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Community-based addiction treatment staff attitudes about the usefulness of evidence-based addiction treatment and CBO organizational linkages to research institutions

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Abstract

This national study of community-based addiction-treatment organizations' (CBOs) implementation of evidence-based practices explored CBO Program Directors' ($n = 296$) and clinical staff ($n = 518$) attitudes about the usefulness of science-based addiction treatment. Through multivariable regression modeling, the study identified that identical factors were associated with directors, and staff attitudes about the usefulness of science-based addiction treatment. For both directors and staff working in an organization that was affiliated with a research institution, working in an organization with better internet technology (measured through TCU-ORC scores) and having higher levels of education were all significantly associated with having more positive attitudes regarding science-based addiction treatment. Implications: government policy that promotes the hiring of addiction treatment clinical staff with professional degrees and encourages the development of linkages between addiction treatment researchers and treatment staff may positively impact attitudes and use of evidence-based addiction treatment practices (EBPs) in CBOs.

Keywords

Evidence-based practice; Addiction treatment; Substance abuse; Attitudes toward evidence-based practice; TCU-ORC

1. Introduction

An increasing number of empirically valid, efficacious behavioral and pharmacological therapies are available for the treatment of alcohol and drug use disorders (McCarty, McConnell, & Schmidt, 2010). Clinical trials of addiction treatment therapies conducted within the National Drug Abuse Treatment Clinical Trials Network (CTN) suggest that science-based treatments can be effective in the chaos of real-world clinical environments and heterogeneous clinical populations (Amass et al., 2004; Carroll et al., 2006; Ling et al.,

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2005; Peirce et al., 2006; Petry et al., 2005). The Institute of Medicine (2000, 2001, 2006) recommends increased use of treatment with empirical evidence of efficacy and effectiveness. However, many addiction treatment practitioners remain skeptical about the value of empirically-based treatments. A number of studies suggest that negative attitudes by clinical staff toward EBPs in addiction treatment are a barrier to the implementation of such treatment (Amodeo, Ellis, & Samet, 2006; Hamm, 1992; Liddle et al., 2002; Simpson, Joe, Rowan-Szal, 2007).

A study of 112 addiction treatment organizations participating in the CTN (over 3700 individual respondents), suggested that clinical staff in treatment organizations that participated in medication clinical trials had more positive attitudes toward medications compared to their counterparts (McCarty et al., 2007). A secondary analysis of data from the CTN assessment of organizations and workforce reported that clinicians who participated in research were more willing to use research in practice compared to their counterparts (Pinto et al., 2010). CTN comparisons with non-CTN treatment centers, moreover, found increased adoption of medications and motivational interviewing within programs participating in the CTN (Roman, Abraham, Rothrauff, & Knudsen, 2010). A limitation with the CTN analyses described above is that the data are generated from programs willing to participate in clinical trials. Organizations participating within the CTN are also disproportionately located within medically and research oriented institutions which may influence their attitudes toward evidence-based practices (McCarty et al., 2007).

The study presented in this article explored, for a national sample of addiction treatment program directors ($n = 296$) and clinical staff ($n = 518$), whether working in a community-based addiction treatment organization which had any research affiliation (the Principal Investigator (PI), evaluator, or training provided was affiliated with a university or hospital) was associated with having more positive attitudes toward the usefulness of scientifically-based addiction treatment.

2. Other variables associated with treatment supervisor/staff attitudes toward scientifically-based addiction treatment

2.1. Clinical staff characteristics

Addiction treatment staff who have higher levels of education consistently have more positive attitudes about EBPs. For example, in an analysis of 112 programs participating in the CTN addiction treatment, managers and supervisors were more supportive of EBPs while support staff were less supportive of scientifically-tested addiction treatment interventions (McCarty et al., 2007). Support for EBP smoking cessation services in drug treatment increased with staff job category and level of education. Support staff, conversely, were more likely than managers and clinical supervisors to endorse opinions consistent with the use of confrontation and noncompliance discharge (McCarty et al., 2007). Similarly, a national sample of 312 clinical staff in addiction treatment organizations involved with the implementation of EBPs found that clinical staff education levels were associated with wanting training-based on scientific evidence (Lundgren et al., 2011). An analysis of attitudes toward the use of medications for addiction treatment found that counselors with less education were more likely to support abstinence-only treatment (Rieckmann, Daley, Fuller, Thomas, & McCarty, 2007).

2.2. Treatment unit characteristics

Findings on whether or not Program Director or clinical staff attitudes vary by the type of treatment unit worked in are mixed. Lundgren et al. (2011) found no significant difference in attitudes between either directors or staff working in outpatient settings compared to

inpatient treatment units or between directors and staff working in treatment units in different geographic regions. Similarly, McCarty et al. (2007) and Fuller et al. (2007) did not find treatment unit setting to be associated with differences in clinical staff attitudes regarding evidence-based practices. However, in their study of 376 counselors and 1083 clients involved in methadone, residential and outpatient substance abuse programs in Oregon and Massachusetts, Rieckmann et al. (2007) reported that the most consistent support for pharmacological therapies was from staff in outpatient settings. Furthermore, in a comparison of over 750 public and private substance abuse treatment organizations, Roman, Ducharme, and Knudsen (2006) found that pharmacotherapy was more likely to be adopted in private centers compared to public centers. Finally, size of a treatment unit may affect use of medications and evidence-based psychosocial treatments. Many addiction treatment programs, however, are small independent services (Corredoira & Kimberly, 2008; Kimberly & McLellan, 2006; Substance Abuse and Mental Health Services Administration SAMHSA, 2007).

2.3. Organizational capacity

Simpson and Flynn (2007) propose a four-stage model of organizational change/organizational capacity related to implementation of evidence-based practices in addiction treatment organizations. The model considers staff attributes, organizational motivation for change, resources and program climate (Lehman, Greener, & Simpson, 2002). Simpson and colleagues also have made major contributions to understanding implementation of EBPs in substance abuse treatment organizations by developing and testing a comprehensive measure of organizational readiness: the TCU Organizational Readiness for Change Scale (Lehman et al., 2002).

Fuller et al. (2007) examined the CTN organizational and workforce data to assess the association between addiction treatment units' organizational capacity measured through the TCU-ORC and attitudes about evidence-based practices. Their study identified that there was greater support for EBPs when: (1) clinical staff perceived greater access to institutional resources such as improved access to the internet and email; (2) respondents perceived more willingness and ability to influence peers within the organization; and, (3) staff had a stronger sense of agency mission and purpose. When treatment center staff reported less opportunity for professional growth, weaker peer influence, more organizational stress, and less access to the internet, they were more likely to support the use of confrontation and noncompliance discharge (Fuller et al., 2007).

3. Methods

This study included 296 Program Directors and 518 direct service clinical staff from 296 addiction treatment community-based organizations (CBOs) surveyed to assess variables associated with their support for the use of evidence-based addiction treatments. Participating centers received awards from the Center for Substance Abuse Treatment (CSAT), Substance Abuse and Mental Health Services Administration (SAMHSA), between 2003 and 2008 to implement EBPs. These CSAT/SAMHSA funded CBO addiction treatment organizations were not participating in research trials. However, in some situations the PI who received the service grant was affiliated with a university or hospital. Further, the CSAT/SAMHSA grantees were required to evaluate the implementation and outcomes of their services (between 10 and 20 percent of the funding was allocated to evaluation), and, at some sites, individuals affiliated with hospitals and universities led the evaluation. Also, the organizations were encouraged to participate in EBP training and at some sites these trainings were affiliated with hospitals and universities. Thus, we were able to assess the influence of having linkages with hospitals and universities on attitudes about the usefulness of evidence-based addiction treatment compared to their counterparts. In addition, we

compared Program Director and clinical staff attitudes regarding the usefulness of scientifically-based addiction treatment. Based on the literature review (described above), the study variables included years of education, years of experience, years in current position, type of treatment unit worked in, primary service area (urban versus rural) of the treatment unit, program size, and organizational readiness for change (TCU-ORC). Multivariable regression analysis assessed associations between working in an organization affiliated with a research institution (through the PI, the evaluator, or clinical training affiliation with a university or a hospital) and levels of agreement with the statement “scientifically-supported treatment can be useful” controlling for respondent characteristics, treatment unit characteristics and perceptions of organizational readiness for change. Specifically, the multivariable models controlled for:

1. Individual characteristics (age, gender, educational levels, length of time in current job and years of experience in drug abuse counseling).
2. Treatment unit characteristics (type of treatment unit, primary service area and size).
3. Organizational capacity (measured through the TCU-ORC scores).

3.1. Data collection

Phone interviews and web-surveys were conducted with the 814 respondents (296 Program Directors and 518 clinical staff identified by Program Directors as directly involved in the implementation of evidence-based practices). Potential participants were sampled from a publicly available listing of agencies receiving awards from CSAT/SAMHSA between 2003 and 2008; this list included 495 grantees out of which 330 were sampled. Of these 330 grantees, 10 Program Directors refused to participate. Further, 24 cases were excluded from the data analyses presented below due to significant portions of the survey data missing (see missing data section below). The CSAT/SAMHSA sample was selected because the treatment centers include specific descriptions of the EBPs they would implement in their CSAT proposals. Additionally, funding was not a key barrier to EBP implementation because the CSAT awards were substantial and a lack of economic capacity to implement EBPs should not be a factor influencing attitudes. And, finally, this sample included a range of geographic areas and program types around the country.

Trained interviewers telephoned each Program Director and clinical staff and completed 6 tasks: (1) confirmed that the respondent was the Director or staff and that our contact information was correct; (2) invited them to complete a web-based survey; (3) read aloud and taped the informed consent; (4) noted that an e-mail would be sent out to the respondent at the conclusion of the telephone call providing directions on how to complete the web-survey; (5) explained that the interviewer would call back if the web-survey was not completed within a week; and (6) explained that a \$30.00 check would be mailed to the respondent when the web survey was submitted. As soon as the interviewer completed the phone call, she/he sent the respondent an e-mail. The e-mail included the written version of the informed consent form read during the telephone call and a web-link to the survey. The link connected to a SurveyMonkey-based (online survey response-gathering tool) instrument. On the first page, the respondent confirmed that she/he read and understood the informed consent and agreed to participate in the web survey. The respondent then entered the survey and completed the study items. Generally, respondents required two to three telephone calls before the web survey was completed; 93% of the agencies contacted completed surveys. Study protocols were approved by the Boston University Institutional Review Board.

3.2. Measures

CBO having a research affiliation was a recoding of six variables: whether the PI for the CSAT/SAMHSA-funded project was associated with a university, whether the PI was associated with a hospital, whether the evaluator was associated with a university, whether the evaluator was associated with a hospital and whether any training received was associated with a university and whether any training received was associated with a hospital.

3.2.1. Individual clinical staff characteristics—*Age* was calculated by subtracting the date of birth from the date the online survey was completed. See Table 1 for univariate statistics on all variables. *Gender* was measured as a two-category variable; (two individuals reported being transgendered). *Level of education* was measured by identifying highest degree status (no high school, high school or equivalent, some college, associate's degree, bachelor's degree, master's degree, doctoral degree or other professional degree). *Length of time in current job* and *years of experience in drug abuse counseling* both were measured utilizing the following scale: 0–6 months, 7–11 months, 1–3 years, 4–5 years or greater than 5 years.

3.2.2. Treatment unit characteristics—*Type of treatment unit* was measured through a 3-category variable: (1) outpatient unit, (2) inpatient/therapeutic community unit; and (3) other. This variable was recoded from a list of 7 of treatment unit categories. Outpatient was defined as intensive outpatient – 9 or more hours of structured programming per week (non-methadone), outpatient services – less than 9 hours of structured programming per week (non-methadone), and outpatient methadone. Inpatient was defined as inpatient/residential. Other included halfway house/work release, therapeutic community, or 'other'. *Primary Service Area* was measured through a 3-category variable which identified if the organization was situated in a rural, suburban, or urban location. *Size of the organization* was measured through a variable which measured the number of annual admissions (including re-admits).

Organizational capacity: To assess organizational capacity, the study instrumentation included the scales from the Texas Christian University's Organizational Readiness for Change (TCU-ORC) scale (Lehman et al., 2002). Directors and clinical staff completed 115 items (five-point agree-disagree Likert-type scales); items are summed to form the 18 scales summarized in Appendix A. Organizational scale variables include motivation for change, resources, staff attributes, and organizational climate. In addition, the staff version of the instrument also included items on training exposure and utilization.

With respect to the validity and reliability of the TCU-ORC measures for our sample, a principal components analysis (PCA) confirmed that our data had the same internal structure that Lehman et al. (2002) reported. The questions forming each subscale generally loaded on a unique factor. Eigenvalues were similar to the Lehman et al. (2002) values; in instances where more than one eigenvalue exceeded 1, the second value was quite low. In addition, our Cronbach's alpha for these scales were consistent with the values reported in Lehman et al. (2002) and suggested similar internal consistency and reliability

3.2.3. Dependent variable—*Usefulness of science-based treatment*: The dependent variable was a five-point Likert-type scale (disagree strongly, disagree, uncertain, agree, and agree strongly) variable measuring agreement with the statement “scientifically-supported treatments can be useful”. This measure was originally developed and tested in a study of direct care workers participating in the CTN (Forman, Bovasso, & Woody, 2001; McCarty et al., 2007).

3.3. Data analysis

Two sets of data analyses with two samples were conducted. In the first set of analyses, the sample consisted of the 296 Program Directors and in the second set, the sample included the 518 project clinical staff. One-way ANOVA, correlations and multivariable linear regression statistics were conducted for both sets of models, Program Directors and clinical staff. For each, as a first step, bivariate analysis (one-way ANOVA, correlations) examined the statistical relationship between all independent variables and the dependent variable. Second, for the two respondent samples, separate preliminary linear regression models were developed for each TCU-ORC organizational area: motivation for change, resources, staff attributes and organizational climate. These analyses included as independent variables all the subscales in each organizational area and the dependent variable was the response to: “scientifically-supported treatments can be useful”. In addition, individual and treatment characteristics that were significant at the bivariate level were included in all preliminary models.

Third, a set of final linear regression models were developed, where only the variables found to be significantly associated with the dependent variable in the preliminary linear regression models were included (note, all data analyses were conducted separately for the Program Director and clinical staff samples). Finally, it should be noted that because it could be argued that the dependent variable is an ordinal variable and not a continuous variable, we also tested the results from the linear regression models through the use of logistic regression analysis where the dependent variable was dichotomous (we tested both a mean and median split). The logistic regression models (results not presented in this article) evidenced the same significant relationships as those presented below in the linear regression model.

3.3.1. Missing data—A detailed analysis of the missing data was conducted. For each variable that was missing data, “science can be useful” scores (the dependent variable) were compared for the missing data cases and the complete cases data. Further, to assess whether “missingness” was due to demographic characteristics, an analysis of the missing cases on demographic variables including age, primary service area, number of years respondent has experience in drug abuse counseling, number of years in current job, research affiliation of the project institution, and number of annual admissions, was conducted. To evaluate the impact of missing data on the final results, mean imputation was used and all bivariate and multivariable analyses were repeated and compared to bivariate and multivariable results based on complete cases. Results for *each* of these analyses showed that the analysis with imputed data was highly comparable to the analysis based on complete cases. Results using complete cases are presented in both the narrative and the tables.

4. Results

4.1. Program Directors

Table 1 summarizes the characteristics of the 296 Program Directors. Directors were primarily female (67.0%) with an average age of 48 years. More than 80% of the Program Directors had a master's or professional degree. Most Directors (73.6%) reported greater than five years of experience as drug abuse counselors and 61.4% had more than five years of experience in their current job. Further, Program Directors reported that the organizations they worked in were 48.6% outpatient, 23.3% inpatient and 28.0% defined as “other”. Most (77%) of the units were located in urban areas and admitted a mean of 625 clients annually. In approximately half of the organizations (55%) the PI, the evaluator or the training for the SAMHSA grant was affiliated with a university or hospital either through the PI, the trainer or the evaluator for the service grant.

Bivariate analyses (see Table 2) identified that 14 variables were associated with director attitudes regarding the usefulness of scientifically-supported treatments: Director level of education, the organization being affiliated with a research institution, and the following TCU-ORC scores; staffing, training, equipment, internet technology, staff adaptability, staff growth, staff efficacy, staff influence, organizational mission, organizational cohesion, autonomy, communication, and organizational change score. There were no significant relationships between age, gender, years of experience in drug abuse counseling, number of years on the job, type of treatment unit, primary service area, or the TCU-ORC scores on motivation for change and attitudes regarding the usefulness of scientifically-supported treatments (Table 2).

As the next step, a number of preliminary regression analyses were conducted with the sub-scales within each TCU-ORC area (motivation for change, resources, staff attributes and organizational climate). In these models, working in an organization that had any research affiliation, Director level of education, and the TCU-ORC scores on access to internet technology, organizational growth, organizational influence and organizational autonomy were significantly associated with Director attitudes regarding the usefulness of scientifically-supported treatments. Hence, these variables were entered into the final regression model as a single block.

The final multivariable linear regression, presented in Table 3, suggested that Program Directors who reported higher levels of education, worked in organizations that had a research affiliation PI, evaluator or training affiliated with hospital or university), and who reported their organization had better access to internet technology were significantly more likely to report greater agreement with the statement that “scientifically-supported treatment can be useful.”

4.2. Clinical staff attitudes

Five hundred and eighteen clinical staff members were identified by Program Directors as directly involved with the implementation of evidence-based practices in their organizations. Respondents were primarily women (71.5%) with a mean age of 42 years. Approximately 50% held a graduate degree. In addition, 29.4% of the staff reported having greater than five years of experience in their jobs and 44.0% had greater than five years of experience as drug abuse counselors.

The results from the bivariate analyses identified (see Table 4) that clinical staff working in an organization which had an affiliation with a research institution (affiliated with a university or hospital through the PI evaluator or trainer, gender, staff level of education and the following TCU-ORC scores: equipment, internet technology, adaptability, growth, efficacy, influence, mission, autonomy and change were significantly associated with staff attitudes regarding the usefulness of scientifically-supported treatments. Preliminary regression analyses identified that research affiliation, level of education, organizational pressure to change, internet technology, staff influence, organizational mission and organizational autonomy were significantly associated with clinical staff attitudes regarding the usefulness of scientifically-supported treatments. Hence, these variables were entered into the final regression model as a single block.

The final staff linear regression model in Table 5 identified that clinical staff who worked in an organization affiliated with a research institution (affiliated with a university or hospital through the PI, the evaluator or training), who had higher levels of education, and reported working in an organization that had better access to internet technology were significantly more likely to report greater agreement with the statement that “scientifically supported treatment can be useful” (Appendix A).

5. Conclusion

Findings from multivariable regression models for Program Directors and clinical staff identified that identical variables were associated with having more positive attitudes about the usefulness of scientifically-supported treatments. Specifically, having higher levels of education, working in an organization where the PI, the evaluator or the training was affiliated with a university or a hospital, and working in an organization that had higher levels of internet-related technology were associated with having more positive attitudes regarding the usefulness of science-based addiction treatment. Other types of treatment unit factors such as type of treatment unit, primary service area (urban, rural, suburban), size or other TCU-ORC sub-scales such as program needs, adequacy of resources or staff attributes were not associated with these attitudes.

These findings are consistent with other research studies and samples of addiction treatment staff. Hence, all of the existing research point to education as a key factor associated with having more positive attitudes about the value of evidence-based treatment. This is not surprising, given that the scientific model underlies most of academic thinking regarding health interventions. It is also not surprising that in the organizations that had some affiliation with universities or hospitals, Director and clinical staff had more positive attitudes about EBPs.

5.1. Lessons learned

Results from this study suggest that efforts to promote the implementation of EBPs may benefit from policies that increase requirements for graduate degrees among addiction treatment counselors. In contrast to state policies that require graduate degrees for mental health counselors, most states allow individuals without graduate education to practice as addiction counselors (Kerwin, Walker-Smith, & Kirby, 2006). It may be time to expect and to pay for a more educated addictions workforce.

This study also suggests that improving linkages between researchers and CBOs may enhance opinions and attitudes regarding EBPs of staff in these settings. The addiction treatment field has relied on counselors with a strong commitment to addictions work who are relatively isolated from the addiction research field. Continued polarization between addiction counselors and addiction treatment researchers is not useful for the improvement of addiction treatment.

5.2. Limitations

This project only sampled community-based CSAT/SAMHSA-funded substance abuse treatment organizations. It did not include treatment organizations solely funded by states or by private insurance. Second, the study relied on Program Directors to identify clinical staff directly involved with implementing evidence-based treatments. Third, given that this is an exploratory cross-sectional study, it is only able to identify possible associations rather than causal connections between selected study factors. Fourth, a possible concern is sample bias; since organizations that are the least successful with implementation of EBPs probably never apply for government funding, the Director and staff perspectives from those organizations are not included in our study.

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Appendix A

Appendix A

Organizational readiness for change (TCU-ORC) staff (TCU-ORC-S) and treatment director versions (TCU-ORC-D).^a

Category and associated sub-scales	Variable description (TCU-ORC-S and TCU-ORC-D)
<i>Motivation for change</i>	
Program needs (additional guidance needed in . . .)	<ul style="list-style-type: none"> • Assessing client needs. • Matching needs – services. • Increasing client program participation. • Measuring client performance. • Developing effective group sessions. • Raising quality of counseling. • Using client assessments to guide clinical and program decisions. • Using client assessments to document program effectiveness.
	<ul style="list-style-type: none"> • Documenting service needs of clients for treatment placements. • Tracking/evaluating client performance over time. • Obtaining information to document program effectiveness. • Automating client records Evaluating staff/org. performance • Selecting new treatment interventions for which staff need training. • Improving recording/retrieval of financial information. • Generating timely “management” reports.
Training needs (need more training in . . .)	<ul style="list-style-type: none"> • Assessing client problems and needs. • Increasing client participation in treatment. • Monitoring client progress. • Improving rapport with clients. • Improving client thinking and problem solving skills. • Improving behavioral management of clients. • Improving cognitive focus of clients during group counseling. • Using computerized client assessments.
Pressures for change (pressure comes from . . .)	<ul style="list-style-type: none"> • Clients in the program. • Program staff members. • Program supervisors or managers. • Agency board members. • Community action groups. • Funding and oversight agencies. • Accreditation or licensing authorities.
<i>Resources</i>	
Offices	<ul style="list-style-type: none"> • Your offices and equipment are adequate. • (Facilities) adequate for conducting group counseling. • Offices allow the privacy for individual counseling. • Program provides a comfortable waiting area for clients.
Staffing	<ul style="list-style-type: none"> • Enough counselors to meet client needs. • A larger support staff is needed to help meet program needs. • Frequent staff turnover is a problem for this program. • Counselors here are able to spend enough time with clients. • Support staff here have the skills they need to do their jobs. • Clinical staff here are well-trained.

Category and associated sub-scales	Variable description (TCU-ORC-S and TCU-ORC-D)
Training	<ul style="list-style-type: none"> • Staff training and continuing education are priorities at this program. • You learned new skills/techniques at a professional conference in the past year. • The budget allows staff to attend professional conferences each year. • This program holds regular inservice training.
Equipment	<ul style="list-style-type: none"> • Client assessments here are usually conducted using a computer. • Computer problems are usually repaired promptly at this program. • Most client records here are computerized. • You have a personal computer to use. Computer equipment is mostly old and outdated. • Staff here feel comfortable using computers. • More computers are needed in this program for staff to use.
Internet	<ul style="list-style-type: none"> • You used the internet (World Wide Web) to communicate with other treatment professionals in the past month. • You have easy access for using the internet at work. • You used the internet (World Wide Web) to access drug treatment information in the past month. • You have convenient access to e-mail at work.
<i>Staff attributes</i>	
Growth	<ul style="list-style-type: none"> • This program encourages and supports professional growth. • You read about new techniques and treatment information each month. • You have enough opportunities to keep your (counseling/management) skills up-to-date. • You regularly read professional journal articles or books on drug abuse treatment. • You do a good job of regularly updating and improving your skills.
Efficacy	<ul style="list-style-type: none"> • You have the skills: <ul style="list-style-type: none"> ◦ Needed to conduct effective group counseling. ◦ To conduct effective staff meetings. • You consistently plan ahead and carry out your plans. • You usually accomplish whatever you set your mind on. • You are effective and confident in doing your job. • You: <ul style="list-style-type: none"> ◦ Have the skills needed to conduct effective individual counseling. ◦ Are highly effective in working with community leaders and Board members.
Influence	<ul style="list-style-type: none"> • You frequently share your knowledge of new counseling ideas with other staff. • Staff generally regard you as a valuable source of information. • Other staff often ask your advice about program procedures. • Other staff often ask for your opinions about counseling and treatment issues. • You often influence the decisions of other staff here. • You are viewed as a leader by other staff here.
	<ul style="list-style-type: none"> • You frequently discuss new counseling ideas with staff. • Staff generally regard you as a valuable source of information. • Staff readily implement your ideas for changing program procedures. • Staff seek your opinions about counseling and treatment issues. • Your staff readily follows your leadership. • You are viewed as a strong leader by the staff here.
Adaptability	<ul style="list-style-type: none"> • You are willing to try new ideas even if some staff members are reluctant. • Learning and using new procedures are easy for you. • You are sometimes too cautious or slow to make changes.

Category and associated sub-scales	Variable description (TCU-ORC-S and TCU-ORC-D)
	<ul style="list-style-type: none"> You are able to adapt quickly when you have to shift focus.
<i>Organizational climate</i>	
Mission	<ul style="list-style-type: none"> Some staff get confused about the main goals for this program. Program staff understand how this program fits as part of the treatment system in your community. Your duties are clearly related to the goals of this program. This program operates with clear goals and objectives. Management here has a clear plan for this program.
Cohesion	<ul style="list-style-type: none"> Staff here all get along very well. There is too much friction among staff members. The staff here always work together as a team. Staff here are always quick to help one another when needed. Mutual trust and cooperation among staff in this program are strong. Some staff here do not do their fair share of work.
Autonomy	<ul style="list-style-type: none"> Treatment planning decisions for clients here often have to be revised by a counselor supervisor. Trust: You fully trust the professional judgment of staff who work with clients here. Management here fully trust the professional judgment. (Counselors) here are given broad authority in treating their own clients. Counselors here often try out different techniques to improve their effectiveness. Staff members think (they have/are given) too many rules here.
Communication	<ul style="list-style-type: none"> You always listen to ideas and suggestions from staff. The formal and informal communication channels here work very well. Program staff are always kept well informed. More open discussions about program issues are needed here. Staff members always feel free to ask questions and express concerns in this program
Stress	<ul style="list-style-type: none"> You are under too many pressures to do your job effectively. Staff members often show signs of stress and strain. The heavy workload here reduces program effectiveness. Staff (frustrations is/are) common here.
Change	<ul style="list-style-type: none"> Novel treatment ideas by staff are discouraged. (You can/It is easy to) change procedures here (quickly) to meet new conditions. You frequently hear good staff ideas for improving treatment. The general attitude here is to use new and changing technology. You encourage counselors/are encouraged here to try new and different techniques.
<i>Training exposure and utilization (staff only)</i>	
Training satisfaction	<ul style="list-style-type: none"> You were satisfied with the training offered at workshops available to you last year. You were satisfied with the training opportunities available to you last year.
Training exposure	<ul style="list-style-type: none"> In the last year, how often did you attend training workshops held within 50 miles of your agency? In the last year, how often did you attend training workshops held more than 50 miles from your agency? How many workshops do you expect to attend in the next 12 months? In the last year, how many times did outside trainers come to your agency to give workshops? In the last year, how many times did your agency offer special, in-house training?
Training utilization (individual level)	<ul style="list-style-type: none"> When you attend workshops, how often do you try out the new interventions or techniques learned? Are your clients interested or responsive to new ideas or counseling materials when you try them? In recent years, how often have you adopted (for regular use) new counseling interventions or techniques from a workshop?

Category and associated sub-scales	Variable description (TCU-ORC-S and TCU-ORC-D)
	<ul style="list-style-type: none"> • When you have adopted new ideas into your counseling, how often have you encouraged other staff to try using them?
Training utilization (program level)	<ul style="list-style-type: none"> • How often do new interventions or techniques that the staff from your program learn at workshops get adopted for general use? • How often do new ideas learned from workshops get discussed or presented at your staff meetings? • How often does the management at your program recommend or support new ideas or techniques for use by all counselors?

^aThis summary has been created by the authors of this article (Lundgren, Krull, Zerden, and McCarthy). This summary was not created by the creators of the TCU-ORC scales (Lehman et al., 2002).

Biography

Lena Lundgren, Ph.D., the Director of the Center for Addictions Research and Services, is also a professor of Welfare Policy and the Director of Research at Boston University School of Social Work. Her research focuses on: addiction treatment and HIV prevention in community-based organizations and implementation of evidence-based practices in community-based addiction treatment organizations.

Ivy Krull, M.S.W., M.P.H., is a doctoral candidate at Boston University and Data Analyst at the Center for Addictions Research and Services. Prior to returning to school for her doctorate degree, she worked in the public health sector specifically focused on behavior intervention. She received her M.S.W. and M.P.H. at Boston University. At the Center, she is responsible for the implementation of federally-funded evaluation projects, data analysis, presentation creation and writing for publications.

Lisa de Saxe Zerden, M.S.W., Ph.D., teaches at the University of North Carolina Chapel Hill School of Social Work. Her research interests focus on HIV/AIDS, substance abuse, cross-cultural prevention and intervention efforts, harm reduction policies, and program evaluation. She has conducted field work in South Africa, her native country, and on the island of Puerto Rico. Most recently, she completed an evaluation for the Carolina Alcohol and Drug Expansion Team, a SAMHSA-funded program designed to integrate substance abuse services into three HIV clinics in central North Carolina. She received her Ph.D. in Social Work and Sociology from Boston University.

Dennis McCarty, Ph.D., is a professor in the Department of Public Health and Preventive Medicine at Oregon Health and Science University. He collaborates with policy makers in state and federal government and with community-based programs to examine the organization, financing, and quality of publicly-funded prevention and treatment services for alcohol and drug disorders. He is the Principal Investigator for the Oregon/Hawaii Node of the National Drug Abuse Treatment Clinical Trials Network and the national evaluation for the Network for the Improvement of Addiction Treatment. His Ph.D. in Social Psychology is from the University of Kentucky.

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Table 1

Univariate Statistics for each sample (PD and Staff).

	Program Director respondents (n = 296) (%)	Staff respondents (n = 518) (%)
<i>Research affiliation</i>		
No	36.1	33.8
Yes	55.1	51.7
<i>Age</i>		
Mean Age (standard deviation)	48.30 (9.56)	42.02 (11.16)
<i>Gender</i>		
Female	66.7	71.5
Male	33.3	28.3
Transgender		.2
<i>Level of education – highest degree status</i>		
No high school	.3	.2
High school or equivalent	.3	3.9
Some college	4.1	10.4
Associate degree	2.7	6.0
Bachelors degree	10.5	27.8
Masters degree	66.9	45.8
Doctoral degree	14.9	4.6
Other professional degree	.3	1.4
<i>Length of time in current job</i>		
0–6 months	1.0	5.9
7–11 months	2.4	8.6
1–3 years	21.0	43.8
4–5 years	14.1	12.3
Greater than 5 years	61.4	29.4
<i>Years of experience in drug abuse counseling</i>		
0–6 months	8.8	8.7
7–11 months	1.7	.2
1–3 years	6.8	20.5
4–5 years	9.1	26.2
Greater than 5 years	73.6	44.4
<i>Type of treatment unit</i>		
Outpatient	48.6	46.1
Inpatient/therapeutic community unit	23.3	19.7
Other	28.0	34.2
<i>Primary service area</i>		
Rural	9.7	9.5
Suburban	13.1	13.3
Urban	77.2	77.1
<i>Size of the organization</i>		

	Program Director respondents (n = 296) (%)	Staff respondents (n = 518) (%)
Mean annual admissions (standard deviation)	625.82 (2286.58)	687.75 (2431.32)
<i>Scientifically supported treatments can be useful (dependent variable)</i>		
Mean score (standard deviation)	4.37 (.56)	4.17 (.60)

Table 2

Program Director attitudes-scientifically-supported treatments can be useful – one-way ANOVA, correlations and preliminary linear regressions within each TCU-ORC area.

Scale: 1 – strongly disagree, 2 – disagree, 3 – uncertain, 4 – agree, 5 – strongly agree		
Program Director sample <i>n</i> = 296		
Variable	Bivariate analysis (one-way ANOVA, correlations) (<i>p</i> value)	Multivariable analysis (linear regression) by subscale with each TCU-ORC area (<i>p</i>-value)
Research affiliation	.009	.005
Age	Not significant	
Gender	Not significant	
Level of education	.000	.000
Length of time in current job	Not significant	
Years of experience in drug abuse counseling	Not significant	
Type of treatment unit	Not significant	
Primary service area	Not significant	
Size of organization	Not significant	
Organizational readiness for change (ORC) subscales (analyzed in groups)		
<i>Motivation for change</i>		
Program needs	Not significant	Not significant
Training needs	Not significant	Not significant
Pressure to change	Not significant	Not significant
<i>Resources</i>		
Offices	Not significant	Not significant
Staffing	.010	Not significant
Training	.005	Not significant
Equipment	.055	Not significant
Internet	.000	.000
<i>Staff attributes</i>		
Adaptability	.004	Not significant
Growth	.000	.004
Efficacy	.000	Not significant
Influence	Not significant	.039
<i>Organizational climate</i>		
Mission	.002	Not significant
Cohesion	.012	Not significant
Autonomy	.000	.027
Communication	.013	Not significant
Stress	Not significant	Not significant
Change	.010	Not significant

Table 3

Final linear regression results Program Director attitudes, with dependent variable: “scientifically-supported treatments can be useful” Program Director sample $n = 296$.

	Unstandardized coefficients <i>B</i>	Standardized coefficients beta	<i>t</i>	Sig.
Research affiliation	.152	.128	2.266	.024 *
Level of education	.125	.208	3.720	.000 ***
Internet score	.017	.172	2.608	.010 **
Growth score	.015	.135	1.863	.063
Influence score	-.025	-.098	-1.512	.132
Mission score	.006	.049	.722	.471
Autonomy score	.005	.038	.604	.547

Adjusted $R^2 = .143$.

* $p < .05$.

** $p < .01$.

*** $p < .000$.

Table 4

Clinical staff: “scientifically-supported treatments can be useful” – one-way ANOVA, correlations and preliminary linear regressions within each TCU-ORC area.

Scale: 1 – strongly disagree, 2 – disagree, 3 – uncertain, 4 – agree, 5 – strongly agree		
Staff sample $n = 518$		
Variable	Bivariate analysis (one-way ANOVA, correlations) (p value)	Multivariable analysis (linear regression) by subscale with each TCU-ORC area (p -value)
Research affiliation	.005	.003
Age	Not significant	
Gender	.028	Not significant
Level of education	.000	.000
Length of time in current job	Not significant	
Years of experience in drug abuse counseling	Not significant	
Type of treatment unit	Not significant	
Primary service area	Not significant	
Size of organization	Not significant	
Organizational readiness for change (ORC) subscales (analyzed within area)		
<i>Motivation for change</i>		
Program needs	Not significant	Not significant
Training needs	Not significant	Not significant
Pressure to change	.029	.027
<i>Resources</i>		
Offices	Not significant	Not significant
Staffing	Not significant	Not significant
Training	Not significant	Not significant
Equipment	.005	Not significant
Internet	.000	.002
<i>Staff attributes</i>		
Adaptability	.001	Not significant
Growth	.000	Not significant
Efficacy	.000	Not significant
Influence	.000	.005
<i>Organizational climate</i>		
Mission	.002	.010
Cohesion	Not significant	Not significant
Autonomy	.001	.023
Communication	Not significant	Not significant
Stress	Not significant	Not significant
Change	.005	Not significant

Table 5

Final Linear Regression Model – Staff attitudes with dependent variable: scientifically-supported treatments can be useful. Staff sample $n = 518$.

	Unstandardized coefficients <i>B</i>	Standardized coefficients <i>beta</i>	<i>t</i>	Sig.
Research affiliation	.142	.107	2.525	.012 *
Level of education	.108	.226	5.404	.000 ***
Internet score	.010	.097	2.129	.034 *
Pressure to change	-.006	-.077	-1.776	.076
Influence score	.016	.155	3.278	.001 **
Mission score	.004	.044	.872	.384
Autonomy score	.001	.009	.174	.862

Adjusted $R^2 = .118$.

* $p < .05$.

** $p < .01$.

*** $p < .000$.