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## Organizational Consequences of Staff Turnover in Outpatient Substance Abuse Treatment Programs

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### Abstract

The purpose of this study was to examine the impact of staff turnover on perceptions of organizational demands and support among staff who remained employed in substance abuse treatment programs. The sample consisted of 353 clinical staff from 63 outpatient agencies. Two scales from the Survey of Organizational Functioning (SOF) measured work-environment demands (Stress, Inadequate Staffing), and three measured supportive work relationships (Communication, Cohesion, Peer Collaboration). Results from a series of multilevel models documented that counselors working in programs that had previously experienced high staff turnover perceived higher demands and lower support within their organization, even after controlling for other potentially burdensome factors such as budget, census, and individual measures of workload. Two individual-level variables, caseload and tenure, were important determinants of work-environment demands, but were not related to supportive work relationships. Findings suggest that staff turnover increases workplace demands and decreases perceptions of support, and underscore the need to reduce stress and minimize subsequent turnover among clinical staff.

### Keywords

staff turnover; coworker support; stress; organizational functioning; substance abuse treatment

### 1. Introduction

Turnover among clinical staff has been cited as one of the most significant and challenging issues facing the substance abuse treatment field (Alcoholism & Drug Abuse Weekly, 2002; Institute of Medicine, 1998; McLellan, Carise, & Kleber, 2003). Rates are generally high, ranging from 18.5% (Knudsen, Johnson, & Roman, 2003) to 25% (Gallon, Gabriel, & Knudsen, 2003) among direct care staff and 24% (Knight, Broome, Edwards, & Flynn, 2011) to 54% (McLellan et al., 2003) among program directors. The problem appears to be pervasive, with instability sometimes spanning multiple years (see Knight, Broome, et al., 2011). While attrition in any organization is natural and sometimes healthy, workforce change can be particularly detrimental in social service organizations where product quality is dependent upon relationships between consumers (i.e., clients) and the individuals who

deliver services –namely counselors, case managers, social-workers, etc. (e.g., Mor Barak, Nissly, & Levin, 2001). In order for social service agencies to provide consistent and quality services, there must be some degree of staffing stability.

To fully understand the ways in which turnover negatively affects the treatment workplace, it is important to determine the impact that loss of clinical staff has on organizational functioning. Very few studies have examined this issue within the context of substance abuse treatment. Studies of nursing and other social service industries suggest that turnover causes financial strain on organizations while they recruit and train new employees (Pinder & Das, 1979) because it costs more to hire and train than it does to train existing staff (e.g., Shaw, Duffy, Johnson, & Lockhart, 2005). Turnover also disrupts organizational efficiency (as measured by both personnel and non-personnel operating costs per patient day; Alexander, Bloom, & Nuchols, 1994) and can threaten the implementation and sustainability of newly embraced initiatives (Glisson et al., 2008). When counselors leave, aspects of organizational functioning that are necessary precursors to innovation, change, and quality service provision –such as co-worker support (cohesion, communication, collaboration; Joe, Broome, Simpson, & Rowan-Szal, 2007) – become compromised, particularly when stress within the work environment is heightened (e.g., Flynn & Simpson, 2009; Simpson, 2002, 2009). To further compound the problem, the likelihood of turnover among remaining staff increases when stress is high and co-worker support is low (Ben-Dror, 1994; Ellis & Miller, 1994; Kirk, Koeske, & Koeske, 1993). Co-worker support, therefore, not only serves as a foundation for staff retention and other positive aspects of organizational functioning, but also as a protective factor against both emotional exhaustion and intention to quit (Aarons & Sawitzky, 2006; Bakker & Demerouti, 2007; Ducharme, Knudsen, & Roman, 2008). Thus, staff turnover has important implications for organizational functioning.

Turnover within substance abuse treatment programs occurs within an open and interactive system. Other contextual factors, including changes in client census and budget fluctuations can also impact organizational health. While some studies suggest that a larger census can be associated with the availability of greater resources (Moos, King, Burnett, & Andrassy, 1997), better cost efficiencies (Harwood, Kallinis, & Liu, 2001), and wider onsite service offerings (Knight, Edwards, & Flynn, 2010), other studies indicate that larger size has negative implications for counselor caseloads (Knight, Broome, Simpson, & Flynn, 2008) and client engagement (Broome, Flynn, Knight, & Simpson, 2007). Intuitively, increased workload is associated with higher work-related stress (Johnson, Brems, Mills, Neal, & Houlihan, 2006) and can also impact turnover directly, as evidenced by increased resignations among nurses when caseloads are high (Lake, 1998). Diminishing budgets also burden health care professionals, impacting morale, job-related stress, and performance quality, as they struggle to accomplish tasks with fewer resources (Decker, Wheeler, Johnson, & Parsons, 2001). Budget cuts and downsizing can negatively impact perceptions of the work environment (Brown, Arnetz, & Petersson, 2003), creating additional demands for employees and further limiting opportunities for supportive interaction and collaboration among staff.

These previous studies raise important questions about the degree to which employee turnover contributes to staff perceptions of work struggles and coworker support within

substance abuse treatment organizations. Consequently, it should be determined whether perceptions of job demands are higher and supportive work relationships lower in programs that have experienced relatively high turnover. Also of concern is whether individual perceptions are merely a function of budget and census changes or whether the loss of staff impacts organizational health even when controlling for these factors. The purpose of this study is to examine the impact of staff turnover on remaining staff members' perceptions of organizational demands and support within substance abuse treatment programs. It is hypothesized that staff in programs with higher turnover rates will report more work-environment demands (i.e., higher stress and higher ratings of inadequate staffing) and less supportive relationships with fellow counselors (i.e., lower communication, lower cohesion, and less collaboration) following the loss of staff. Changes in budget and census are expected to be related to work-environment demands, but not to the quality of relationships with fellow staff members. Individual factors, including tenure and caseload are expected to be related to both workplace demands and support. Specifically, less-tenured employees and those with higher caseloads are more likely to report higher demands and lower coworker support. Because individual staff members are nested within programs, a multilevel analytic approach (Hierarchical Linear Modeling, HLM; Raudenbush & Bryk, 2002) was used to examine the relationships of interest across programs as well as the variation in responses among individuals within a given program.

## 2. Method

### 2.1. Sample

Beginning in 2004, as part of the Treatment Costs and Organizational Monitoring (TCOM) project (Broome et al., 2007; Knight et al., 2008), data on program characteristics, organizational functioning, and client composition were collected from 115 treatment programs in 9 states: Florida, Idaho, Illinois, Louisiana, Ohio, Oregon, Texas, Washington, and Wisconsin. A cross-sectional design spanning a 3-year period yielded an annual "snapshot" of each organization. The current study utilizes data collected during the first 2 years and includes two assessment instruments (1) an assessment of organizational structure and operations (SSO; completed by program directors) and (2) an assessment of organizational functioning (SOF; completed by all staff members with direct client contact). The study sample consists of 353 clinical staff (including 312 counselors and 41 clinical/program directors) from 63 programs with program operations data available in years 1 and 2 and staff survey data in year 2. While all 115 treatment programs that agreed to participate provided initial program operations data, 74 programs (64% of the initial sample) provided both program and staff data during the second year. Eleven of these 74 programs were omitted from the current analyses due to an inadequate program level response rate (only 1 staff member responded to the survey in 2 programs) or because missing data on variables of interest reduced the program response rate to one ( $n = 9$  programs; note, missing data is one limitation of multilevel modeling approaches; Schafer & Olsen, 1998).

### 2.2. Procedure

Letters describing the project were distributed through Addiction Technology Transfer Centers (ATTCs) in four regions: Southern Coast, Great Lakes, Gulf Coast, and Northwest

Frontier. To qualify for inclusion, participating programs had to primarily provide outpatient substance abuse treatment (could be embedded in the criminal justice or mental health system), and have a minimum of 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. Data collection plans and study protocols were approved by the university's Institutional Review Board (IRB).

Once annually, participating programs provided information about program operations and organizational functioning. Questions pertaining to agency operations were generally reflective of events within the previous 12-month period; those pertaining to organizational functioning represented perceptions of the program on the day the survey was given. For this particular study, program operations information was collected at years 1 and 2, and staff surveys were collected at year 2. Measures of turnover, census change, and budget change reflect the period between years 1 and 2. This design allowed for an examination of perceptions of organizational functioning among staff who remained employed by programs after coworkers had left.

A program director or clinical manager completed the Survey of Structure and Operations (SSO; Knight et al., 2008), which took approximately 30 minutes to complete. The SSO gathered information about general program characteristics, organizational relationships, clinical assessment and practices, services provided, staff and client characteristics, and operational changes (e.g., staff turnover). During the same period of time (spanning approximately 1 month), clinical staff and directors completed the Survey of Organizational Functioning (SOF; Broome et al., 2007), an expanded version of the Organizational Readiness for Change (ORC; Lehman, Greener, & Simpson, 2002) instrument. The SOF was designed to assess program needs, resources, staff attributes, organizational climate, job attitudes, and workplace practices within social service settings. The SOF took approximately 20 minutes to complete, and identical forms were administered to directors and clinical staff. The number of respondents from each program completing the SOF ranged from 2 to 23, with a mean of 5.6 ( $SD = 4.4$ ). The average response rate across all programs was 78.7% ( $SD = 63.3\%$ ). Because directors often serve in a counseling capacity and also function as part of the therapeutic team, SOF responses from the director and clinical staff were averaged to create scale scores for each program.

## 2.3. Measures

**2.3.1. Staff perceptions of work-environment demands**—Two scales from the Survey of Organizational Functioning (SOF) were used to measure work-environment demands: Stress and Staffing. Staff responded to a series of statements for these scales, rating each item on a 1 to 5 response scale, where 1 indicated “disagree strongly” and 5 indicated “agree strongly.” Scores were rescaled to range from 10 to 50. Stress was measured by four items including “you are under too many pressures to do your job effectively” and “staff frustration is common here” (Cronbach's coefficient alpha = .82). Staffing was measured by six items including “there are enough counselors here to meet current client needs” and “counselors here are able to spend enough time with clients”

(Cronbach's coefficient alpha = .67). Scale scores for staffing were reverse coded so that higher values indicated perceptions of inadequate staffing.

**2.3.2. Staff perceptions of supportive work relationships**—Three scales from the SOF were used to measure supportive work relationships: Communication, Cohesion, and Peer Collaboration. The same 1 to 5 response scale was used and scores were also rescaled to range from 10 to 50. Communication was measured by five items including “program staff are always kept well informed” and “staff members always feel free to ask questions and express concerns in this program” (Cronbach's coefficient alpha = .78). Cohesion was measured by six items including “staff here all get along very well” and “mutual trust and cooperation among staff in this program are strong” (Cronbach's coefficient alpha = .85). Peer Collaboration was measured by four items including “counselors here design therapeutic interventions together” and “the director, counselors, and staff collaborate to make this program run effectively” (Cronbach's coefficient alpha = .65).

**2.3.3. Staff characteristics**—Staff demographics (ethnicity, age, gender) were assessed using the SOF, as were two additional measures, Tenure and Caseload. Tenure was defined as the number of years the individual had been in their present job, and Caseload was defined as the number of clients the staff member was “currently treating (i.e., your caseload).”

**2.3.4. Program turnover**—At the start of the project, program directors were asked to indicate the number of counselors employed at the specified program. One year later, informants were asked to indicate the number of counseling staff who left during the previous 12-month period. “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. A ratio reflecting the number that left to the original number of counseling staff was calculated for each program.

**2.3.5. Organizational measures**—Organization-level measures were obtained from program directors using the Survey of Structure and Operations (SSO; Knight, Broome, et al., 2011). At the year 2 assessment, directors reported census and budget changes over the previous 12-month period using a 5-point Likert scale representing “rapidly decreasing,” “slowly decreasing,” “stable,” “slowly increasing,” or “rapidly increasing.” These measures were rescaled to represent decreasing (−1), stable (0), or increasing (1) for ease of interpretation. 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). Because parent affiliation has been found to be an important determinant of supervisory turnover (Knight, Broome, et al., 2011) and hospital-based programs generally have lower turnover rates due perhaps to higher salaries, better benefits, and a more stable work environment (Neal, Johnson, Knudsen & Roman, 2002), parent affiliation was included as a program-level covariate in all analyses.

## 2.4. Statistical Analysis Procedure

The central focus of the current study was on how organizational turnover impacts staff ratings of work-environment demands and supportive work relationships. Because individual staff responses (Level-1) are nested within programs (Level-2), multilevel modeling approaches are appropriate. In this study, organizational-level measures (Level-2) are examined as predictors of staff-level perceptions (Level-1), using hierarchical linear modeling (HLM; Raudenbush & Bryk, 2002). HLM provides an advantage over Ordinary Least Squares (OLS) regression by estimating two error terms, one at the individual and one at the group level. Five separate models were constructed, one for each measure of work-environment demands (stress and adequate staffing) and supportive work relationships (communication, cohesion, and peer collaboration).

Multilevel analyses using HLM 6.7 computer software (Raudenbush, Bryk, & Congdon, 2005) began by computing an unconditional model (i.e. no staff- or program-level predictors) for each of the 5 measures, providing an indication of variability across and within programs for each outcome measure. Unconditional models also provide a baseline with which the conditional model (i.e. predictors included) can be compared. The comparison of conditional and unconditional models allows examination of variance in the outcome after each predictor has been taken into account.

Staff-level covariates (age, gender, Caucasian, Hispanic, tenure, and caseload) were included in each conditional model as “fixed” effects and “centered” around their respective grand means. Fixing and grand-mean centering the staff-level covariates statistically allowed for examination of the effects of program factors while controlling for staffing differences. The base rate (i.e., intercept term), as reported in Tables 1 and 2, represents the between group variance in the outcome after controlling for the Level-1 predictors.

## 3. Results

### 3.1. Sample description

Programs were generally private-non-profit (73%) and affiliated with a parent organization (69%). Twenty-five percent of programs were regular outpatient (less than 6 hours of structured programming per week), 16% were intensive outpatient (minimum of 2 hours of structured programming on 3 days per week), and 59% were mixed (providing both regular and intensive tracks). On average, programs lost 26% ( $SD = 27\%$ ) of counseling staff in the year prior to the SOF survey. Census was generally stable (43%) or increasing (46%), and budgets were generally constant (63%; 19% decreasing, 19% increasing). On average, clients received 6.3 hours of counseling per week. Agencies employed an average of 5.4 counseling staff with caseloads averaging 26 clients ( $SD = 16$ ). Counseling staff were predominantly female (60%), white (76%; 13% African-American, 11% Hispanic), and in their forties ( $M = 48$ ,  $SD = 11$ ). Twelve percent had been employed in their current job for less than 6 months, 13% for 6 to 11 months, 27% for 1 to 3 years, 20% for 3 to 5 years, and 28% for 6 or more years.



### 3.2 Bivariate correlations among program-level measures

It should be noted that, while statistical models account for inter-correlations among independent variables, relationships among program-level measures are not explicitly examined in multilevel models using HLM. To facilitate later interpretation of findings, Pearson correlations were run among the three program-level change measures. The relationship between census and budget change was positive—programs reporting increased census also reported increased budgets ( $r = .34, p < .01$ ). Turnover was negatively associated with decreasing census ( $r = -.25, p < .05$ ), indicating that during the period of staff turnover, fewer clients were served. The correlation between turnover and budgetary change was not significant ( $r = .04, ns$ ).

### 3.3. Prediction analyses

**3.3.1. Work-environment demands**—Consideration of factors measuring work-environment demands began with an unconditional model for occupational stress. The unconditional model (without Level-1 and level-2 predictors) showed that the mean rating of stress for the 63 outpatient programs was 30.52 (possible range of 10, disagree strongly to 50, agree strongly), with a program-level standard deviation of 3.29. On average, staff members across programs and regardless of turnover reported a moderate amount of job stress. About 14% of the total variance in stress ratings can be attributed to program-level differences. The conditional model, including Level-1 covariates and Level-2 predictors explained 15% of the program-level variation in stress ratings. Two staff-level (individual) covariates and three program-level predictors were significant (see Table 1). Staff members with more than one year experience at the program reported ratings 2.8 points higher on stress than staff with tenure less than one year ( $t = 2.62, p < .01$ ). Similarly, those with higher caseloads reported higher stress ( $t = 3.32, p = .001$ ). Work-related stress was higher in programs where turnover had been high in the previous year ( $t = 2.24, p < .05$ ), client census was increasing ( $t = 2.51, p < .05$ ), and budgets decreasing ( $t = -2.61, p = .05$ ). To illustrate how coefficients can be used to interpret these relationships, staff members in programs experiencing turnover reported an average stress rating 5.7 points higher than those in programs without turnover. Because both census and budget are trichotomous variables, the mean represents the middle value and coefficients are added or subtracted to determine extreme values. For instance, those in programs with reduced budgets reported an average stress rating of 2.84 points higher than the mean ( $30.52 + 2.84 = 33.36$ ) whereas staff in programs with increased budgets reported an average stress rating of 2.84 points lower than the mean ( $30.52 - 2.84 = 27.68$ ).

The unconditional model for inadequate staffing yields an average of 26.50 across programs, with a standard deviation of 2.93; approximately 23% of the total variability in ratings reflected program differences. On average, staff members across programs and regardless of turnover did not feel that staffing was inadequate within their program. The conditional model accounted for 8% of the program-level variation in perceptions of inadequate staffing. Staff were more likely to report inadequate staffing when turnover had been high in the previous year ( $t = 2.13, p < .05$ ).

**3.3.2. Supportive work relationships**—Consideration of factors influencing supportive work relationships began with an unconditional model for open communication. This analysis showed an average rating of 34.76, with a standard deviation of 1.83 across programs; approximately 6.5% of the total variability in communication ratings resulted from program-level differences. On average, staff members across programs and regardless of turnover feel that there was some degree of open communication within their program. The conditional model accounted for 52% of program variation in communication ratings. Open communication was reported more frequently in programs with lower turnover rates ( $t = -2.08, p < .05$ ) and increasing budgets ( $t = 2.98, p < .01$ ; see Table 2).

The unconditional model for cohesion indicated an average rating of 38.35, with a standard deviation of 2.53; approximately 12% of the total variance in cohesion ratings can be attributed to program differences. On average, staff members across programs and regardless of turnover reported cohesion among staff members within their program. The conditional model accounted for 3.4% of the program-level variance, and none of the staff covariates or program-level measures were statistically significant predictors of cohesion.

The unconditional model for peer collaboration showed a mean rating of 38.21 with a standard deviation of .96; approximately 2.6% of the total variation in scores can be explained by program-level differences. On average, staff members across programs and regardless of turnover reported collaboration among coworkers within their program. The conditional model accounted for 71% of the program-level variability in average peer collaboration ratings. Similar to findings for communication, staff in programs with lower turnover rates in the previous year ( $t = -2.06, p < .05$ ) and increasing budgets ( $t = 2.22, p < .05$ ) reported higher ratings of peer collaboration.

## 4. Discussion

While it is generally accepted that the high rate of staff turnover often observed in social service agencies negatively affects the health of those organizations, there exists relatively little documented evidence for this within substance abuse treatment settings. The current study offers an examination of how turnover among counseling staff affects perceptions of workplace demands and supportive work relationships among staff members who remain employed. Given that other program-specific contextual factors (namely changes in census and budget) as well as personal factors (caseload and employment tenure) can also impact perceptions of the work environment, this study seeks to examine the influence that turnover has on organizational functioning, controlling for these factors.

Study findings provide empirical evidence that staff turnover influences how employees perceive demands and support within the workplace. Individuals working in programs with high turnover report higher stress and less adequate staffing than individuals working in programs with lower turnover. Turnover also affects perceptions of supportive work relationships as evidenced by lower communication and lower peer collaboration. Furthermore, the impact of turnover remains significant, even after controlling for contextual and individual factors known to influence perceptions of organizational health.



Results for models predicting supportive work relationships were reasonably simple, in that only turnover and budget change were significant predictors of communication and peer collaboration. Staff working in programs with lower turnover rates reported better communication and peer collaboration than those in programs with higher turnover rates. Budget change also affected communication and collaboration, with employees reporting more positive interpersonal relations when budgets had increased. Census and parent affiliation were not significant, nor were individual factors. The fact that none of the individual-level measures were predictive of supportive work relationships suggests that organizational factors may play a larger role in shaping perceptions of supportive work relationships than individual factors. An alternative explanation, however, may be that measures of personal attributes reflecting social influence were not included. Future studies should consider examining how personal attributes might shape the way an individual views turnover and perceives coworker relationships, including autonomy, influence, and position held within the organization.

The models for workplace demands were rather different from one another. Regarding perceptions of inadequate staffing, only turnover was significant. While it may be intuitive that remaining employees' perceptions of staffing patterns would be influenced by the knowledge that coworkers had left, the fact that neither contextual factors (budget and census change), nor individual workload contributed to these perceptions is noteworthy. This is somewhat surprising, given the general tendency to assume that decreasing budgets translate to less than ideal staffing patterns. Yet the correlation between budget change and turnover for this sample was not significant. Clearly, relationships among actual and perceived budget and staffing issues are complex and most likely involve aspects of organizational functioning beyond those measured in this study.

In contrast to inadequate staffing, the model for perceived stress was quite complex. Staff turnover, two program contextual factors (increasing census and decreasing budgets) and two individual factors (longer tenure and higher caseloads) influenced perceived stress among counselors who remained employed. These findings corroborate other research documenting the link between budget strain and employee stress (Brown, Arnetz, & Petersson, 2003; Decker, Wheeler, Johnson, & Parsons, 2001) and illustrate that client census changes also affect stress, independent of budget changes. Furthermore, the longer a counselor had been in their position, the more stress they were likely to report, which could potentially reflect greater responsibilities (both clinical and/or managerial) among more senior staff members (Taylor, Audia, & Gupta, 1996). Consistent with previous studies, larger caseloads were also associated with greater perceived stress (e.g., Johnson, et al., 2006). Whereas perceptions of staffing patterns are influenced primarily by prior staffing changes, perceptions of stress appear to be shaped by an array of organizational and personal factors.

Pearson correlations among the three program-level change measures revealed some interesting relationships that are useful in interpreting findings. The positive relationship between census and budget change is intuitive, yet the two measures were differentially related to perceptions of organizational demands and support. Both decreasing budgets and increasing census were related to perceptions of stress, however only budget increases were

related to perceptions of supportive work relationships. While associations among program-level factors are noteworthy, directionality cannot be determined. For instance, it is not known whether a decline in census occurred prior to staff turnover (thus forcing layoffs) or whether census decreased because vacated positions were not filled. More time-specific measures of budget and census change would allow for an in-depth analysis of such patterns.

Results of this study document that program-level turnover negatively affects workplace demands and coworker support, and operates independent of fluctuations in budget or census. But whereas support is associated primarily with program-level factors, stress is associated with both program- and individual-level factors. The more complex model for stress may reflect that individuals respond differently to workplace demands, interpreting events through their own personal filters, expectations, and experience. For example, when stressors are perceived as a challenge, employees report greater job satisfaction; when stressors are perceived as a hindrance, the opposite is seen (Cavanaugh, Boswell, Roehling, & Boudreau, 2000). Staff turnover may be interpreted differently depending on one's workload and regardless of concomitant changes in census or budget.

Because social resources within the workplace can serve as a buffer against potentially negative effects of high job demands on work/job outcomes (e.g., Bakker & Demerouti, 2007; Cohen & Wills, 1985; Eisenburger, Huntington, Hutchinson, & Sowa, 1986; Van der Doef & Maes, 1999), it is important to find ways to facilitate the development of supportive networks within an organization. Given that findings from this study document that supportive coworker relationships may diminish following staff turnover, efforts at strengthening social resources appear to be even more important following the departure of an employee. Determining what aspects of the organization may be contributing to turnover and targeting ways of strengthening relationships to help staff cope with increasing workplace demands following coworker departure may help to reduce employee stress and prevent further loss of staff.

Research has documented effective strategies for retaining employees, even during tumultuous times (e.g., DeMarco, 2007; Zlotnik, DePanfilis, Daining, Lane, 2005). Intentional efforts to increase organizational identification and commitment (e.g., Edwards & Peccei, 2010; Knudsen et al., 2003; Mitchell, Holtom, Lee, Sablinski, & Erez, 2001) have important implications for reducing employee intentions to quit. Individuals who are committed to an organization are more likely to remain employed there if they feel the organization is committed to personnel development (Kraimer, Seibert, Wayne, Liden, & Bravo, 2010) and is open to change (Knight, Landrum, Edwards, & Flynn, 2011). Intentional efforts to improve employee perceptions of support through mentoring benefit both the organization and the individual by reducing turnover intentions and strengthening collaborative relationships (Dawley, Andrews, & Bucklew, 2010).

Several limitations of this study should be noted. First, while an inherent strength of hierarchical modeling is that it can partial out proportions of variance accounted for by program-versus individual-level measures, relationships among program measures and between program and individual level "predictors" are not accounted for in the model. In other words, drawing conclusions around how program-level factors influence individual-

level tenure and workload are beyond the scope of the current study. Second, correlations among budget and census are based on measures from one point in time, and relationships are therefore bi-directional. Third, while it is likely that increased demands and decreased co-worker support may lead to poorer organizational outcomes (including increased risk of employee turnover), the current study does not examine measures of organizational functioning over time. Finally, the generalizability of these findings to substance abuse treatment in general may be limited. Data were drawn from only four geographic regions of the US, and due to sample attrition, only 64% of programs in the original sample provided data in the second year of the project.

Despite these limitations, this study offers important insights into how staff turnover within substance abuse treatment programs affects employee perceptions of the workplace environment. Not only does turnover impact service provision (e.g., Glisson et al., 2008; Mor Barak et al., 2001), it also affects organizational health, exacerbating stress and decreasing perceptions of supportive work relationships among staff who remain employed.

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**Table 1**

## HLM Results for Work-Environment Demands

	Stress Coefficient	Inadequate Staffing Coefficient
Base Rate of Dependent Measure	30.52***	26.50***
Individual (Staff)-Level Measures		
Age	-.03	-.04
Caucasian	.43	.28
Female	.65	.13
Hispanic	1.27	-.04
Tenure	2.76**	.55
Caseload	.94***	.37
Program-Level Measures		
Turnover	5.70*	4.30*
Census	2.59*	1.07
Budget	-2.84*	-1.48
Parent Affiliation	-.35	.87

\*  
 $p < .05$ ;\*\*  
 $p < .01$ ;\*\*\*  
 $p < .001$



**Table 2**

## HLM Results for Supportive Work Relationships

	Open Communication Coefficient	Cohesion Coefficient	Peer Collaboration Coefficient
Base Rate of Dependent Measure	34.76***	38.35***	38.21***
Individual (Staff)-Level Measures			
Age	.01	.03	.01
Caucasian	-.37	1.67	.07
Female	-1.24	-.86	.26
Hispanic	-1.22	.49	-.03
Tenure	-.87	-1.12	-1.00
Caseload	-.41	-.19	-.03
Program-Level Measures			
Turnover	-3.24*	-3.16	-3.41*
Census	-.39	-.06	.47
Budget	2.25**	1.62	1.32*
Parent Affiliation	.32	.78	1.16

\*  
 $p < .05$ ;\*\*  
 $p < .01$ ;\*\*\*  
 $p < .001$