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Clinical supervision, emotional exhaustion, and turnover intention: A study of substance abuse treatment counselors in NIDA's Clinical Trials Network

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Abstract

An intriguing hypothesis is that clinical supervision may protect against counselor turnover. This idea has been mentioned in recent discussions of the substance abuse treatment workforce. To test this hypothesis, we extend our previous research on emotional exhaustion and turnover intention among counselors by estimating the associations between clinical supervision and these variables in a large sample ($n = 823$). An exploratory analysis reveals that clinical supervision was negatively associated with emotional exhaustion and turnover intention. Given our previous findings that emotional exhaustion and turnover intention were associated with job autonomy, procedural justice, and distributive justice, we estimate a structural equation model to examine whether these variables mediated clinical supervision's associations with emotional exhaustion and turnover intention. These data support the fully mediated model. We found the perceived quality of clinical supervision is strongly associated with counselors' perceptions of job autonomy, procedural justice, and distributive justice, which are, in turn, associated with emotional exhaustion and turnover intention. These data offer support for the protective role of clinical supervision in substance abuse treatment counselors' turnover and occupational wellbeing.

Keywords

clinical supervision; emotional exhaustion; turnover intention

1. Introduction

Systematic attention to features of the substance abuse treatment workforce (Annapolis Coalition on the Behavioral Health Workforce, 2007; Whitter et al., 2006) underlines that the high rates of counselor turnover and emotional exhaustion have several negative consequences for the field (McLellan, Carise, & Kleber, 2003; Gallon, Gabriel, & Knudsen, 2003; Hser, 1995). First, counselor turnover poses a threat to the quality of care that clients receive by disrupting the client-therapist relationship (Barak, Nissly, & Levin, 2001; Smith, 2005).

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Furthermore, turnover is costly to behavioral healthcare organizations, requiring recruitment, hiring, and training of new counselors (Alexander, Bloom, & Nuchols, 1994). Efforts spent in replacing clinical staff may undermine organizational efforts to adopt and implement evidence-based treatment practices (Carroll & Rounsaville, 2007).

Emotional exhaustion has been linked to the turnover process (Blankertz & Robinson, 1997; Cropanzano, Rupp, & Bryne, 2003; Lee & Ashforth, 1996), but also is an important issue in its own right. First, several researchers have argued that emotional exhaustion is the most significant dimension of the larger phenomenon of employee burnout (Maslach, Schaufeli, & Leiter, 2001; Schaufeli & Taris, 2005). Emotional exhaustion is associated with negative health outcomes (Cherniss, 1980; Melamed et al., 2006) and reductions in job performance (Cropanzano et al., 2003; Taris, 2006; Wright & Cropanzano, 1998). Furthermore, there is evidence that individual-level burnout may become an organization-level phenomenon in which it spreads to other employees (Bakker, Schaufeli, Sixma, & Bosveld, 2001; Halbesleben & Buckley, 2004).

In our work, we have measured counselors' turnover intention because it is the strongest predictor of actual turnover (Griffeth, Hom, & Gaertner, 2000) and avoids the methodological problems of valid retrospective data on actual turnover. In prior work we have focused on counselors' perceptions of managerial practices within treatment centers, particularly the distribution of power and justice within these organizations (Knudsen, Ducharme, & Roman, 2006; Knudsen, Johnson, & Roman, 2003). Our first study documented the linkage of turnover intention to job autonomy, meaning the degree to which managers empower counselors to make decisions about how to perform their jobs (Knudsen et al., 2003). We found that autonomy was negatively associated with turnover intention, a finding consistent with the large body of research that has applied Karasek and Theorell's (1990) theoretical framework of work stress to turnover intention (Lee & Ashforth, 1996).

Our second study focused on perceptions of organizational justice, emotional exhaustion, and turnover intention (Knudsen et al., 2006), examining both distributive justice and procedural justice. Distributive justice encompasses perceptions about how fairly job demands and rewards are distributed across employees of the organization (Adams, 1965). Previous research had linked distributive justice with emotional exhaustion and turnover intention across a range of occupations (Cohen-Charash & Spector, 2001; Colquitt, Conlon, Wesson, Porter, & Ng, 2001; Cropanzano, Goldman, & Benson, 2005; Halbesleben & Buckley, 2004; Schaufeli, Van Dierendonck, & Van Gorp, 1996; Van Dierendonck, Schaufeli, & Buunk, 2001). Our data from a large sample of counselors employed in therapeutic communities indicated that distributive justice was negatively associated with both emotional exhaustion and turnover intention.

A related, but distinct, dimension of organizational justice is procedural justice, which focuses on the fairness of decision-making processes within organizations (Levinthal, 1980). This has been operationalized in terms of whether managers collect information from employees before making decisions and allow employees to have a voice in managerial decision-making (Niehoff & Moorman, 1993). Recent meta-analyses have linked procedural justice with intention to quit in a variety of occupations (Cohen-Charash & Spector, 2001; Colquitt et al., 2001). Consistent with this literature, our research indicated that procedural justice was negatively associated with both emotional exhaustion and turnover intention (Knudsen et al., 2006).

In a related study, we built upon these models by introducing the concept of coworker support and its influence on counselor burnout and turnover intention (Ducharme, Knudsen & Roman, 2008). While coworker support is an important predictor of these outcomes, it does not attenuate the robust effects of autonomy and justice. Left unmeasured in those models, however, was the influence of counselors' interactions with supervisors.

Clinical supervision in the behavioral healthcare field goes beyond supervisory support as measured in most other occupational studies. It is a more complex relationship than generic job supervision. Clinical supervision is important for understanding the range of dynamics influencing counselors' perceptions about their jobs and their desire and willingness to remain with their organizations. Moreover, understanding the impacts of clinical supervision on counselor retention and well-being can lead to the design and delivery of workplace interventions targeted at enhancing the quality and quantity of supervision in these settings.

Based on relatively scant empirical data, clinical supervision has been suggested by policy makers as a key element in improving the addiction treatment workforce (Center for Substance Abuse Treatment, 2007). Discussions in related fields such as nursing have also pointed to clinical supervision as a means both to improve patient care and to reduce employee burnout (Clegg, 2001). Among the rare studies of clinical supervision and employee well-being, a study of nurses found a significant negative association between clinical supervision and emotional exhaustion (Edwards et al., 2006).

There are several reasons to suggest that there may be a strong but possibly indirect link between clinical supervision and turnover intention in addiction counseling. Supervisors directly influence the day-to-day experience of work and can offer valuable support in performing job tasks (Stinglhamber & Vandenberghe, 2003). Instrumental social support, which refers to supervisors providing assistance with job tasks, has been linked to employee well-being and actual turnover (Eisenberger et al., 2002). Such support may help employees feel empowered to make decisions about how to perform their jobs. Furthermore, supervisor behaviors have been shown to shape employees' perceptions about job-related stressors, and subsequently turnover intention (O'Driscoll & Beehr, 1994).

In addition, supervisors represent the most visible symbol of the organization (Kozlowski & Doherty, 1989). Previous research suggests that employee perceptions about supervisors are often generalized to broader evaluations of the organization (Eisenberger et al., 2002). For example, perceptions of supervisor support have been shown to be strongly associated with perceptions that the organization is supportive (Maertz, Griffeth, Campbell, & Allen, 2007; Shanock & Eisenberger, 2006). Others have documented that employees who perceive a higher quality relationship with their supervisors tend to report greater procedural and distributive justice (Lee, 2001). Another possible benefit of clinical supervision is that employees may perceive that their supervisors are paying closer attention to their job performance. Niehoff and Moorman (1993) found that when supervisors engaged in greater observation of employees' work, employees reported greater procedural and distributive justice. They argued that employees likely perceived that this observation allowed managers to make more informed, and hence, more fair decisions. Perceptions of a high-quality relationship with one's supervisor may represent "evidence," from the perspective of the employee, that the overall organization values fairness.

A conventional approach to studying supervision is to treat it as a single independent variable among many possible sources of work stress. Alternatively, it may be that counselors' perceptions of their supervisors set the stage for their evaluations of job autonomy and organizational justice, which subsequently have implications for emotional exhaustion and turnover intention (Figure 1). Our primary interest is in estimating a model of turnover intention and emotional exhaustion that treats counselor perceptions of their supervisor as a key "input" that will be associated with autonomy, procedural justice, and distributive justice. That is to say, we examine whether clinical supervision itself influences perceptions of autonomy and justice that have been shown to significantly influence numerous dimensions of employees' job-related affect across multiple samples and studies. Based these studies and on our prior work, we hypothesize that autonomy and perceived workplace fairness are then associated with

emotional exhaustion and turnover intention. Finally, we examine whether there is still a significant direct association between supervision and these dependent variables, net of autonomy, procedural justice, and distributive justice.

Consistent with the argument about mediating variables posited by Baron and Kenny (1986), we first estimate a preliminary model to establish whether there are direct associations between clinical supervision and the two dependent variables, emotional exhaustion and turnover intention. Then we use structural equation modeling to test the hypothesized relationships presented in Figure 1. Although not pictured in Figure 1, the model estimates the associations of the control variables on the mediating variables and the two dependent variables.

2. Methods

2.1. Sample

The Clinical Trials Network, a research initiative sponsored by the National Institute on Drug Abuse, is a collaborative endeavor between researchers and practitioners that tests the effectiveness of substance abuse treatment techniques via multi-site clinical trials in community-based treatment settings (Hanson Leshner, & Tai, 2002; NIDA, 2002). The CTN comprises a number of geographically dispersed research nodes, with each node consisting of a university-based research center and multiple community-based treatment programs (Saxon & McCarty 2005). The counselors working in these “community treatment programs” (CTPs) represent the population included in the present research.

At the time of data collection in 2002, the CTN included 109 treatment agencies, and embedded within these were 262 CTPs that were directly involved in CTN-related activities. Definition of what constituted a CTP was left up to each of the provider agencies. In some agencies, CTPs were equivalent to service delivery units; in others, they were physical facility locations. For the most part, each CTP represented a cost center within the larger agency – that is, each CTP had a discrete budget and an administrator who was accountable for the program’s expenditures and revenues. To be eligible for this study, CTPs were required to provide a minimum level of care at least equivalent to ASAM-defined outpatient services. CTPs that were dedicated to prevention/education/outreach services, correctional services, or assessment services were not included in the sample as these programs were unlikely to have direct involvement in CTN-related research protocols.

Face-to-face interviews were conducted with the administrator and/or clinical director of each CTP in order to collect information about organizational structure and service delivery. During the study period, administrators of 240 CTPs were interviewed, representing a response rate of 91.6% of all CTN-affiliated treatment programs eligible for inclusion in this study. At the end of the interview, respondents were asked to compile a list of counselors at the program who provide direct services to substance abuse clients. All listed counselors were mailed a paper-and-pencil questionnaire and an informed consent form at the CTP’s mailing address. Counselors who completed and returned the questionnaire received a \$40 incentive payment. These counselor-level data are the focus of these analyses. A total of 1,643 questionnaires were mailed and 1,001 were returned, yielding a response rate of 60.9%. This rate of participation is similar to an earlier study of counselors conducted in 1997–1998 at privately funded treatment facilities (Knudsen et al., 2003) as well as recent studies of clinicians (Forman et al., 2001; Thomas et al., 2003). The University of Georgia’s Institutional Review Board approved this research design.

2.2. Measures

Two dependent variables were of interest: *emotional exhaustion* and *turnover intention*. Emotional exhaustion was measured using the nine item subscale from the Maslach Burnout Inventory (Maslach and Jackson 1981, 1986). Responses ranged from 1 (not at all true) to 7 (definitely true), with greater values indicating greater emotional exhaustion. The wording of these items and all other scale items appear in Table 1. Four items, adapted from Walsh, Ashford and Hill (1985), were used to measure turnover intention; these items also used a seven-point Likert response format (1 = strongly disagree, 7 = strongly agree).

The items measuring *clinical supervision* were adapted from two sources; five items were drawn from Efstation, Patton, and Kardash (1990) and seven items were included from Rahim (1988). Generally speaking, these items measured the perceived competence of the clinical supervisor and the receipt of instrumental assistance from this person. All items used a seven-point Likert response format that ranged from 1 (strongly disagree) to 7 (strongly agree). Preliminary analyses (not shown) indicated that these items, while drawn from two sources, represent a single factor.

Job autonomy was measured by three items adapted from Pritchard and Karasek (1973), while the measures of *procedural justice* and *distributive justice* are from Niehoff and Moorman (1993). All items for these three constructs used a seven-point Likert response format that ranged from 1 (strongly disagree) to 7 (strongly agree).

Control variables include *gender* (1 = female, 0 = male), *racial/ethnic minority* (1 = minority, 0 = white), *age* in years, *personal recovery status* (1 = recovering, 0 = not recovering), *Master's-level degree* (1 = Master's level degree or higher, 0 = less than Master's level degree), *tenure* at the CTP in years, *salary* (nine categories ranging from 1 = less than \$15,000 to 9 = greater than \$50,000), number of clients in the counselor's *caseload*, and *work hours* per week.

2.3. Analysis

The proposed model is a fully saturated model that includes both direct and indirect effects between clinical supervision, turnover intention, and emotional exhaustion. The model assumes there are correlations between autonomy and the two forms of justice as well as a relationship between emotional exhaustion and turnover intention. Finally, the control variables are entered as predictors of the mediating and dependent variables.

This model was tested via structural equation modeling, using the Mplus 4.21 software (Muthen & Muthen, 2004). Structural equation modeling simultaneously estimates a measurement model of latent variables and the hypothesized relationships between the latent variables. The measurement model is based on the shared variance between individual items, which has the advantage of parceling out the error components from the items. The result is an unobserved measure that is more reliable and valid. Some residual errors within constructs were allowed to be correlated in order to improve model fit. Using these unobserved measures, Mplus estimates the relationships between latent variables as well as observed control variables. This software produces measures of overall model fit, estimates of the hypothesized associations (unstandardized and standardized coefficients, standard errors, and t-tests), and measures of the proportion of variance explained for endogenous variable. We used Hu and Bentler's (1999) recommendations about model fit, assuming good fit when the Tucker-Lewis Index (TLI) and Comparative Fit Index (CFI) both exceed .95, the root mean square error of approximation (RMSEA) was less than .05, and the standardized root mean square residual was less than .08. Finally, Mplus calculates the total effects of exogenous variables on the endogenous variables based on the direct and indirect effects. Listwise deletion was used for the analysis, resulting in final sample size of 823 counselors.

3. Results

3.1. Sample Description

The sample was predominantly female (69.1%) with a substantial proportion of counselors being of a racial or ethnic minority background (40.9%). The average counselor was 43.87 years old ($SD = 11.63$). About 48.1% of the counselors reported having a Master's-level degree (or higher) and 42.3% were personally in recovery from substance abuse. On average, counselors had worked 5.20 years at the CTP ($SD = 5.24$) and earned between \$25,000 and \$35,000 per year. The average counselor worked 38.78 hours per week ($SD = 9.08$) and reported a current caseload of 26.08 clients ($SD = 22.18$).

These demographic characteristics were largely consistent with the average counselor characteristics reported by program administrators in the face-to-face interviews. In the average CTP, 61.2% of the counselors were women, 36.1% were racial/ethnic minorities, 43.1% held a Master's-level degree or higher, 43.6% were certified in addictions counseling, and 43.1% of counselors were in recovery from substance abuse. While the characteristics of the CTN vary somewhat from the US treatment system as a whole, the characteristics of counselors included in these analyses reasonably approximate those of the specific population they are designed to represent.

3.2. Preliminary Analyses

Prior to estimating the model presented in Figure 1, we estimated a structural equation model to determine whether there were direct relationships between clinical supervision and the two dependent variables, net of the control variables, while excluding the proposed mediating variables. This simple model fit the data well ($TLI = .956$, $CFI = .950$, $RMSEA = .043$, $SRMR = .041$), although the chi-square test was significant because the sample size is large ($\chi^2 = 1184.24$, $df = 456$, $p < .001$). There was a significant direct association between clinical supervision and emotional exhaustion ($\beta = -.215$, $p < .001$). In addition, clinical supervision was negatively associated with turnover intention ($\beta = -.365$, $p < .001$). This preliminary analysis indicated that it was appropriate to test the more complex model (Figure 1).

In addition, we conducted an exploratory factor analysis using principal components and varimax rotation to determine whether the items loaded on their respective factors without loading on multiple factors (not shown). This exploratory factor analysis indicated that the items loaded on six factors as expected, with none of the items loading on more than one factor.

3.3. Structural Equation Model of Turnover Intention

Overall, the model shown in Figure 1 fit the data well. The TLI and CFI were .956 and .950, respectively. In addition, the $RMSEA$ was .037 and the $SRMR$ was .041, indicating good model fit. Given the large sample size, it was not surprising that the chi-square test was significant ($\chi^2 = 1873.64$, $df = 878$, $p < .001$). Table 1 presents the factor loadings from the confirmatory factor analysis that was estimated as part of the structural equation model. All items had loadings exceeding .50 and loaded significantly on their intended factors as expected.

The results of the model suggest that clinical supervision's direct associations with turnover intention and emotional exhaustion are completely mediated by autonomy, distributive justice, and procedural justice. After including these measures, clinical supervision was no longer directly associated with the two dependent variables.

As hypothesized, clinical supervision was strongly associated with the measures of autonomy, procedural justice, and distributive justice, net of the control variables. The perceived quality of clinical supervision was positively associated with perceptions regarding the amount of

autonomy the counselor had in performing his or her job ($\beta = .426, p < .001$). In addition, higher quality clinical supervision was positively associated with perceptions of procedural justice ($\beta = .536, p < .001$) and distributive justice ($\beta = .398, p < .001$). These findings suggest that perceptions about the quality of clinical supervision translate into counselors' evaluations of decision latitude and fairness in the workplace. Clinical supervision and the control variables explained considerable proportions of the variance for autonomy (19.7%), procedural justice (30.5%), and distributive justice (20.4%).

These measures of power and justice were significantly associated with both emotional exhaustion and turnover intention. Greater autonomy ($\beta = -.224, p < .001$), distributive justice ($\beta = -.298, p < .001$), and procedural justice ($\beta = -.136, p < .05$) were associated with lower emotional exhaustion. Likewise, job autonomy ($\beta = -.162, p < .001$), distributive justice ($\beta = -.282, p < .001$), and procedural justice ($\beta = -.246, p < .001$) had significant negative associations with turnover intention.

The model also included associations between the control variables and the mediating variables, emotional exhaustion, and turnover intention. In general, the control variables were not associated with the mediating and dependent variables; just eight of the 45 associations were significant. Tenure was positively associated with job autonomy ($\beta = .083, p < .05$). Older counselors ($\beta = .136, p < .001$) and those earning higher salaries ($\beta = .130, p < .001$) reported greater distributive justice, while work hours was negatively associated with this type of justice ($\beta = -.121, p < .001$). None of the control variables were associated with procedural justice. Age was negatively associated with emotional exhaustion ($\beta = -.105, p < .01$) while the association for salary was positive ($\beta = .072, p < .05$). For turnover intention, the only significant associations were for age ($\beta = -.102, p < .01$) and tenure ($\beta = -.165, p < .001$).

The model explained about 30.8% of the variance in emotional exhaustion and 45.9% of the variance in turnover intention. As expected, there was a significant correlation between these two variables ($\beta = .272, p < .001$). Overall, the indirect effects of clinical supervision on emotional exhaustion ($\beta = -.287, p < .001$) and turnover intention ($\beta = -.313, p < .001$) were of considerable magnitude. The total effects of clinical supervision, which combine direct and indirect effects, were $-.210$ for emotional exhaustion ($p < .001$) and $-.369$ for turnover intention ($p < .001$).

4. Discussion

Recent literature and policy concerns underline the problematic extent of counselor turnover in substance abuse treatment (Annapolis Coalition, 2007; Whitter et al., 2006). A conceptually related and costly feature of counselors' careers is emotional exhaustion, which research has repeatedly found to be linked to turnover intention. Understanding how organizations can address these issues has the potential to direct quality improvement efforts while also improving counselor well-being.

An understudied issue in the emerging counselor turnover literature has been the role of clinical supervision, although there has been recognition that it likely is consequential in the work lives of counselors. Consistent with other studies documenting the value of supervisor support in general (Smith, 2005) and clinical supervision for reducing emotional exhaustion among nurses (Edwards et al., 2006), we initially found that clinical supervision was negatively associated with both emotional exhaustion and turnover intention, suggesting it plays a protective role in counselor well-being. These correlations were of considerable magnitude and highly significant, suggesting that there was value in considering further what variables accounted for these relationships.

The structural equation model of emotional exhaustion and turnover intention suggested that the association between clinical supervision and these variables was explained by autonomy, procedural justice, and distributive justice. In effect, autonomy and the two forms of justice appear to be mechanisms through which the benefits of clinical supervision operate, completely mediating supervision's associations with emotional exhaustion and turnover intention. Counselors' relationships with their supervisors appear to have implications for the extent to which they perceived that they are empowered to make decisions about job performance, that tasks and rewards are fairly distributed within the organization, and that the procedures for organizational decision-making are fair. In turn, these perceptions about autonomy and justice were linked to both emotional exhaustion and turnover intention. To summarize, the model presented in Figure 1 was largely supported with the exception of direct paths from clinical supervision to the two dependent variables.

Several limitations must be acknowledged. First, these analyses are based on cross-sectional data, so causality cannot be established. Other longitudinal research has documented a causal order in which perceptions of supervisor support then lead to perceptions about the organization as a whole and subsequently turnover (Eisenberger et al., 2002), lending some credence to the order of variables in our model. However, research is needed that examines these relationships using a panel longitudinal design so that the causal ordering can be fully established. An added benefit of such a design would be that actual turnover could be included in the model.

Second, these data are not drawn from a nationally representative sample, but rather are data collected from counselors employed by centers affiliated with NIDA's Clinical Trials Network. In previous research, we have found that there are some demographic differences, such as differences in educational attainment, between counselors employed by CTN-affiliated programs and those in nationally representative samples of programs (Knudsen, Ducharme, & Roman, 2007). However, demographic variables generally were not related to the measures in the model, so the bias introduced by using these data is likely limited. In addition, there is always the potential that bias may be introduced by non-response. Complete data on all measures were available from about half of the counselors who were originally mailed the questionnaire. A comparison of the demographic characteristics of counselors who provided complete data was similar to the reports of counselor characteristics by administrators of these programs, which increased our confidence in our results.

Finally, our measure of clinical supervision was largely focused on the expertise and skills of the supervisor in helping counselors address work-related challenges. This focus is analogous to the concept of instrumental social support in the larger literature on work stress (Ducharme & Martin, 2000). Instrumental support is largely about assisting in job performance rather than in providing affective or emotional support. It may indeed be the case that part of the value of clinical supervision is that it conveys emotional support to counselors. Such emotional support may be conveyed by the creation of a "safe space" to discuss emotionally challenging issues during supervisory sessions. The process of clinical supervision may also encourage counselors to engage in self-reflection, which may be beneficial. Our data are unable to capture these additional dimensions of the supervisory relationship, but these are important issues for future research.

Moreover, the measures employed in this study are based entirely on counselors' perceptions of their supervisors' skills and assistance. Future research would benefit by including objective measures of supervisor training, performance, and distinct facets of support provided, so that the relative contributions of instrumental and affective social support on burnout and turnover might be estimated, and appropriate workplace interventions could be designed and delivered.

This research offers empirical support for recent discussions about the importance of clinical supervision within addiction treatment organizations. The findings about how it is related to emotional exhaustion and turnover intention suggest that both organizations and counselors may benefit from efforts to improve the extent and quality of clinical supervision. While these data show that counselors' perceptions of justice are linked to the supervisory relationship, we need a better understanding of how this works. It may be that the supervisory relationship works to enrich the counselors' ongoing experience on the job or the supervisory relationship may bond the counselor closer to the organization, thus moderating sensitivities to perceived injustices. Clearly, additional studies are warranted to further elucidate these relationships, but these findings suggest that clinical supervision is one important element in potentially stabilizing the treatment workforce.

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References

- Adams, JS. Inequity in social exchange. In: Berkowitz, L., editor. *Advances in experimental social psychology*. Vol. vol. 2. New York: Academic Press; 1965. p. 267-299.
- Alexander JA, Bloom JR, Nuchols BA. Nursing turnover and hospital efficiency: An organization-level analysis. *Industrial Relations* 1994;33:505–520.
- Annapolis Coalition on the Behavioral Health Workforce. An action plan for behavioral health workforce development. Cincinnati, OH: Annapolis Coalition; 2007.
- Bakker AB, Schaufeli W, Sixma HJ, Bosveld W. Burnout contagion among general practitioners. *Journal of Social and Clinical Psychology* 2001;20:82–98.
- Barak MEM, Nissly JA, Levin A. Antecedents to retention and turnover among child welfare, social work, and other human service employees: What can we learn from past research? A review and meta-analysis. *Social Service Review* 2001;75:625–661.
- Baron RM, Kenny DA. The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology* 1986;51:1173–1182. [PubMed: 3806354]
- Blankertz LE, Robinson SE. Turnover intentions of community mental health workers in psychosocial rehabilitation services. *Community Mental Health Journal* 1997;33:517–529. [PubMed: 9435998]
- Carroll KM, Rounsaville BJ. A vision of the next generation of behavioral therapies research in the addictions. *Addiction* 2007;102:850–862. [PubMed: 17523974]
- Center for Substance Abuse Treatment. Technical Assistance Publication (TAP) Series 21-A. DHHS Publication No. (SMA) 07-4243. Rockville, MD: Substance Abuse and Mental Health Services Administration; 2007. Competencies for Substance Abuse Treatment Clinical Supervisors.
- Cherniss, C. *Professional burnout in human service organizations*. New York: Praeger; 1980.
- Clegg A. Organizational stress in nursing: A review of the literature. *Journal of Nursing Management* 2001;9:101–106. [PubMed: 11879452]
- Cohen-Charash Y, Spector PE. The role of justice in organizations: A meta-analysis. *Organizational Behavior and Human Decision Processes* 2001;86:278–321.
- Colquitt JA, Conlon DE, Wesson MJ, Porter COLH, Ng KY. Justice at the millennium: A meta-analytic review of 25 years of organizational justice research. *Journal of Applied Psychology* 2001;86:425–445. [PubMed: 11419803]
- Cropanzano, R.; Goldman, BM.; Benson, L, III. Organizational justice. In: Barling, J.; Kelloway, EK.; Frone, MR., editors. *Handbook of Work Stress*. Thousand Oaks, CA: Sage; 2005. p. 63-87.
- Cropanzano R, Rupp DE, Byrne ZS. The relationship of emotional exhaustion to work attitudes, job performance, and organizational citizenship behaviors. *Journal of Applied Psychology* 2003;88:160–169. [PubMed: 12675403]

- Ducharme LJ, Knudsen HK, Roman PM. Emotional exhaustion and turnover intention in human service occupations: The protective role of coworker support. *Sociological Spectrum* 2008;28:81–104.
- Ducharme LJ, Martin JK. Unrewarding work, coworker support, and job satisfaction: A test of the buffering hypothesis. *Work and Occupations* 2000;27:223–243.
- Edwards D, Burnard P, Hannigan B, Cooper L, Adams J, Juggessur T, Fothergil A, Coyle D. Clinical supervision and burnout: The influence of clinical supervision for community mental health nurses. *Journal of Clinical Nursing* 2006;15:1007–1015. [PubMed: 16879545]
- Efstation JF, Patton MJ, Kardash CAM. Measuring the working alliance in counselor supervision. *Journal of Counseling Psychology* 1990;37:322–329.
- Eisenberger R, Stinglhamber F, Vandenberghe C, Sucharski IL, Rhodes L. Perceived supervisor support: Contributions to perceived organizational support and employee retention. *Journal of Applied Psychology* 2002;87:565–573. [PubMed: 12090614]
- Forman RF, Bovasso G, Woody G. Staff beliefs about addiction treatment. *Journal of Substance Abuse Treatment* 2001;21:1–9. [PubMed: 11516921]
- Gallon SL, Gabriel RM, Knudsen JRW. The toughest job you'll ever love: A pacific northwest treatment workforce survey. *Journal of Substance Abuse Treatment* 2003;24:183–196. [PubMed: 12810139]
- Griffeth RW, Hom PW, Gaertner S. A meta-analysis of antecedents and correlates of employee turnover: Update, moderator tests, and research implications for the next millennium. *Journal of Management* 2000;26:463–488.
- Halbesleben JRB, Buckley MR. Burnout in organizational life. *Journal of Management* 2004;30:859–879.
- Hanson GR, Leshner AI, Tai B. Putting drug abuse research to use in real-life settings. *Journal of Substance Abuse Treatment* 2002;23:69–70. [PubMed: 12220602]
- Hser YI. Drug treatment counselor practices and effectiveness: An examination of literature and relevant issues in a multilevel framework. *Evaluation Review* 1995;19:389–408.
- Hu L, Bentler PM. Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling* 6(1):1–55.
- Karasek, R.; Theorell, T. *Healthy Work: Stress, Productivity and the Reconstruction of Working Life*. New York: Basic Books; 1990.
- Knudsen HK, Ducharme LJ, Roman PM. Research network involvement and addiction treatment center staff: Counselor attitudes toward buprenorphine. *The American Journal on Addictions* 2007;16:365–371. [PubMed: 17882607]
- Knudsen HK, Ducharme LJ, Roman PM. Counselor emotional exhaustion and turnover intention in therapeutic communities. *Journal of Substance Abuse Treatment* 2006;31:173–180. [PubMed: 16919745]
- Knudsen HK, Johnson JA, Roman PM. Retaining counseling staff at substance abuse treatment centers: Effects of management practices. *Journal of Substance Abuse Treatment* 2003;24:129–135. [PubMed: 12745030]
- Kozlowski S, Doherty M. Integration of climate and leadership: Examination of a neglected issue. *Journal of Applied Psychology* 1989;74:546–553.
- Lee J. Leader-member exchange, perceived organizational justice, and cooperative communication. *Management Communication Quarterly* 2001;14:574–589.
- Lee RT, Ashforth BE. A meta-analytic examination of the correlates of the three dimensions of job burnout. *Journal of Applied Psychology* 1996;81:123–133. [PubMed: 8603909]
- Leventhal, GS. What should be done with equity theory?. In: Gergen, KJ.; Greenberg, S.; Willis, RH., editors. *Social exchange: Advances in theory and research*. New York: Plenum; 1980. p. 25-55.
- Maertz CP, Griffeth RW, Campbell NS, Allen DG. The effects of perceived organizational support and perceived supervisor support on employee turnover. *Journal of Organizational Behavior* 2007;28:1059–1075.
- Maslach C, Jackson SE. The measurement of experienced burnout. *Journal of Occupational Behavior* 1981;2:99–113.
- Maslach, C.; Jackson, SE. *Maslach burnout inventory manual*. Vol. 2nd ed.. Palo Alto, CA: Consulting Psychologists Press; 1986.

- Maslach C, Schaufeli WB, Leiter MP. Job burnout. *Annual Review of Psychology* 2001;52:397–422.
- McLellan AT, Carise D, Kleber HD. Can the national addiction treatment infrastructure support the public's demand for quality care? *Journal of Substance Abuse Treatment* 2003;25:117–121. [PubMed: 14680015]
- Melamed S, Shirom A, Toker S, Berliner S, Shapira I. Burnout and the risk of cardiovascular disease: Evidence, possible causal paths, and promising research directions. *Psychological Bulletin* 2006;132:327–353. [PubMed: 16719565]
- Muthen, LK.; Muthen, BO. Mplus user's guide. Vol. 3rd ed.. Los Angeles: Muthen & Muthen; 2004.
- National Institute on Drug Abuse (NIDA). National Drug Treatment Clinical Trials Network. 2002. http://www.nida.nih.gov/CTN/brochures/2003CTN_br.pdf
- Niehoff BP, Moorman RH. Justice as a mediator of the relationship between methods of monitoring and organizational citizenship behavior. *Academy of Management Journal* 1993;36:527–556.
- O'Driscoll MP, Beehr TA. Supervisor behaviors, role stressors and uncertainty as predictors of personal outcomes for subordinates. *Journal of Organizational Behavior* 1994;15:141–155.
- Pritchard RD, Karasek BW. The effects of organizational climate on managerial job performance and job satisfaction. *Organizational Behavior and Human Performance* 1973;9:126–146.
- Rahim MA. The development of a leader power inventory. *Multivariate Behavioral Research* 1988;23:491–503.
- Saxon AJ, McCarty D. Challenges in the adoption of new pharmacotherapies for addiction to alcohol and other drugs. *Pharmacology & Therapeutics* 2005;108:119–128. [PubMed: 16055196]
- Schaufeli WB, Taris TW. The conceptualization and measurement of burnout: Common grounds and worlds apart. *Work & Stress* 2005;19:256–262.
- Schaufeli WB, Van Dierendonck D, Van Gorp K. Burnout and reciprocity: Towards a dual-level social exchange model. *Work & Stress* 1996;10:225–237.
- Shanock LR, Eisenberger R. When supervisors feel supported: Relationships with subordinates' perceived supervisor support, perceived organizational support, and performance. *Journal of Applied Psychology* 2006;91:689–695. [PubMed: 16737364]
- Smith BD. Job retention in child welfare: Effects of perceived organizational support, supervisor support, and intrinsic job value. *Child and Youth Services Review* 2005;27:153–169.
- Stinglhamer F, Vandenberghe C. Organizations and supervisors as sources of support and targets of commitment: A longitudinal study. *Journal of Organizational Behavior* 2003;24:251–270.
- Taris TW. Is there a relationship between burnout and objective performance? A critical review of 16 studies. *Work & Stress* 2006;20:316–334.
- Thomas CP, Wallack SS, Lee S, McCarty D, Swift R. Research to practice: adoption of naltrexone in alcoholism treatment. *Journal of Substance Abuse Treatment* 2003;24:1–11. [PubMed: 12646325]
- Van Dierendonck D, Schaufeli WB, Buunk BP. Burnout and inequity among human service professionals: A longitudinal study. *Journal of Occupational Health Psychology* 2001;6:43–52. [PubMed: 11199256]
- Walsh JP, Ashford SJ, Hill TE. Feedback obstruction: The influence of the information environment on employee turnover intentions. *Human Relations* 1985;38:23–36.
- Whitter, M.; Bell, EL.; Gaumond, P.; Gwaltney, M.; Magana, CA.; Moreaux, M. Strengthening professional identity: Challenges of the addiction treatment workforce. 2006 [Accessed on July 23, 2007]. <http://www.samhsa.gov/Workforce/WorkforceFinalReport.pdf>.
- Wright TA, Cropanzano R. Emotional exhaustion as a predictor of job performance and voluntary turnover. *Journal of Applied Psychology* 1998;83:486–493. [PubMed: 9648526]

Figure 1. Hypothesized Model of Emotional Exhaustion and Turnover Intention

Note: Although not pictured, the model includes the associations of the control variables on the mediating variables and the two dependent variables.

Figure 2. Structural Equation Model of Emotional Exhaustion and Turnover Intention

Note: Only significant paths shown. * $p < .05$, ** $p < .01$, *** $p < .001$ (two-tailed test). Although not pictured, the model includes the associations of the control variables on the mediating variables and the two dependent variables.

Table 1**Confirmatory Factor Model**

Item Wording	Factor Loading
<i>Turnover Intention</i>	
As soon as I can find a better job, I will leave this center.	.869
I am actively looking for a job at another center.	.772
I am seriously thinking of quitting my job.	.732
I think I will be working for this center five years from now. (reverse-coded)	.650
<i>Emotional Exhaustion</i>	
I feel emotionally drained from my work.	.746
I feel fatigued when I get up in the morning and have to face another day on the job.	.774
Working with people all day is really a strain for me.	.639
I feel burned out from my work.	.867
Working directly with people puts too much stress on me.	.602
I feel frustrated by my job.	.798
I feel used up at the end of the workday.	.833
I feel I'm working too hard on my job.	.709
I feel like I'm at the end of my rope.	.749
<i>Job Autonomy</i>	
I have sufficient authority to fulfill my job responsibilities.	.787
I have enough freedom over how I do my job.	.860
I have enough authority to make decisions necessary to provide quality treatment service.	.886
<i>Procedural Justice</i>	
The center's management makes sure that employee concerns are heard before decisions are made.	.866
Job decisions are applied consistently across all affected employees.	.782
Employees are allowed to challenge or appeal job decisions that are made by managers.	.759
Rank and file employees are involved in making decisions about how work is done.	.735
When decisions are made, all the people who will be affected are asked for their ideas.	.863
<i>Distributive Justice</i>	
Where you work, the amount of pay employees receive is distributed fairly.	.715
Employees receive an amount of fringe benefits that is fair.	.689
The workload at this center is fairly distributed.	.740
The overall rewards workers receive are fairly distributed.	.884
<i>Clinical Supervision</i>	
My supervisor encourages me to take time to understand what the client is saying and doing.	.710
When correcting my errors with a client, my supervisor offers alternative ways of intervening with that client.	.754
My supervisor helps me work within a specific treatment plan with my clients.	.694
My supervisor helps me stay on track during our meetings.	.672
I work with my supervisor on specific goals in the supervisory session.	.710

Item Wording	Factor Loading
My supervisor can give me sound advice on strategies or policies because he/she has special expertise in substance abuse treatment.	.909
I approach my supervisor for advice on work-related problems because he/she is usually right.	.874
When a tough client or case comes up, my supervisor has the technical “know how” to address the problem.	.920
My supervisor has specialized training in his/her field.	.853
My supervisor lacks the knowledge needed to assist me in performing my job. (reverse-coded)	.525
I prefer to do what my supervisor suggests because he/she has high professional expertise.	.787
My supervisor has considerable professional experience to draw from in helping me do my work.	.863