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RESEARCH ARTICLE

Program Structure and Counselor–Client Contact in Outpatient Substance Abuse Treatment

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Objectives. To examine organizational structural attributes associated with counselor–client contact.
Data Sources. Data were collected in 2004 and 2005 for a federally funded project, which simultaneously examines organizational structure, functioning, and resources among outpatient substance abuse treatment programs.
Study Design. The study uses a naturalistic design to investigate organizational structure measures—ownership, accreditation, and supplemental services—as predictors of time in counseling and case management, and caseload size, controlling for geographic differences.
Data Collection. Directors at 116 outpatient drug-free treatment programs located in four regions across the U.S. (Great Lakes, Gulf Coast, Northwest, and Southeast) voluntarily completed a survey about program structure.
Primary Findings. Clients received more counseling hours in programs that were "intensive," publicly owned, accredited, and had a lower proportion of recently hired counselors. More case management hours were offered in "intensive," private-for-profit or publicly owned (versus private-nonprofit) programs, serving a lower proportion of dual-diagnosis clients, and providing more on-site supplemental services. Smaller caseloads were found in programs that were accredited and had a smaller average client census and a lower proportion of criminal justice referred clients.
Conclusions. Organizational attributes are related to counselor–client contact and may have implications for staff turnover and service quality.

Key Words. Program structure, organizational functioning, outpatient substance abuse treatment, counselor–client contact, caseload

Clients tend to have better treatment outcomes when more counseling sessions (Fiorentine and Anglin 1996, 1997) and case management services (McLellan et al. 1999) are provided and when counselor caseloads are low (McCaughrin and Price 1992; Woodward et al. 2006). While the ideal is to

provide appropriate personal contact hours and lower client-to-counselor ratios, programs experience pressures from funding sources and monitoring organizations to do more with less, and cuts are often made in personnel and in nonsubstance abuse specific services (Hubbard et al. 1989; Etheridge et al. 1995). When treatment providers must make do with fewer personnel, the number of counseling sessions available to clients may decrease, and counselors may be required to take on more clients in groups, further impacting personal contact between counselors and clients.

Viewing a treatment program as an "open system"—that is, it is not completely self-sufficient, but interacts with its environment (see Pfeffer and Salancik 1978)—provides a framework for understanding the way counselor–client contact is structured. Specifically, the external environment can be a source of uncertainty and a source of resources, which can shape decisions about programs' internal organization and management (Robey and Sales 1994). Accrediting bodies are one such external force, promoting high-quality programming as assessed by an independent, external group. Guidelines applied by accrediting bodies reflect important aspects of treatment, including the frequency of sessions, types of services provided, and amount of direct contact with staff. For instance, accredited agencies provide more treatment hours (Lemak and Alexander 2005), and are more likely than nonaccredited programs to provide mental health (Friedmann, Alexander, and D'Aunno 1999) and medical services (Durkin 2002).

An equally important element of a program's environment is its clientele. Clients with different needs may require different treatment plans (National Institute on Drug Abuse 1999), and appropriate services will often be negotiated as part of referral and contract decisions. Programs that admit clients with distinctive needs are more likely to provide specialized services (Olmstead, White, and Sindelar 2004), including case management, which has been found to be predictive of positive posttreatment outcomes (McLellan et al. 1999). Likewise, having a high proportion of criminal justice (CJ) clients can prompt modifications in the way counselors utilize their time with clients. The number of CJ referrals to community-based treatment programs is increasing (Office of Applied Studies 2004), and are often accompanied by funds

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and mandates. Thus, programs may alter services to meet expectations of CJ referral sources.

Program ownership also has implications for contact. Generally speaking, public programs tend to provide more supplemental services than do privately owned programs (Friedmann, Alexander, and D'Aunno 1999; Rogers and Barnett 2000), and the for-profits tend to offer fewer medical and social services (Friedmann, Alexander, and D'Aunno 1999). Lemak and Alexander (2005) found that public programs tend to have higher caseloads, but did not find an association between ownership and counseling hours. It appears that publicly owned programs offer a wider range of supplemental services with fewer staff (as evidenced by higher caseloads) than their privately owned counterparts. Whether or not ownership is associated with counseling hours is unclear.

Factors that are internal to the program, reflecting its specific design and operations, are also relevant to understanding counselor–client contact. Programs that are part of a larger "parent" organization often can shift staff from one location to another within the organization to respond to client needs or market demands, or hire specialized personnel who work part-time at multiple locations (Davis-Blake and Uzzi 1993). For these reasons, operating within a parent organization is associated with greater service provision (Durkin 2002), particularly with regard to medical and mental health services (Friedmann, Alexander, and D'Aunno 1999). Affiliation with a mental health center is related to providing more counseling hours and offering smaller caseloads (Lemak and Alexander 2005). However, programs affiliated with a parent organization also tend to serve more clients (Substance Abuse and Mental Health Services Administration 2003).

Turnover among staff is a significant problem in substance abuse treatment programs (e.g., Alcoholism & Drug Abuse Weekly 2002; Gurel et al. 2005), and staff changes can have implications for conducting clinical activities. The amount of counselor–client contact can be quite different in programs where the majority of counselors are new to the organization, compared with those where counselors have been with the program for several years. When a counselor quits or is terminated, his or her caseload must be redistributed among staff, resulting in higher caseloads until the position is filled. Time spent locating, hiring, and training replacement or new staff may result in a temporary disruption in contact.

The current study extends the existing literature by using a naturalistic design to examine structural correlates of counselor–client contact in outpatient (nonmethadone) substance abuse treatment programs, while simulta-

neously controlling for geographical differences. Specific aspects of the external environment and internal organization are expected to predict counselor–client contact.

METHOD

Sample

The sample consists of 116 outpatient (nonmethadone) substance abuse treatment programs participating in a NIDA-funded research project entitled "Treatment Costs and Organizational Monitoring" (TCOM; see Broome et al. 2007). Organizational structure data were provided by all programs in 2004 and 2005.

Letters describing the project were distributed through Addiction Technology Treatment Centers (ATTCs) in four regions: Southern Coast, Great Lakes, Gulf Coast, and Northwest Frontier. Each ATTC assisted with program recruitment and had a target of approximately 25 programs. Programs were offered monetary compensation, staff training opportunities, and individualized feedback reports in exchange for providing organizational and client data. Participants had to be primarily outpatient substance abuse treatment programs (could be embedded in the CJ or mental health system), and had to have at least three clinical staff members. Some exceptions were made when a large organization with multiple outpatient units wanted to include all programs in the research project. A naturalistic quota-sampling plan was developed to provide adequate coverage of various program types (e.g., varying levels of care) and geographic regions. All programs that met inclusion criteria were enlisted, and all participated voluntarily.

Procedures

Data collection procedures for the project as a whole focused on obtaining a cross-sectional view of treatment program functioning. The Survey of Structure and Operations (SSO; available without charge for download at www.ibr.tcu.edu) was completed by a program director, and served as the principal source of structural information about participating programs. Major topics include general program characteristics, organizational relationships, clinical assessment and practices, services provided, staff and client characteristics, and recent changes. The SSO was developed as part of the TCOM project and includes selected sections of the Program Identification and Description form (PID; Lehman, Greener, and Simpson 2002), the Program

Training Needs form (PTN; Rowan-Szal et al. 2007), and the National Survey of Substance Abuse Treatment Services (N-SSATS; U.S. Department of Health and Human Services 2006). It is also similar to surveys used in other national studies, such as the Alcohol and Drug Services Study (ADSS; Substance Abuse and Mental Health Services Administration 2003).

Measures

Contact Measures. Two mechanisms through which clients interact with counselors include counseling sessions and case management, both of which provide support for recovery and resources for meeting needs and attaining goals (Center for Substance Abuse Treatment 1998; National Institute on Drug Abuse 1999). Counseling hours per week was assessed by asking directors to indicate the number of hours a "typical" client spends in individual and in group counseling sessions per week at their program. They were also asked how many hours a "typical" client spends in case management per week. Caseload, also a measure of contact, with fewer clients per counselor being more desirable, was assessed by asking the average counselor caseload (i.e., the number of clients per counselor) at the time of the survey. "Counselor" was defined as a staff member who had direct clinical contact with clients, including counselors, social workers, case managers, clinical supervisors, and therapists. Full-time, part-time, and contractual clinicians were included in the estimate, as well as all clients.

Organizational Structure Measures. Directors described their outpatient service approach as (a) regular outpatient (less than 6 hours of structured programming per week), (b) intensive outpatient (minimum of 2 hours of structured programming on 3 days per week), or (3) mixed (both regular and intensive outpatient). For this study, regular outpatient served as the reference category in the multiple regression models. Parent organization affiliation was defined as belonging to a larger organization or agency of which the clinic or program is a part (with either shared or separate financial accounting practices). Ownership was assessed by asking whether the facility was operated by a (a) private for-profit, (b) private nonprofit, or (c) public organization (i.e., state, local, county, tribal, or federal). Private nonprofit served as the reference category in the multiple regression models. Information provided on the SSO was verified by comparing responses provided using the Treatment Cost Analysis Tool (TCAT; see Flynn et al. 2005). Discrepancies occurred in five cases and included client counts that

were extreme, missing data on the parent affiliation item, and missing data on number of counseling hours.

Client census was determined by directors' responses to the question "how many clients are served by this program over a 1-month period (average number)?" The monthly census was chosen over a daily or annual census because it was most comparable time-wise to the measure of current caseload. To assess accreditation, directors were asked to indicate whether or not their program was accredited by the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) or the Commission on Accreditation of Rehabilitation Facilities (CARF). Programs that responded "yes" to accreditation by one or both were coded as "accredited." Directors were also asked to indicate how many clients were referred from the CJ system in the last year, and how many were considered dual diagnosis clients (DD; e.g., having both mental health and substance abuse issues) during that same period. The numbers were then divided by the total annual client count, resulting in proportion of CJ-referred clients and proportion of DD clients.

Directors were provided with a list of services and asked to indicate whether or not each was (a) not provided, (b) provided by the program on-site, or (c) provided by referral only. Services included assessment (e.g., substance abuse diagnosis; two items), substance abuse therapy and counseling (e.g., family counseling; four items), biological testing (e.g., urine screening; six items), transitional services (e.g., discharge planning; five items), medical services (e.g., psychiatric; five items), and other services (e.g., education classes; 11 items; see also N-SSATS for a list of services; U.S. Department of Health and Human Services 2006). Responses were recoded as either "service provided on-site" or "service not provided on-site" and were summed, resulting in a measure that could range from 0 to 31. For the purpose of this study, case management and individual and group counseling were not included in the supplemental services measure. The proportion of recently hired counselors was computed by dividing the number of counselors with less than 2 years tenure by the total number of counselors currently at the program.

Geographic Region. Informal discussions with directors representing different geographical regions suggested that programs in the TCOM sample differed by region in their approach to management philosophies and treatment operations. Some of those anecdotal differences were confirmed through exploratory analyses with the current sample (see Supplementary

Appendix A). Therefore, region was used as a covariate in regression analyses. The four regions included the Southeast (Florida), Great Lakes (Illinois, Ohio, Wisconsin), Gulf Coast (Texas, Louisiana), and Northwest (Idaho, Oregon, Washington).

Analysis Plan

This study utilizes a naturalistic approach to examine aspects of organizational structure and counselor–client contact. First, univariate analysis of variance was used to document regional differences among the three dependent measures of interest (counseling hours, case management hours, and caseload), and to determine whether region should be included in subsequent analyses as a covariate. Next, bivariate correlations were computed among staffing measures, among structure measures, and between organizational structure and staffing measures. Finally, three separate multiple regression equations were computed, corresponding to each dependent measure. Variables were entered in blocks, with outpatient service approach (regular, intensive, mixed) entered first, region entered second, ownership and accreditation entered third, and all other structural measures entered last. Service approach was entered first because by definition, it was expected to account for much of the variance in counseling hours. Analytic procedures were identical to facilitate comparisons between models. These procedures not only control for variations due to outpatient service approach and region, but also allow the incremental examination of R^2 to determine how much variance is being accounted for with the addition of each block.

RESULTS

Means, standard deviations, and percentages for each structure and contact measure across the four regions are provided in Supplementary Appendix A. Nearly three-quarters of programs (74 percent) operated under a parent organization. Most defined themselves as mixed outpatient (56 percent), with an additional 32 percent regular, and 12 percent intensive. Seventy-one percent of programs were private-nonprofits, 21 percent private-for-profits, and 8 percent publicly owned. Forty-one percent were accredited. On average, programs reported that 58 percent of clients were CJ-referred, 26 percent had dual diagnoses, and 46 percent of staff were recently hired (within 2 years). Programs treated an average of 108 clients per month, and provided an

average of nearly 13 different supplemental services on site. Overall, more than $5\frac{1}{2}$ hours of counseling and about 50 minutes of case management was provided per week. Caseloads averaged about 26 clients per counselor.

Characteristics of the TCOM programs were compared against those responding to N-SSATS in 2005 (U.S. Department of Health and Human Services 2006), in an effort to judge the coverage for various treatment models. When comparing the entire TCOM sample with the N-SSATS outpatient drug-free sample in the selected regions, distributions on available variables are comparable. For example, 38 percent of N-SSATS programs described their service approach as "regular" outpatient, 6 percent "intensive," and 57 percent "mixed," compared with 32, 12, and 56 percent, respectively, in TCOM. Greater variation was seen in the distribution of ownership measures. In N-SSATS, 35 percent were private-for-profit, 53 percent private-nonprofit, and 12 percent were public, compared with 21, 71, and 8 percent, respectively, in TCOM. Accreditation rates were comparable, with 38 percent of N-SSATS programs accredited by JCAHO or CARF compared with 41 percent in TCOM. Based on these comparisons, it appears that TCOM generally was successful in capturing the variety of treatment models sought, and the sample is similar to those programs described by N-SSATS; the primary exception is a possible over sampling of nonprofit programs.

A series of one-way analyses of variance were used to examine regional differences. Several significant differences were found for both structural and contact measures. Programs in the Southeast and Gulf Coast regions were more likely to provide "regular" outpatient ($F_{(3, 112)} = 10.80$, $p < .0001$), whereas those in the Great Lakes and Northwest were more likely to describe their programs as "mixed" ($F_{(3, 112)} = 13.41$, $p < .0001$). Programs in the Southeast were also more likely to be private-nonprofit ($F_{(3, 112)} = 5.31$, $p < .01$), affiliated with a parent organization ($F_{(3, 112)} = 3.30$, $p < .05$), accredited ($F_{(3, 112)} = 31.39$, $p < .0001$), have fewer CJ referrals ($F_{(3, 112)} = 4.19$, $p < .01$), and provide fewer counseling and case management hours (an artifact of providing "regular" versus "intensive" services; $F_{(3, 112)} = 3.84$, $p < .05$; $F_{(3, 112)} = 3.31$ $p < .05$, respectively). Great Lakes programs were more likely to be publicly owned ($F_{(3, 112)} = 10.30$, $p < .0001$), provide more case management hours ($F_{(3, 112)} = 3.31$, $p < .05$), and have higher caseloads ($F_{(3, 112)} = 4.77$, $p < .01$). The proportion of recently hired counselors was higher among Gulf Coast programs ($F_{(3, 112)} = 5.82$, $p < .001$). Differences in average monthly census, proportion of dual-diagnosis clients, and number of supplemental services on-site were not statistically significant. Over-sampling for "mixed" outpatient programs in the Great Lakes (56 percent N-SSATS, 70

percent TCOM) and private-nonprofits in the Southeast (52 percent N-SSATS, 100 percent TCOM) could account for some of the regional differences reported above. Geographic region therefore is included in the multivariate analyses as a covariate, but should be viewed as a fixed attribute of programs that does not necessarily reflect any policy differences.

Bivariate Relationships among Structure and Contact Measures

The bivariate correlations among structure and contact measures are provided in Supplementary Appendix B. External factors such as accreditation and ownership were directly associated with contact. Accredited programs had lower caseloads ($r = -0.21$, $p < .05$), and public programs provided more counseling and case management ($r = 0.37$, $p < .0001$; $r = 0.26$, $p < .01$, respectively). Accreditation was not, however, significantly associated with counseling hours in univariate analyses. Programs affiliated with a parent organization were more likely to be accredited ($r = 0.25$, $p < .01$), private-nonprofit ($r = 0.19$, $p < .05$), and less likely to be private-for-profit ($r = -0.33$, $p < .001$). Parent-affiliated programs were also more likely to provide "regular" programming ($r = 0.24$, $p < .05$), and fewer case management hours ($r = -0.25$, $p < .01$), but they also had lower caseloads ($r = -0.22$, $p < .05$). Programs with a higher proportion of CJ-referred clients had a higher client census and were less likely to be accredited ($r = 0.28$, $p < .01$; $r = -0.34$, $p < .001$, respectively). A higher proportion of DD clients was not associated with counseling hours, but as expected, was negatively related to caseload ($r = -0.24$, $p < .01$). Finally, a higher proportion of recently hired counselors was associated with fewer counseling and case management hours ($r = -0.21$, $p < .05$; $r = -0.18$, $p < .05$, respectively).

Counseling Hours

Independent variables hypothesized as having an impact on counseling hours were entered into a multiple regression model in blocks (see Table 1). As expected, given that the number of counseling hours is inherent in its definition, outpatient service approach was predictive of counseling hours, and remained significant throughout all four iterations of the model. Public ownership and national accreditation were directly related to counseling hours, even after controlling for service approach and region.

Block 4 shows the full model with all measures included. Because the dependent variable was measured in "hours," coefficients can be interpreted

Table 1: Regression Results Examining Relationships between Organizational Structure Measures and Counseling Hours ($N = 115$)

	Block 1 (Service Approach)			*Block 2 (Region)*			*Block 3 (Ownership)*			*Block 4 (Other)*		
Structure Measure	*Estimate*	*SE*	*p*	*Estimate*	*SE*	*p*	*Estimate*	*SE*	*p*	*Estimate*	*SE*	*p*
Intercept	3.00	0.60	<.0001	3.80	0.80	<.0001	3.44	0.86	<.0001	4.48	2.02	<.05
Intensive outpatient	8.79	1.15	<.0001	8.20	1.16	<.0001	7.23	1.13	<.0001	7.43	1.12	<.0001
Mixed outpatient	2.95	0.75	<.001	2.16	0.87	<.05	2.68	0.84	<.01	2.72	.86	<.01
Southeast				−1.90	0.98	<.1	−3.81	1.23	<.01	−3.99	1.25	<.01
Great Lakes				0.67	0.99		−1.51	1.11		−2.78	1.17	<.05
Northwest				−0.04	0.98		−0.40	0.94		−1.30	.96	
Private, for-profit							−0.20	0.86		−0.13	.94	
Public							3.83	1.43	<.01	4.64	1.47	<.01
National accreditation							2.36	0.90	<.01	2.14	.91	<.05
Parent organization affiliation										−0.93	.82	
Proportion recently hired counselors										−3.32	1.02	<.01
Proportion CJ clients										0.09	1.20	
Proportion DD clients										−0.51	1.28	
Average monthly client census										0.00	0.00	
Supplemental services on-site										0.14	.09	
Adjusted R^2	0.33			0.35			0.41			0.47		

as units of hours per week. "Intensive" programs provided 7 more hours than "regular" outpatient, and "mixed" (serving clients in two tracks within one program) provided $2\frac{1}{2}$ more hours than "regular." Compared to programs in the Gulf Coast region (GC), those in the Southeast reported nearly 4 fewer hours, and those in the Great Lakes reported $2\frac{1}{2}$ fewer hours. Public programs provided $4\frac{1}{2}$ more hours than private-nonprofit programs, and accredited programs provided 2 more hours counseling than nonaccredited programs. Because the recently hired counselor measure represents a proportion of recent hires to total counselors and is therefore continuous, differing degrees are possible. The coefficient -3.32 (see estimate from Table 1 for Block 4, proportion of recently hired counselors) indicates that programs with 100 percent recently hired counselors spent 3 fewer hours per week in counseling than did programs with no new hires in the last 2 years. Other differences may also be computed. For example, each 10 percent increase in recent hires is reflected by a decrease of approximately 20 minutes (33 percent of 60 minutes). Thus, programs with 30 percent recent hires spent approximately 1 fewer hours in counseling, and those with 60 percent recent hires spent approximately 2 fewer hours counseling.

As indicated by the adjusted R^2, a large proportion of the variance accounted for in this analysis was due to outpatient service approach (33 percent). The addition of region accounts for an additional 2 percent, whereas ownership and accreditation add 6 percent. Other structural measures accounted for an additional 6 percent above service approach, region, ownership, and accreditation, for a total amount of 47 percent in the final model.

Case Management Hours

Results of the multiple regression model for case management hours are presented in Table 2. The only service approach consistently predictive of case management hours, was "intensive," which remained significant throughout all four iterations of the model. Although regional differences were found in univariate analyses, they were not significant when examined using multiple linear regression.

Block 4 shows the full model with all measures included. "Intensive" programs provided 1 hour more of case management per week than "regular" programs. Public programs provided approximately 50 minutes more and private for-profits provided about 35 minutes more per week than the reference group of private nonprofit programs. Contrary to expectations,

Table 2: Regression Results Examining Relationships between Organizational Structure Measures and Case Management Hours ($N = 115$)

	Block 1 (Service Approach)			*Block 2 (Region)*			*Block 3 (Ownership)*			*Block 4 (Other)*		
Structure Measure	*Estimate*	*SE*	*p*	*Estimate*	*SE*	*p*	*Estimate*	*SE*	*p*	*Estimate*	*SE*	*p*
Intercept	0.41	0.17	<.05	0.41	0.22	<.1	0.21	0.25		−0.04	0.58	
Intensive outpatient	1.24	0.32	<.001	1.10	0.32	<.001	1.03	0.33	<.01	1.17	0.32	<.001
Mixed outpatient	0.47	0.21	<.05	0.31	0.24		0.37	0.24		0.41	0.25	
Southeast				−0.15	0.27		0.11	0.36		0.34	0.36	
Great Lakes				0.55	0.28	<.05	0.56	0.32	<.1	0.41	0.34	
Northwest				−0.04	0.27		0.06	0.27		−0.04	0.28	
Private, for-profit							0.46	0.25	<.1	0.61	0.27	<.05
Public							0.53	0.41		0.86	0.42	<.05
National accreditation							−0.07	0.26		−0.22	0.26	
Parent organization affiliation										−0.46	0.24	<.1
Proportion recently hired counselors										−0.41	0.29	
Proportion CJ clients										0.08	0.34	
Proportion DD clients										−0.76	0.37	<.05
Average monthly client census										0.00	0.00	
Supplemental services on-site										0.07	0.03	<.01
Adjusted R^2	0.10			0.13			0.15			0.24		

programs with a higher proportion of DD clients reported fewer case management hours. The coefficient −0.76 indicates that programs with 100 percent dual-diagnosis clients spent 45 fewer minutes per week in case management than did programs with no dual-diagnosis clients. The provision of on-site supplemental services was positively associated with case management, with programs that offered a higher number of on-site services providing more case management. Specifically, case management time increased by about 4 minutes for each additional supplemental service offered.

As indicated by the adjusted R^2, 10 percent of the variance accounted for in this analysis reflected outpatient service approach. Although not significant in the final model, geographic region added 3 percent. Ownership measures added another 2 percent and other measures accounted for an additional 9 percent above service approach, region, and ownership measures. The final model accounted for 24 percent of variance.

Caseload

Results for caseload are presented in Table 3. Because the dependent variable was measured in "average number of clients per counselor," coefficients can be interpreted in terms of number of clients per counselor. While intensive programming was associated with lower caseloads in the model controlling only for region, service approach was no longer significant when other factors were considered simultaneously.

Accredited programs reported six fewer clients per counselor, and programs serving a larger number of clients had higher caseloads, with an increase of approximately three additional clients for each 100 enrolled. Programs with a higher proportion of CJ clients also reported higher caseloads. Each 10 percent increase in CJ-referred clients was associated with approximately one additional client on each counselor's caseload. Thus, a program serving 100 percent CJ-referred clients had caseloads approximately 10 clients larger than programs serving no CJ-referred clients.

As indicated by the adjusted R^2, only 7 percent of the variance accounted for in this analysis was due to outpatient service approach. Geographic region added 5 percent, and ownership and accreditation added an additional 8 percent. Other structural measures accounted for the largest amount of variance, adding an additional 16 percent above service approach, region, ownership, and accreditation. The total amount of variance accounted for in the final model was 36 percent.

Table 3: Regression Results Examining Relationships between Organizational Structure Measures and Caseload ($N = 115$)

	Block 1 (Service Approach)			*Block 2 (Region)*			*Block 3 (Ownership)*			*Block 4 (Other)*		
Structure Measure	*Estimate*	*SE*	*p*	*Estimate*	*SE*	*p*	*Estimate*	*SE*	*p*	*Estimate*	*SE*	*p*
Intercept	24.32	2.27	<.0001	21.46	2.99	<.0001	19.17	3.20	<.0001	15.92	6.98	<.05
Intensive outpatient	−7.32	4.32	<.1	−8.55	4.31	<.05	−7.22	4.23	<.1	−4.83	3.87	
Mixed outpatient	5.15	2.85	<.1	1.25	3.23		0.90	3.14		−0.78	2.98	
Southeast				2.31	3.64		12.38	4.59	<.01	11.41	4.35	<.05
Great Lakes				10.53	3.69	<.01	16.39	4.15	<.0001	14.35	4.06	<.001
Northwest				8.16	3.66	<.05	9.42	3.51	<.01	7.72	3.31	<.05
Private, for-profit							8.36	3.22	<.01	6.27	3.24	<.1
Public							−0.29	5.35		−2.33	5.08	
National accreditation							−8.16	3.36	<.05	−6.37	3.15	<.05
Parent organization affiliation										−3.01	2.83	
Proportion recently hired counselors										−1.68	3.52	
Proportion CJ clients										9.98	4.14	<.05
Proportion DD clients										−8.51	4.44	<.1
Average monthly client census										0.03	0.01	<.01
Supplemental services on-site										−0.09	0.32	
Adjusted R^2	0.07			0.12			0.20			0.36		

DISCUSSION

Consistent with an open-system framework and with previous findings of Lemak and Alexander (2005), specific external factors—accreditation, ownership, and clientele—were associated with counselor–client contact. Programs that demonstrated adherence to a set of national standards for the provision of treatment services (i.e., had achieved national accreditation) provided more counseling hours and had lower caseloads than those that were not accredited. Publicly owned programs, typically subject to federal and state requirements (Institute of Medicine 1998), provided more counseling and case management hours, a finding consistent with previous research comparing public and private programs (Rogers and Barnett 2000). Both for-profit and public programs offered more time for case management than nonprofits despite previous studies suggesting that for-profits tend to offer fewer services (Friedmann, Alexander, and D'Aunno 1999; Rogers and Barnett 2000). Not surprisingly, "intensive" outpatient drug free (ODF) programs provided more group and individual counseling hours than "regular" ODF programs. Intensive programs did not, however, provide more case management hours than their "regular" counterparts.

Findings regarding clientele were complex. Contrary to expectations, programs with a higher proportion of DD clients provided fewer case management hours (by approximately 45 minutes) than those with fewer DD clients. When examining bivariate correlations with the three outcome measures, only the relationship between proportion of DD clients and caseload was significant. However, when examined in conjunction with other measures in multivariate models, DD was predictive of case management, but not caseload. This is in part because publicly owned programs reported a lower proportion of DD clients. Likewise, programs that reported higher proportions of CJ referrals tended to have lower proportions of DD clients. Finally, programs with more clients enrolled tended to have higher client-to-counselor ratios. Coupled with findings showing larger programs have more difficulty with client engagement (Broome et al. 2007), the data begin to raise important questions about the impact of program size.

CJ referral was also a predictor of caseload—those with a higher proportion of CJ referrals also had higher caseloads. However, programs with many CJ referrals tended to share some other structural features as well. Programs with a high proportion of CJ referrals were more likely to be private-for-profit and less likely to be private-nonprofit, less likely to be accredited, and more likely to have a larger client census.

Internal program factors were also relevant to understanding contact. Results indicated that the higher the proportion of recently hired counselors, the fewer hours clients spent in direct contact with counselors. For example, clients received about 1 fewer hours of counseling in programs where one-third of staff were hired within the previous 2 years, compared with programs that had not hired staff during the same period.

Results should be interpreted within the context of several limitations. While the TCOM sample as a whole is similar to the N-SSATS sample of outpatient programs across the four regions surveyed, oversampling within some regions did appear to occur within TCOM. This is particularly true in the Southeast, where 96 percent operate under a parent organization and 100 percent are private-nonprofits. Region was included as a covariate in the analyses to account for potential differences, allowing for greater confidence in the generalizability of results. However, univariate analyses comparing structural measures across region should not be taken as an adequate test of policy or stylistic differences. Another limitation involves the potential influence that managed care has on counselor–client contact. With managed care organizations playing a larger role in the provision of substance abuse treatment (see Olmstead, White, and Sindelar 2004), and documented evidence that it is associated with staffing (e.g., Lemak and Alexander 2005), it is likely that it would explain additional variance above and beyond the measures included in this study. Appropriate measures of managed care involvement were not included in the SSO; therefore this information is not available. Future studies should examine this issue further.

Consistent with an open systems framework, external environments influence organizational decisions. Even though external factors such as accreditation and ownership may indeed impact the amount of counselor–client contact offered, several internal program factors also were influential (namely proportion of recent hires). Internal factors are more closely under program control than external factors, and efforts to change them therefore are often more successful. For instance, programs can look within the organization to determine how new hires are integrated into the internal structure and culture of the organization and examine ways in which the process of training and integration can occur with minimal disruption to service provision. Future research efforts should include measures of organizational climate as a means of understanding staff socialization practices and how these elements of the organization further influence counselor–client contact.

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Disclaimers: The interpretations and conclusions do not necessarily represent the position of the NIDA, NIH, or Department of Health and Human Services. More information (including intervention manuals and data collection instruments that can be downloaded without charge) is available on the Internet at www.ibr.tcu.edu, and electronic mail can be sent to ibr@tcu.edu.

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SUPPLEMENTARY MATERIAL

The following supplementary material for this article is available online:

Appendix A: Regional Means and Standard Deviations for Organizational Attributes and Contact Measures.

Appendix B: Correlations among Contact, Caseload, and Organizational Structure Measures,

This material is available as part of the online article from http://www.blackwell-synergy.com/doi/abs/10.1111/j.1475-6773.2007.00778.x (this link will take you to the article abstract).

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