Moving empirically-supported treatment to the workplace: Recruiting addiction program supervisors to help in technology transfer

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Abstract

Federal and state funding agencies are encouraging or mandating the use of empirically supported treatments in addiction programs, yet many programs have not moved in this direction (Forman, Bovasso, and Woody, 2001; Roman and Johnson, 2002; Willenbring et al., 2004). To improve the skills of counselors in community addiction programs, the authors developed an innovative Web-based course on Cognitive Behavioral Therapy (CBT), a widely accepted empirically-supported treatment (EST) for addiction. Federal funding supports this Web course and a randomized controlled trial to evaluate its effectiveness. Since supervisors often play a pivotal role in helping clinicians transfer learned skills from training courses to the workplace, the authors recruited supervisor-counselor teams, engaging 54 supervisors and 120 counselors. Lessons learned focus on supervisor recruitment and involvement, supervisors' perceptions of CBT, their own CBT skills and their roles in the study, and implications for technology transfer for the addiction field as a whole. Recruiting supervisors proved difficult because programs lacked clinical supervisors. Recruiting counselors proved difficult because programs were concerned about loss of third-party reimbursement. Across the addiction field, technology transfer will be severely hampered unless such infrastructure problems can be solved. Areas for further investigation are identified.

Barriers to EST Adoption by Addiction Treatment Programs

Technology transfer is a process by which organizations or groups adopt ESTs. Successful technology transfer often involves the creation of multiple organizational or system-wide mechanisms to ensure that the desired change is accepted, incorporated and reinforced. Addiction treatment experts agree that ESTs cannot simply be introduced to program staff via manuals and/or conferences and be automatically embraced by the organization (Brown, 2000; Miller, Zweben & Johnson, 2005; Simpson, 2002). If there is to be a transfer of treatment technology from trained individuals to the program as a whole, organizational supports must be employed.

Addiction treatment programs have been slow to adopt and fully integrate ESTs. The reasons for this are many, including resistance to adoption of new practices by those who have been socialized into existing practices and feel strongly committed to them (Backer,

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2000; Forman, Bovasso & Woody, 2001; Roman & Johnson, 2002), lack of organizational readiness (Simpson, 2002), inadequate staff preparation (Amodeo, Ellis & Samet, 2006; Willenbring et al., 2004), poor understanding of the complexity of the change process (Liddle et al., 2002), and inadequate reinforcement of modified behavior and learned skills (D'Aunno, 2006). Even clinicians who view innovative treatments in a favorable light often fail to implement them (Willenbring et al., 2004), and staff members often work autonomously and independently using treatment practices that they prefer (D'Aunno, 2006). To address these issues and improve the ability of addiction treatment programs to adopt innovation, several experts (D'Aunno, 2006; Liddle et al., 2002; Miller, Zweben & Johnson, 2005; Roman & Johnson, 2002, Simpson, 2002) have concluded that interventions are necessary at more than one organizational level. Dansereau and Dees (2002) tried to introduce cognitive mapping ("a way of spatially organizing and relating ideas, feelings, and actions") (p. 219) in the training of addiction treatment personnel and were unsuccessful at this single-level effort. The authors concluded that additional organizational supports were needed including provision of peer and administrative support; opportunity to have counselors adapt the new practice to their own counseling style and to choose appropriate times to incorporate the practice; and guidance in integrating the technique into ongoing counseling. The authors concluded that, "Having a better mousetrap actually means little, especially if an individual must have skill and confidence to get it to work" (Dansereau & Dees, 2002, p. 228).

Pivotal Role of Supervisors in Transfer of Training

Related to technology transfer, the *transfer of training* is a process in which individual learners bring their new knowledge and skills from the training site to the worksite and use them in the everyday provision of clinical services. Transfer of training is often part of larger technology transfer efforts and is crucial when organizational change as well as individual learning is the goal. Staff members are more likely to transfer new learning when they believe their peers will be supportive and patient with their efforts (Baldwin & Ford, 1988; Tannenbaum & Yukl, 1992) and their supervisors and peers will give them opportunities to practice new skills on the job (Rouillier & Goldstein, 1993; Tziner et al., 1991; Wehrmann, Shin & Poertner, 2003). If supervisors and coworkers lack understanding of the dimensions and utility of the new skills, they may not value the skills and may directly or indirectly undermine the employee's efforts and the employee is likely to return to pre-training skill levels (Baldwin & Ford, 1988; Garavaglia, 1993; Tannenbaum & Yukl, 1992).

Supervisors in EST Dissemination in Addiction Programs

Including supervisors in randomized trials and EST dissemination efforts is a novel approach in the addiction treatment field, however, supervisors have had roles in reinforcing or evaluating training innovations in past studies. Liddle and colleagues (2002) involved supervisors in reinforcing the use of multidimensional family therapy; Carise and colleagues (2002) employed supervisory support in introducing a computer-assisted client admissions instrument; Gallon and colleagues (2006) developed supervisory tools to assess the proficiency of counselors trained in Motivational Interviewing; and Amodeo, Ellis, Hopwood and Derman (2007) provided supervisor training and tools to assess staff compliance with new standards of client care. Our model of supervisor involvement differs from that frequently used by researchers in the NIDA Clinical Trials Network. In that effort, counselors who apply the clinical approaches are often supervised by researchers who are not employees of the treatment program.

In the following pages, we discuss: (a) an innovative web course to teach Cognitive-behavioral Therapy (CBT) and a randomized controlled trial to evaluate the effectiveness of the course; (b) goals and design of the present study focused on supervisors, (c) lessons learned related to supervisor recruitment and involvement, and (d) implications of supervisor participation for technology transfer in the addiction field as a whole. Only the recruitment and baseline data collection phases of the randomized trial are complete; post-training and follow-up data collection is ongoing. Thus, findings here reflect data and experiences of the study to date. This article is written for addiction program managers and supervisors who want to increase their organization's use of ESTs and see those practices become embedded in the fabric of the organization; educators and trainers are another important audience because they seek ways to help counselors practice, master and permanently adopt new skills.

TEACH-CBT: An Innovative Web Course and Randomized Controlled Trial

TEACH-CBT Web Course with "Blended" Methods

The authors of this article worked with the technology staff of the New England Research Institutes, Inc. (NERI), to develop an innovative web-based course called Technology to Enhance Addiction Counselor Helping: Cognitive Behavioral Therapy (TEACH CBT), to improve the knowledge and skills of community-based counselors and supervisors in Cognitive Behavioral Therapy (CBT). This web-based CBT course contains eight modules inclusive of approximately 10–15 hours of online training and offline assignments. Authored by CBT experts and the authors, it focuses on the principles and techniques of CBT including methods for conducting a functional analysis related to drug use behavior, cognitive skills training such as identifying dysfunctional thoughts, behavioral skills training such as drug refusal techniques, applying CBT to HIV/AIDS, and helping clients manage life problems that accompany addiction. CBT is one of a small number of therapeutic approaches with overwhelming evidence of effectiveness (Carroll, 1998; Kadden et al., 1992). This empirically supported treatment (EST) has utility for a range of clients who experience a host of life problems including substance use disorders. Funding from the National Institute on Drug Abuse (NIDA) supports both the web course development and a randomized controlled trial to evaluate the effectiveness of this training method for CBT dissemination.

Randomized Controlled Trial

The randomized controlled trial employs a delayed control group design. The study recruited counselor-supervisor teams from addiction programs and required one supervisor and a minimum of two counselors per team: 54 treatment program teams (54 supervisors and 120 counselors) were randomly assigned to either the web course (experimental group) or to usual training (NIDA's CBT training manual by Carroll, 1998) (control group) to test effectiveness of the web course. With such a design, the control group is restricted to using NIDA's CBT manual until the program's subjects have completed data collection, at which point they are offered participation in the innovative web course. The delayed design made participation more attractive to the control group agencies, as they could also earn continuing education credits for web course participation.

The randomized trial measures counselor outcomes such as (a) changes in CBT knowledge, perception of his/her use of CBT skills, and attitudes toward ESTs, assessed with pre- and post-training questionnaires, (b) changes in the level of competence in CBT delivery, assessed by independent ratings of audio-taped counseling sessions pre- and post-training, and (c) the counselor's maintenance of CBT skills at three-month follow-up, assessed by independent ratings of audio-taped sessions. Qualitative data is available from assignment

boards and discussion boards where counselors from both groups report their experiences in using particular exercises with clients and raise questions for consideration by other participants, and transcripts of supervisor phone calls in which supervisors seek assistance in working with counselors or integrating the study into their agencies. Secondary analyses will focus on the influence of supervisor participation in the study on these outcomes. In other words, supervisors who fully participate in training, taking advantage of study resources for monthly conference calls and a supervisor workshop, may favorably influence the adoption or maintenance of CBT skills by counselor participants.

Present Study: Role of Supervisors

In keeping with recommendations by Simpson (2002), we sought to move beyond simply exposing individual counselors to CBT, to a model that included supervisors who could promote CBT adoption and implementation. Although our methodology was on-line training for counselors, the structure and intent of the project was institutionalization of CBT as a legitimate treatment method. Thus, a supervisor was required for every team.

We wondered whether supervisors would be willing to participate, whether they would have the time and commitment to provide study guidance and support to counselors, and whether their participation would have a spill-over effect in the treatment program, that is, whether other staff would learn about the study through them and develop an interest in CBT. Our study questions were:

- What can be learned about the feasibility of recruiting counselor-supervisor teams?

- Who are the supervisors who are interested in participating (e.g., program setting, educational background)?

- What can supervisors tell us about the work environment into which the ESTs will be integrated?

- What are the supervisors' perceptions of CBT, their own CBT skills and their study roles?

- What level of supervisor engagement can be expected?

NERI's Institutional Review Board approved the study protocol.

Educational Approach to Training and Supervisor Role

Adult Learning Principles

TEACH-CBT course designers were careful to follow principles of adult learning (Knowles, Holton & Swanson, 2005; Kolb, 1984) ensuring that teaching methods were 'active' and learner-centric. For example, counselors are given exercises to use during client sessions and are asked to post the results on a course assignment board (Kolb, 1984), thus blending the web-course in-session practice with reflection on assignments through web-based dialogue with other counselors. Learning is designed to be attractive to individuals with different learning styles, for example, both those who learn a skill best by understanding the theory upon which it's based, and those with minimal interest in theory who learn best by seeing it demonstrated. This means that adoption of knowledge, attitudes and skills will occur more readily (Knowles, Holton & Swanson, 2005; Kolb, 1984; Sternberg, 1997). Advantages of a web-based course over traditional training for community-based counselors include: (a) immediate feedback to the learner through on-line quizzes and exercises, so the learner is actively engaged in self-evaluation, (b) brief audio vignettes which bring the clinical material to life, (c) links to web resources so learners can satisfy their interest in related

topics at the click of a button, (d) learner-paced access 24 hours/7 days a week at home or work, and (e) easily printed course handouts for use with clients. For agencies and counselors, the web course saves time and travel and requires no or little cost. For course developers, an advantage is web course scalability – new information can be inserted and graphics, voice-overs and animation can be added without starting from scratch.

To understand whether the web course could reach and be used by community substance abuse clinicians in diverse, non research-based settings and be viewed as relevant for day-to-day practice, a survey was conducted with a convenience sample of 22 clinicians (not involved in any aspect of the randomized trial) to elicit their responses to a "prototype module" (representative of the course) (Larson, Amodeo, Storti, Blitzman et al., in press). A 59-item written questionnaire and telephone interview asked about strengths and limitations of the design, appeal of the training components, ease of use (user-friendliness), and teaching effectiveness. Twenty (91%) of the clinician respondents agreed with the statement, *"The web course would help me in my work with clients."* The qualitative findings indicated that the module immediately and positively affected the clinicians' perceptions of the value of CBT. Feedback on the prototype from these diverse participants (setting, education, experience) influenced the final web design and teaching strategies, for example: (a) material aimed at the advanced, more theoretically-oriented participant was added and segmented; these optional advanced topics were housed behind an "advanced concept" graphic button; (b) the difficulty of the end-of-module quizzes was increased; (c) the number of handouts per module was increased; (d) the audio segments were broken up to download more quickly; and (e) the module length was increased by 7 screens to a total of 34 screens to accommodate text broken into smaller units.

Methods

Recruiting Supervisors and Counselors

Applicants were required to apply in teams with one supervisor and two or more counselors, all from the same program unit. Programs were encouraged to enroll more than one team, however, programs with multiple teams needed to ensure that staff came from different units that could be independently randomly assigned. Although we wanted to recruit formal "clinical supervisors" from the treatment programs, when they were unavailable we accepted "study supervisors" from the treatment programs who did not function in direct supervisory roles but agreed to facilitate counselor participation in the study and support the use of CBT with clients. In addition to those who functioned as clinical supervisors in their programs (32.8%), we had supervisor proxies who were directors of clinical services (35.9%), program directors (17.2%) or clinician colleagues (12.5%) of the counselors. Thus, more than 50% of those who served as study supervisors were not clinical supervisors per se in their agencies. Since the study is not assessing the impact of clinical supervision on the two groups, but rather the impact of the training method (CBT web course vs. NIDA CBT training manual), and both the experimental and control groups are equally likely to lack clinical supervisors, the potential impact of this design choice on the study results is minimal.

Material publicizing the study was sent to hundreds of addiction treatment programs and the study was publicized on the national Join Together List Serve www.jointogether.org Other types of recruitment methods were also used, for example, presentations to state coordinating bodies responsible for addiction treatment and managed care organizations.

Orienting and Training Supervisors

The authors conducted an initial supervisor orientation to acquaint supervisors with the purpose and design of the study, familiarize them with the training their counselors would receive, stimulate supervisors to complete the training themselves, and discuss the supervisors' study role and ways they could assist counselors. Specifically, the session encouraged supervisors to (a) learn CBT (whether they found themselves in the web course or manual group), (b) practice CBT skills with counselors in supervision, and (c) answer post-training questionnaires on their experience with the study and the course. We anticipated that supervisors could reinforce counselors' use of CBT with clients, motivate counselors to complete audio-tape submissions for the study, demystify research activities for their agencies and inform staff and administrators about the nature and value of CBT, have their own CBT skills refreshed and reinforced, and over time, introduce additional staff to CBT. Building the supervisor's capacity to orient and train new staff could be a considerable contribution, given high staff turnover in many such organizations. Further, supervisor-counselor teams are ideal for learning: teams can practice skills together in supervision and reflect on strengths and weaknesses in their approach. The web course offers an array of activities, such as skill-utilization session check lists (completed after client sessions to indicate which CBT methods the counselor used and which were overlooked or not chosen), discussion boards and assignments boards, that allows counselors and supervisors to exploit the multiple aspects of adult learning provided.

We sought to understand the type of support that supervisors needed in their role (e.g., newsletters or conference calls with other supervisors or course faculty) to help with counselor and agency dilemmas including potential program barriers to study implementation. We learned about their organization's receptivity to and experience with both ESTs and research in general, as well as characteristics of the selected counselors, demographics of the client population, and role of supervision in the treatment program.

Supervisors as Mentors or Coaches

Having a mentor or coach can be especially helpful as learners go through developmental learning stages and need various levels of support and guidance. A mentor is a trusted advisor who provides accurate feedback in a supportive way and seeks opportunities to help the learner grow and succeed (Murray, 1991; Shea, 1994; 1997). Mentors or coaches share their technical expertise, professional experiences and wisdom, listen well and give useful suggestions for managing organizational and personal realities (Stone,1999; Sullivan,1992; Zachary, 2000). We proposed that supervisors with official supervisory roles in the treatment program fill a mentoring role in the study since the counselors' study participation was not part of their formal work obligations. Similarly, we proposed that supervisor proxies who had been chosen to oversee study activities but had no official administrative role with the counselors, do likewise. We expected that counselors might have a high level of excitement at the start of the study, then have a period of feeling "de-skilled" regarding CBT and perhaps challenged by trying to respond to study requirements along with regular treatment program demands. We thought mentoring could be especially helpful when the counselors' confidence was low; supervisors could help them feel an increased sense of self-efficacy and express confidence in their ability to manage project tasks along with other job responsibilities.

In cases where there was a formal supervisor at the treatment program who was not participating in the study, we encouraged the supervisor proxies to keep them informed of the counselors' progress with CBT and study completion.

In under-funded and under-staffed agencies, standard supervision often focuses on administrative rather than clinical issues, and when clinical supervision occurs, the focus is often on client crises. To guard against this, we encouraged supervisors to keep the mentoring focus on CBT clients through regular check-ins with counselors, even those who seemed to be doing well.

We anticipated considerable variation in how supervisors defined or modified their roles for the study due to differences in program settings, counselors' experience level, supervisors' expertise in CBT, supervisors' relationship with the counselors, and whether the supervision was ongoing or had been initiated only for this project. We assumed that supervisors' roles would be some combination of clinical supervision, administrative supervision and mentoring/coaching.

Lessons Learned

Feasibility of Recruiting Counselor-Supervisor Teams

Major obstacles were encountered in recruiting counselor-supervisor teams, causing a delay of several months. We had expected to recruit clinical *supervisors,* but we found that they were a rare commodity in the programs or rarely available to participate in this type of training venture; instead, clinical *directors* or program managers were often enrolled to fulfill this function due to the absence of clinical staff with supervisory experience and/or funds earmarked for supervisory staff. Most of these clinical directors and program managers also felt ownership over new practices to be introduced to agency counselors. They had many other program responsibilities beyond supervision, often overseeing several program units. Those supervisors enrolled in the study have rich clinical backgrounds and considerable exposure to ESTs, but reported working with staff who had limited clinical experience and no or little experience participating in research. Those who enrolled seemed to have a vision for the future of their programs that involves greater EST integration and involvement in related research. They were excited about ESTs and felt a commitment to excite others.

Recruiting counselors was also difficult (although less so than supervisors) primarily because the study design required agency support for data collection in the form of supervisors or supervisor proxies. Thousands of individual counselors contacted us to participate, but they could not be accepted without the remainder of the team. Had their treatment programs been able to provide supervisors or proxies, many additional counselors would have been accepted. Treatment programs were conflicted about whether to expect counselors to complete the 16 hour web-based course or the NIDA CBT training manual (i.e., depending on which arm of the study they were randomized to) on their own time or to provide release time so counselors could complete training at work. In those situations, treatment programs sometimes reported that counselors felt overworked and were unwilling to take on additional tasks during their off-duty hours. If counselors were not given release time to complete the course at work, they were reluctant to enroll, in spite of the benefits to them of receiving CBT training, continuing education credits, and some financial compensation from the study. In some states, counselors were members of unions which created additional equity issues in offering training to some but not all counselors.

Although the study team had intended to recruit all participants from the New England states, discovering the dearth of agency supervisors and realizing that this would severely limit our ability to recruit teams in a timely way, we opened the study up to agencies throughout the U.S. and ultimately had participation from 19 states.

Profile of Recruited Supervisors and Program Settings

In all, 65 supervisors signed informed consent and provided baseline questionnaires. Eleven of the 65 were at programs that did not fulfill all baseline requirements and were thus not randomized, or were replacements for supervisors who had to withdraw, resulting in a total of 54 supervisors (n=28 to web training course; n=26 to NIDA manual). Concerning education, 81.5% of supervisors had a Masters degree or higher; 64.8% had five or more years of supervisory experience. Their programs included outpatient (intensive and regular) (52%), methadone maintenance (13%), long-term residential (11%), acute inpatient (6%), and other (15.7%). Primary settings were predominantly not-for-profit (74%) and included free-standing substance abuse (44%), mental health (11%), hospital (8%), social service (9%), other multi-service (8%) and other (20%). Over 80% of programs served both alcohol- and drug-involved clients and the same proportion focused on adults. Most settings had some specialized programming, for example, 50% for criminal justice clients, 44% for dually-diagnosed clients, 30% for women, and 25% for adolescents.

When asked about pressure to change the program (5-point Likert scale, 1=strongly disagree to 5=strongly agree), supervisors agreed or strongly agreed with the following statements: pressures come from funding and oversight agencies (74%), program supervisors or managers (64%), accreditation or licensing authorities (64%), and program staff members (50%).

Nature of Treatment Program Environment

Concerning training, a high percentage of supervisors (84%) indicated that they had attended outside workshops three or more times in the past year; 69% said that three or more times in the past year they had attended in-house training or workshops offered by the agency. However, supervisors described the addiction treatment program model for training and supervision as "on-the-job training." Although programs may support periodic attendance at low-cost training, long-term skill development is not paid for. Staff may use their own funds to attend such training, but limited release time is provided. There is no billing code for clinical supervision, yet it is required, so programs lose money in providing it and sometimes add it to the clinical director's role or farm it out to a part-time consultant because they can't afford to provide it in-house. An additional issue about which supervisors informed us was the scarcity of Masters level workers. Supervisees often had a BA-level education or less. Concerning ESTs, with some exceptions, supervisors' programs had little exposure to research and to ESTs as taught in a research environment.

Supervisors' Views of CBT, Their Own CBT Skills, and Their Study Roles

We did not need to sell CBT to supervisors. They knew enough about CBT to subscribe to its usefulness, especially as an additional rather than exclusive approach to working with addicted clients. (Note however that these supervisors self-selected for a CBT study.) When CBT methods were described in detail at baseline data collection, most supervisors recognized them as ones they had used to some extent in their work, but there was considerable variation in knowledge. For the most part, supervisors reported that they were not proficient in CBT. The following items show the percentage of supervisors reporting that they never or rarely engaged in these CBT interventions: provided clients with take-home handouts to monitor drug use (42%), gave specific practice exercises for homework (41%), gave clients a worksheet to schedule pleasurable, healthy activities (34%), asked client questions about what was learned from assigned homework (28%), provided coaching and practiced role-playing drug refusal or similar skills (27%), used a check-in time at each session to learn about past week high-risk experiences (24%). This is in contrast to counselors in a prior study (Larson, Amodeo, Storti et al., in press) who believed they were

practicing CBT but recognized they were not when exposed to a CBT course module. Supervisors did not overestimate their knowledge or use of CBT.

Supervisors were enthusiastic about the prospect of mentoring counselors, and anticipated that the other aspects of their roles would be manageable and informative. Specifically, since many supervisors had not participated in research, they thought the process would inform them about research protocols and findings in an immediate and interesting way. They thought counselors would be excited about being mentored on CBT skills learned from the manual or web course, and about several other aspects of the study (e.g., the interactive nature of the web course, seeing their progress in skill development mapped electronically on the web course).

Supervisors were invited to help us plan ways to provide them support during the life of the study since technology transfer efforts are often strengthened by participation in decision making by the stakeholders (Rogers, 1995). Supervisors recommended a periodic supervisor e-mail or newsletter for those unable to join the conference calls, and this recommendation was implemented. We posted information, such as a catalog of previous newsletters and a copy of the orientation slides, on a restricted website. Supervisors on the web course had a designated area to post questions or discuss problems.

Level of Supervisor Engagement in Study

The majority of the supervisors whose counselors were assigned to the web course (n=16 of 28; 86% to date) completed all the web modules to increase their own learning about CBT, as recommended by study faculty; 4 supervisors did not complete the modules; some supervisors are still in process (8 of 28). Of those supervisors who completed the web course, a majority have reported that the most interesting aspects of the course were quizzes, "advanced concept" content, and "scientific evidence" content. An especially helpful training method for the majority was practicing CBT skills with a counselor or another supervisor. A recommendation for additional training program elements endorsed by more than ¾ of supervisors was consulting with a CBT expert on training cases.

Concerning other aspects of supervisor participation in the project, supervisors at 46/54 units attended a formal supervisor workshop sponsored by the project and 26 supervisors joined a monthly supervisor conference call (some duplicate count). Supervisor questions in monthly phone calls focused on how to (a) find agency forums/time for CBT supervision, coaching and reinforcement of learning; (b) integrate CBT in agencies with other predominant counseling approaches (e.g., 12-step), (c) help non-directive counselors use CBT structure in client sessions, (d) motivate highly-directive counselors to adopt a more collaborative style, and (e) help reluctant counselors role-play with clients.

Discussion

CBT was introduced to addiction agencies through innovative technology transfer methods: (a) a web-based course and associated learning activities to transfer the technology of CBT to the staff, and (b) supervisor-counselor teams to assist in embedding CBT content in the fabric of the treatment program. We had a strong pedagogical rationale for including supervisors. We assumed programs would have clinical supervisors available, but we were incorrect. Thus, the feasibility of recruiting counselor-supervisor teams proved to be low until we expanded our recruitment area. Even so, we had to use many supervisor proxies. Many programs lacked this automatic mechanism to transfer new knowledge to staff and to reinforce it over time.

Service delivery in all health care settings is focusing on processes for adoption of ESTs. If addiction programs wish to survive, they will need to demonstrate the use of treatment methods shown to be effective through research evidence. The central questions for federal funding agencies, researchers and educators disseminating ESTs, and addiction program administrators seeking EST training, are, "What types of dissemination methods can be used to reach these programs, and what types of technology transfer methods will result in the institutionalization of change?" In this project, we invested time in orienting and training supervisors so that they would invest in other staff. We did not want supervisors to be distanced or disempowered by the training which can occur when staff go outside the treatment program for training and the supervisor remains uninformed about what was learned.

We found that our difficulty in identifying a sufficient pool of clinical supervisors was related to the shortage of supervisors in the programs, which in turn was related to reimbursement rates; difficulty recruiting counselors was related to the same issue. Currently, rates don't appear to cover even explicit basic expenses such as clinical supervision, the implicit expenses of administrative oversight, and time for counselor training. Counselors who seek to improve their skills in any consistent way are penalized by having to engage in training on their own time. Further, without clinical supervision, counselors will not receive the expert input, skill training, and role modeling available from an experienced supervisor who comes to know client problems through regular case reviews and can provide decisive direction when necessary.

Even if training can be disseminated to programs, these severe infrastructure problems (e.g., lack of reimbursement, lack of supervisors) will impede training transfer and institutionalization. The addiction field is trying to disseminate ESTs to a treatment system that is woefully deficient in the basic elements necessary for workforce development. The field must find ways to identify low cost, quality training that counselors and supervisors can access during work time or that involves clear financial incentives if these staff are required to invest their personal time.

Upon study completion, we will be able to answer key questions such as: "What roles did supervisors play in supporting and reinforcing counselors' use of CBT? Did they practice CBT methods together with their counselors in supervision sessions? What supervisory or other methods facilitated the counselors' use of CBT with clients? What barriers did supervisors and counselors encounter as they tried to integrate CBT into their work and the program's work? Future research, beyond the scope of our study, will need to address a larger and more difficult systems question: if there are few supervisors available, how will addiction treatment programs support counselor learning and ultimately, raise the competency level of the field?

Acknowledgments

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