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The relationship between perceptions of organizational functioning and voluntary counselor turnover: A four-wave longitudinal study

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Abstract

Using data from a nationwide study, we annually track a cohort of 598 substance use disorder counselors over a 4-wave period to (1) document the cumulative rates of voluntary turnover and (2) examine how counselor perceptions of the organizational environment (procedural justice, distributive justice, perceived organizational support, job satisfaction) and clinical supervisor leadership effectiveness (relationship quality, in-role performance, extra-role performance) predict voluntary turnover over time. Survey data were collected from counselors in year 1 and actual turnover data were collected from organizational records in year 2, 3, and 4. Findings reveal that 25% of the original counselors turned over by year 2, 39% by year 3, and 47% by year 4. Counselors with more favorable perceptions of the organizational environment are between 13.8% – 22.8% less likely to turn over than those with less favorable perceptions. None of the leadership effectiveness variables are significant.

Keywords

voluntary turnover; clinical supervisor-counselor interactions; organizational functioning; leadership; longitudinal data

1. Introduction

Voluntary organizational turnover is frequently discussed as a major concern in substance use disorder (SUD) treatment, because it has detrimental effects on patient care (Ducharme, Knudsen, & Roman, 2008) and staff morale (Johnson & Roman, 2002). Turnover also incurs a financial cost in terms of the recruitment, selection, and training of new staff (Alexander, Bloom & Nuchols, 1994). This can put demands on human resource management systems that are typically stretched thin in the SUD field to start with.

Notwithstanding the importance of understanding counselor turnover, most research examines counselors' organizational turnover intentions rather than actual turnover (e.g., Ducharme et al., 2008; Knudsen, Ducharme, & Roman, 2007; Knudsen, Johnson, & Roman,

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2003). While informative, this research places limits on our understanding of the turnover process, because counselors may express a desire to leave their treatment organization yet fail to do so for various reasons. This may include difficulty finding work (Kammeyer-Mueller, Wanberg, Glomb, & Ahlburg, 2005), concerns about losses incurred by leaving one's current job (e.g., loss of health benefits) (Mitchell, Holtom, Lee, Sablynski, & Erez, 2001), or not wanting to leave one's community (Lee, Mitchell, Sablynski, Burton, & Holtom, 2004). In fact, meta-analytic research finds that the corrected correlation between turnover intentions and voluntary turnover is only .45 (Tett & Meyer, 1993). This highlights the importance of studying actual turnover to more fully understand the turnover process.

The current study uses four waves of data collected from counselors across the United States to address two main objectives. First, we provide the first multi-wave longitudinal examination of SUD counselor turnover. This allows us to build on and extend Eby, Burk, and Maher's (2010) recent study on annual turnover rates among SUD counselors. In this study, we follow a cohort of SUD counselors to ascertain just how much voluntary turnover occurs over a 3 year period, allowing us to determine the cumulative effects of turnover over an extended period of time. Second, we examine how counselors' perceptions of the organizational environment and perceived leadership effectiveness (i.e., clinical supervisor-counselor interactions) at year 1 predict turnover over the next 3 years. Doing so provides the first empirical investigation of how SUD counselors' perceptions of organizational functioning and leadership effectiveness predict turnover over three subsequent years.

1.1. What do we know about actual counselor turnover rates in SUD treatment centers?

Estimates of the annual turnover rate among SUD counselors vary widely, making it difficult to render definitive conclusions about counselor turnover. For example, estimated annual counselor turnover ranges from a low of 16% (McNulty, Oser, Johnson, Knudsen, & Roman, 2007) to a high of 50% (McLellan, Carise, & Kleber, 2003). These discrepancies may be due to differences in how turnover rates are estimated, different definitions of what constitutes turnover, idiosyncratic samples, and low response rates (see Carise, McLellan, Gifford, & Kleber, 1999; McLellan et al.; McNulty et al.).

The one study that provides detailed information on actual counselor turnover rates measured turnover over a 1 year time period (Eby et al., 2010). While this study offers valuable information, it provides only a snapshot of counselor turnover. Our 4-wave longitudinal design allows us to annually track the turnover patterns of the same cohort of counselors over 3 years and identify whether voluntary turnover rates are stable over time, increase, or decrease over time as counselors become more embedded in their organizations. We pose the following research question: How much voluntary counselor turnover occurs annually over 3 years in SUD treatment programs?

1.2. What predicts actual voluntary turnover among SUD counselors?

Although there is considerable research on the predictors of voluntary turnover in other occupations, we are only aware of two published studies that focus on the SUD treatment workforce (Knight, Broome, Edwards, & Flynn, 2009; McNulty et al., 2007). However, neither study examined individual-level predictors in relation to individual-level turnover. McNulty and colleagues found that the average levels of participatory management and organizational commitment reported by counselors (aggregated to the organization level) were related to lower voluntary turnover at the organizational level. They also found that various center characteristics, workforce characteristics, and the percent of managed care referrals predicted organization-level turnover. Knight and colleagues (2011) also examined the predictors of organization-level turnover, focusing specifically on turnover among clinical supervisors. Their results indicated differences in turnover by region, ownership,

organizational characteristics, and average job attitudes of program directors and staff (aggregated to the organization level). The current study extends existing organization-level turnover research by focusing on two sets of individual-level predictors of individual counselor turnover: perceptions of the organizational environment and perceptions of leadership effectiveness.

1.2.1. Perceptions of the organizational environment—SUD treatment programs often run on shoestring budgets and have limited discretionary capital. This is because many programs rely on state and federal funding, which has not kept pace with demand in recent years. Low pay relative to other healthcare professions (Bureau of Labor Statistics, 2010) and limited opportunity for professional development (Gallon, Gabriel, & Knudsen, 2003) further characterize the profession. Moreover, SUD counselors are susceptible to burnout given the challenging nature of the job (Garner, Knight, & Simpson, 2007). Many patients reluctantly enter treatment (Stanton, 2004) and drop out soon after entry (Craig, 1985). This likely contributes to feelings of burnout and may reduce counselors' task self-efficacy.

Taken together, these unique aspects of the SUD treatment profession may make perceptions of fair organizational treatment particularly salient to counselors. This includes perceptions of distributive justice (i.e., the fairness of outcome distributions or allocations) and procedural justice (i.e., the fairness of the procedures used to determine outcomes) (Colquitt, Conlon, Wesson, Porter, & Ng, 2001). Moreover, feeling genuinely cared for, valued, and supported by the organization may help offset turnover by meeting needs for approval, esteem and community at work (Eisenberger, Huntington, Hutchison, & Sowa, 1986). Finally, job satisfaction may be an important predictor of turnover (Tett & Meyer, 1993), because feeling a sense of accomplishment and enjoyment at work may keep counselors in jobs that are otherwise less desirable (i.e., lower paying, higher workload). This leads us to predict: *Hypothesis 1: Perceptions of procedural and distributive justice at wave 1 will be negatively related to voluntary counselor turnover over the next 3 years. Hypothesis 2: Perceived organizational support at wave 1 will be negatively related to voluntary counselor turnover over the next 3 years. Hypothesis 3: Job satisfaction at wave 1 will be negatively related to voluntary counselor turnover over the next 3 years.*

1.2.2. Perceived leadership effectiveness—Historically, SUD professionals entered the field after recovering from SUDs themselves, often with limited formal education and without formal counseling training (White, 1998). However, in recent years more and more new entrants to the field have bachelor degrees (60% – 80%) and master degrees (50%) (Center for Substance Abuse Treatment/CSAT, 2003; Eby, McCleese, Baranik, & Owen, 2007). As a consequence, the SUD workforce is diverse in its background, education, and previous experience with SUDs. This has implications for the extent to which counselors may rely on clinical supervisors for on-the-job training, guidance, support, and professional development.

By contrast, clinical supervisors often have little formal educational training to prepare them for this important role (CSAT, 2007). Given the importance of supervision in terms of helping to prepare counselors for the many challenges facing them on the job, we expect that the quality of a counselor's relationship with his or her clinical supervisor, the supervisor's in-role job performance (i.e., task-related competence), and the supervisor's extra-role behavior (i.e., going above and beyond role expectations) will be important in predicting subsequent counselor turnover. This is consistent with the finding that supervisory relationship quality (e.g., Harris, Wheeler, & Kacmar, 2009) and workplace mentoring (Payne & Huffman, 1995) are negatively related to employee turnover. As such, we predict: *Hypothesis 4: Perceived relationship quality with one's clinical supervisor at wave 1 will be negatively related to voluntary counselor turnover over the next 3 years. Hypothesis 5:*

Perceptions of the clinical supervisor's job performance at wave 1 will be negatively related to voluntary counselor turnover over the next 3 years. Hypothesis 6: Perceptions of the clinical supervisor's extra-role behavior at wave 1 will be negatively related to voluntary counselor turnover over the next 3 years.

2. Materials and Methods

2.1. Study design

Longitudinal data were obtained from the Managing Effective Relationships in Treatment Services (MERITS I) project, which was funded by the National Institute on Drug Abuse (NIDA). Data collection for MERITS I began in 2007 with the main purpose of identifying counselor and clinical supervisors' work experiences in SUD treatment organizations. The project was carried out by researchers affiliated with the University of Georgia. Organizations are defined as relatively autonomous, free-standing operational units located in the community. Prison-based organizations, Veteran's Health Administration organizations, and driving-under-the-influence schools were excluded from eligibility.

Twenty-six organizations affiliated with NIDA's Clinical Trials Network (CTN) were recruited during formal presentations at the CTN's 2004 External Affairs Subcommittee Meeting and the Community Treatment Program Caucus. The majority of treatment organizations were free-standing units that were not located on a hospital campus (84.6%), non-profit entities (88.5%), accredited (69.2%), and non-government owned (96.2%). The average treatment center had 171.9 total full-time employees, 56.4 full-time counselors who carried a caseload and 9.5 clinical supervisors. On average, 37.5% of the clients were female, 9.6% were adolescents, and 48.2% were in treatment primarily for alcohol. These organizational characteristics are highly similar to research conducted using large, nationally representative samples (detailed comparative information is available upon request from the first author). Treatment organizations were also geographically dispersed across all major regions of the United States: 26% in the East, 11% in the Midwest, 26% in the South, and 37% in the West. Although we did not obtain a random sample of treatment programs, these comparisons, along with representation from all major regions of the United States, provide some assurance that our findings are not likely to be highly idiosyncratic. In terms of data collection, counselors completed paper and pencil surveys that were administered on site by trained research assistants. The response rate was over 80%. All procedures were approved by the University of Georgia's Institutional Review Board.

2.2. Sample

Data for this study were obtained from 598 counselors who completed surveys on the organizational environment and leadership effectiveness at wave 1. To be eligible to participate counselors had to have direct contact with patients in a therapeutic relationship. The majority of counselors were women (64%), not in recovery (62%), non-Hispanic White (60%), had no children living at home (60%), were not married (52%), and were certified SUD professionals (51%). Counselors were generally well-educated with 47% holding at least a master degree. On average, counselors were 42.95 years old, worked 44.37 hours per week, earned $33,671 per year, and worked for their center 4.40 years. A comparison of counselor characteristics from our sample to other published research using nationally representative samples indicated few differences. One notable difference was that our counselors tended to be less likely to be certified, but also less likely to personally be in recovery (detailed comparative information is available from the first author upon request). It is also worth noting that counselors employed in the CTN are highly similar to other counselors across the country (Knudsen et al., 2007).

2.3. Measures

2.3.1. Turnover status—At wave 1, SUD treatment organizations provided a list of all counselors who were employed at the time of data collection. At each yearly follow-up, representatives from each SUD treatment organization compiled information on the employment status of each counselor who had been employed the previous year. Employment status included whether the counselor was still employed at the organization or had left the organization. In the event that a counselor had turned over, representatives also noted whether the counselor had left voluntarily or involuntarily. For the purpose of this study, only counselors who completed baseline surveys and turned over voluntarily or remained employed at the organization are included in this study. As such, 74 counselors who completed surveys at wave 1 and left their organization involuntarily at any subsequent wave of data collection were removed from the dataset. Turnover information was provided by human resource directors (46%), the COO/VP or president (32%), clinical supervisors (16%), or executive assistants (5%) of the organizations. Organizations received $1,000 each year to off-set the time required for staff to gather the turnover data.

2.3.2. Organizational environment—Counselors' perceptions of the organizational environment were measured with four scales. *Distributive justice* was assessed with Moorman's (1991) 4-item scale (e.g., "I am fairly rewarded considering my responsibilities."). *Procedural justice* was measured using Niehoff and Moorman's (1991) 6-item scale (e.g., "Job decisions are made by center management in an unbiased manner."). *Perceived organizational support* was determined with Eisenberger, Cummings, Armeli, and Lynch's (1997) 8-item scale (e.g., "My organization cares about my opinions."). *Job satisfaction* was assessed using Smith's (1976) 6-item scale (e.g., "I enjoy nearly all the things I do in my job."). Response options for all scales ranged from 1 = *strongly disagree* to 5 = *strongly agree*. In terms of psychometric properties, all of these scales have been extensively used in previous research and are psychometrically sound. For example, a Web of Science search indicates that 775 studies have cited Eisenberger et al.'s (1986) original article introducing the construct of perceived organizational support. Likewise, 690 studies have cited Moorman's (1991) original article which developed and validated the above mentioned measure of distributive justice. In the present study coefficient alphas for these scales ranged from .80 to .94.

2.3.3. Leadership effectiveness—Counselors' perceptions of their clinical supervisors' leadership effectiveness were also measured with four scales. *Relationship quality* with the clinical supervisor was measured with Allen and Eby's (2003) 4-item scale (e.g., "The relationship between my clinical supervisor and I is very effective."). *Clinical supervisors' extra-role behaviors directed at individuals* were determined with Williams and Anderson's (1991) 7-item scale (e.g., "My clinical supervisor helps others who have heavy workloads."). *Clinical supervisors' extra-role behaviors directed at the organization* were measured using Williams and Anderson's (1991) 7-item scale (e.g., "My clinical supervisor gives advance notice when unable to come to work."). Response options for all three scales ranged from 1 = *strongly disagree* to 5 = *strongly agree. Clinical supervisors' in-role job performance* was determined with a 14-item scale developed for this study (e.g., "Provides feedback on my clinical work with individual patients."). Items were written using O*Net (http://online.onetcenter.org/) to identify core job performance tasks for clinical supervisors and with feedback from an advisory board of organization administrators serving as subject matter experts. Response options ranged from 1 = *very ineffective* to 4 = *very effective*.

The measures of relationship quality and organizational citizenship behavior have been used extensively and have reliability and validity evidence. Because the measure of in-role job performance was developed for this project, an exploratory factor analysis was conducted.

The results of this analysis provide strong validity evidence. Supporting our unidimensional conceptualization of clinical supervisor in-role job performance, the first eigenvalue was 11.59 with no other eigenvalues greater than 1.0, component loadings ranged from .81 to . 90, and no items had appreciable cross-loadings. This provides validity evidence for this newly developed measure. In addition, coefficient alphas for the leadership measures ranged from .81 to .98.

2.3.4. Control variables—Counselors noted their tenure in their current SUD treatment organization in years, gender (0 = *male*, 1 = *female*), race/ethnicity (0 = *racial/ethnic minority*, 1 = *non-Hispanic White*), and certification as SUD professional (0 = *not certified*, 1 = *certified*). These variables were selected as control variables so that we could draw conclusions about predictor-criterion relationships while holding counselor tenure, gender, race, and certification status constant.

2.4. Data analysis

Survival analyses with Cox regression were conducted to answer the research question and test the hypotheses using SPSS/PASW 18. Survival analysis estimates whether and when an *event* occurs over time. An event (i.e., turnover) occurs when a counselor leaves the treatment organization between follow-ups. A non-event (i.e., retention), in contrast, occurs when a counselor remains employed in the original treatment organization over time. Our analyses were right censored, which means that turnover was set to 1 and retention was set to 0. Time was treated as a discrete measure because the occurrence of events and non-events for all participants was measured at each annual follow-up. The control variables were included in the analyses.

3. Results

3.1. How much voluntary turnover occurs in SUD treatment programs over 3 years?

The survival analysis showed that voluntary turnover was 0% at wave 1, which represents the baseline starting point of the study. By wave 2, 25% of the original sample of counselors had turned over voluntarily. By wave 3, a total of 39% of counselors had voluntarily left their organizations. By wave 4, a total of 47% of counselors had voluntarily turned over.

3.2. Hypothesis 1: Perceptions of procedural and distributive justice at wave 1 will be negatively related to voluntary counselor turnover over the next 3 years

Hypothesis 1 was supported. Counselors with higher perceived procedural justice were 14.7% less likely to leave voluntarily over the next 3 years than other counselors. Similarly, counselors with higher perceived distributive justice were 18.2% less likely to leave voluntarily over the next 3 years than other counselors (see Table 1).

3.3. Hypothesis 2: Perceived organizational support at wave 1 will be negatively related to voluntary counselor turnover over the next 3 years

Hypothesis 2 was supported. Counselors with greater perceived organizational support were 13.8% less likely to voluntarily leave over the next 3 years than other counselors (see Table 1).

3.4. Hypothesis 3: Job satisfaction at wave 1 will be negatively related to voluntary counselor turnover over the next 3 years

Hypothesis 3 was also supported. Counselors with higher job satisfaction were 22.8% less likely to voluntarily leave the organization over the next 3 years than other counselors (see Table 1).

3.5. Hypothesis 4: Perceived relationship quality with one's clinical supervisor at wave 1 will be negatively related to voluntary counselor turnover over the next 3 years

Hypothesis 4 was not supported. Counselors with higher perceived relationship quality with their supervisors were not less likely to voluntarily leave the organization over the next 3 years than other counselors (see Table 1).

3.6. Hypothesis 5: Perceptions of the clinical supervisor's job performance at wave 1 will be negatively related to voluntary counselor turnover over the next 3 years

Hypothesis 5 was not supported. Counselors who reported higher clinical supervisor job performance were not less likely to voluntarily leave the organization over the next 3 years than other counselors (see Table 1).

3.7. Hypothesis 6: Perceptions of the clinical supervisor's extra-role behavior at wave 1 will be negatively related to voluntary counselor turnover over the next 3 years

Hypothesis 6 was not supported. Counselors who reported higher clinical supervisor extra-role behavior toward individuals were not less likely to voluntarily leave the organization over the next 3 years than other counselors. Likewise, counselors who reported higher clinical supervisor extra-role behavior toward the organizational level were not less likely to voluntarily leave the organization over the next 3 years than other counselors (see Table 1).

4. Discussion

This study is the first to systematically investigate actual turnover among counselors by annually tracking their turnover status over 3 subsequent waves of data collection. We also investigated whether counselors' perceptions of the organizational environment and leadership effectiveness at wave 1 (baseline) predicts subsequent turnover at waves 2, 3, and 4. Results show that among the cohort of counselors who completed surveys at wave 1, 47% of them voluntarily left over the duration of the study. Perceptions of the organizational environment predict subsequent turnover. Interestingly, only perceptions of the organizational environment predict subsequent turnover; none of the hypotheses regarding perceptions of leadership effectiveness are supported.

4.1. Extent of actual annual voluntary turnover over 4-waves

Almost half of the cohort of SUD counselors that we tracked over time turned over during the duration of the study. Of those who completed surveys at wave 1, 75% were still employed at wave 2, 61% were still employed at wave 3, and 53% were still employed at wave 4. Previous research has documented annual turnover rates among SUD counselors using a one year timeframe (Carise et al., 1999; Eby et al., 2010; Gallon et al., 2003; McLellan et al., 2003; McNulty et al., 2007). Our findings add to this literature by demonstrating that from year 1 to year 2 of data collection there was an initial spike in turnover, but after that the annual turnover rate among a stable cohort of counselors declined. The reasons for this are not completely clear. One explanation is that this could reflect declining economic conditions over time (i.e., fewer employment opportunities as the economy became increasingly unstable over the 4 years of data collection). It may also reflect the difficulty counselors have remaining in a field over time that is marked by low pay, professional stigma, and emotionally draining work.

4.2. Organizational environment, leadership effectiveness, and voluntary turnover over time

Our findings suggest that only perceptions of the organizational environment, most notably job satisfaction, but also perceptions of distributive justice, procedural justice, and perceived

organizational support are predictive of subsequent counselor turnover. Moreover, these organizational environment factors were stronger predictors of subsequent turnover than leadership effectiveness.

Existing meta-analytic research provides evidence-based suggestions for improving job satisfaction (Loher, Noe, Moeller, & Fitzgerald, 1985), justice perceptions (Cohen-Charash & Spector, 2001), and perceived organizational support (Rhoades & Eisenberger, 2002). These recommendations share an emphasis on creating a work environment where counselors have a voice in decision-making, freedom to make decisions regarding their daily work, receive frequent feedback on their performance, and get clear guidelines on work role expectations. Being able to develop skills on the job and work on a variety of different, challenging tasks is also important for creating favorable perceptions of the work environment. Specific practical suggestions to improve the work environment include employee task forces that are charged with identifying and proposing solutions to work-related problems, allowing counselors greater freedom in scheduling individual and group sessions, encouraging counselors to try new evidence-based approaches with patients and rewarding these behaviors with positive feedback and recognition, and conducting performance appraisals semi-annually, with an emphasis on helping counselors identify career goals and providing support for professional development.

Interestingly, our results do not find that counselors' perceptions of their supervisors' leadership effectiveness predict turnover over time. This is inconsistent with research on the positive effects of mentoring (Payne & Huffman, 2005) and supportive leadership (Ferris, 1985) on employee turnover, as well as the prevailing wisdom that higher performing clinical supervisors should do a better job at retaining counselors under their supervision. One explanation for the lack of effects is that in this unique occupational context, having an effective clinical supervisor is simply not enough to offset factors that influence turnover behavior such as low pay, high caseloads, limited resources, and working in a low status occupation (Kaplan, 2003).

4.3. Limitations and conclusions

As with any research, there are limitations to our study that need to be taken into consideration when interpreting and generalizing the results. Survival analysis with Cox regression is an ideal statistical method for assessing the effects of multiple predictors at baseline on counselor turnover over time. However, one limitation of this approach is that it uses predictor variables collected at baseline to predict turnover over time rather than measuring predictor variables over time to examine how, for example, change in perceptions of organizational functioning predict voluntary turnover rates over time.

Another limitation involves focusing on two sets of predictors of actual voluntary turnover. Organizational environment and clinical supervisor leadership effectiveness were selected based on previous research and theory. However, it is possible that other sets of predictors not examined in the current study, such as pay-related factors, available job opportunities, or other types of relationships at work (e.g., co-worker, patient) may also predict turnover over time.

Finally, because we focused exclusively on voluntary turnover we cannot draw conclusions about the rates of involuntary turnover over time or the predictors of involuntary turnover. The reason that we took this approach is that voluntary turnover is presumed to reduce organizational effectiveness because often high performing employees choose to leave (Kacmar, Andrews, VanRooy, Steilbreg, & Cerrone, 2006). In contrast, involuntary turnover is initiated by an administrative decision to terminate an employee, so it is presumed to enhance organizational effectiveness (Beadles, Lowery, Petty, & Ezell, 2000). Moreover,

the predictors of involuntary turnover are likely to be different than those for voluntary turnover. For instance, low or declining job performance, rule violation, and excessive absences are common reasons for involuntary turnover.

In closing, this is the first study to systematically examine SUD counselors' actual turnover rates over a 3-year timeframe and investigate predictors of turnover over time. Our findings highlight the importance of examining voluntary turnover over time and demonstrate the predictive power of counselors' perceptions of their organizational environment in predicting turnover. The findings suggest that efforts to reduce SUD counselor turnover and stabilize the SUD workforce should focus on efforts to improve job satisfaction, perceptions of distributive and procedural justice, as well as organizational support. It is hoped that the results of this study provide a springboard for future research aimed at better understanding how organizational functioning relates to voluntary turnover in SUD treatment organizations.

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Table 1

Organizational environment and clinical supervisor leadership effectiveness as predictors of voluntary counselor turnover over a 3-year period

			Annual counselor turnover over 4-waves[1]			
	M	***SD***	***B***	***SE***	**Likelihood**	**χ^2 for omnibus test (df, N)**
Perceptions of organizational environment[2]						
Procedural justice [3]	2.86	.83	−.16*	.07	14.7%	46.10*** (5, 583)
Distributive justice[3]	2.67	1.04	−.20**	.06	18.2%	53.05*** (5, 584)
Organizational support[3]	3.26	.86	−.15*	.07	13.8%	47.03*** (5, 582)
Job satisfaction[3]	3.93	.63	−.26**	.09	22.8%	50.87*** (5, 583)
Perceptions of clinical supervisor's leadership effectiveness[2]						
Relationship quality[3]	3.52	.91	−.07	.06	6.3%	41.52*** (5, 577)
Job performance[4]	3.10	.68	−.02	.09	1.6%	40.51*** (5, 546)
Behavior directed at individual[3]	3.43	.79	−.11	.07	10.6%	44.05*** (5, 576)
Behavior directed at organization[3]	3.86	.66	−.15	.09	13.5%	44.34*** (5, 574)

Note.

[1] Controlling for race, tenure in the current treatment center, gender, and certified SUD professional status;

[2] Mean and standard deviation at wave 1;

[3] 1=*strongly disagree* to 5 = *strongly agree*;

[4] 1 = *very ineffective* to 4= *very effective;*

* $p < .05$,

** $p < .01$,

*** $p < .001$.