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Organizational Characteristics that Foster Early Adoption of Cultural and Linguistic Competence in Outpatient Substance Abuse Treatment in the United States

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1. Introduction

Cultural competence—through which organizations recognize and are responsive to the service needs of culturally diverse populations—has become a widely supported policy innovation designed to contribute to reductions in health disparities among minorities. Specifically, concerns about the gradual increase in minority patients in substance abuse treatment (Office of Applied Studies, 2007) and their poor treatment outcomes (Wells, Klap, Koike, & Sherbourne, 2001) have justified efforts to develop a culturally and linguistically responsive system of care in the United States (Campbell & Alexander, 2002; Center for Substance Abuse Treatment, 2009b; Howard, 2003a, 2003b). It is not clear, however, the extent to which these efforts help develop an effective system of linguistic and cultural competence among outpatient substance abuse treatment (OSAT) organizations in the nation.

For the past two decades, federal and state campaigns, as well as professional associations, have encouraged health providers to improve the quality of care for members of culturally diverse backgrounds by providing services sensitive to differences in race, ethnicity, and language (Agency for Healthcare Research and Quality, 2010; OAS, 2009; Ulmer, McFadden, & Nerenz, 2009; Wilson-Stronks & Galvez, 2007). Yet these federal and state policies had vague descriptions of culturally competent practices and lacked enforcement components (Stork, Scholle, Greeno, Copeland, & Kelleher, 2001). Current initiatives emerging from health care reform request providers to collect information on clients' race, ethnicity, and language proficiency (Ulmer et al., 2009), and plan to fund and monitor providers' investment in workforce diversity, cross-cultural training, and cultural competence education (Andrulis, Siddiqui, Purtle, & Duchon, 2010). These policy initiatives and directives have been based on little empirical evidence about the organizational factors related to the provision of culturally competent care.

Government policy initiatives began pressuring health care programs as early as 1964 (Title VI) to offer services to minorities based on language and ethnic culture (National Center for Cultural Competence, 2010). But it was not until 1986 that the U.S. Department of Health and Human Services created the Office of Minority Health (OMH), while the Culturally and Linguistically Appropriate Services (CLAS) standards weren't developed until the

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mid-1990s (Betancourt, 2004; NCCC, 2010). Concurrently, Medicaid, through the Americans with Disabilities Act as well as the quality assurance rules in the Balanced Budget Act, also defined specific strategies for culturally and linguistically competent care (Stork et al., 2001). The creation of CLAS standards and legislation prompted The Joint Commission (TJC) to incorporate CLAS into its professional accreditation requirements (Wilson-Stronks & Galvez, 2007). Meanwhile, in the early 1990s, academic institutions began to establish teaching and practice standards around CLAS principles to train service professionals to address the health needs and disparities experienced by minority populations in the United States (See Betancourt, 2004; Zane, Gordon, Sue, Young, & Nunez, 2004).

Organizational frameworks on policy innovation point to the need for early buy-in from organizational decision-makers to achieve adoption (CSAT, 2009a; Klein & Sorra, 1996; Simpson & Flynn, 2007). Adoption is just the first stage of the process of implementation (Roman, Ducharme, & Knudsen, 2006; Simpson & Flynn, 2007), and relies on organizations *offering* new services, technology, or practices. Implementation goes beyond simply having an innovation to making it a routine, using the new practices frequently (Klein & Sorra, 1996). Considering that the cultural competence regulatory movement began in the early 1990s, this study focuses on the organizational factors associated with adoption of culturally and linguistically responsive practices in OSAT programs during that early stage. It examines the direct relationship between the initial presence of regulation and the extent to which programs respond to this early pressure by adopting, at various degrees, culturally and linguistically competent practices. Additionally, the study will determine whether the level of professionalization of an organization is related to the degree of adoption of this policy innovation, and to what degree managers' cultural sensitivity plays a role in fostering the adoption of culturally and linguistically responsive practices. By examining the major external and internal organizational influences of the early adoption process, this study identifies baseline measures that may inform both future research on cultural competence and relevant components for current health care management policy.

2. Conceptual framework

Prior research highlights the importance of resources and regulatory expectations in the adoption of new health and social service practices in OSAT programs (Campbell & Alexander, 2002, 2005; D'Aunno, 2006; Durkin, 2002). It is evident that programs are pressured by professional and state regulatory bodies to provide linguistic and cultural services to minorities (Wilson-Stronks & Galvez, 2007; Stork et al., 2001). The relationship between organizations and their environmental demands is partially explained by neo-institutional theory. According to this framework, OSAT organizations are institutionalized because they are prone to adopt socially accepted practices in order to gain external resources and legitimacy from government agencies and regulatory licensing and accreditation entities (Campbell & Alexander, 2002; D'Aunno, 2006; DiMaggio & Powell, 1983). By complying with institutional demands and endorsing macrocultural ideals with public cachet, managers obtain necessary resources and professional support for their organizations (DiMaggio & Powell, 1983; Scott, 2001). Yet, rather than passively absorbing institutional mandates, managers may strategically choose the degree of adoption of institutional directives that offer the most resources (Oliver, 1991; Peyrot, 1991). Additionally, regulatory demands, also present in public funding, are generally considered a facilitator in the adoption of innovative practices (Hasenfeld, 1983).

Research shows that regulation that includes specific guidelines and compliance monitoring may have the most receptivity in OSAT programs. For example, the concrete definition of health services and the consistent oversight of its integration in service provision may

explain its high degree of adoption among OSAT programs. For instance, OSAT programs with professional accreditation from regulators such as The Joint Commission are more likely to offer new medical services (Campbell & Alexander, 2005; Campbell, Alexander, & Lemak, 2009; Durkin, 2002; Marsh, Cao, & D'Aunno, 2004; Pollack, D'Aunno, & Lamar, 2006; Roman et al., 2006). Despite the fact that regulation regarding cultural competence was ambiguous and poorly monitored in the early 1990s (Stork et al., 2001), OSAT providers reported significant early support for matching clients and providers based on language and race/ethnicity (Guerrero, 2010). OSAT programs with greater dependence on public funding face more pressure to provide services to women (Campbell & Alexander, 2002, 2005) and other minorities (Howard, 2003a, 2003b). Thus, *Hypothesis 1* predicts that OSAT programs with a higher presence of regulation and public funding will report a higher degree of adoption of culturally and linguistically competent practices.

According to institutional theory, pressure to offer legitimate practices also stems from professional associations that regulate training for graduate professional degrees (Scott, 2001; Scott, Ruef, Mendel, & Caronna, 2000). In the OSAT field, openness to adopt evidence-based practices has been associated with OSAT providers with higher education levels (Knudsen & Roman, 2004; Wells, Lemak, & D'Aunno, 2006). Although the relationship between graduate education and the incorporation of innovative practices in substance abuse treatment is inconclusive (Miller, Sorensen, Selzer, & Brigham, 2006), professional environments may be more conducive to evidence-based, culturally responsive treatment. Graduate education in the health care professions includes cross-cultural training and ethics, creating service expectations for healthcare providers to develop cultural competency (Betancourt, Green, Carrillo, & Ananeh-Firempong, 2003). Due to these expectations, professional staff, represented here as treatment providers with higher academic education may be more inclined to foster an organizational culture of integrating linguistic and cultural competence. Thus, accounting for funding and regulation, *Hypothesis 2* posits that OSAT programs with higher professionalism will exhibit a higher degree of adoption of culturally and linguistically competent practices.

The organizational literature suggests that regulatory institutions influence the adoption priorities of decision-makers through the promotion of institutionally endorsed practices (Thornton & Ocasio, 2007). Initial evidence in substance abuse treatment research suggests that external pressures from stakeholders facilitate early adoption of evidence-based practices, yet meaningful adoption and implementation requires buy-in from leaders and staff (CSAT, 2009a, 2009b; D'Aunno, 2006; Simpson & Flynn, 2007). There is limited evidence on the unique contribution of government resources and regulation in the early adoption process of culturally responsive practices (Guerrero, 2010). However, it is conceivable that the organizational culture that this regulation initially fosters may incentivize some programs to invest in a higher degree of adoption. All providers have a professional responsibility to develop services that meet the cultural and linguistic needs of their client population (CSAT, 2006; 2009a). Yet providers' commitment to meaningful adoption may be most likely in OSAT programs with higher professionalism and cultural sensitivity. Thus, *Hypothesis 3* posits that professionalism and manager's cultural sensitivity will contribute above and beyond the main effect of funding and regulation to the degree of adoption of culturally and linguistically competent practices in OSAT programs.

3. Methods

This study relied on the National Drug Abuse Treatment Services Survey (NDATSS) dataset, a nationally representative sample of OSAT units. Outpatient services are the most common treatment modality in the United States, serving more than 65% of all clients that

enter substance abuse treatment (D'Aunno, 2006), and NDATSS is the most comprehensive survey on the organization and structure of OSAT programs (D'Aunno, 2006).

3.1. Sampling Frame and Data Collection

The sampling frame of the NDATSS was a composite of several national lists of substance abuse treatment providers in the United States. This list provided the framework for drawing random samples stratified by treatment modality (methadone, non-methadone), ownership (public, private for-profit, nonprofit), and organizational affiliation (hospital, mental health center, free-standing program). The NDATSS dataset defined an OSAT unit as any program in which outpatient substance abuse treatment constituted at least 50% of services. More than 80% of directors and clinical supervisors responded to the survey via phone. Directors provided information on organizational structure, while supervisors (referred to here as managers) provided information on their belief systems, as well as information on staff, clients, and practices. For specific information on the sampling approach, see the technical report (Adams & Herringa, 2001).

3.2. Sample

This study used only one wave (the fourth) of six waves completed for the NDATSS project. Wave four, collected in 1995, contained 618 programs and is the only wave with complete data on culturally competent practices. Although this relevant wave was completed 15 years ago, NDATSS remains the only nationally representative sample of the provision of culturally competent practices in the OSAT field, and the only data available to explore the early adoption of these new practices.

3.3. Measures

Dependent variable—In examining the degree of adoption of culturally and linguistically competent practices, 14 practices were identified in the NDATSS that approximated Brach and Fraser's (2000) comprehensive representation of organizational cultural competence. While this measure focused on practices rather than policies, it included the most significant domains identified in comprehensive reviews (Brach & Fraser, 2000; Fischer, Burnet, Huang, Chin, & Cagney, 2007). Specifically, managers were asked: (1) what percentage of staff completed cross-cultural training; (2) how many mean hours of cross-cultural training staff receive annually; (3) whether their unit has staff who speak Spanish; and (4) whether their unit offers provider/client same-race individual counseling services. In addition to these core culturally competent practices (Campbell & Alexander, 2002), this study included 10 other ethnoculturally relevant practices to approximate a comprehensive conceptual notion of cultural competence (Brach & Fraser, 2000; Howard, 2003a, 2003b). Indicators of these practices include: (1) ratio of African American staff to African American clients; (2) ratio of minority staff to minority clients; (3) percentage of staff self-described as Latino; (4) percentage of staff self-described as African American; (5) whether the unit's director is African American; (6) whether the unit's supervisor is Latino; (7) whether the unit does outreach specifically for minorities; (8) whether the unit involves churches in follow-up; (9) whether the unit is affiliated with community-based outreach programs; and (10) whether the unit seeks input from community leaders. The current study used Rasch rating scale analysis with the above indicators to build a unidimensional and continuous composite measure of degree of adoption.

The Rasch method was used as a measurement approach in order to respond to the multidimensional characteristics of the survey data. Rasch models represent a relatively novel approach to measurement development and validation in substance abuse treatment research (Henderson, Taxman, & Young, 2008). Using principles of item response theory, Rasch analysis converts a set of dichotomous variables into equal-interval scales (Wright &

Masters, 1982). This method provides information on both respondents' likelihood to answer different items and the ability of items to describe a single concept. Combining these two pieces of information results in an outcome measure that is linear, unbiased by particular items or units in the analysis, and robust to missing data (Wright & Masters, 1982).

The continuous outcome measure developed in this study was labeled "degree of adoption of linguistic and cultural competence." Four original items (practices) were removed because of their high correlation with other items; namely, whether the unit had a Latino director, African American supervisor, and/or bilingual staff, as well as the ratio of Latino staff to clients. After removing these items, this measure showed optimal psychometric properties; respondents differentiated practices from each other adequately (separation = 11.10) and practices were highly interrelated (Cronbach's reliability coefficient = .79). For measurement development details, see (Guerrero & Andrews, in press).

Independent variables—Resources and regulation variables included two funding measures associated with provision of health care practices: (1) *public revenue*, measured as the percentage of total public funding received by the facility in the last fiscal year, and (2) *revenue for minority services*, measured as funding specifically earmarked for services for racial/ethnic minorities. Regulation measures included three items: (1) *state license*, (2) *city license*, and (3) *accreditation*—specifically, whether the program is accredited by The Joint Commission. While TJC enforces professional norms, it largely functions as an external regulatory entity. Professionalism was measured as *staff with graduate degree*, or the percentage of unit staff with a master's degree, PhD, or MD.

Finally, the measure of *managers' cultural sensitivity* was also developed using Rasch measurement methods. This measure represented managers' degree of support for the cultural and language service needs of Latino and African American clients. Managers were asked about the extent to which they agree that, compared to Caucasians, African American or Latino clients need: (1) treatment by staff of the same ethnic minority group; (2) treatment by staff educated in the history of that group; (3) treatment by staff who speak their language or dialect; and (4) treatment by staff who provide special services. Managers' responses indicated that they adequately differentiated each belief (separation = 10.50), and the measure reported a Cronbach's reliability coefficient of .99.

Control variables—The empirical and theoretical literature points to important factors that serve as alternative explanations of the relationship between external and internal organizational characteristics and the provision of culturally responsive practices. The organizational structure, ownership, and affiliation of programs, as well as proxies for client racial/ethnic diversity, were included as control variables in this study.

Organizational structure—*Organizational size* corresponds to the capacity to serve clients, measured as the log of the total number of clients served during the past fiscal year. *Staffing resources* indicates the level of staffing available to serve a diverse population (Guerrero, 2010), and was measured as the log ratio of the total number of treatment staff and clients during the previous fiscal year. Organizational size and staffing resources were transformed to logarithms to reduce potential for collinearity with other variables, and centering was necessary to ease interpretation of coefficients representing the average size and staffing resources of OSAT programs. *Service comprehensiveness* was also considered in this study, as programs with more services are more likely to integrate more practices (Friedmann, D'Aunno, Jin, & Alexander, 2000). This was a count measure of the total number of services the program provided. *Treatment modality* was included due to the differing structure of outpatient programs based on the type of drug treatment services

provided—namely, the difference between methadone and non-methadone providers. Methadone programs are more regulated than non-methadone, partially due to the use of pharmacotherapy (D’Aunno & Pollack, 2002). *Location* was also considered due to the fact that urban programs tend to have more capabilities, more pressure to adopt legitimate practices (D’Aunno & Pollack, 2002; Pollack et al., 2006), and more access to cultural diversity (Howard, 2003a, 2003b). Location was measured in terms of whether the unit was located in a metropolitan area or not.

Other characteristics of programs also shape the extent to which they have the organizational culture or external pressure to offer culturally responsive practices. *Ownership* represents a key component because public treatment centers, as compared to privately owned facilities, are more responsive to federal and state expectations and more likely to offer safety-net care (D’Aunno, 2006; Howard, 2003a). This concept was represented by dummy variables that, using government-run public programs as a reference, represented whether the unit was private for-profit or private nonprofit. *Affiliation* represents programs that are part of a larger mental health or hospital setting, and dummy measures were created using free-standing programs as a reference. In contrast with mental health and hospital settings, developing evidence suggests that freestanding facilities are more likely to adopt a variety of culturally responsive practices (Guerrero, 2010). Finally, *client racial/ethnic diversity* was included because diverse programs are likely to have diverse staff and offer culturally (Howard, 2003a) and linguistically responsive services (Guerrero, 2010). These variables included three levels (low, medium, and high) based on Latino and African American clients’ average representation in the OSAT field. See Table 1 for descriptive statistics and response format for variables used in the study.

3.4. Statistical Analysis

A multiple imputation procedure was used to fill in the missing values as data were assumed to be missing at random (Rubin, 1987). Each missing value was replaced with five plausible values using the Markov Chain Monte Carlo method (Schaefer, 1997). The highest rate of missing data for any variable in the sample was approximately 8%. Five imputed datasets were developed, merged, and analyzed using STATA/SE (Version 10) ICE and MIM commands.

STATA/SE Version 10 was also used to conduct multivariate regression analysis relying on a hierarchical and cumulative approach. Because the conceptual framework describes a hierarchical process, the unique explained variance in the outcome by each independent variable was identified and compared across three consecutive statistical models. In other words, the first regression model identified the R-squared estimate of funding and regulation and degree of adoption. The second model included the indicator of professionalism, while the third cumulative hierarchical model included the indicator of managers’ cultural sensitivity. The R-squared estimate for each cumulative model was computed to examine the contribution of each concept (regulation, professionalism, and cultural sensitivity) to the degree of adoption, and to assess the necessary and sufficient condition proposed in Hypothesis 3.

4. Results

Findings offer partial support for Hypothesis 1—OSAT programs with a higher presence of regulation and public funding will report a higher degree of adoption of culturally and linguistically competent practices. Results for Model 1 in Table 2 show statistically significant positive relationships between the degree of adoption of linguistic and cultural competence and percentage of public revenue ($p < .01$), funding targeted to serve minorities ($p < .001$), and possession of a city license ($p < .001$). Yet state-licensed and TJC-certified

programs were no more likely than unlicensed or noncertified programs to adopt a higher degree of these practices.

Hypothesis 2, which posits that OSAT programs with higher professionalism will exhibit a higher degree of adoption of culturally and linguistically competent practices, was not supported. While Model 2 presented in Table 2 shows an R-squared increase of 1.6% in the predicted variance of degree of adoption, the relationship between the percentage of graduate professionals and the degree of adoption of these practices was inversely related ($p < .001$).

Findings offer partial support for Hypothesis 3. This hypothesis posited that professionalism and manager's cultural sensitivity will contribute above and beyond the main effect of funding and regulation to the degree of adoption of culturally and linguistically competent practices in OSAT programs. The hierarchical approach presented in Table 2 shows three models. Model 1 includes the control variables and the five indicators of public funding and regulation. This model reported a total R-squared of .287, of which .12 was explained by the five indicators of funding and regulation. In Model 2, the addition of professionalism was associated with an increase in R-squared of .016. Finally, Model 3 included managers' cultural sensitivity, which increased R-squared by .011. Although limited, professionalism and cultural sensitivity explained unique variance above and beyond the main effect of funding and regulation (.027). Yet professionalism hindered rather than promoted a higher degree of adoption of culturally and linguistically competent practices.

Regarding other variables, programs with the highest client diversity and service comprehensiveness achieved the highest degree of adoption, which is consistent with the emerging literature (Guerrero, 2010; Howard, 2003a). Programs serving a high proportion of African Americans ($p < .001$) and/or Latinos ($p < .001$) and offering a variety of services ($p < .001$) reported the most statistically significant relationships with degree of adoption. As expected, early adoption of higher degree of these practices is partially explained by clients' racial/ethnic diversity representation and program resources.

5. Discussion

Findings suggest that the early development of a culturally and linguistically responsive system in the United States requires public resources and local regulation to increase program capacity. Consistent with findings of several studies, this analysis stresses the importance of public and targeted funding, as well as local licensing, as enabling factors for the provision of responsive services in OSAT programs (D'Aunno, 2006).

In contrast, programs with more graduate professionals, whose standards and ethics demand tailored services for racial and ethnic minorities, reported the lowest degree of adoption. In 1995, programs with a high number of graduate treatment professionals had mainly Caucasian staff (more than 75%), potentially limiting the capacity to provide bilingual and bicultural services. It should be noted, however, that providers' commitment to adoption of new practices may go beyond external expectations and graduate training and include providers' favorable view of and conviction about the practices' effectiveness (Aarons & Palinkas, 2007; D'Aunno, Sutton, & Price, 1991). This is evident in the strong relationship found between managers' cultural sensitivity and degree of adoption of culturally and linguistically competent practices.

5.1. Study Limitations

This study has some limitations, mainly associated with the methodology and nature of the data analyzed, that restricted the interpretability of findings. This study attempted to address

issues related to different sources of bias. Managers' social desirability can compromise the validity of responses. To reduce the effect of inaccurate responses, survey administrators corroborated responses between supervisors and directors (Adams & Herringa, 2001). Another source of bias is associated with common methods variance, which is present when data collection relies on similar methods or scales to collect data (Doty & Glick, 1998). This issue was addressed by using data from both directors and supervisors, and developing the composite outcome measure of degree of adoption. Still, caution is advised when interpreting results from cross-sectional data analysis, particularly in terms of issues related to reverse causality. It is conceivable that programs integrated many culturally responsive practices first and then sought supportive public funding and licenses or hired culturally responsive managers. This baseline study sought to reduce the potential for reverse causality by analyzing data from the beginning of the cultural competence movement.

5.2. Lessons Learned

Overall, these findings have important implications for future research on cultural competence, and for behavioral health administration policy that seeks to improve the quality of services for members of racial and ethnic minorities. Based on this baseline analysis of the early adoption of new practices in the nation's substance abuse treatment system, future research on cultural competence would benefit from using a similar comprehensive measure to examine system capacity to develop a culturally and linguistically competent system of care. As the field of cultural competence has shifted the emphasis from enhancement of individual counselors' skills to organizational policy and processes of care, it is crucial to develop refined measures of staff's racial/ethnic diversity representation, cross-cultural training, and language proficiency to develop an evidentiary base for the impact of cultural competence on treatment outcomes.

Behavioral health care policy should consider the impact of the current racial homogeneity of providers and their development training needs. In OSAT, 85% of counselors are Caucasian and more than half of the client population belongs to an ethnic minority group (Mulvey, Hubbard, & Hayashi, 2003). Findings from this baseline study support current regulatory efforts to diversify and train the behavioral health workforce to increase the relevance and quality of services for cultural minorities.

As a nascent field, research on cultural competence is gradually maturing its conceptualization and measurement to become highly relevant to treatment outcomes (Vega, 2005). At this stage, the impetus to fully implement cultural competence may be viewed as based solely on the passion, need for legitimacy, and ideology of a group of providers, instead of common sense and evidence (Weinrach & Thomas, 1998). But robust evidence requires investment and refinement of outcome measurements. The current federal initiatives from the Patient Protection and Affordable Care Act will provide substantial incentives and regulation to increase workforce diversity, cross-cultural training, and cultural competence education among health care providers. This is a unique opportunity to develop policy with measurable outcomes and adequate monitoring of compliance to effectively disseminate evidence-based, culturally responsive practices and ensure positive treatment outcomes for cultural minorities (NCCC, 2006; Stork et al., 2001; Vega, 2005). It is only through effective collaboration between funders, regulators, and providers that culturally responsive systems of care can be built to ultimately reduce the current health disparities among ethnic minorities.

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Biography

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Highlights

I examined the early organizational adoption of linguistic and culturally responsive practices. Regulation and culturally sensitive managers were associated with the highest degree of adoption. The lowest degree of adoption was observed in programs with more professionals. These baseline findings are discussed for future research and health care policy evaluation.

Table 1

Descriptive statistics and response format

Variables	1995 (N = 618)	Response format
Dependent variable		
Degree of adoption of culturally and linguistically competent practices, <i>M (SD)</i>	40.93 (10.67)	Rasch composite measure of 14 practices considered culturally responsive (ranges from 0 to 100)
Independent variables		
Public revenue, <i>M (SD)</i>	55.8 (37.0)	% of total budget in last fiscal year
Revenue for minority services (%)	5.1	1 = Unit has specific revenue to serve minority clients 0 = Unit does not have specific revenue to serve minority clients
State license (%)	92.3	1 = Unit has a state license 0 = Unit does not have a state license
City license (%)	15.5	1 = Unit has a city license 0 = Unit does not have a city license
Accreditation (TJC) (%)	24.6	1 = Unit has TJC accreditation 0 = Unit does not have TJC accreditation
Staff with graduate degree, <i>M (SD)</i>	32.8 (32.9)	Percentage of treatment staff with a graduate degree
Manager's cultural sensitivity, <i>M (SD)</i>	55.6 (20.0)	Rasch composite measure of six beliefs regarding the service needs of Latinos and African Americans (ranges from 0 to 100)
Control variables		
<i>Client racial/ethnic diversity</i>		
High – Latino/a (%)	17.7	1 = > 30% of total clients are Latino/a 0 = < 30% of total clients are Latino/a
Medium – Latino/a (%)	33.8	1 = 6% to 30% of total clients are Latino/a 0 = 6% to 30% of total clients are not Latino/a
Low – Latino/a (referent) (%)	48.5	1 = < 6% of total clients are Latino/a 0 = > 6% of total clients are Latino/a
High – African American (%)	24	1 = > 40% of total clients are African American 0 = < 40% of total clients are African American
Medium – African American (%)	33.5	1 = 10% to 40% of total clients are African American 0 = 10% to 40% of total clients are not African American
Low – African American (referent) (%)	42.5	1 = < 10% of total clients are African American 0 = > 10% of total clients are African American
<i>Organizational structure</i>		
Unit size (number of clients), <i>M (SD)</i>	347 (754)	Number of total clients served past fiscal year (logarithm and mean-centered in analyses)
Staffing resources, <i>M (SD)</i>	0.2 (0.2)	Ratio of staff to clients (logarithm and mean-centered in analyses)
Service comprehensiveness, <i>M (SD)</i>	12.1 (6.4)	Ranges from 0 to 26
Methadone (%)	20.7	1 = Unit is a methadone provider 0 = Unit is not a methadone provider
Urban unit (%)	48.9	1 = Unit is within metropolitan area 0 = Unit is not within metropolitan area
<i>Ownership</i>		
For-profit (%)	13.9	1 = Unit is for-profit 0 = Unit is not for-profit
Nonprofit (%)	62.3	1 = Unit is nonprofit 0 = Unit is not nonprofit
Public (referent) (%)	23.8	1 = Unit is public 0 = Unit is not public
<i>Affiliation</i>		

Variables	1995 (N = 618)	Response format
Hospital (%)	18.3	1 = Unit is affiliated with hospital 0 = Unit is not affiliated with hospital
Mental health facility (%)	22.5	1 = Unit is affiliated with mental health center 0 = Unit is not affiliated with mental health center
Free-standing unit (referent) (%)	59.2	1 = Unit is free standing 0 = Unit is not free standing

Note: TJC = The Joint Commission

Table 2

Impact of regulation, professionalism, and cultural sensitivity on degree of adoption

	Degree of adoption of culturally and linguistically competent practices		
	Model 1 β (SE)	Model 2 β (SE)	Model 3 β (SE)
Independent variables			
% public revenue	3.49 (1.24)**	3.36 (1.22)**	3.11 (1.22)*
Revenue for minority services	5.00 (1.43)**	4.93 (1.47)**	4.94 (1.50)**
State license	-1.09 (1.57)	-0.82 (1.50)	-0.70 (1.45)
City license	4.86 (1.02)***	4.63 (0.98)***	4.40 (0.98)***
Accreditation (TJC)	1.25 (1.35)	1.53 (1.36)	1.66 (1.36)
Staff with graduate degree	--	-0.05 (0.01)***	-0.05 (0.01)***
Manager's cultural sensitivity	--	--	0.06 (0.02)**
Control variables			
<i>Client racial/ethnic & gender diversity</i>			
High, Latino ^a	7.48 (1.27)***	7.10 (1.25)***	7.40 (1.26)***
Medium, Latino ^a	0.76 (0.92)	1.07 (0.92)	0.94 (0.92)
High, African American ^b	4.87 (0.98)***	4.79 (0.97)***	4.65 (0.97)***
Low, African American ^b	0.71 (0.99)	0.87 (0.98)	0.79 (0.97)
<i>Unit structure</i>			
Unit size (number of clients)	0.39 (0.41)	0.47 (0.40)	0.50 (0.40)
Staff resources	4.10 (3.55)	3.48 (3.47)	3.47 (3.47)
Service comprehensiveness	0.23 (0.06)***	0.24 (0.06)***	0.20 (0.06)**
Methadone provision	1.85 (1.08)	1.07 (1.07)	1.33 (1.06)
Urban setting	-2.12 (0.88)**	-1.84 (0.87)*	-1.5051
<i>Ownership</i>			
For-profit ^c	-1.09 (1.74)	-0.96 (1.72)	-0.99 (1.70)
Nonprofit ^c	0.74 (0.93)	0.44 (0.92)	0.46 (0.92)
<i>Affiliation</i>			
Hospital ^d	-0.22 (1.45)	-0.22 (1.46)	-0.49 (1.47)
Mental health facility ^d	0.24 (0.96)	0.63 (0.96)	0.43 (0.96)
Constant	33.39 (2.22)***	34.94 (2.24)***	32.12 (2.34)***
R-Square	0.287	0.303	0.314
Observation	618	618	618

Note: Nonstandardized parameter estimates, with standard errors in parentheses from two-tailed test.

TJC = The Joint Commission

^aUnits with low percentage (< 5%) of Latino clients is the referent.^bUnits with low percentage (< 10%) of African American clients is the referent.^cPublic is the referent.

$d_{\text{Free-standing unit is the referent.}}$

*
 $p < .05$

**
 $p < .01$

 $p < .001$