



## Workforce diversity in outpatient substance abuse treatment: The role of leaders' characteristics

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### ABSTRACT

Although the outpatient substance abuse treatment field has seen an increase in referrals of African American and Latino clients, there have been limited changes in the diversity of the workforce. This discordance may exacerbate treatment disparities experienced by these clients. Program leaders have significant influence to leverage resources to develop staff diversity. Analysis of panel data from 1995 to 2005 showed that the most significant predictors of diversity were the characteristics of leaders. In particular, programs with managers with racially and ethnically concordant backgrounds and their education level were positively related to the percentage of Latino and African American staff. A high percentage of African American staff was positively associated with managers' tenure, but inversely related to licensed directors. Diversification of the field has increased, yet efforts have not matched increases in client diversity. Implications for health care reform legislation seeking to improve cultural competence through diversification of the workforce are discussed.

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### 1. Introduction

The outpatient substance abuse treatment (OSAT) field has seen a rapid increase in referrals of clients of color. In particular, the percentage of African American and Latino clients entering substance abuse treatment has been steadily increasing during the last 10 years (Arndt, 2010; Office of Applied Studies, 2009, 2010). Although several studies have documented increased diversity in the client population, only a few have explored the extent to which the racial and ethnic composition of the OSAT workforce matches this client diversity (Howard, 2003a, 2003b; Mulvey, Hubbard, & Hayashi, 2003). As health care reform, through the Patient Protection and Affordable Care Act, seeks to increase national standards on culturally and linguistically appropriate care for minorities to reduce existing health disparities, diversification of the workforce has become one of the chief strategies (Andrulis, Siddiqui, Purtle, & Duchon, 2010; Office of Minority Health, 2012). Upper managers have the authority to pursue such strategies, yet little is known about the extent to which these leaders play a significant role in the diversification of their workforce. Using nationally representative data from 1995 to 2005, this study seeks to understand the role that key organizational factors, particularly leaders' characteristics, play in developing a racial and ethnic diverse workforce in the OSAT field over time.

The importance of diversifying the workforce in OSAT stems from disparate research that suggests that the discordance between the racial and the ethnic diversity of clients and treatment staff may contribute to service and health disparities (Bhadury, Mighty, & Damar, 2000; Broderick, 2007; Howard, 2003a; McGuire & Miranda, 2008; Pitts, 2009). Specifically, congruence between the cultural and the linguistic backgrounds of staff and clients is thought to elevate the competencies of health care providers and improve client treatment adherence via the use of racial/ethnic history and cultural norms, as well as the reliance on client's native language or dialect during health interventions (Grumbach & Mendoza, 2008; Herring, 2009; Howard, 2003a; Lok, Christian, & Chapman, 2009; McGuire & Miranda, 2008). Furthermore, having a diverse workforce may create a conducive climate for implementing culturally and linguistic responsive services (e.g., family support groups in Spanish) (Guerrero, 2010; Prince Inniss, Nesman, Mowery, Callejas, & Hernandez, 2009) and addressing treatment outcome disparities among minorities (Center for Substance Abuse Treatment [CSAT], 1993, 2006; Howard, 2003a; Quist & Law, 2006).

Although limited, existing statistics of the racial and ethnic composition of the substance abuse treatment workforce suggest that more than 70% of providers are White, female, and older than the largely African American and Latino young male client population (Broderick, 2007; Mulvey et al., 2003). Other national samples of the workforce show less staff diversity, with 86% of counselors identifying as White, 8% as African American, and 3% as Latino (Knudsen, Johnson, & Roman, 2003). This low level of diversity poses a challenge for program leaders who seek to recruit, retain, and develop program

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staff who can effectively respond to the cultural and linguistic service needs of diverse client populations (Andrulis et al., 2010; CSAT, 2006; 2009a).

### 1.1. Managers' cultural background that may support the diversifying of the workforce

Culturally sensitive managers exert a primary influence over an organization's implementation of culturally competent practices, which may include recruiting minority staff (Betancourt, Green, Carillo, & Anaheh-Firempong, 2003; CSAT, 2006, 2009a, 2009b; Choi, 2009; Fixsen, Naom, Blase, Friedman, & Wallace, 2005; Gonzalez & DeNisi, 2009; Guerrero, 2010; Prince Inniss et al., 2009). Regardless of their cultural background, substance abuse treatment managers are responsible for developing the most qualified workforce to serve the needs of culturally diverse clients (CSAT, 2006, 2009a; Pitts, 2009). The issues of diversity, cultural sensitivity, cultural competence, race, and ethnicity are highly interrelated and complex, particularly as they relate to achieving organizational goals (Ely & Thomas, 2001; Mor Barak, 2000; Williams & O'Reilly, 1998). Although managers are capable of diversifying their workforce regardless of whether their ethnicity matches that of their staff, it is important to determine the extent to which managers' cultural as well as professional background characteristics play a significant role in the diversification of the OSAT workforce.

### 1.2. Conceptual framework

The background characteristics of managers such as race, education, licensure, and tenure—which are often grouped together to reflect cultural and professional preparation—are generally included in conceptual models of implementation of innovative practices in OSAT (Friedmann, Jiang, & Alexander, 2010; Guerrero, 2010; 2011; Knudsen, Ducharme, & Roman, 2006). Diversifying the workforce can be characterized as an innovative practice needed to respond to external mandates and improve treatment access and retention among minority clients (Guerrero & Andrews, 2011).

Managers from racial and ethnic minority backgrounds are likely to be college educated, are professionally prepared, and have extensive field experience (Friedmann et al., 2010; Guerrero, 2010; Howard, 2003a). This preparation, along with more access to a network of minority professionals compared to White managers (Ibarra, 1993), may increase the capacity of minority managers to recruit and retain staff from their own minority group (Thomas, 1990). Certainly the availability of minority candidates, which is more likely to be higher in urban versus rural communities (Fixsen et al., 2005; Howard, 2003a) may impact diversification efforts of managers regardless of cultural background. Yet, in urban communities, programs with minority directors may be most likely to maximize their professional networks to recruit and retain racial and ethnic minority staff. Hence, it would be expected that compared with programs located in rural settings and led by White managers, programs located in urban communities and managed by minority leaders would be more likely to develop a significant representation of racial and ethnic minorities in program staff. Thus, Hypothesis 1 posited: African American and Latino directors will be positively associated with the percentage of African American and Latino staff, respectively, over time, and this positive relationship will be moderated by program location.

Compared to race and ethnicity, education and professional experience are more traditional indicators of leadership capacity to manage change. During educational preparation, future managers are introduced to innovative and evidence-informed practices; thus, managers with a higher education level are more likely to understand the benefits of implementing new practices in their workplace (Friedmann et al., 2010; Kimberly & Evanisko, 1981; Roman &

Johnson, 2002). Moreover, professionalism, skill, and commitment to the field are measured by whether managers have obtained professional licensure. To become licensed, managers are required to understand and utilize evidence-based practices (Friedmann et al., 2010) and to tailor such practices to meet the cultural and linguistic service needs of racial and ethnic minority clients (California Certification Board of Alcohol and Drug Abuse Counselors, 2009). Finally, tenure, or years in a management position, has been observed to have a differential role in terms of innovation. Although increased tenure is related to more efficient navigation of the institutional environment and a greater capacity for managing innovation (Fixsen et al., 2005; Prince Inniss et al., 2009), longer tenure is inconsistently related to preference for usual practices (Hambrick & Mason, 1984; Kimberly & Evanisko, 1981) and implementation of innovations (Roman & Johnson, 2002), including culturally competent practices (Howard, 2003a). Overall, comprehensive reviews of the literature suggest that seasoned managers are more likely to recruit and retain diverse staff (Hernandez & Nesman, 2006; Prince Inniss et al., 2009). Thus, Hypothesis 2 posited: Directors' education level, professional licensure, and job tenure will be positively associated with the percentage of Latino and African American staff in OSAT programs over time.

### 1.3. Organizational structure and resources that may support the diversifying of the workforce

The empirical and theoretical literature points to structural and resource factors, which at different levels contribute to incorporating new practices in OSAT units (D'Aunno, 2006; Knudsen et al., 2006). For instance, staffing characteristics reflect organizational capacity to adopt new service practices (Friedmann, D'Aunno, Jin, & Alexander, 2000; Guerrero, 2011; Guerrero & Cederbaum, 2010). Specifically, education level has been used to measure the technical capacity of staff and the professional culture of OSAT programs. Early adoption of evidence-based practices is most likely in programs with high levels of education among staff (Roman & Johnson, 2002), and counselors with a master's degree or higher are more likely to be White (Guerrero, 2010) and less likely to be in recovery (Miller, Sorensen, Selzer, & Brigham, 2006).

Prior research consistently shows that public funding and mandates from government (Campbell & Alexander, 2005; Stork, Scholle, Greeno, Copeland, & Kelleher, et al., 2001; U.S. Department of Health and Human Services, 2001), professional accreditation (Wilson-Stronks & Galvez, 2007), and culturally diverse clients and other stakeholders (D'Aunno, 2006; Howard, 2003b) provide resources and expectations to offer culturally responsive practices (Guerrero, 2011). Yet, in OSAT programs, implementation of new practices requires the commitment of leaders to the particular practice (D'Aunno, Sutton, & Price, 1991), as well as involvement in all areas of the implementation process (Friedmann et al., 2010; Simpson & Flynn, 2007). Thus, Hypothesis 3 posited that directors' characteristics, namely racial/ethnic minority status, education, tenure, and licensure, will contribute above and beyond the main effect of other organizational factors to the percentage of Latino and African American staff in OSAT programs over time.

## 2. Methods

This study analyzed secondary data representing a national sample of OSAT units. The National Drug Abuse Treatment Services Survey (NDATSS) is one of the most comprehensive surveys of management and organization in outpatient treatment units (D'Aunno, 2006). In particular, NDATSS offers insight into changes in the organization, structure, and service delivery of OSAT units in the United States.

## 2.1. Sampling frame and data collection

A composite of several national lists of substance abuse treatment providers in the United States provided the sampling frame for drawing random samples stratified by treatment modality (methadone and non-methadone), ownership (public, private for-profit, and nonprofit), and organizational affiliation (hospital, mental health center, and freestanding). The NDATSS dataset formally defined an OSAT unit as any unit in which OSAT constituted at least 50% of services. More than 80% of directors and clinical supervisors responded to the survey via telephone and accuracy of responses was verified through a rigorous follow-up protocol. Directors provided information on organizational structure, while supervisors provided information on the characteristics of staff members, clients, and services (for information on NDATSS, see Adams & Heeringa, 2001; Heeringa, 1996).

## 2.2. Sample

This analysis used three waves of panel data, collected in 1995, 2000, and 2005. Samples included 618 units in 1995, 745 units in 2000, and 566 units in 2005. Response rates were 88%, 89%, and 89%, respectively, and survey methodology included two pretests, interviewer training, and respondent validation to ensure the validity and reliability of responses. To address issues associated with estimation bias due to selection processes, a rigorous approach was introduced. In order to avoid potential bias with sample restriction, all OSAT units were considered regardless of their participation in any of the three waves (Rubin, 1987). To avoid bias related to the fact that units have a different probability of selection because they entered the sample at different times, weights such as ownership (public, non-profit, and private for-profit), treatment modality (use of methadone), and unit affiliation (freestanding, hospital, and mental health center) were used as suggested by other studies (Alexander, Nagra, Lemak, Pollack, & Campbell, 2008; Campbell & Alexander, 2005; Wells et al., 2007).

In addition, to take advantage of the maximum amount of information in the dataset, multiple imputation was used to fill in missing values, which reached 15% in some measures. The assumption of data missing at random was supported by showing that the probability of having a missing value on the main explanatory variables was not associated with the two dependent variables (Allison, 2002). The Markov Chain Monte Carlo method (Shafer, 1997) was used to generate five possible values for each missing value and increase the accuracy in parameter estimation.

## 2.3. Measures

### 2.3.1. Dependent variables

The dependent variables in this paper measure the racial and ethnic minority composition of staff in OSAT units. Latinos and African Americans represent the two largest minorities in the United States and in OSAT services. To develop our measures of percentage of Latino and African American staff, the reported number of Latino and African American staff was divided by the reported number of total staff. Specifically, clinical supervisors were asked the following three questions in all three waves: (1) Excluding consultants and independent contractors, how many full-time paid staff, those working 35 hours per week or more, are currently employed at your outpatient unit? (2) How many (of your outpatient unit's full-time paid staff members) are Hispanic or Latino? and (3) How many (of your outpatient unit's full-time paid staff members) are African American, non-Hispanic? To be able to compare the level of racial and ethnic diversity among treatment units and ease the interpretation of results, two measures were developed representing the percentages of Latino and African American staff in each OSAT unit.

Survey administrators instructed participants to consider all staff who work in their OSAT unit, including administrative and treatment personnel. Administrative staff, including office support staff and outreach workers, plays a significant role in the engagement process of racial and ethnic minority clients (CSAT, 2009a; Prince Inniss et al., 2009).

### 2.3.2. Explanatory variables

The study sought to capture demographic and experience-related attributes of directors as explanatory variables. Directors were asked about their race/ethnicity, gender, education, licensure, and tenure. Operationalization and response format for each variable is presented in Table 1. In addition, treatment staff characteristics were examined; namely, the number of staff in recovery and the percentage of staff with a graduate degree (doctor of philosophy [PhD], MD, or master's). Because organizations rely on available resources and environmental demands to adopt culturally responsive practices (Guerrero, 2011; Campbell & Alexander, 2002, 2005; Howard, 2003a, 2003b), the analysis included measures of funding, licensing, and accreditation, which may facilitate or pressure programs to diversify their workforce. This study accounted for the percentage of public revenue received the previous fiscal year and whether the unit received revenue for serving minorities, has a state license, and has professional accreditation by The Joint Commission, formerly the Joint Commission on Accreditation of Healthcare Organizations. Finally, other important organizational characteristics associated with culturally responsive practices were considered, such as program ownership, affiliation (Knudsen & Roman, 2004), racial/ethnic diversity of clients, and urbanicity (D'Aunno, 2006; Howard, 2003a, 2003b). Using the Beale Urban index (0–9), in which 0 represents the largest urban setting, a dichotomous variable was generated using the three highest levels of urbanicity (0–3). This measure was also used to generate two moderating variables representing each minority director (African American or Latino) and urban setting. Refer to Table 1 for descriptive statistics for all three waves.

## 2.4. Data analyses

This study used STATA/SE (Version 11) to conduct descriptive and panel analysis using three waves of data (1995, 2000, and 2005). Using the 1995 wave as a reference group, descriptive analysis was used to test whether the 2000 or 2005 wave was significantly different in terms of all organizational characteristics at  $p < .05$ . Chi-square tests were used for categorical variables and analysis of variance was used for continuous variables (see Table 1). The predictive longitudinal analysis of ethnic and racial diversity in OSAT units relied on random-effects specification to account for within-unit correlations in unobservables that arise from repeated observations of the same OSAT unit in different waves. Fixed-effect regressions, which account for all unobservable factors in provider characteristics, may be an appropriate specification for these panel data. Yet, to respond to the high number of programs with no Latino and/or African American staff diversity (35%), a Tobit random-effects model was necessary; the fixed-effects regressions did not provide sufficient statistic parameters to produce unbiased estimates (see Honoré, 1992). Other studies analyzing these data have relied on random effects with Tobit models and quadrature point examinations (Fitzmaurice, Laird, & Ware, 2004) to determine whether the random-effects estimates were adequate (Campbell & Alexander, 2005; D'Aunno & Pollack, 2002; Pollack, D'Aunno, & Lamar, 2006).

STATA/SE Version 11 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 conceptual block of variables was identified and compared across four consecutive statistical models. In other words, Model 1 identified the *R*-squared estimate of *directors' characteristics and percentage of Latino*

**Table 1**  
Changes in OSAT using panel data (1995–2005).

Variables	1995 (n = 618)	2000 (n = 745)	2005 (n = 566)	Response format
<b>Dependent variables</b>				
Latino staff	6.83 (16.51)	10.99 (21.21) <sup>***</sup>	10.0 (19.50) <sup>***</sup>	% of full-time Latino staff in unit
African American staff	17.24 (26.17)	22.07 (30.42) <sup>***</sup>	19.45 (27.13)	% of full-time AA staff in unit
<b>Independent variables</b>				
<b>Director characteristics</b>				
Latino (%)	5.1	5.5	7.8	1 = director is Latino
Latino, in urban program (%)	4.1	4.3	5.8	1 = urban location and Latino director
AA (%)	9.2	10.5	11.5	1 = director is AA
AA, in urban program (%)	8.3	9.7	9.9	1 = urban location and AA director
Education	16.43 (1.23)	16.39 (1.09)	16.36 (1.19)	No. of years of academic education
Licensure (%)	51.5	54.2	60.1	1 = director has a professional license
Tenure	6.38 (5.73)	6.57 (5.92)	17.79 (8.88) <sup>***</sup>	No. of years in present position
<b>Treatment staff characteristics</b>				
In recovery	3.08 (4.39)	2.97 (3.90) <sup>**</sup>	3.18 (4.62)	No. of staff who reported history of substance dependence and recovery status
Graduate degree	44.59 (29.23)	46.34 (29.24)	44.42 (29.21)	% of staff with a PhD, MD or master's
<b>Organizational</b>				
Public revenue	84.76 (3.83)	67.69 (61.04) <sup>*</sup>	68.61 (56.33) <sup>*</sup>	% of total public revenue for past fiscal year
Revenue for minorities (%)	4.7	3.8	7.1 <sup>**</sup>	1 = receives funding to serve minorities
State license (%)	92.4	92.4	91.8	1 = unit has a state license
Accreditation (%)	24.5	23.6	25.1	1 = unit has accreditation by TJC
<b>Organizational characteristics</b>				
Latino clients	11.68 (18.48)	13.56 (19.74) <sup>***</sup>	16.29 (21.71) <sup>***</sup>	No. of Latino clients in unit
AA clients	23.39 (26.10)	25.82 (27.90) <sup>**</sup>	24.82 (26.80)	No. of African American clients in unit
Public (%)	23.9	19.5	20.1	Reference—unit is public
For-profit (%)	13.8	24.2 <sup>***</sup>	22.4	1 = unit is for-profit
Nonprofit (%)	62.3	56.3	57.5	1 = unit is nonprofit
Freestanding (%)	63.1	71.7	72.1	Reference—unit is freestanding
In hospital (%)	18.4	13.0	13.2 <sup>**</sup>	1 = unit is affiliated with hospital
In mental health facility (%)	18.5	15.3	14.6	1 = unit is affiliated with mental health
In urban location (%)	68.6	69.8	69.6	1 = most urban setting. Using Beale Urban Code (0–9), selected (0–3)

Note. Statistically significant differences calculated using 1995 data as the reference; AA = African American, TJC = The Joint Commission.

\*  $p < .05$ .

\*\*  $p < .01$ .

\*\*\*  $p < .001$ .

and African American staff. Model 2 included *treatment staff characteristics*, Model 3 added *organizational resources and mandates* and Model 4 included *organizational characteristics*. The cumulative R-squared estimate across models and the statistically significant relationships between leaders' characteristics and outcomes were compared to examine the necessary and sufficient condition proposed in Hypothesis 3.

### 3. Results

All descriptive analyses can be found in Table 1. Findings from analysis of means across the three waves show increases in percentage of African American staff from 1995 to 2000 and in Latino staff from 1995 to 2000 and 2005. As for the independent variables of interest, only directors' tenure in the same position increased dramatically, from an average of 6.38 years in 1995 to 17.79 years in 2005. Control variables also showed relevant changes, including a decrease in public funding and an increase in the percentage of programs that reported receiving funding targeted to serve minorities from 1995 to 2005. As expected, the proportion of ethnic and racial minority clients increased over time—particularly the Latino segment, which grew from 11.68% in 1995 to 16.29% in 2005. The percentage of for-profit units increased dramatically from 13.8% in 1995 to 24.23% in 2000, and the percentage of units located in hospitals decreased from 18.42% in 1995 to 13.25% in 2005.

#### 3.1. Hypotheses testing

Hypothesis 1 was partially supported: African American and Latino directors were positively associated with the percentage of African

American and Latino staff, respectively. Fully specified Tobit regression models were used to test Hypotheses 1 and 2 based on the two outcomes: Latino staff (Table 2, Model 4) and African American staff (Table 3, Model 4). After accounting for all conceptually relevant organizational factors (staff characteristics, organizational resources, mandates, and other characteristics), this analysis revealed a strong positive relationship between Latino directors and the percentage of Latino staff. Similarly, a robust positive relationship was identified between African American directors and the corresponding percentage of African American staff. However, the moderating effects of directors' race or ethnicity and program location were not statistically significant.

The second hypothesis tested the positive relationship between directors' academic education, professional licensure, and job tenure and percentage of Latino or African American staff in OSAT programs over time. The following findings partially support Hypothesis 2. After accounting for other organizational factors, the Latino staff model revealed a strong positive relationship between directors' education level and proportion of Latino staff (see Table 2, Model 4). Directors' education level was also positively related to the proportion of African American staff. In addition, other characteristics of African American leaders were found to be differently associated with the percentage of African American staff. While directors' tenure was positively related to the percentage of African American staff, programs in which directors reported having a professional license had a negative relationship with this form of racial diversity. Notably, there was a statistically significant positive relationship observed in the percentage of both Latino and African American staff from 1995 to 2000 (see Models 4 in Tables 2 and 3, respectively).

Findings offer partial support for Hypothesis 3: Except for license, directors' racial and ethnic minority status, education and tenure

**Table 2**  
Random effects regression on percentage of Latino staff using panel data (1995, 2000, and 2005).

Variables	Percentage of Latino staff in treatment unit, Tobit (SE)			
	Model 1	Model 2	Model 3	Model 4
Director				
Latino	0.36 (0.03)***	0.36 (0.03)***	0.36 (0.03)***	0.27 (0.05)***
Latino, in urban location	–	–	–	–0.06 (0.06)
Education	0.02 (0.01)**	0.02 (0.01)**	0.02 (0.01)**	0.03 (0.01)***
Licensure	–0.01 (0.02)	–0.01 (0.02)	–0.01 (0.02)	–0.01 (0.01)
Tenure	0.01 (0.001)	0.01 (0.001)	0.01 (0.001)	0.01 (0.001)
Treatment staff characteristics				
In recovery		0.01 (0.0001)	0.01 (0.0001)	0.01 (0.001)
Graduate degree		–0.14 (0.12)**	–0.14 (0.03)**	–0.03 (0.02)
Organizational resources/mandates				
Public revenue			0.01 (0.001)	0.01 (0.001)
Revenue for minorities			0.07 (0.03)*	0.08 (0.03)**
State license			0.08 (0.03)**	0.06 (0.02)*
Accreditation (TJC)			0.02 (0.02)	0.01 (0.02)
Organizational characteristics				
Latino clients				0.01 (0.001)***
For-profit <sup>a</sup>				0.01 (0.02)
Nonprofit <sup>a</sup>				0.03 (0.02)
In hospital <sup>b</sup>				0.01 (0.02)
In mental health facility <sup>b</sup>				0.01 (0.02)
In urban location				0.06 (0.02)**
2000 wave <sup>c</sup>				0.08 (0.01)***
2005 wave <sup>c</sup>				0.01 (0.02)
Constant	–0.37 (0.12)**	–0.41 (0.12)**	–0.45 (0.12)**	–0.74 (0.01)***
Sigma_u	0.26 (0.01)**	0.25 (0.01)**	0.25 (0.01)**	0.10 (0.01)***
Sigma_e	0.21 (0.01)**	0.21 (0.01)**	0.20 (0.01)**	0.19 (0.01)***
Observations	1929	1929	1929	1929

Note. Unstandardized parameter estimates, with standard errors in parentheses from two-tailed tests; TJC = The Joint Commission.

<sup>a</sup> Public unit is the referent.

<sup>b</sup> Freestanding unit is the referent.

<sup>c</sup> 1995 wave is the referent.

\*  $p < .05$ .

\*\*  $p < .01$ .

\*\*\*  $p < .001$ .

contributed above and beyond the main effect of other organizational factors to the percentage of Latino staff, but particularly to percentage of African American staff. The hierarchical approaches presented in Tables 2 and 3 show four cumulative models. While reporting pseudo  $R^2$  values in Tobit models is not the best measure of goodness of fit, it can be used as a comparative measure for different models applied to the same dataset (see Cox & Wermuth, 1992). Model 1 included leaders' characteristics, which accounted for an  $R^2 = .246$  in Latino staff (Table 2) and  $R^2 = .314$  in African American staff (Table 3). Compared to leaders' characteristics, the explained variance associated with staff characteristics was much lower in Model 2 ( $\Delta R^2 = .013$  in Latino staff and  $.015$  in African American staff). Similarly, adding resources and mandates in Model 3 only increased explained variance slightly ( $\Delta R^2 = .005$  and  $.019$  respectively). However, sizeable increases were observed when including other organizational characteristics in Model 4 ( $\Delta R^2 = .25$  and  $.34$  respectively). Expectedly, ethnic/racial concordance of clients and of directors largely accounted for most of the variance explained in Latino and African American staff (85%). Yet, after sequentially accounting for organizational factors in the four models, directors' education remained a robust predictor of increases in both minority staff groups, while tenure consistently associated with increases in African American staff in OSAT units over time.

#### 4. Discussion

Overall, these results suggest that certain cultural and professional characteristics in managers and some organizational resources and mandates play a significant role in the development of racial and ethnic representation in the national workforce in OSAT. Although the rate of staff diversification had not matched the increase in minority clients by 2005 (e.g., Latino clients = 16%, Latino staff = 10%),

increases in the percentage of both Latino and African American staff were evident, particularly from 1995 to 2000.

It is important to note that compared to programs with White directors, programs led by racial and ethnic minority directors reported, on average much higher percentages of racially and ethnically concordant staff (e.g. 12% African American staff in programs with White directors vs. 59% African American staff in programs with African American directors). In addition, programs with minority directors were mainly located in urban settings (89% among African American directors and 78% among Latino directors), suggesting an interaction between minority status and program location. However, the null results from the moderation analysis suggest that program location does not make a difference in terms of the relationship between racial and ethnic minority directors and higher minority representation. Minority directors may improve staff diversity in both, urban and rural settings.

Preliminary support for Hypothesis 2 highlighted the role of leaders' education level in increasing diversity in both racial and ethnic minority staff. However tenure in the same leadership position was only related to greater representation of African American staff. Education and managerial experience are robust indicators of managerial competency in OSAT (Friedmann et al., 2010; Roman & Johnson, 2002). Yet not all indicators of experience were associated with outcomes. Programs with licensed directors were related to lower representation of African American staff. It is not clear why licensed directors are inversely related to staff diversity. It may be linked to the low representation of licensed directors in government-run programs, which report the highest rates of African American staff.

Overall, findings from Hypothesis 3 suggest that above and beyond organizational factors, directors' Latino or African American

**Table 3**

Random effects regression on percentage of African American staff using panel data (1995, 2000, and 2005).

Variables	Percent of AA Staff in treatment unit, Tobit (SE)			
	Model 1	Model 2	Model 3	Model 4
Director				
AA	0.24 (0.07)**	0.22 (0.07)**	0.22 (0.07)**	0.26 (0.06)***
AA, in urban program	–	–	–	0.001 (0.06)
Education	0.02 (0.01)**	0.03 (0.01)**	0.03 (0.01)**	0.02 (0.01)**
Licensure	–0.04 (0.02)**	–0.04 (0.02)**	–0.04 (0.02)**	–0.03 (0.01)*
Tenure	0.01 (0.001)*	0.01 (0.001)*	0.01 (0.001)*	0.01 (0.001)**
Treatment staff characteristics				
In recovery		0.01 (0.0001)*	0.01 (0.0001)*	0.01 (0.0001)
Graduate degree		–0.15 (0.03)**	–0.15 (0.03)**	–0.16 (0.03)***
Organizational resources/mandates				
Public revenue			0.01 (0.001)*	0.01 (0.001)
Revenue for minorities			0.07 (0.04)	0.03 (0.03)
State license			–0.01 (0.03)	0.02 (0.03)
Accreditation (TJC)			0.02 (0.02)	0.02 (0.02)
Organizational Characteristics				
AA clients				0.01 (0.001)***
For-profit <sup>a</sup>				–0.07 (0.03)**
Nonprofit <sup>a</sup>				–0.04 (0.02)*
In hospital <sup>b</sup>				0.01 (0.03)
In mental health facility <sup>b</sup>				–0.02 (0.02)
In urban location				–0.03 (0.01)***
2000 wave <sup>c</sup>				0.05 (0.01)***
2005 wave <sup>c</sup>				0.01 (0.02)
Constant	–0.39 (0.12)**	–0.46 (0.27)**	–0.47 (0.27)**	–0.36 (0.10)**
Sigma_u	0.28 (0.01)**	0.27 (0.01)**	0.27 (0.01)**	0.14 (0.01)***
Sigma_e	0.23 (0.01)**	0.23 (0.01)**	0.23 (0.01)**	0.22 (0.01)***
Observations	1929	1929	1929	1929

Note. Unstandardized parameter estimates, with standard errors in parentheses from two-tailed tests; AA = African American; TJC = The Joint Commission.

<sup>a</sup> Public is the referent.

<sup>b</sup> Freestanding unit is the referent.

<sup>c</sup> 1995 wave is the referent.

\*  $p < .05$ .

\*\*  $p < .01$ .

\*\*\*  $p < .001$ .

background, education and tenure may contribute uniquely to the capacity of programs to develop cultural responsiveness by investing in workforce diversity. The measures of education and tenure used in this study may represent indicators of the knowledge, professional skills, and work experience that enable directors to respond to the challenges of accessing, recruiting, and retaining a diverse workforce. Growing research suggests that minority leaders may not only have a vested interest in diversifying their organizations, but compared with Whites, minority leaders may also maximize their ties to a network of diverse candidates as well as other resources to identify, recruit, and retain talented minority candidates (Ibarra, 1993; Thomas, 1990). Exploring minority directors' social networks, community involvement, and managerial strategies in detail may provide insight about their abilities to recruit and potentially retain a diverse workforce in urban and rural settings.

These findings have implications for the development of health administration policy that seeks to equip treatment organizations with decision makers who have the knowledge and competence to enact necessary changes in their organizations. Policy makers should consider the workforce challenges that OSAT programs—particularly those that are non-public, are located in rural environments, and/or have highly educated staff—face to recruit staff that matches the diversity of their racial and ethnic minority client population. As health care reform will potentially increase treatment access for millions of uninsured people from racial and ethnic minority backgrounds (Andrulis et al., 2010), OSAT providers will become vital health care assets in underserved communities and will be well positioned to reduce health disparities if they can prepare their workforce. Diversification of the workforce may become a practical strategy to meet National Standards for Cultural and Linguistic Appropriate Services while

concurrently reducing service and health disparities among Latino and African American clients.

#### 4.1. Limitations

Several issues, including methodological challenges, complicate the relationship between characteristics of directors and their programs and organizational action, and should be considered when interpreting these findings. To start, the structure of the NDATSS survey did not allow for establishing directionality. Causal factors may be bidirectional; units with higher diversity may attract minority and educated directors. Yet, the robust longitudinal relationship found between directors' race and education and staff diversity in both models, and the fact that directors stay in their job for an average tenure of 10 years, suggests that these managers may have contributed to minority staff recruitment between 1995 and 2005. A second limitation of this study was the inability to directly test managerial competencies or efforts to foster staff diversity. Measures of race/ethnicity, education, tenure, and professional licensure are assumed to represent indicators of the knowledge, professional skills, and work experience that enable directors to respond to the challenges of recruiting and retaining a diverse workforce. In this study, upper managers are assumed to have a direct influence on the staffing patterns among these generally small programs, and the organizational factors included in the study are assumed to represent different levels of influence to diversify the workforce. Finally, although outpatient treatment, compared to hospital and residential treatment, is the most common type of substance abuse treatment care and is offered in 80% of all treatment facilities (Office of Applied Studies, 2007), these findings should not be generalized to the wider substance abuse treatment field.

#### 4.2. Directions for future research

Considering that White directors represent three quarters of the OSAT workforce and that minority directors play a significant role in diversifying their organizations, it is important to investigate the context as well as the training needs of White directors to invest in the preparation and promotion of culturally diverse program staff who can potentially improve the standard of care for minority clients. With the slow but steady increase in minorities represented in upper management, race and ethnicity may be important diversity attributes for future research (Nielsen, 2010). Future research should also focus on exploring areas of professional development in more detail, including promising managerial and leadership strategies to enact transformative changes (Battilana, Gilmartin, Sengul, Pache, & Alexander, 2010). Managers certainly face several challenges to introducing new practices in hectic, poorly resourced programs with unstable funding (D'Aunno, 2006; OAS, 2007; Roman & Johnson, 2002). However, to become active participants in a new health care environment driven by cost-effective and client-centered outcomes, leaders of OSAT programs are poised to develop core competencies to create a culturally diverse and well-trained workforce in order to improve professional standards that may impact the quality of care received by racial and ethnic minority clients.

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