expectation, there were no significant associations between the percentage of clients with mental illness diagnoses and director boundary spanning. Directors serving a proportionally higher number of clients who were unemployed reported spending more time making community presentations, liaising with monitoring organizations and interacting with professional associations. The percentage of clients who were African-American was negatively associated with director time liaising with monitoring organizations and contributing to policy-making.

Organizational characteristics

Methadone provision was negatively associated with director time making community presentations. However, directors in these units also spent above-average time consulting with other treatment providers, liaising with monitoring organizations and contributing to policy-making.

In comparison with public unit directors, both for-profit and private non-profit unit directors spent significantly less time boundary spanning. Relative to directors of publicly owned units, directors of for-profit units reported less time consulting other treatment providers and contributing to policy-making; directors of not-for-profit units also spent significantly less time contributing to policy-making.

Directors of units affiliated with larger organizations (relative to freestanding programmes) were in some areas less active boundary spanners. Directors of units based in hospitals spent less time contributing to policy-making than directors of freestanding units. Directors of

units based in mental health centres reported less time making community presentations and participating in professional associations than directors of freestanding units.

Market

As expected, competition with other substance abuse treatment units for public support was positively associated with the amount of time spent on all forms of boundary spanning.

Discussion

Our analysis suggests that the level and type of boundary spanning activity in substance abuse treatment programmes is independently associated with characteristics of the programme director, programme client population, organization and market. For example, individuals who are certified as substance abuse treatment counsellors tend to be more active in boundary spanning. This relationship may be explained by the impact of certification on director skills and attitudes or, alternatively, a tendency for more motivated individuals to become certified as well as engage in active boundary spanning.

In contrast, with the exception of time devoted to policy-making, all boundary spanning activities were negatively related to director age. One possible explanation is that this pattern reflects changes in norms about substance abuse treatment over time, that is, an increasing emphasis on inter-organizational collaboration that has influenced younger directors more than counterparts who were trained earlier. However, interactions between director age and wave (not shown) were not significant; thus there is no indication that a cohort of directors was becoming increasingly different than younger directors over time. The fact that agency tenure was not associated with boundary spanning also suggests that the age effects were not attributable to directors having previously established relationships with stakeholders (and thus reduced current boundary spanning needs). The remaining explanation is that people simply tend to become less actively engaged with external actors as they age.

Two additional findings from this study are worthy of particular note. Both relate to the levels of activity by programme directors in policy development. First, programmes with more African-American clients tended to have directors who spent significantly less time liaising with monitoring organizations and contributing to public policy. This raises questions about both the sufficiency of oversight for units with more African-American clients and how well the potentially distinct treatment needs of this client population²⁸ are reflected in state and national decision-making. This issue may merit attention from both individual substance abuse treatment directors and associations such as the National Association of State Alcohol and Drug Abuse Directors and The Association for Addiction Professionals.

Study findings also revealed that publicly owned programmes engaged in more policy-making activity than their private, for profit or not for profit counterparts. By definition, publicly owned substance abuse treatment units are directly embedded in the public sector in which legislation is made. However, almost four-fifths of the outpatient units in this nationally representative sample were privately owned in 2005. Given evidence that public and private units may respond differently to changing environmental conditions,³⁰ it is

important for each ownership category to be adequately and separately represented in policy-making.

In contrast to the other negative associations in model results, those between unit ownership by larger organizations and director boundary spanning may not only be logical, but also largely functional. For instance, by representing substance abuse treatment units to monitoring organizations such as accreditors, hospital managers may thereby free unit director time to take actions that more directly benefit clients. Similarly, substance abuse treatment units located within mental health centres may benefit from representation by their colleagues in community venues; for instance, such presentations could recruit clients for both mental health and substance abuse treatment. Directors of units within larger organizations, however, may need to be discriminating about which types of boundary spanning they leave to others. For instance, it is not clear that hospital leadership will effectively represent substance abuse treatment priorities to policy-makers; hence, the negative association between ownership by hospitals and this form of boundary spanning is of concern.

Finally, from a public policy perspective, perceived competition for public support does appear to foster increased levels of director boundary spanning, which should in turn facilitate desirable processes such as increased inter-agency collaboration and dissemination of innovations.

Conclusion

The purpose of the current study was to identify personal, client, organizational and market factors related to boundary spanning by OSAT programme directors. Perhaps, as a reflection of the importance of such activity, there is evidence that directors have been engaging more actively in boundary spanning in the last several years. Results also reveal several opportunities for improvement in this area. Identified leverage points for improved boundary spanning included those relating to director and client attributes, and organizational structure. Of course, treatment units need a different balance of external and internal director attention at different times. Nonetheless, given the heavy dependence of substance abuse treatment units on external stakeholders to fulfil their missions, and the continuing stigma endemic to this field, we believe this study's results will facilitate more active boundary spanning when appropriate.

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Table 1

Study measures

Measure	Description	Source/Notes
Outcome measures		
Boundary spanning activities	Time devoted weekly to: (1) consulting with and exchanging information with other providers of treatment; (2) making public presentations and appearances in the community; (3) engaging in liaison activities with organizations that monitor or license the unit; (4) engaging in activities with professional or occupational associations; and (5) contributing to policy making at the local or state level	Unit director (categorized into the following four levels: less than 1.0 h per week; 1.0–2.0 h per week; 2.1–4.9 h per week; 5.0 or more hours per week)
Director attributes		
Director university education	Beyond a bachelor's degree (less as referent group)	Unit director
Director licensure	Whether the director possessed a license or certification as a substance abuse treatment counsellor	Unit director (Yes = 1)
Director organizational tenure	Years director in this unit	Unit director
Director age	Age of director in years	Unit director
<i>Client population</i>		
Percentage clients multiple diagnosis	Currently, what percent of your unit's active outpatient substance abuse clients have both mental health and substance abuse problems?	Clinical supervisor
Percentage clients unemployed	Percentage of unit's current active outpatient substance abuse clients estimated to be unemployed	Clinical supervisor
Percentage clients African-American	Percentage of outpatient substance abuse clients in last year who were unemployed	Clinical supervisor
Organizational attributes		
Methadone treatment unit	Unit provides methadone treatment services to clients	Unit director (Yes = 1)
Private for-profit	Unit ownership status is private, for-profit	Unit director (Yes = 1, Referent group public)
Private not-for-profit	Unit ownership status is private, not-for-profit	Unit director (Yes = 1, Referent group public)
Hospital affiliation	Unit is part of a hospital	Unit director (Yes = 1, referent group includes freestanding units or those with "other" affiliation)
Mental health center affiliation	Unit is part of a mental health center	Unit director (Yes = 1.)
Market		
Competition for public support	Mean of three items: To what extent is there competition between your outpatient unit and other substance abuse treatment units for each of the following kinds of resources: funding from government sources, political support, and community support (alpha = 0.71)	Unit director (each item on 1–5 scale with 1 indicating none and 5 indicating 'a very great extent')

Table 2

Summary statistics for pooled national sample of outpatient substance abuse treatment facilities surveyed in 1995, 1999–2000 and 2005*

Measure	Wave 4 (1995) <i>N</i> = 618		Wave 5 (1999–2000) <i>N</i> = 745		Wave 6 (2005) <i>N</i> = 566	
	Mean/%	SD	Mean/%	SD	Mean/%	SD
Director boundary spanning						
Consulting with other treatment providers	2.96	3.32	2.64	4.00	3.34	11.57
Making community presentations	2.63	4.41	2.07	3.36	2.37	5.68
Liaisoning with monitoring organizations	2.58	3.28	2.58	5.14	2.47	5.32
Time with professional associations	2.16	4.50	1.86	4.05	1.65	4.93
Contributing to policy-making	1.80	2.77	1.41	2.62	1.31	3.16
Director attributes						
Director beyond college [†]	71%		75%		67%	
Director licensed in sat	54%		52%		66%	
Director tenure years in agency	8.24	8.03	10.42	10.41	10.43	19.40
Director age	46.11	10.56	48.09	13.70	49.74	22.55
Client population						
Percentage client dual diagnosis	29%		34%		39%	
Percentage client unemployed	43%		36%		38%	
Percentage clients African-American	22%		23%		23%	
Organization structure						
Methadone [†]	14%		16%		14%	
Private for-profit [†]	17%		19%		26%	
Private not-for-profit [†]	52%		54%		53%	
Hospital affiliated [†]	17%		13%		11%	
Mental health center affiliation [†]	23%		18%		16%	
Market						
Competition for public support	2.45	1.29	2.41	1.59	2.13	2.56

* Weighted sample

[†] Dichotomous (yes or no) variables

Table 3

Multiple regression results: effects of substance abuse treatment facility director, client and organizational attributes on boundary spanning activities (Odds ratio, Confidence Interval, Probability)

Measure	Consulting with other treatment providers N = 1624			Making community presentations N = 1618			Liaisoning with monitoring organizations N = 1613			Working with professional associations N = 1619			Contributing to policy-making N = 1610		
	OR	CI	Prob	OR	CI	Prob	OR	CI	Prob	OR	CI	Prob	OR	CI	Prob
Intercept 1	1.715	0.812	– 3.622	0.491	0.218	– 1.106	0.587	0.278	– 1.239	0.137	0.065	– 0.292	0.356	0.165	– 0.769
Intercept 2	4.437	2.092	– 9.411	1.088	0.483	– 2.450	1.384	0.656	– 2.920	0.381	0.180	– 0.807	0.861	0.400	– 1.851
Intercept 3	28.597	13.200	– 61.952	4.247	1.875	– 9.620	7.798	3.681	– 16.523	2.757	1.295	– 5.872	3.400	1.579	– 7.323
Director college or more	0.790	0.634	– 0.985	* 1.010	0.809	– 1.262	0.718	0.574	– 0.898	0.865	0.698	– 1.072	0.989	0.786	– 1.243
Director licensed in SAT	1.280	1.059	– 1.547	* 1.289	1.066	– 1.559	1.088	0.901	– 1.314	1.283	1.059	– 1.554	1.047	0.867	– 1.264
Director tenure at agency	0.990	0.977	– 1.003	0.997	0.983	– 1.011	0.993	0.979	– 1.008	0.998	0.984	– 1.011	1.005	0.991	– 1.020
Director age	0.978	0.967	– 0.990	*** 0.986	0.973	– 0.999	* 0.987	0.975	– 0.999	0.995	0.983	– 1.007	1.000	0.988	– 1.012
% Clients dual diagnosis	1.002	0.998	– 1.006	0.998	0.994	– 1.002	0.998	0.994	– 1.002	1.002	0.997	– 1.006	0.999	0.995	– 1.003
% Clients unemployed	1.001	0.997	– 1.005	1.006	1.002	– 1.010	1.009	1.005	– 1.013	1.005	1.001	– 1.009	1.001	0.997	– 1.005
% Clients African- American	1.001	0.997	– 1.005	0.996	0.993	– 1.000	0.994	0.990	– 0.998	1.002	0.998	– 1.005	0.990	0.986	– 0.994
Methodone unit	1.289	1.014	– 1.639	* 0.562	0.443	– 0.714	*** 1.347	1.068	– 1.699	* 1.062	0.844	– 1.337	1.304	1.021	– 1.666
Private for- profit	0.595	0.425	– 0.835	** 0.742	0.526	– 1.047	0.874	0.616	– 1.239	0.842	0.602	– 1.179	0.255	0.181	– 0.359
Private non- profit	0.835	0.646	– 1.079	1.052	0.820	– 1.350	1.094	0.847	– 1.413	0.971	0.763	– 1.236	0.620	0.481	– 0.801
Hospital-based	0.840	0.638	– 1.105	0.857	0.649	– 1.131	0.765	0.581	– 1.007	0.783	0.603	– 1.017	0.541	0.402	– 0.727
Mental health center based	0.790	0.600	– 1.041	0.582	0.444	– 0.762	*** 0.850	0.646	– 1.120	0.640	0.485	– 0.844	0.970	0.729	– 1.292
Competition for public support	1.114	1.015	– 1.223	* 1.247	1.131	– 1.377	*** 1.318	1.197	– 1.451	1.208	1.097	– 1.330	1.164	1.057	– 1.282
1999/2000	1.125	0.896	– 1.412	1.204	0.958	– 1.513	0.838	0.666	– 1.055	1.390	1.111	– 1.740	1.182	0.934	– 1.496
2005	0.757	0.604	– 0.948	* 0.906	0.727	– 1.128	0.759	0.607	– 0.949	* 0.944	0.755	– 1.181	0.707	0.569	– 0.879

* $P < 0.05$,
** $P < 0.01$,
*** $P < 0.001$