

Practitioner Perspectives on Evidence-Based Practice: Toward a Model for Designing,  
Evaluating, and Disseminating Treatments with Research Support

Timothy D. Nelson  
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Ric G. Steele, Ph.D.  
Committee Chair

---

Michael C. Roberts, Ph.D.  
Committee Member

---

Eric M. Vernberg, Ph.D.  
Committee Member

---

Julianne Boydston, Ph.D.  
Committee Member

---

David J. Ekerdt, Ph.D.  
Committee Member

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Date Submitted

The Dissertation Committee for Timothy D. Nelson certifies  
that this is the approved version of the following dissertation:

Practitioner Perspectives on Evidence-Based Practice: Toward a Model for Designing,  
Evaluating, and Disseminating Treatments with Research Support

Committee:

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Ric G. Steele, Ph.D.  
Chairperson

---

Michael C. Roberts, Ph.D.  
Committee Member

---

Eric M. Vernberg, Ph.D.  
Committee Member

---

Julianne Boydston, Ph.D.  
Committee Member

---

David J. Ekerdt, Ph.D.  
Committee Member

Date approved \_\_\_\_\_

## Abstract

The widespread implementation of evidence-based practices (EBPs) into mental health settings will require a thorough understanding of the factors influencing practitioner adoption of these approaches. This project reports on the results of a series of empirical studies investigating practitioner attitudes toward EBP, preferences for treatment characteristics, predictors of EBP use, and preferences for treatment research dissemination outlets. The first study explored community mental health practitioner attitudes toward EBP using a focus group methodology and found that these practitioners (N = 19) indicated a number of challenges in implementing EBPs in their clinical work. Using a national survey of mental health practitioners (N = 206), the second study investigated practitioner preferences for various treatment characteristics and found that practitioners are more likely to use treatments that are flexible, supported in “real world” research studies, and are recommended by respected colleagues. Using the same sample, the third study examined potential predictors of practitioner use of EBPs, and aspects of practitioner training, clinical setting, and attitudes toward treatment research were found to be significant predictors. The fourth study asked practitioners to indicate where they obtain information about treatments and found that professional colleagues and supervisors were the most common sources of this information. Finally, the results of these studies are considered together and a model for designing, evaluating, and disseminating treatments with research support is presented. The proposed model highlights practitioner perspectives on EBP and

attempts to integrate these perspectives into recommendations aimed at increasing the use of treatments with research support in applied settings.

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## Introduction

In recent years, government agencies, professional organizations, and individual authors have called for increased use of treatments with research support in clinical settings. In 2003, the President's New Freedom Commission on Mental Health released its report on mental health services in the United States and identified the movement of efficacious treatments into clinical settings as a national priority (New Freedom Commission on Mental Health, 2003). Similarly, the American Psychological Association (APA) has recently approved a policy statement regarding evidence-based practice (APA, 2005). Although the APA policy statement does not embrace research-validated treatments as unequivocally as the New Freedom Commission report, it does acknowledge the importance of evidence-based approaches in clinical practice and contributes to the recent shift toward integrating research evidence into clinical care.

In addition to the New Freedom Commission report and the APA policy statement, other influential organizations and individuals have advocated for the use of evidence-based approaches in the area of clinical child psychology. For example, special editions of the *Journal of Clinical Child Psychology* (i.e., Volume 27, Number 2) and the *Journal of Pediatric Psychology* (i.e., Volume 25, Number 4) have focused on empirically supported treatments (ESTs) for children and adolescents with a variety of disorders. Similarly, APA's Division 53 (Society for Clinical Child and Adolescent Psychology) has created a website for information on evidence-based treatments for children and adolescents. Numerous authors have supported the notion that evidence-

based approaches should be adopted in clinical practice with children, and some have questioned the ethics of using treatments that lack research backing (Ollendick & Davis, 2004).

In the area of clinical child psychology, substantial evidence for the efficacy of numerous psychotherapeutic interventions has accumulated in recent years (Kazdin & Weisz, 2003). However, advances in the quantity and quality of such research have not led to widespread use of treatments with empirical support (New Freedom Commission on Mental Health, 2003; Connor-Smith & Weisz, 2003; Hoagwood & Olin, 2002; Kazdin, 1997). Even when such treatments make their way into clinical settings, the transition from the laboratory to regular clinical practice is typically a slow one, often taking 15-20 years (Balas & Boren, 2000, as cited in the New Freedom Commission on Mental Health, 2003).

Despite a general movement toward the adoption of treatments with research support, many mental health practitioners have resisted this change. In 1995, the APA's Division 12 Task Force on Promotion and Dissemination of Psychological procedures and the Task Force on Psychological Interventions released their controversial guidelines for identifying empirically supported treatments, and subsequent publications listed treatments with high levels of empirical support (Chambless & Hollon, 1998; Chambless & Ollendick, 2001; Chambless et al., 1996). Vocal opponents of ESTs challenged the emphasis on treatments with research support, claiming that psychotherapy research does not address the issues that are important to practitioners in

the field (e.g., Strupp, 2001; Persons & Silberschatz, 1998; Garfield, 1996). More recently, some authors have questioned the assumption that treatment decisions should be primarily based on research findings, instead suggesting clinical judgment is a more appropriate basis for clinical practice (e.g., Levant, 2004).

In response to the controversy regarding ESTs, APA introduced and endorsed the concept of evidence-based practice in psychology (EBPP; APA, 2006). APA's definition of EBPP was modeled after evidence-based medicine (Sackett, Rosenberg, Gray, Haynes, & Richardson, 1996) and, unlike ESTs, highlights the importance of both clinical research and clinical expertise in service delivery. APA's endorsement of EBPP is generally consistent with the larger movement within the mental health services field toward increasing the use of evidence-based practices (EBPs), which the New Freedom Commission on Mental Health (2003) defines as "a range of treatments and services whose effectiveness is well documented" (p. 68). While the APA's conceptualization and endorsement of EBPP may be helpful in promoting the use of EBPs, the widespread adoption of these approaches remains a major challenge.

As the field moves toward increasing endorsement of EBPs, the attitudes of practitioners in applied settings will play an important role in the success of implementation efforts. Therefore, understanding practitioner perspectives on EBP and related issues will be crucial to the successful movement of EBPs into clinical settings. In recent years, some research has begun to examine practitioner attitudes toward EBPs. Aarons (2004) studied practitioner attitudes toward EBPs in general, surveying 322

public sector service providers working with children, adolescents and families. Practitioners reported a wide range of attitudes toward EBPs with significant differences based on educational status (higher educational status was associated with more favorable attitudes), experience (greater experience was associated with less favorable attitudes), and setting (practitioners in inpatient settings were more open to EBPs than those in outpatient settings). Addis and Krasnow (2000) investigated practitioner attitudes toward treatment manuals, a specific component common to many EBPs, surveying a national sample of 891 practitioners. Similar to Aarons (2004), Addis and Krasnow found considerable variance in practitioner knowledge regarding and attitudes toward treatment manuals.

Although the Aarons (2004) and Addis and Krasnow (2000) studies provide rare and valuable investigations of practitioner attitudes toward EBPs, the present project aims to further explore practitioner perspectives on EBP and related issues. The goal of this project is to generate data that will inform a model of treatment design, evaluation, and dissemination that incorporates practitioner perspectives while promoting the widespread use of treatments with research support. Because the dissemination of EBPs into applied settings is a complex issue, this project pursued several areas of investigation related to treatment design, evaluation, and dissemination.

#### *Goals and Structure of the Present Project*

The present project consisted of four empirical studies. The first study aimed to better understand the issues related to EBP use from a practitioner perspective. To this

end, a focus group format was used to identify major issues in this area and to inform subsequent investigations. Focus groups provide a more open format for data collection than surveys, allowing practitioners to identify important themes and allowing researchers to capture the complexity of practitioner perspectives. The themes observed in focus group discussions were then used to generate survey questions for a broader sample of mental health professionals.

Using themes identified in the first study, the second study examined clinician preferences for different treatment characteristics in a national survey of mental health practitioners. While scientific inquiry should determine the content of treatments, the design and “packaging” of protocols might be important in how practitioners perceive a given treatment, influencing their likelihood of implementing that protocol (Nelson & Steele, in press). Recognizing the potential influence of treatment characteristics on implementation, this study aimed to determine the relative importance of different treatment characteristics (e.g., flexibility, ease of use, nature of the evidence for outcomes) to mental health practitioners. The results of this study are expected to provide guidance for how treatments can be designed and evaluated with an eye toward widespread implementation.

Although practitioner preferences for treatment characteristics are considered important, they are likely only one of several factors related to treatment selection. With this in mind, the third study investigated the potential predictors of treatment selection, specifically focusing on the influence of practitioner training characteristics,

clinical setting, and attitudes toward treatment research on self-reported use of EBPs. These data should provide a broader understanding of the multiple and interacting factors that influence treatment decisions and point toward recommendations for facilitating greater use of EBPs.

In light of the communication disconnect between researchers and practitioners (see Beutler, Williams, Wakefield, & Entwistle, 1995), it is important to understand where practitioners get their information on treatments. Again, with a focus on fostering widespread implementation of treatments with research support, the fourth study examined the sources most frequently used by practitioners to obtain information about treatments. By understanding where practitioners get their information, this study will inform efforts to disseminate information about EBPs in an efficient manner.

Finally, this project aims to integrate the results of the four studies into a model for the effective promotion of treatments with research support. Specifically, the results of the empirical investigations will be used to generate practical recommendations for treatment design, evaluation, dissemination, and training.

### **Study One**

As described in the introduction, study one was conducted to gain a better understanding of the major issues related to EBP from a practitioner perspective. Given the relative novelty of this research area and the lack of a dominant paradigm for conducting such research, study one was designed to provide for an open discussion of issues and to inform the foci of subsequent investigations. Focus groups were utilized

in order to elicit practitioner perspectives without unnecessarily imposing the preconceptions of the researcher on the discussion. This approach was deemed most appropriate for a preliminary investigation and provided a more rich understanding of the issues that are important to practitioners in implementing EBP in their work.

## Method

### *Participants*

Participants were 19 clinicians working full time in one of two community mental health centers (CMHCs) in a medium-sized Midwestern state. The CMHCs were selected based on convenience and their proximity to the author. Each center is the only CMHC in its county. Compared to the other 27 CMHCs in the state, the two centers included in this study are located in more urban areas. Participants worked primarily with children, adolescents, and families, providing either outpatient or community-based mental health services. The present sample consisted of 12 Masters-Level Licensed Social Workers, 4 Ph.D.-Level Licensed Clinical Psychologists, 2 Masters-Level Licensed Psychologists, and an Advanced Registered Nurse Practitioner (ARNP). The total sample comprised approximately 51% (19 of 37) of the eligible clinicians at the targeted community mental health centers. The participants in each focus group were generally representative of the clinicians working in the child and family department of their center based on available demographic information (see Table 1; p. 13). To test for differences between the groups and their respective centers on academic degree and gender, Kolmogorov-Smirnov One Sample Tests were used

because this test is more suitable for small samples than the chi-square statistic (Lowry, 2000). No significant differences were observed between the groups and their respective centers on academic degree ( $D_{max} = .048$ ,  $p > .05$  for the first group;  $D_{max} = .111$ ,  $p > .05$  for the second group) or gender ( $D_{max} = 0$ ,  $p > .05$  for the first group;  $D_{max} = .278$ ,  $p > .05$  for the second group). No statistically significant differences were found in years of experience between the participants in the first group and non-participants from the same center,  $t(17) = .983$ ,  $p > .05$ .

### *Procedures*

The author contacted clinical supervisors in two community mental health centers regarding recruitment of potential participants. One supervisor in each center posted fliers announcing a focus group to “discuss current issues in child treatment” and encouraging interested clinicians to attend. The term “evidence-based practice” was not mentioned in recruitment in order to decrease the likelihood of obtaining a biased sample (i.e., only clinicians who had strong feelings toward evidence-based practice). Two separate focus groups were conducted (one at each community mental health center). In order to increase participation, the groups were conducted on site at the centers, over the lunch hour, and lunch was provided for all participants. The first group consisted of 10 clinicians, and the second group consisted of 9 clinicians.

Before beginning the focus groups, participants gave their informed consent to participate in the groups. Participants were informed that their responses would not be linked to any identifying information and they were free to withdraw at any time. They

were informed that the groups would be audio and videotaped to allow the researchers to code participant responses.

The focus groups were conducted in a manner consistent with guidelines outlined by Krueger (2000). After participants gave their informed consent, the moderator (author) gave a brief introduction to the focus groups. He gave a general description of the purpose of the study, which was to “investigate practitioner attitudes toward some current issues in child treatment.” The moderator encouraged participants to offer their honest opinions on the discussion topics and to feel free to express differing points of view.

In order to stimulate discussion on the target topics, the moderator asked participants to respond to seven prepared questions (see Table 2; p. 26). After asking each prepared question, the moderator let the participants freely discuss the issue, using active listening techniques to encourage participation without influencing the nature of responses. Occasionally, when responses were unclear or more information was needed, the moderator used additional follow up questions to further probe participant responses (see Krueger 2000, for description of probes). Participants were given the opportunity to offer their opinions on each question and to engage each other in a dialogue regarding the target questions. Each focus group lasted approximately one hour and was videotaped for later transcription. After the completion of each group, the moderator took notes on his impressions of the session.

Table 1. Demographic Characteristics of the Focus Group Samples Compared to Populations at Community Mental Health Centers

	<u>Percentage/Average</u>	
	<u>Focus group</u>	<u>CMHC</u>
<u>Location 1</u>		
Number of therapists	10	19
Type of License		
Masters level social worker	60	63.2
Masters level psychologist	20	21.0
Ph.D. level psychologist	10	10.5
Advanced Nurse Practitioner	10	5.3
Gender (% female)	100	100
Years of clinical experience	10.1	9.1
<u>Location 2</u>		
Number of therapists	9	18
Type of License		
Masters level social worker	67	77.8
Masters level psychologist	0	0
Ph.D. level psychologist	33	22.2
Gender (% female)	100	72.2
Years of clinical experience	*data not available for this center	

### *Qualitative Data Analysis*

Using procedures consistent with recommendations by Krueger (2000), the author conducted each focus group, transcribed the video tapes and conducted the analyses. After watching each video tape twice and producing a full transcript of each group, the author followed a two-part procedure for identifying the major themes of the focus groups. First, he reviewed the transcripts and his personal notes from each group and generated preliminary themes reflecting ideas expressed by multiple group members. Second, the author coded the transcripts for the number of times each idea was expressed. Themes were defined as ideas that were expressed repeatedly (at least three times) in each group and appeared to reflect the general consensus of the group as indicated by responses to probes and the moderator's notes.

To verify the presence of themes, a second coder who was not present at the groups followed a similar procedure for identifying themes. The second coder reviewed the transcripts of each group and generated preliminary themes of participant responses. The second coder then coded the transcripts for the number of times each idea was expressed. Ideas that were expressed at least three times in each group and appeared to represent general group consensus were retained as themes. The themes presented in this study were those that were independently observed by both the author and the second coder. Coder agreement on themes was 100%; that is, there were no instances where a theme was generated by one coder and not the other. Frequency counts for themes are not reported because such counts can be misleading regarding the strength

and importance of a theme and are generally viewed with caution in qualitative group research (see Krueger, 2000, for discussion).

## Results

Overall, both focus groups produced lively discussions of the target issues. Although some participants spoke more frequently than others, all participants contributed to the discussions and neither group was excessively dominated by any one individual. Similar themes were expressed across groups and those themes are presented here (for a summary of themes see Table 2; p. 26). The themes are organized by topic area and quotes from the groups are offered to help illustrate certain themes.

### *Challenges to Implementing EBPs*

Participants identified a number of challenges to implementing EBPs in community mental health settings. Specifically, they identified certain characteristics of EBPs, characteristics of practitioners and clinical settings, and characteristics of clients that make the use of the EBPs in community settings difficult.

*Characteristics of EBPs.* Participants identified three main characteristics typical of EBPs that pose challenges for integrating these treatments into clinical practice. First, participants indicated that most evidence-based treatments are too long to be effectively implemented in community practice. One clinician said, “It’s hard to get through treatments for children that are 12 sessions, being able to actually implement that, being able to get someone in here for 12 sessions.” Another

commented, “When you start looking at interventions that take 6, 7, 8, 9, 12, 16 sessions, you just don’t get the results because the turnover is high.”

Second, several participants noted that EBPs often require substantial training in order to gain competence with a particular approach or protocol. Participants generally indicated that this specialized competence was often an obstacle that prevented them from implementing treatments with research support. One clinician said, “You have to make sure you’re well-trained in a given therapy. A little bit of knowledge can be dangerous if we don’t really know what we are doing.” Another added, “EBPs are not something that we are trained on, and how does someone become an expert in an approach when they are only going to use it occasionally?”

Third, participants generally believed that the research supporting most EBPs is not applicable to their work in community mental health centers. Specifically, participants indicated that they believed the highly controlled conditions and exclusion criteria that are often present in clinical trials made them question the transportability of these treatments to community settings. A participant noted that “so many of the studies are done on ideal kids. You’re disqualified from the study if you don’t meet the criteria, but in real life, people don’t meet the criteria.” Another participant commented, “It’s very hard to use interventions that were tested on populations where the variables were controlled, and the situations were closely monitored. In our realm, things change very rapidly and we just don’t have the luxury of having a set protocol that makes the intervention as successful as it was in the lab.” Distrusting much of the available

treatment literature, many participants indicated that they prefer to use treatments with which they are more familiar, even if they lack substantial research backing. One participant said, “I think many evidence-based practices just aren’t standardized for our population,” and another said, “I can just rely on what I feel comfortable with.”

*Characteristics of Practitioners and Community Settings.* Participants identified three characteristics of practitioners and community settings in general that make implementation of EBPs challenging. First, practitioners repeatedly indicated that they have heavy caseloads and do not have the free time necessary to learn new approaches and become proficient in their delivery. One participant said, “It’s hard when people are working 50-60 hours and have to go on and do extra reading.” Another commented, “None of us have time to learn a new treatment.” Second, the practitioners in this study noted that they often lack training and adequate supervision necessary to be able to implement EBPs. One clinician noted, “You really need people that know the protocol and have a broader background and a deeper understanding of the protocol to help you with implementation.” Finally, participants cited the economic restrictions of community mental health settings as a major obstacle to EBPs. Treatments that are not cost-effective or are not reimbursable by third-party payers are not viable options in most community mental health settings. An administrator and practitioner in one group said, “A treatment may be the best thing in the world, but if we can’t fund it, we can’t do it.”

*Characteristics of Clients.* The clinicians in both focus groups indicated that client characteristics also make the implementation of EBPs in community settings challenging. Participants repeatedly talked about seeing clients with complex clinical presentations, often carrying multiple diagnoses and encountering multiple stressors. Many of the participants saw most EBPs as insufficient and inappropriate for these children because many EBPs are designed for and tested with children with only one diagnosis. One clinician said, “Our kids don’t come in nice neat little packages. Most have multiple diagnoses, and I don’t know what’s out there for kids with multiple diagnoses.” In addition to the complex and severe nature of many clients seen in community mental health centers, several participants noted resistance to EBPs on the part of their clients. One clinician noted that some clients have rejected evidence-based approaches saying, “No way am I doing some manualized treatment.” Another participant cited poor parent buy-in to behavioral approaches with some parents saying “I’m not putting up that sticker chart.” Finally, participants noted that many of their clients were inconsistent in their attendance at therapy, making the implementation of a highly structured protocol quite challenging. One practitioner said, “Sometimes I only see people every three weeks...and they’ve forgotten what we did three weeks ago.”

#### *Desirable Treatment Characteristics*

In both focus groups, participants identified the characteristics of treatments that increased their likelihood of using a particular approach or protocol. The characteristics that were most commonly mentioned and most agreed upon are presented here.

*Flexibility.* Throughout both groups, participants repeatedly reported that flexibility is an essential characteristic of a treatment. Treatments that allow for the clinician to deal with issues as they arise and give the clinician flexibility to tailor the treatment to an individual client are preferred. Flexibility of treatments was a particularly important characteristic for many clinicians given the complexity and severity of many cases seen in community settings. One participant commented, “You have to be able to stop and deal with real crises. You can’t say, ‘I am sorry, it’s session 4 and we have to do this.’” Another clinician added, “The less rigid it is, the more likely it is to be successful when you can tailor it more to the client.”

*Easy to Implement.* Another important characteristic of treatments for clinicians in this sample was related to ease of use. Participants indicated that treatments that are easy to learn and easy to implement are preferable. Specifically, approaches that use the skills a clinician already possesses, rather than requiring new skills, are more likely to be used. One participant said, “I’m tired. This is hard work. I don’t have the energy to learn another protocol.” Likewise, treatments that do not require excessive training in order to be able to implement are preferred. One clinician commented that for some treatments “the rules are so specific and there’s so much to remember, so I don’t use them nearly as much as I would like.”

*Positive Experiences with the Treatment.* Not surprisingly, practitioners in this sample indicated that they prefer treatments with which they have had positive experiences in the past. While some participants indicated that research findings

supporting a treatment's outcomes are important, most participants put more weight on their own personal experiences and the experiences of trusted colleagues. A participant commented, "It makes a big difference to me if I have seen it work or if people I respect say that they've seen it work. Then I am much more motivated to learn that."

*Emphasis on the Relationship.* Many participants indicated that they prefer treatments that place an emphasis on the therapeutic relationship. For some, the relational aspects of the treatment were seen as more important than any other proposed mechanism of change. One clinician said, "You have to build that relationship before they'll listen to anything else you say that might be evidence based." Another commented, "I like treatments that attempt to articulate the therapeutic process, 'the dance' ... treatments that operationalize that, instead of ignoring it."

*Access to Training and Expert Consultation.* For clinicians open to new evidence-based approaches, access to training and ongoing expert consultation was cited as a desirable treatment characteristic. Because implementing EBPs often requires learning new techniques and new protocols, participants emphasized the need to receive training in new approaches and to have an expert available to supervise implementation. Participants indicated that if expert supervision was not available, they would be hesitant to use a new treatment even if there were strong evidence for its effectiveness. One participant said, "I think it's important to have immediate access to someone who has expert knowledge of a treatment, maybe online or maybe in the center."

*Sources of Information on Treatments*

Participants were asked to indicate from where they receive information on treatments. Although a wide variety of responses were given, the most common answers are presented here.

*Colleagues.* The most common source of information on treatments for the clinicians in this study was professional colleagues. Participants indicated that other therapists were usually the first places they went to obtain information regarding treatments. Supervisors were also a common source of information on treatments. Obtaining information from colleagues was usually an informal process of asking colleagues for recommendations regarding treatments that they frequently used or with which they had observed positive results. One clinician said, “Some people are more trained in a particular topic, so I will call them.”

*Workshops and Trainings.* Another source of information for practitioners in the groups was continuing education workshops and training sessions in particular therapies. Participants indicated that workshops and trainings offered within the community mental health center were particularly helpful, but trainings outside the center were also occasionally useful. “We have had some good training here at the center,” noted one clinician, “and some of them have been helpful.”

*Books.* Participants indicated that they often seek information on treatments in practitioner-oriented and mainstream books. Although many clinicians indicated they frequently obtain information from such books, several participants lamented that they

rarely have enough time to read as much as they would like, somewhat decreasing the use of books as a means for gaining information on treatments.

*The Internet.* Participants indicated that they often seek treatment information on the internet. While some clinicians indicated that they use database search engines, many participants reported using general search engines as a primary strategy for obtaining information. One clinician said, “I start on the internet a lot of times now. I use search engines just to see what kind of names pop up.” Another commented, “The internet has a whole bunch of stuff that’s accessible now. If I want to look something up and find something I can use, I can go to the internet now.”

#### *Attitudes toward Treatment Research*

Although some participants indicated that treatment research can be a helpful guide, most clinicians in this study reported that research does not have a major impact on their treatment selection. Overall, the participants identified concerns regarding studies conducted under highly controlled conditions and a desire for summaries of relevant research.

*Controlled vs. Applied Research.* One of the clearest themes of the focus groups was the distinction that participants make between highly controlled “lab” studies and applied “field” studies. The participants indicated that research conducted in community mental health settings, with populations typically seen in those settings, is much more useful than highly controlled research conducted with strict fidelity checks and exclusion criteria. One participant went so far as to describe highly controlled

studies as “irrelevant” and “absurd.” Another participant said, “So much of what I read is so inapplicable to what I actually do in terms of the level of complexity of cases, multiple diagnoses, and the parts of therapy that can’t be quantified.” Participants were more open to the results of applied studies with severe clinical populations; however, they perceived these studies as extremely rare in the current literature. One clinician recommended research that is “demonstrated out in the community because that is our state mandate and those are the kids who need it more than anyone else.” Sampling concerns were also repeatedly mentioned with participants stressing the need to validate treatments with severe populations. One participant joked, “The research has to be with *out-of-control kids*, not control kids.”

*Summaries.* Participants generally indicated that the literature on child and family treatments can be overwhelming in both its complexity and its volume. Numerous clinicians in the present study suggested that research aimed at summarizing and synthesizing this diverse literature is most valuable to them. Participants expressed a particular appreciation for articles that make explicit recommendations regarding how to translate the findings into clinical settings that may be different than the original research setting. Again, several practitioners in the present study indicated that they have limited time to read clinical research, so work that brings together a body of research into a single article or chapter is often the most efficient way to communicate relevant findings to clinicians in the field.

*Recommendations for Researchers*

After discussing the challenges to implementing EBPs, treatment preferences, and attitudes toward research, participants offered recommendations for how researchers could help practitioners in community settings. Recommendations generally centered around two themes which are presented here.

*“Come Spend a Day with Us.”* In both focus groups, participants encouraged researchers to spend time in community mental health settings in order to develop a first-hand understanding of the day-to-day challenges faced by the participants. Participants believed that such first-hand exposure would give researchers a better understanding of the types of clients seen in community settings and the typical schedules of practitioners in these settings. Furthermore, an increased presence of researchers in community mental health centers could facilitate greater communication and understanding between practitioners and researchers. Several practitioners expressed the belief that if more researchers “come spend a day” in community mental health centers, this might be helpful in encouraging research that is seen as more directly relevant to clinicians in the field.

*Give Summaries and Recommendations for Clinical Practice.* As mentioned earlier, practitioners in both groups indicated that summaries of the literature are most helpful to practitioners in the field. Several participants indicated that they look for “take home messages” that can be gleaned from the extensive literature on child and family treatment. Participants in the present study also indicated that researchers should provide detailed recommendations for applying research findings to clinical practice.

Specifically, recommendations on how a treatment might be adapted for use in diverse settings or with children with comorbid conditions are particularly helpful.

#### *General Attitudes toward Evidence-Based Practices*

While the two focus groups in this study produced similar themes with regard to the challenges of EBPs, desirable treatment characteristics, sources of information, attitudes toward research, and recommendations, the two groups differed in their overall attitudes toward evidence-based practice. Although some variability of attitudes within groups was observed, one group appeared much more open to implementing EBPs than the other group. Whereas participants in the first group recognized challenges but believed EBPs were an appropriate goal, the second group made a number of negative comments regarding EBPs in general. For example, in the first group, one clinician said, “I think it’s good to have what we know works be the thing that determines the decisions we make about treatment...it forces clinicians to at least consider what’s out there and what works.” In contrast, a clinician in the second group called EBPs “pointless” and “not reality-based,” while another participant in the second group said that “evidence-based treatments don’t capture the important subtleties of treatment.”

Table 2. Practitioner Focus Group Questions and Themes

<i>Focus Group Questions</i>	Group Themes
<i>What are the challenges of implementing evidence-based practice?</i>	Characteristics of EBPs
	Long treatment duration
	Specialized competence required
	Research not applicable
	Practitioners/Setting Characteristics
	Limited practitioner time
	Lack of training and supervision
	Economic restrictions
	Characteristics of Clients
	Complex client presentation
Client resistance	
Client inconsistency in therapy	
<i>What characteristics of a treatment make you more likely to use that treatment?</i>	Flexibility
	Easy to implement
	Positive previous experiences
	Emphasis on the therapeutic relationship
	Access to training and expert consultation

<i>Where do you get your information on treatments?</i>	Colleagues Workshops and Trainings Books Internet
<i>How helpful is treatment research for you in your clinical work? What kind of research is most helpful?</i>	Controlled vs. Applied research Summaries
<i>If you could make recommendations to researchers about how they can best help you in your work, what would you recommend?</i>	“Come spend a day with us” Summaries/Recommendations for practice
<i>What does “evidence-based practice” mean to you?</i>	Openness to EBPs (in first group) Negative toward EBPs (in second group)

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### Discussion for Study One

Study one presents the results from two community mental health practitioner focus groups exploring issues related to evidence-based practice. Overall, participants’ responses reflected common themes regarding attitudes toward EBPs and the challenges related to implementing EBPs in community settings. Many practitioners in this study questioned the applicability of much of the research supporting EBPs and indicated a desire for more applied research in clinical settings with samples with more severe psychopathology. Participants also identified a number of challenges to using evidence-

based approaches, including limited time to learn new approaches and access to adequate training and supervision with evidence-based protocols. The participants expressed resistance to rigid, lengthy and overly detailed protocols, instead indicating a preference for treatments that emphasize the therapeutic relationship and allow the therapist flexibility in tailoring the treatment to individual clients. Attempts to facilitate evidence-based practice in community settings will need to address these concerns if evidence-based approaches are to successfully move from research settings to standard community practice. Likewise, community mental health centers interested in adopting evidence-based approaches will need to make considerable investments in education and training for their staff in order to ensure that they have the necessary knowledge and skills to implement these practices successfully.

Although the practitioners in this study exhibited a general agreement regarding the themes presented in this paper, notable differences between groups were observed regarding overall attitudes toward EBP. In the first group, participants were generally open to EBPs, while recognizing a number of obstacles to their implementation in community settings. In contrast, participants in the second group were more hostile toward EBPs and indicated a general skepticism about their usefulness in community practice. In trying to explain these between-group differences, two possible explanations are offered. First, the differences suggest that practitioners in general have a wide range of opinions regarding EBPs in community settings, ranging from openness and enthusiasm to skepticism and cynicism. This wide range of attitudes is consistent

with previous research finding considerable variability between mental health providers in their openness to and likelihood of adopting EBPs. Aarons (2004), for example, noted variability in mental health provider responses regarding the intuitive appeal of EBP, likelihood of adopting EBPs if required to do so, openness to new EBPs, and perceived divergence of EBP from existing practices. Furthermore, attitudes were found to vary by practitioner education level, experience, and clinical setting. Although the present study found numerous common themes among practitioner attitudes, mental health providers are clearly not of one mind with regard to their attitudes toward EBP.

Second, because differences between groups were more apparent than differences within groups, it is reasonable to conclude that community mental health centers have their own *institutional culture* regarding EBPs. It is possible that the attitudes and beliefs of clinicians, supervisors and administrators within a community setting interact to produce a prevailing institutional attitude toward EBPs. The influence of colleagues on individual attitudes toward EBP is likely to be substantial given the frequent use of colleagues as sources of information on treatments.

Administrative policies and priorities may also influence the institutional culture regarding EBPs which in turn influences individual attitudes. The community mental health center in which the first group was conducted has identified the implementation of EBPs as a center priority, which may account for the more positive attitudes toward EBPs within this group. Little research is currently available on institutional attitudes regarding EBPs and should be explored in future research.

### *Limitations of this Study*

A number of limitations of this study should be noted. First, the themes emerging from these focus groups were generated based on the responses of a relatively small sampling of community mental health practitioners. Although the participants were similar to other clinicians working in their community mental health centers on a number of relevant demographic characteristics, the national representativeness of these two centers is unknown. The centers were selected for convenience, so caution should be exercised in generalizing these results to practitioners from settings that differ in size or population served. Given these limitations, research verifying these themes with a larger, nationally representative sample is needed. Second, while the format of this study allowed for the identification of important themes, the small sample size did not allow for a closer investigation of differences between practitioners. Future research should build upon the findings of this study and examine differences between practitioners in their attitudes toward EBPs. Third, this study asked participants to discuss EBPs in general without providing a clear definition of EBPs. Instead, participants used their own definitions, and some variability was observed in those definitions. Because it is likely that individual definitions of EBPs can affect attitudes toward EBPs, future work should more closely examine practitioner definitions of this concept. Finally, the focus group methodology is potentially susceptible to the influence of group dynamics. Specifically, this methodology can sometimes lead to an overemphasis on the attitudes of the most vocal participants at the expense of less

assertive group members. Likewise, status differences within the group might affect the willingness of individuals to voice their opinions. Despite these inherent limitations of focus group data collection, the moderator made efforts to elicit the attitudes of all group members and neither group was excessively dominated by any one individual. The open group discussion format used in this study was deemed the most appropriate for a preliminary investigation of practitioner attitudes. With a number of themes now identified, future research on attitudes toward EBPs can be explored in greater detail.

### **Study Two**

The results of study one suggest that practitioner attitudes and preferences toward different treatment approaches can affect which treatments are used in clinical settings. Building on these results, study two further investigates practitioner preferences for different treatments. Specifically, this study aims to better understand which treatment characteristics are most influential in treatment selection. The results from this study are expected to inform treatment design by allowing treatment developers to tailor their protocols to the needs and preferences of practitioners, increasing the likelihood of widespread adoption. As noted above, the intent of this study is not to undermine the scientific basis of treatment design, but rather to affect the presentation or “packaging” of treatments in order to facilitate more widespread use of treatments with research evidence. By determining the relative importance of different treatment characteristics, new treatments can be created and existing protocols can be adapted with clinician preferences in mind.

## Method

### *Participants*

The participants were 206 mental health practitioners from 15 different states who completed a brief online survey. Although previous research has focused mostly on Ph.D.-level psychologists, we conceptualized “mental health practitioner” more broadly to include master’s- and doctoral-level clinicians who spend at least 25% of their professional time in delivering treatment services. The final sample consisted of 112 Ph.D. psychologists, 24 Psy.D. psychologists, 25 Master’s-level psychologists, 35 Master’s-level clinical social workers and 10 Master’s-level clinicians who selected “other” for their academic degree. The sample was diverse in terms of clinical setting (26.7% in private practice, 23.8% hospitals, 18.4% CMHCs, 10.7% schools, 8.3% university clinic, and 12.1% in other clinical settings), theoretical orientation (59.7% Cognitive or Cognitive-Behavioral, 10.2% Psychodynamic, 9.2% Behavioral, 7.8% Family Systems, 3.9% Humanistic, 9.2% other), and years of clinical experience (mean = 10.6, SD = 9.4).

### *Procedures*

Mental health practitioners were identified and recruited to complete a brief online survey using two primary recruitment strategies which were approved by the Human Subjects Committee at the University of Kansas. First, presidents of state psychological associations were contacted via email regarding recruitment of members to participate in the survey. Thirty presidents were contacted and ten presidents

(33.3%), representing a diverse geographic sample, agreed to recruit members by forwarding a recruiting email to members on their association listserv. Of the 20 presidents who were contacted and did not agree to participate, five (25%) declined to participate and 15 (75%) did not respond to the email. The recruiting email, which was forwarded to members of participating associations, gave a brief and general description of the study indicating that the survey would include questions on “preferences regarding treatments and treatment research.” Potential participants were also informed in the email that a participating publisher would provide a 20% one-time discount coupon for those completing the survey. A link directly to the survey website was included in the email to provide potential participants easy access and to increase participation. Using this method, a total of 1062 potential participants were contacted; however, it should be noted that, because state psychological association memberships comprise both clinicians and researchers, not all of these potential participants were eligible for inclusion in the study (i.e., they do not spend at least 25% of their professional time in clinical practice).

Second, in the interest of recruiting clinicians from a wider range of academic backgrounds and clinical settings, a national sampling of community mental health centers (CMHCs) and hospitals providing mental health treatment services was contacted. Potential participating institutions were identified from a list available at the Substance Abuse and Mental Health Services Administration (SAMHSA) website ([www.mentalhealth.samhsa.gov/databases](http://www.mentalhealth.samhsa.gov/databases)) and were drawn from 16 states. The

directors of 32 institutions were contacted via email and a recruiting procedure similar to the one used for state psychological associations was employed. Of the 32 institutions contacted, the directors of 15 institutions (46.9%; 8 CMHCs, 7 hospitals), representing 10 states, agreed to recruit clinicians at their site. Participating directors were given a general description of the project and asked to forward the recruiting email to eligible clinicians in their institution. Potential participants were then able to click on a link that took them directly to the survey. Using this method of recruitment, 198 potential participants were contacted.

Potential participants who arrived at the survey website, regardless of how they were initially identified and recruited, were given a brief description of the survey and the opportunity to give their informed consent to participate or withdraw without penalty. At no point during the recruitment process were potential participants told that the study focused on EBPs or any related term. Participants who gave their informed consent were asked a “gatekeeper question” (*Do you spend at least 25% of your professional time providing treatment or treatment-related activities, i.e., direct client contact, case management, preparation, supervision, and other treatment-related activities?*). Respondents who indicated “yes” were directed to the survey for this study, while those who responded “no” were directed to a survey for another study.

Overall, 1260 potential participants identified through the two methods of recruitment were contacted to participate in this study. Of the 1260 potential participants, 276 met the criteria for inclusion in the study (i.e., master’s- or doctoral-

level clinician spending at least 25% of professional time in clinical practice) and gave their informed consent to participate in the study (21.9%). Unfortunately, 70 participants did not complete a significant portion of the survey due to technical difficulties or terminating the survey page before completing the survey, yielding a final sample of 206 participants with complete data. Correspondence from potential participants indicated that technical difficulties were the most common reason for not completing the survey, and the causes of technical difficulties were usually unknown and did not appear to systematically exclude potential participants. The actual participation rate for eligible clinicians could not be directly calculated because the number of state psychological association members who were eligible is unknown; however, the participation rate is likely considerably higher than 21.9% as only a percentage of those contacted were actually eligible for the study. In accordance with the institutional review board (IRB) approval of this project, participant anonymity was maintained throughout the project.

### *Practitioner Survey*

Data for this study were collected via the online practitioner survey. The survey consisted of 97 items assessing the practitioner's professional characteristics, preferences for various treatment characteristics, attitudes toward treatment research and EBP use. The survey was developed based on a review of the relevant literature and the results of the focus groups in study one. Most participants completed the survey in 15-20 minutes. A subset of the data from the survey was used in this study.

Practitioner preferences for treatment characteristics were assessed in three ways. First, respondents were asked to rate their preferences for 29 treatment characteristics on a 7-point scale (*1=presence of this characteristic would greatly decrease the likelihood I would use this treatment; 7=presence of this characteristic would greatly increase the likelihood I would use this treatment*). Items included a wide variety of treatment characteristics (e.g., flexibility, ease of use, research support) and were created based on the results of study one, a review of the literature, and discussion of potentially important items among the researcher's colleagues. The items included in the final analysis are listed in Table 3 (p. 41). Second, in order to assess the relative importance of different categories of characteristics, participants were asked to rank order their preferences among 10 treatment characteristic categories (see Table 4, p. 43, for list of categories). Respondents were asked to place a "1" by the most important characteristic, a "2" by the second most important and so on until placing a "10" by the least important characteristic.

Third, in order to further compare two constructs of particular interest, the *outcomes evidence* scale and the "*other evidence*" scale were created by combining relevant individual items from the list of 32 treatment characteristics. The *outcomes evidence* scale was created by taking the mean score of three items related to outcomes research evidence for a treatment (i.e., *Treatment has received support in highly controlled research studies*, *Treatment has received empirical support in studies closely resembling "real-world" clinical conditions*, and *Treatment appears on a list of*

*“Empirically-Supported or “Evidence-Based” treatments*) and is intended to measure the degree to which outcomes evidence for a treatment influences the likelihood that the respondent will adopt that treatment in practice. Adequate reliability for this scale was observed ( $\alpha = .72$ ) despite consisting of only three items. The *“other evidence”* scale was created by combining three items related to non-outcomes evidence for a treatment (i.e., *Treatment is appealing to clients*, *Treatment is recommended by clinical colleagues whom I respect*, and *Treatment is cost-effective*) and is intended to measure the degree to which non-outcomes evidence for a treatment influences the likelihood that the respondent will adopt that treatment in practice. The reliability for this scale was also considered adequate ( $\alpha = .71$ ). The *“other evidence”* scale was of particular interest in light of theory suggesting that such considerations are integral to treatment implementation but are not routinely assessed (see Nelson & Steele, in press).

## Results

### *Ratings of Treatment Characteristics*

In order to examine differences in the relative importance of different treatment characteristics, the mean scores for each of the 29 items were compared and are presented in Table 3 (p. 41). The items are presented in the order of the observed means, with the characteristics rated as most important listed first. Empirical support in studies reflecting “real-world” conditions, flexibility, and endorsement by colleagues were among the most highly rated treatment characteristics.

### *Rankings of Treatment Characteristics*

In order to examine differences in the rankings of the treatment characteristic categories, the mean rankings for each of the 10 categories were compared and are presented in Table 4 (p. 43). Treatment flexibility, research support in a field study, endorsement by colleagues, and previous success with the treatment were the most highly ranked categories (i.e., mean ranking closest to 1). In order to test for statistically significant differences between the categories, a Within-Subjects Multivariate Test was conducted. The omnibus test was significant, Wilks'  $\lambda = .27$ ,  $F(9, 192) = 57.78$ ,  $p < .001$ , indicating statistically significant differences in the mean rankings of the categories. Post-hoc pairwise comparisons were conducted to examine differences between individual categories, and a Bonferroni correction was used for each of these comparisons. Pairwise comparisons indicated that "Treatment is flexible" had a significantly higher mean ranking than all other categories except "Treatment has received research support in a field (applied) study." The two categories with the lowest mean rankings ("Treatment is short" and "Treatment is reimbursable by insurance") had significantly lower rankings than all other categories but did not differ from each other.

#### *Scales of Treatment Characteristics*

In order to compare the relative importance of "outcomes evidence" versus "other evidence" to practitioners in treatment selection, a Within-Subjects Multivariate Test was conducted. The test was statistically significant, Wilks'  $\lambda = .94$ ,  $F(1, 200) =$

13.01,  $p < .001$ , indicating that ratings on the *other evidence* scale (mean = 5.75) were significantly higher than ratings on the *outcomes evidence* scale (mean = 5.48).

### Discussion for Study Two

The results of this study suggest that certain characteristics of mental health treatments are, on average, considered to be more influential than others in treatment selection decisions. Specifically, flexibility appears to be a treatment characteristic that greatly increases the likelihood that a treatment will be adopted in clinical settings. Likewise, evidence for the effectiveness of a treatment in applied or “real world” studies is considered important to practitioners. Consistent with the findings in study one, practitioners in this study rated research support in effectiveness studies to be more influential than support from highly controlled efficacy studies. Also consistent with study one, treatments that are recommended by trusted colleagues, cost-effective, and well-received by clients are more likely to be used in clinical practice. Finally, this study found that “other evidence” for a treatment (e.g., practitioner appeal, client appeal, cost-effectiveness) was considered more influential in treatment selection than evidence for the outcomes of the treatment. This finding supports the importance of not only studying treatment outcomes, but expanding treatment evaluation programs to include practitioner, consumer, and economic considerations, as well (see Nelson & Steele, in press, for a discussion of a “multifaceted treatment evaluation” model).

### *Limitations of this Study*

One potential limitation of this study should be noted. Although attempts were made to obtain a diverse and representative sample, the actual representativeness of the sample in this study is unknown. Previous practitioner survey research (e.g., Kazdin, Siegel, & Bass, 1990; Beutler et al., 1995) has sampled national registers of practicing doctoral-level psychologists. While such methods simplify recruitment, they limit the potential participants to those with presumably similar training (e.g., Ph.D. program in clinical psychology) and do not capture the range of professionals providing clinical services. Because this study focused not only on Ph.D.-level psychologists but also master's-level psychologists and social workers, multiple methods of identifying and recruiting potential participants were needed. Despite the challenges in identifying and recruiting the present sample, the diversity of this sample is considered a major strength. Still, recognizing the potential limitations of the sample, future researchers are invited to validate the findings of this study in large representative samples of clinicians.

Table 3. Treatment Characteristic Mean Scores

<u>Item</u>	<u>Mean</u>	<u>Standard Deviation</u>
<i>Treatment has received empirical support in studies resembling “real-world” clinical conditions.</i>	6.14	1.08
<i>Treatment is flexible.</i>	6.11	1.07
<i>Treatment is recommended by clinical colleagues whom I respect.</i>	5.84	1.02
<i>Treatment is appealing to clients.</i>	5.84	1.14
<i>Treatment has worked for me in past.</i>	5.82	1.20
<i>Treatment has been specifically tested on the clinical population that I most frequently serve.</i>	5.80	1.16
<i>Treatment is based on well-articulated theory.</i>	5.79	1.24
<i>Training is available for learning how to use the treatment.</i>	5.73	1.21
<i>Treatment allows me to be creative in my work.</i>	5.70	1.29
<i>Treatment offers written support materials to assist in learning and implementing the treatment.</i>	5.58	1.23
<i>Treatment is cost-effective.</i>	5.56	1.24
<i>Treatment is easy to implement.</i>	5.53	1.29
<i>Treatment is based on a theoretical orientation that I find appealing.</i>	5.52	1.15

<i>Treatment manual anticipates potential problems using the treatment with real clients and offers suggestions for overcoming these obstacles.</i>	5.51	1.22
<i>Treatment fits my personality.</i>	5.50	1.24
<i>Treatment is enjoyable to administer/implement.</i>	5.48	1.25
<i>Treatment has been tested on ethnically diverse samples.</i>	5.48	1.15
<i>Treatment focuses on establishing a strong therapeutic relationship.</i>	5.36	1.32
<i>Treatment clearly articulates its underlying theory of change.</i>	5.35	1.08
<i>Treatment has received empirical support in highly controlled research studies.</i>	5.33	1.41
<i>Treatment is simple to learn.</i>	5.28	1.45
<i>Treatment has a written manual.</i>	5.18	1.58
<i>Treatment is reimbursable by insurance or other third party payers.</i>	5.08	1.62
<i>I am familiar with the treatment protocol.</i>	5.08	1.06
<i>Treatment sessions require limited preparation.</i>	4.98	1.36
<i>Treatment appears on a list of “empirically-supported” or “evidence-based” treatments.</i>	4.89	1.36
<i>Treatment is of limited duration.</i>	4.70	1.33

<i>Treatment was taught in my training program.</i>	4.64	1.17
<i>Treatment focuses on the therapeutic relationship as the main mechanism of change.</i>	4.30	1.36

Table 4. Treatment Characteristic Category Mean Rankings

<u>Category</u>	<u>Mean Ranking</u>	<u>Standard Deviation</u>
<i>Treatment is flexible.</i>	4.00	2.35
<i>Treatment has received research Support in a field (applied) study.</i>	4.12	2.67
<i>Treatment has been recommended by colleagues I trust.</i>	5.01	2.61
<i>I have had success with the treatment in the past.</i>	5.02	2.49
<i>Treatment is easy to learn and implement.</i>	5.05	2.41
<i>Training and supervision for treatment are easily accessible.</i>	5.06	2.51
<i>Treatment has received research support in a controlled study.</i>	5.56	3.01
<i>Treatment focuses on the therapeutic relationship.</i>	5.78	3.00
<i>Treatment is reimbursable by insurance.</i>	7.60	2.61
<i>Treatment is short.</i>	7.84	2.28

### Study 3

Although individual practitioner preferences for various treatment characteristics are related to treatment selection, such preferences are likely only one of several important influences on practitioner use of EBPs. With this in mind, study three investigates other potential predictors of practitioner adoption of EBPs in their clinical work. Specifically, this study examines the influence of practitioner training, clinical setting, and attitudes toward treatment research in predicting self-reported use of EBPs. Practitioner training has been the focus of recent efforts to disseminate EBPs (e.g., APA, 2002) and is expected to predict a significant amount of variance in self-reported EBP use. Characteristics of the clinical setting have been less studied in relation to EBP use; however, some emerging evidence suggests that clinical setting may be an important influence on treatment selection (Aarons, 2004; study one of this project). Finally, study one suggested that practitioner attitudes toward the treatment research that underlies EBPs might be related to use of EBPs in applied settings. Study three investigates the unique and interacting influences of training, clinical setting, and attitudes on EBP use in an attempt to better understand treatment selection and inform programs aiming to increase the use of EBPs in clinical settings.

Study three tests three primary hypotheses. First, it is expected that practitioner training will significantly predict self-reported EBP use. Second, it is expected that characteristics of the clinical setting will significantly predict self-reported EBP use. Third, it is expected that practitioner attitudes toward treatment research will

significantly predict self-reported EBP use. If these primary hypotheses are supported, two secondary hypotheses will be tested. First, it is hypothesized that practitioner attitudes toward treatment research will mediate the relationship between practitioner training and self-reported EBP use. Second, it is hypothesized that attitudes toward treatment research will mediate the relationship between characteristics of the clinical setting and self-reported EBP use.

## Method

### *Participants and Procedures*

Data for study three were collected using the survey procedures described in study two. The sample consisted of 214 mental health practitioners (the same participants as study two plus 8 participants who completed the measures for study three but discontinued participation, either voluntarily or due to technical problems, before attempting the measures for study two). The final sample for study three was diverse in terms of professional degree, clinical setting, theoretical orientation, and years of clinical experience (mean = 10.6, SD = 9.4; see Table 5, p. 48, for sample demographics)

The data used in study three were collected via the online survey. Practitioner EBP use was measured by self-reported response to the question, “*How often do you use ‘evidence-based practices’ in your clinical work?*” (1 = *Never/Almost Never*, 2 = *Sometimes*, 3 = *Often*, 4 = *Always/Almost Always*). Responses ranged from 1 to 4 with a mean of 2.62 and a standard deviation of .86. To assess characteristics of the

practitioner's training, respondents were asked to indicate the highest academic degree they have earned (e.g., Ph.D., Psy.D., MA, MS, MSW), their theoretical orientation (e.g., Psychodynamic, Behavioral, Cognitive or Cognitive-Behavior, Family Systems, Humanistic), and whether or not they have taken a class in evidence-based treatments (i.e., *Have you ever taken a class in "evidence-based treatments," "empirically supported treatments," "empirically-validated treatments," or any comparable version of these?*). Approximately 49% of respondents answered "yes" to this question.

Practitioner clinical setting was measured by asking participants to indicate the type of clinical setting in which they work (see Table 5, p. 48, for sample characteristics).

Participants were then asked to rate the openness of their primary clinical setting to EBPs on a 5-point scale. Specifically, they were asked to *"Please rate your primary clinical setting on its openness to using evidence-based practices in treatment" (1 = Not at all open, 5 = Extremely open)*. Responses ranged from 1 to 5, with a mean of 4.44 and a standard deviation of .84.

In order to assess practitioner attitudes toward treatment research, two brief scales were created. The *positive attitudes toward treatment research* scale is a 4-item measure assessing the degree to which a practitioner holds positive attitudes toward treatment research (see Table 6, p. 61, for items, means, and standard deviations). The *positive attitudes* scale showed adequate internal consistency in this sample ( $\alpha = .76$ ). The *negative attitudes toward treatment research* scale is a 4-item measure assessing the degree to which a practitioner holds negative attitudes toward treatment research

(see Table 6, p. 61, for items, means, and standard deviations). The *negative attitudes* scale showed adequate internal consistency in this sample ( $\alpha = .74$ ). The *positive* and *negative attitudes* scales were moderately negatively correlated with each other ( $r = -.458, p < .001$ ), suggesting that these constructs are related but not redundant. That is, positive attitudes toward treatment research is not merely the absence of negative views toward treatment research and vice versa. Given the potential differences between these two constructs, both scales are used separately in the analyses to measure different dimensions of practitioner attitudes toward treatment research.

Table 5. Study Three Sample Characteristics by Academic Degree, Theoretical Orientation, and Clinical Setting

	Percent
<b>Academic Degree</b>	
Ph.D.	53.7
Psy.D.	11.7
M.A./M.S.	11.7
M.S.W.	16.8
Other Master's Degree	6.1
<b>Theoretical Orientation</b>	
Cognitive/Cognitive-Behavioral	59.3
Psychodynamic	10.2
Behavioral	9.7
Family Systems	7.9
Humanistic	3.7
Other	9.2
<b>Clinical Setting</b>	
Private Practice	26.9
Hospital	23.1
Community Mental Health Center	19.4
School	10.6

University Clinic	7.9
Other Clinical Settings	12.1

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## Results

### *Preliminary Analyses*

In order to explore potential differences in self-reported use of EBPs based on demographic variables (i.e., academic degree, theoretical orientation, clinical setting, and years of clinical experience), a series of ANOVAs, t tests, and correlational analyses were conducted. For academic degree, no significant between group differences were found,  $F(5, 208) = 1.06, p > .05$ . To explore potential differences based on the level of education, doctoral and master's level practitioners were compared on self-reported EBP use, and no significant differences were found,  $t(212) = 1.25, p > .05$ . For theoretical orientation, significant between group differences were observed,  $F(5, 208) = 6.79, p < .001$ , with practitioners identifying as behavioral or cognitive-behavioral reporting higher levels of EBP use. For clinical setting, significant between group differences were found,  $F(5, 208) = 4.49, p = .001$ , with practitioners from hospitals or university clinics reporting higher levels of EBP use. For years of clinical experience, no significant relationship between a practitioner's years of clinical experience and self-reported EBP use was observed,  $r = -.088, p > .05$ . The results of the between-group preliminary analyses should be interpreted with caution, however, because group sizes varied considerably (see Table 5, p. 48, for sample demographics).

However, these analyses suggest that practitioner theoretical orientation and clinical setting might be important predictors of self-reported EBP use and should be included in subsequent models predicting EBP use. Conversely, practitioner academic degree and years of clinical experience were not significantly related to self-reported EBP use and, therefore, were not included in subsequent analyses.

In order to include theoretical orientation and clinical setting in the regression analyses, dichotomized variables were created. For theoretical orientation, practitioners endorsing a behavioral or cognitive-behavioral approach were grouped together and practitioners endorsing other approaches were grouped together. For clinical setting, practitioners working in a hospital or university setting were grouped together and practitioners in other settings were grouped together. These dichotomized variables were included in the regression analyses as control variables. The results of the regression analyses are presented in Table 7 (p. 62).

#### *Predictors of Self-Reported Use of EBPs*

To test the first hypothesis, that practitioner training (i.e., taking an EBP class) is related to self-reported EBP use, a multiple regression procedure was used. Practitioner theoretical orientation and clinical setting (dichotomized variables) were entered on the first step and accounted for a significant amount of variance in EBP use,  $R^2 = .161$ ,  $F(1, 211) = 20.24$ ,  $p < .001$ . The *EBP class* variable was entered on the second step and predicted a significant amount of unique variance in practitioner self-reported use of EBPs,  $R^2\Delta = .074$ ,  $F_{change}(1, 210) = 20.21$ ,  $p < .001$ . *EBP class* accounted for 7.4% of

the variance in self-reported EBP use, controlling for practitioner theoretical orientation and clinical setting.

To test the hypothesis that characteristics of the clinical setting predicted self-reported EBP use, a similar regression procedure was used. Practitioner theoretical orientation was entered on the first step to control for the effect of this variable and accounted for a significant amount of variance,  $R^2 = .102$ ,  $F(1, 212) = 24.10$ ,  $p < .001$ . The dichotomized clinical setting variable (i.e., hospital/university setting vs. other settings) was entered on the second step and predicted a significant amount of unique variance after controlling for theoretical orientation,  $R^2\Delta = .059$ ,  $F_{change}(1, 211) = 14.81$ ,  $p < .001$ . The perceived *openness of the clinical setting to EBPs* was entered on the third step and predicted a significant amount of unique variance in self-reported EBP use,  $R^2\Delta = .135$ ,  $F_{change}(1, 210) = 40.38$ ,  $p < .001$ . Practitioner reported *openness of the clinical setting to EBPs* accounted for 13.5% of the variance in self-reported EBP use after controlling for theoretical orientation and type of clinical setting.

In order to test the hypothesis that practitioner attitudes toward treatment research significantly predict self-reported EBP use, another multiple regression analysis was conducted using self-reported EBP use as the dependent variable. Dichotomized variables for theoretical orientation and clinical setting were entered on the first step to control for their effects on EBP use. On the second step, both *positive attitudes toward treatment research* and *negative attitudes toward treatment research* were entered. This step accounted for 21.3% of the unique variance in self-reported

EBP use,  $R^2\Delta = .213$ ,  $F_{\text{change}}(2, 179) = 29.6$ ,  $p < .001$ . Examining the individual standardized beta weights of each scale, both scales were found to predict a unique portion of variance in self-reported EBP use controlling for the other variables in the analysis.

### *Mediator Analyses*

In order to test potential mediator models, procedures discussed by Baron and Kenny (1986) were used. Because both *positive* and *negative attitudes toward treatment research* predicted unique variance in self-reported EBP use, both were tested as mediators. The attitude variables were tested as mediators for both the relationship between practitioner training and EBP use as well as between clinical setting and EBP use.

First, the hypothesis that *positive attitudes toward treatment research* mediates the relationship between practitioner training and self-reported EBP use was tested. In earlier analyses, *EBP class* was found to be a significant predictor of EBP use. Likewise, *positive attitudes toward treatment research* was found to be a significant predictor of EBP use. However, *EBP class* and *positive attitudes* were not significantly correlated, indicating that *positive attitudes toward treatment research* does not mediate the relationship between *EBP class* and self-reported EBP use.

Second, the hypothesis that *negative attitudes toward treatment research* is a mediator of the relationship between *EBP class* and self-reported EBP use was tested. Significant relationships between *EBP class* and EBP use ( $\beta = .324$ ) and between

*negative attitudes* and EBP use ( $\beta = -.441$ ) were established using regression analyses. To test the relationship between *EBP class* and *negative attitudes*, a regression using *EBP class* to predict *negative attitudes* was conducted, and a significant negative relationship was found,  $R^2 = .038$ ,  $F(1, 182) = 7.21$ ,  $p = .008$ . Finally, a multiple regression predicting EBP use was conducted by entering *negative attitudes* on the first step and *EBP class* on the second step. *EBP class* was still a significant predictor of EBP use; however, the standardized beta weight was reduced from .318 to .219 after controlling for *negative attitudes*, suggesting partial mediation. To test the statistical significance of the reduction in beta weight, an online calculator was used to calculate the Sobel test (Preacher & Leonardelli, 2003), yielding a test statistic = 2.46,  $p = .014$ , suggesting significant mediation.

Third, the hypothesis that *positive attitudes toward treatment research* is a mediator of the relationship between *openness of clinical setting* and self-reported EBP use was tested. Significant relationships between *openness* and EBP use ( $\beta = .446$ ) and between *positive attitudes* and EBP use ( $\beta = .485$ ) were established using regression analyses. To test the relationship between *openness* and *positive attitudes*, a regression using *openness* to predict *positive attitudes* was conducted, and a significant negative relationship was found,  $R^2 = .098$ ,  $F(1, 183) = 19.82$ ,  $p < .001$ . Finally, a multiple regression predicting EBP use was conducted by entering *positive attitudes* on the first step and *openness* on the second step. *Openness* was still a significant predictor of EBP use; however, the standardized beta weight was reduced from .446 to .291 after

controlling for *positive attitudes*, suggesting partial mediation. This reduction in beta weight yielded a Sobel test statistic = 3.63,  $p < .01$ , suggesting significant mediation.

Fourth, analyses were conducted to test the hypothesis that *negative attitudes toward treatment research* is a mediator of the relationship between *openness* and self-reported EBP use. Significant relationships between *openness* and EBP use ( $\beta = .446$ ) and between *negative attitudes* and EBP use ( $\beta = -.441$ ) were established in previous analyses. To test the relationship between *openness* and *negative attitudes*, a regression using *openness* to predict *negative attitudes* was conducted, and a significant negative relationship was found,  $R^2 = .053$ ,  $F(1, 184) = 10.21$ ,  $p = .002$ . Finally, a multiple regression predicting EBP use was conducted by entering *negative attitudes* on the first step and *openness* on the second step. *Openness* was still a significant predictor of EBP use; however, the standardized beta weight was reduced from .446 to .311 after controlling for *negative attitudes*, suggesting partial mediation. This reduction in beta weight yielded a Sobel test statistic = 2.79,  $p < .01$ , suggesting significant mediation.

#### *Model for Predicting Self-Reported Use of EBPs*

In order to test the overall predictive value of *theoretical orientation*, *clinical setting*, *EBP class*, *openness of clinical setting*, *positive attitudes toward treatment research*, and *negative attitudes toward treatment research*, a multiple regression analysis predicting self-reported EBP use was conducted. All six of the predictive variables were entered together, and the whole model was significant  $R^2 = .443$ ,  $F(6, 177) = 23.5$ ,  $p < .001$ , accounting for approximately 44.3% of the variance in EBP use.

Examination of the beta weights indicated that *positive attitudes toward treatment research* was the strongest predictor of practitioner self-reported EBP use, controlling for the other variables in the model (see Table 8, p. 63, for summary).

### Discussion for Study Three

This study presents the results of a national mental health practitioner survey regarding possible predictors of practitioner self-reported use of EBPs in clinical practice. As hypothesized, practitioner training (i.e., whether or not the practitioner reported taking an EBP class), the culture of the practitioner's clinical setting (i.e., perceived openness to EBPs), and the practitioner's attitudes toward treatment research (both positive and negative attitudes) were significant predictors of self-reported EBP use. Practitioner self-identified theoretical orientation and clinical setting were also significant predictors of self-reported EBP use. The factors each contributed uniquely to the variance in EBP use and together accounted for 44.3% of this variance. The relationship between taking an EBP class and self-reported EBP use was partially mediated by negative attitudes toward treatment research. Similarly, the relationship between perceived openness of one's clinical setting and self-reported EBP use was partially mediated by practitioner attitudes toward treatment research (both positive and negative attitudes).

The findings of this study highlight the importance of practitioner training, institutional culture, and attitudes in facilitating the use of EBPs. The relationship between practitioner training and EBP use is consistent with the recent emphasis on

training in EBPs (e.g., APA, 2002; Sholomskas et al., 2005). The finding that the perceived openness of the clinical setting is associated with EBP use is consistent with the findings of study one and the idea that institutional culture can influence the implementation of EBPs in clinical settings. Practitioner attitudes toward treatment research was also a significant predictor of self-reported EBP use. Interestingly, this study found that positive and negative attitudes toward treatment research each predicted unique variance in practitioner self-reported EBP use. This finding suggests that attitudes that are hostile to treatment research are not simply the absence of positive attitudes and that strong negative sentiments toward research significantly decrease the likelihood that a practitioner will use EBPs.

In addition to the findings for EBP training, perceived openness of one's clinical setting to EBPs, and practitioner attitudes toward treatment research, this study found significant differences in levels of self-reported EBP use based on theoretical orientation and clinical setting. Specifically, practitioners endorsing a cognitive-behavioral or behavioral orientation were more likely to report high levels of EBP use. This finding is not surprising, given the fact that most evidence-based treatments adopt a cognitive-behavioral or behavioral orientation. Similarly, this study found that practitioners in hospital or university settings reported higher levels of EBP use than those in other settings (e.g., private practice, CMHCs, schools). This finding is also consistent with expectations, given that the EBP movement has been more widely embraced in hospitals and university clinics than in other settings. However, caution

should be exercised in interpreting these between-group differences given unequal representation of different groups in the sample.

Moving beyond simple correlates of EBP use and attempting to elucidate important processes, this study examined potential mediator models. First, the results indicated that practitioner negative attitudes toward treatment research partially mediated the relationship between perceived *EBP class* and EBP use; however, positive attitudes was not found to be a mediator. These results suggest that practitioners who have taken an EBP class do not necessarily develop positive attitudes toward treatment research, but the class might protect against the development of overly negative attitudes which can, in turn, decrease EBP use. While taking an EBP class likely does not radically change a practitioner's attitude toward treatment research, such classes probably facilitate EBP use by increasing knowledge of EBPs and confidence in using EBPs. From this perspective, EBP classes do not indoctrinate students to value treatment research, but rather provide valuable exposure to EBPs and help develop skills to employ these practices.

This study also found that attitudes toward treatment research (both positive and negative) were partial mediators of the relationship between the perceived openness of one's clinical setting and self-reported EBP use. This finding suggests that a practitioner's clinical setting can affect how that individual views treatment research, which then may affect the individual's willingness to use EBPs. Practitioners who are ambivalent in their feelings toward treatment research but work in a setting that is

supportive of EBPs may develop more accepting views of the research that underlies EBP and, ultimately, use EBPs more often. Conversely, practitioners who are ambivalent toward treatment research but work in a setting that is hostile toward EBPs might internalize their setting's negative attitudes toward treatment research and reject EBPs as the product of irrelevant research. Interpreted within the context of the general movement to increase the use of EBPs in clinical practice, the results of this study suggest several implications for clinical training, research, and EBP dissemination which will be discussed later in the general project discussion section.

#### *Limitations of this Study*

In addition to the sample recruitment concerns noted in study two, a number of limitations of this study should be noted. Each of the variables considered in this study were assessed only using self-report. Therefore, the relationships observed between the variables might be partially attributable to common-method variance. Furthermore, because practitioner EBP use was assessed using only self-report, this measure might have been subject to a social desirability bias. As noted earlier, the mental health services field has experienced a shift toward endorsing EBPs, and practitioners may have felt pressure to report high levels of EBP use in practice. However, the anonymous nature of the online survey likely limited the influence of any self-report bias. Future investigations should seek indicators of EBP use that do not rely on self-report. For example, supervisor reports of practitioner EBP use, case notes, and tapes of treatment sessions might provide more information regarding practitioner EBP use.

A related limitation of this study is that EBP use was assessed using a single question (i.e., *How often do you use evidence-based practices in your clinical work?*). Evidence-based practice is likely a multidimensional construct, and future investigations should use multiple indicators to assess practitioner EBP use. At the time of this study, the investigator knew of no published, reliable and valid measures of EBP use; however, given the increasing emphasis on EBP in the literature, such measures are likely to emerge soon. As these measures become available, researchers are encouraged to replicate and expand on these findings using a validated multidimensional measure of practitioner EBP use. It is also worth noting that practitioner EBP use was assessed on a 4-point scale, which may have failed to fully capture the continuum of practitioner EBP use in the field. Despite these measurement limitations, this study found strong predictors of self-reported EBP use and serves as a foundation for research investigating the full range of EBP use.

Another limitation of this study is that participants were not provided a standard definition of “evidence-based practices,” and instead used their own definitions of this construct. Definitions of EBPs likely varied somewhat among the respondents adding some degree of measurement error to this variable. Despite this potential for “noise” in the EBP use variable, strong and theoretically relevant relationships were observed in predicting self-reported EBP use.

The measurement of perceived openness of the clinical setting is another potential limitation of this study. Although a significant relationship between openness

of the clinical setting and EBP use, openness was measured by only one question on the practitioner's perception of setting openness to EBPs. Institutional culture is likely a complex and multidimensional construct that can be measured in more sophisticated ways. However, the single indicator of institutional openness appears appropriate given the exploratory nature of this study and the limited investigation of this construct in the literature. Building on this study, future research should more fully investigate institutional culture in order to allow for a more thorough understanding of this construct and its relationship to EBP use.

Table 6. Positive and Negative Attitudes Toward Treatment Research Scales

*Positive Attitudes Toward Treatment Research Scale*

Item	Mean	SD
<i>Most treatment research published in the last 10 years is directly relevant to me in my clinical work.</i>	3.01	1.13
<i>Clinical research should be the foundation of clinical practice.</i>	2.53	.99
<i>Researchers understand the needs of practitioners.</i>	3.45	1.19
<i>Clinical research addresses questions that are important to me.</i>	3.28	1.14

$\alpha=.76$

*Negative Attitudes Toward Treatment Research Scale*

Item	Mean	SD
<i>Clinical judgment is more important than clinical research in determining appropriate treatment.</i>	3.23	1.17
<i>Efforts to empirically evaluate treatment effects are overly simplistic and therefore of little value to me.</i>	2.52	1.12
<i>Reading and applying research findings is too time-consuming.</i>	2.65	1.15
<i>I would like to apply treatment research in my practice, but most research does not address questions that are important to me.</i>	2.97	1.21

$\alpha=.74$

Table 7. Summary of Regression Analyses Predicting Self-Reported EBP Use

Variable	<i>B</i>	<i>SE B</i>	$\beta$	$\Delta R^2$	$\Delta F$
<i>Practitioner Training (N=214)</i>					
Step 1				.16	20.24***
Theoretical Orientation	-.54	.12	-.29***		
Clinical Setting	-.45	.12	-.24***		
Step 2				.07	20.21***
EBP Class	.47	.11	.27***		
<i>Clinical Setting (N=214)</i>					
Step 1				.10	24.01***
Theoretical Orientation	-.60	.12	-.32***		
Step 2				.06	14.81***
Clinical Setting	-.45	.12	-.24***		
Step 3				.14	40.38***
Openness of Clinical Setting to EBPs	.39	.06	.38***		
<i>Attitudes (N=184)</i>					
Step 1				.14	14.87***
Theoretical Orientation	-.56	.13	-.30***		
Clinical Setting	-.37	.13	-.20**		
Step 2				.21	29.60***
Positive Attitudes	.08	.02	.31***		
Negative Attitudes	-.06	.02	-.25***		
* $p < .05$ , ** $p < .01$ , *** $p < .001$					

Table 8. Summary of Regression Including All Significant Predictors of EBP Use

Variable	<i>B</i>	<i>SE B</i>	$\beta$
Theoretical Orientation	-.28	.11	-.15*
Clinical Setting	-.21	.11	-.11
EBP Class	.36	.10	.21***
Openness of Clinical Setting	.22	.06	.21***
Positive Attitudes	.07	.02	.28***
Negative Attitudes	-.05	.02	-.19**

*Note.*  $R^2 = .443, p < .001$   
 \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

#### Study 4

The effective dissemination of treatments with research support into clinical settings requires the efficient communication of treatment information to practitioners (Herschell, McNeil, & McNeil, 2004). To this end, understanding where practitioners obtain information on treatments, and where they would like to obtain this information, is crucial to efforts to disseminate these treatments. Beutler et al. (1995) conducted a national survey of 134 practicing psychologists and found that, on average, practitioners preferred to receive information about treatments through clinical newsletters and national conferences. In contrast, the same study found that researchers most frequently disseminated their work in academic journals, indicating a major discrepancy in the preferences of practitioners and researchers. While the Beutler et al. study provided

useful data regarding practitioner preferences, these data are in need of updating. Over a decade has passed since the Beutler et al. study, and the nature of treatment selection decisions has likely changed due to the recent movement toward EBPs. Similarly, the potential means for communication between researchers and practitioners have changed with the development of new technologies (e.g., internet-based resources). In light of the importance of practitioner preferences for different sources of treatment information and the need to update data on these preferences, study four examines where practitioners obtain information about treatments and where they would prefer to obtain such information. The results of this study will be helpful in more efficiently targeting the dissemination of information to practitioners making treatment decisions in the field.

## Method

### *Participants and Procedures*

The data for study four were collected using the same survey procedures as in study two and study three. The final sample for study four consisted of 191 practitioners (102 Ph.D. psychologists, 21 Psy.D. psychologists, 22 Master's-level psychologists, 34 Master's-level social workers, and 10 Master's-level clinicians selecting "other" for their academic degree). Again, the sample was diverse in terms of clinical setting (27% private practice, 22.8% hospital, 19.6% CMHC, 11.1% school, 7.9% university clinic, and 11.6% "other"), theoretical orientation (60.8% Cognitive or Cognitive-Behavioral, 9.5% Psychodynamic, 9.0% Behavioral, 7.9% Family Systems,

4.2% Humanistic, 8.5% other), and years of clinical experience (mean = 10.2, SD = 9.1).

Data for this study were drawn from a section of the practitioner survey which assessed practitioner preferences for different sources of treatment information. Specifically, three types of information about treatment sources were collected. First, practitioners were asked to rate how often they use 9 different treatment sources (*academic-oriented journals, practice-oriented journals, conferences, academic books, non-academic books, conversations with colleagues and supervisors, online sources, continuing education workshops, and professional newsletters*) on a 5-point scale (*1=I never use this source, 2=I use this source sparingly [about once a year], 3=I use this source occasionally [about 3-times a year], 4=I use this source often [about once a month], 5=I use this source with very high frequency [more than once a month]*). Second, practitioners were asked to rank order the five most helpful sources from the list of 9 treatment sources (i.e., *place a “1” next to the most helpful source, a “2” next to the second most helpful source, and so on*). Finally, practitioners were asked to rank order the 5 sources where they would most like to receive information about treatments.

### Results

In order to determine the frequency with which different sources are used by practitioners, mean levels of use were examined and are reported in Table 9 (p.70). “Conversations with colleagues and supervisors” had the highest mean with respondents indicating that, on average, they use this source of information approximately once a

month. “Academic-oriented journals,” the primary dissemination outlet for most treatment research, had the fifth highest rating (2.74), with practitioners indicating that, on average, they use this source between one and three times a year. In order to determine if the observed mean differences were statistically significant, a Within-Subjects Multivariate Test was conducted and the omnibus test was significant, Wilks’  $\lambda = .33$ ,  $F(8, 183) = 46.49$ ,  $p < .001$ . Pairwise post-hoc comparisons were conducted using a Bonferroni correction. Based on these comparisons, “conversations with colleagues and supervisors” had a significantly higher mean than all the other items,  $ps < .001$  for all comparisons. “Academic-oriented journals” were used significantly less often than “conversations with colleagues and supervisors,” “online sources,” and “continuing education workshops.”

Practitioner rankings of their “most helpful” sources were also examined. Consistent with the results for frequency of use, practitioners indicated that “conversations with colleagues and supervisors” was the most helpful source of treatment information, with 31.9% of participants ranking this source as the most helpful source and 71.7% ranking this source in the top three most helpful sources. “Continuing education workshops” appeared to be the second most helpful source of information, with 25.1% ranking this as the most helpful source and 52.9% ranking it in the top three. Interestingly, although the respondents indicated that they use “online sources” with a relatively high frequency, on average, they ranked this source as less useful than several other sources (2.1% ranking this source most helpful and 22%

ranked it in the top three). “Academic-oriented journals,” again, ranked in the middle of the list of sources, with 9.4% ranking this source most helpful and 23% ranking it in the top three.

Finally, practitioner preferences for where they would like to receive treatment information were examined. “Continuing education workshops” was ranked as the most preferred source of treatment information, with 28.3% of respondents ranking this source most preferred and 63.4% ranking it in the top three. Again, “conversations with colleagues and supervisors” was ranked as a highly preferred source, with 17.8% ranking this as their top preference and 48.2% ranking it in the top three. “Online sources” was ranked highly, as well, with 15.2% ranking it as their most preferred and 38.2% ranking it in the top three. Again, “academic-oriented journals” ranked in the middle of the list of sources (12% most preferred, 25.1% in the top three).

#### Discussion for Study Four

The results of this study suggest that, on average, practitioners most frequently receive information on treatments from their colleagues and supervisors. Continuing education workshops and online resources were also identified as frequently used outlets. Similarly, practitioners indicated that colleagues and supervisors are usually the most helpful sources of treatment information. Finally, the practitioners in this study indicated that they would prefer to receive information on treatments through continuing education workshops, colleagues and supervisors, and online resources.

Taken broadly, the results of this study suggest that many practitioners receive their information through personal, rather than written, outlets. The preference for colleagues and supervisors over journals and books supports the notion that treatment dissemination is often a social process (see Stirman et al., 2004) and is consistent with the findings from study one. This finding has important implications for treatment dissemination programs, suggesting the need to target influential individuals within clinical settings in order to successfully encourage the use of treatments with empirical support. Consistent with these findings, strategies for targeting “opinion leaders” within clinical settings will be an important topic in the developing EBP literature (see Smith-Boydston & Nelson, in review, for a discussion on the importance of targeting “opinion leaders” within CMHCs).

Although the observed preference for colleagues and supervisors is considered important for dissemination efforts, this finding is also potentially concerning to proponents of EBP. When the opinions of co-workers are given greater weight than research evidence in treatment selection, consistent use of EBPs is not likely to result. Practitioner preferences, as demonstrated in study two, are influenced by a wide range of considerations often unrelated to the empirical evidence for a particular approach. Influential colleagues who are not knowledgeable in the use of EBPs or who are hostile to these approaches might be more likely to recommend treatment strategies that are unsupported and potentially ineffective. Recognizing the potential influence of these individuals (see also study one and study three for discussions of institutional culture),

education and training in EBPs among these leaders should be a priority of programs seeking to encourage the use of EBPs in applied settings.

While practitioners in this study indicated that they most frequently seek information from their colleagues and supervisors, continuing education workshops were the most *preferred* outlet for treatment information following by colleagues and supervisors and online resources. This finding highlights the importance of disseminating information to practitioners in outlets that are quick, easy, or already part of the practitioner's normal routine. Continuing education workshops, for example, are required for continuing licensure and many practitioners would prefer to use this required activity to obtain information without additional outside time commitments. Similarly, co-workers and online resources represent sources of information that are easily accessed with a minimal extra time commitment. The relative preference for these sources over journals and books is likely attributable to this time factor because reading journal articles or books often requires a substantial commitment of time beyond the normal clinical routine. As numerous focus group participants in study one indicated, practitioner time is usually limited, increasing the need to get information quickly and with relatively little commitment of extra time.

#### *Limitations of this Study*

The overall limitations of the survey methodology noted in studies two and three also apply to this study. The results are limited to the extent that the representativeness of the sample is unknown and the self-report methodology might be influenced by

social desirability. Still, the results of this study are consistent with aspects of the previous studies and are considered useful in understanding where practitioners get their information and how these data can be used to more effectively target the dissemination of treatments with research support.

Table 9. Mean Levels of Use for Treatment Information Outlets

<u>Source</u>	<u>Mean</u>	<u>Standard Deviation</u>
<i>Conversations with colleagues and supervisors</i>	4.09	1.33
<i>Online sources (e.g., websites, list-serves)</i>	3.38	1.33
<i>Continuing education workshops</i>	3.14	1.20
<i>Academic books (e.g., Handbook Of Clinical Child Psychology)</i>	3.01	1.35
<i>Academic-oriented journals (e.g., Journal of Consulting And Clinical Psychology; Journal of Clinical Child and Adolescent Psychology)</i>	2.74	1.26
<i>Conferences (e.g., APA, state psychological association conferences, regional conferences)</i>	2.71	1.08
<i>Practice-oriented journals</i>	2.69	1.15
<i>Professional newsletters</i>	2.57	1.22
<i>Non-academic books</i>	2.51	1.22

## **General Discussion**

Taken together, the studies in this project offer a variety of data on practitioner perspectives on EBP and related constructs. Although each study was designed to investigate a unique area related to EBP, numerous findings were common to multiple studies and are highlighted here. After these findings are reviewed, the results of this project are integrated into a model for promoting the use of treatments with research support.

### *Treatment Flexibility*

The importance of flexibility within treatment protocols was a consistent finding throughout this project. Practitioners in both the open group format (study one) and the online survey format (study two) indicated their preference for treatments that allow for flexibility in their implementation. This finding is consistent with recent articles advocating manualized treatments that allow flexibility to accommodate specific needs of clients, published recommendations for enhancing flexibility within treatment protocols, and empirical investigations of therapist use of and client response to enhanced flexibility in mental health treatments (e.g., Gibbons, Crits-Christoph, Levinson, & Barber, 2003; Henin, Aude, Reilly-Harrington, 2001; Kendall, 2001; Kendall & Hudson, 2001). In light of the importance of treatment flexibility to practitioners, continued investigation of the role of flexibility in outcomes and strategies for enhancing flexibility while maintaining treatment fidelity is warranted.

### *Effectiveness versus Efficacy Studies*

Practitioner preferences for research other than highly controlled efficacy studies was an important finding of this project. In study one and study two, practitioners indicated that they find effectiveness studies, which test treatments in applied settings, to be more influential in treatment selection decisions than efficacy studies (i.e., laboratory-based trials with strict exclusion criteria). Recognizing the long road ahead, it is worth noting that initiatives both within funding agencies and in the current literature are beginning to address this important concern. For example, one might note the language in the National Institute of Mental Health (1998) “Bridge Document” calling for effectiveness research that incorporates more externally valid procedures both in terms of subject populations and delivery personnel:

The principal aim of *effectiveness research* is to identify whether efficacious treatments can have a measurable, beneficial effect when implemented across broad populations and in other service settings. For instance any person seeking help with a particular mental illness, regardless of other co-occurring conditions or the duration of the illness, might be eligible. Treatments are administered by clinicians who have not necessarily been specially trained in the research protocol; and the frequency and duration of visits, how and when outcomes are gauged, and the use of adjunctive services are dictated by local practice patterns or administrative policies (pp. 8-9).

The correspondence between such recommendations and the results of this project are striking. While such studies are relatively rare in the current literature, some have begun

to emerge and even investigate differences in treatment outcome among people with multiple disorders (e.g., Brown, Read, & Kahler, 2003; Flannery-Schroeder, Suveg, Safford, Kendall, & Webb, 2004; Lenze et al., 2003). As currently funded investigations of treatment effectiveness make their way into the literature, many concerns about the generalizability of the findings to “real world” settings may be alleviated. Improving practitioner perceptions of the treatment literature may, in turn, facilitate greater adoption of EBPs in clinical settings (see study three for discussion of attitudes toward treatment research and EBP use).

### *Practitioner Training*

Another central finding of this project was the importance of practitioner training in evidence-based approaches. In study one, practitioners identified a lack training in EBPs as a major obstacle to implementing treatments with research support in community settings. Similarly, in study three, practitioner training in EBPs (i.e., taking a class) was found to be a significant predictor of self-reported EBP use. These findings are consistent with the growing emphasis on training in EBPs (e.g., APA, 2005; Sholomskas et al., 2005) and underscore the importance of the APA resolution (2002) requiring training in evidence-based approaches in accredited graduate programs. However, the expansion of evidence-based practice in applied settings may necessitate similar training guidelines for non-APA-accredited programs (e.g., social work, master’s-level programs). Furthermore, practitioners already in the field would likely benefit from systematic continuing education programs aimed at maintaining

practitioner knowledge of recent relevant research. In this vein, Steele and Roberts (2005) discussed a recent project by the practitioner-oriented Canadian Register of Health Service Providers in Psychology (CRHSPP) which provided practitioners with information, workshops and online consultations in evidence-based practices. The widespread and effective use of evidence-based practices in community settings will likely require this kind of commitment to continued training in order to help practitioners develop and maintain competence with evidence-based approaches.

#### *Social Nature of Dissemination*

Finally, the centrality of social factors in treatment dissemination was a major finding of this project. In both study one and study four, the practitioners indicated that they most frequently receive information about treatments from their colleagues and supervisors. Furthermore, study one and study three found evidence for the influence of institutional culture on decisions regarding the use of EBPs. Decisions to use or not use EBPs are not made in a vacuum, but rather social influences can affect practitioner decisions. Given the finding that individual practitioners can be heavily influenced by their colleagues and supervisors, it is clear that social dynamics within clinical settings must be considered. In contrast to the dissemination strategies typically employed in the mental health services field, which tend to focus on dissemination through written sources such as journal articles, this project highlights the need for social dissemination strategies (see Stirman, Crits-Cristoph, & DeRubeis, 2004) in order to effectively move treatments from research settings into clinical settings.

### **Model for Promoting Use of Treatments with Research Support**

In light of the findings of this project, models guiding current efforts to disseminate treatments with research support appear to be in need of some revision. To this end, this section presents an integrated model for promoting the use of treatments with research support. Specifically, the model builds upon the findings of the present project and offers recommendations for treatment design, treatment evaluation, dissemination strategies, and practitioner training. Each recommendation is aimed at addressing an important issue related to practitioner adoption of EBPs, and the model as a whole is intended to provide a general guide to the mental health field in encouraging widespread use of treatments with research support.

#### *Recommendations for Treatment Design*

Based on the results of this project, two recommendations related to treatment design are offered. First, treatment designers are encouraged to allow for flexibility in the implementation of evidence-based treatment protocols. Flexibility should be incorporated into the treatment design process and protocols that are rigid and inflexible should be avoided. One method of incorporating flexibility into treatments could be to offer therapists options within a treatment protocol. For example, a treatment manual might encourage therapists to use their clinical judgment in choosing which modules of a treatment to implement while remaining consistent with the general approach of the treatment. Likewise, treatment designers might wish to allow therapists flexibility in determining how long they should spend on different parts of a treatment, rather than

follow a rigid session-by-session plan. Because many practitioners are likely to make such adjustments to the treatment protocol anyway, treatment designers might specify opportunities for therapists to flexibly use the treatment and integrate clinical judgment within the context of fidelity to the treatment (see Kendall, 2001 for discussion of flexibility and treatment fidelity). For example, Hembree-Kigin and McNeil (1995) described a flexible approach to conducting Parent Child Interaction Therapy (PCIT) that allows clinicians to use clinical judgment in tailoring the treatment to the specific needs and skills of the client.

An alternative method for building flexibility into the treatment manual would be to specify guiding principles of the treatment rather than detailed session plans. This approach has been utilized with some dissemination-focused treatment approaches (e.g., Multisystemic Therapy; MST; Henggeler, 1999), and likely helps to establish a flexible feel for practitioners. In this approach, the practitioner is free to determine the techniques used in each session, but treatment fidelity is conceptualized as fidelity to the guiding principles of the treatment.

The second recommendation offered for treatment design is to build in support for therapists implementing the treatment. In study one, practitioners identified lack of adequate knowledge and supervision as major obstacles to implementing treatments with research support. While treatment manuals can be invaluable resources for disseminating a treatment with fidelity, manuals alone are often not sufficient to successfully implement a treatment. Given the need for continued support, treatment

designers are encouraged to provide ongoing training and consultation for practitioners and their supervisors in order to encourage the widespread successful implementation of a treatment. Again, MST provides a model for ongoing training and support that could be helpful for other treatments with research support.

Taken together, the recommendations for treatment design are intended to increase the appeal of treatments with research support to practitioners. As suggested in studies one and two, the perceived flexibility and support of a treatment can be crucial in practitioner decisions to use or not use a particular treatment. Therefore, it is recommended that opportunities for flexibility and support be built into both new and existing treatment protocols.

#### *Recommendations for Treatment Evaluation*

The results of this project suggest clear recommendations for the evaluation of mental health treatments. While efficacy studies remain an important method for demonstrating treatment effects under controlled conditions, practitioner ambivalence toward these studies and preference for alternative methods of evaluation indicate the need to expand treatment evaluation programs beyond highly controlled trials. First, treatment evaluators are encouraged to test their treatments in clinical settings with actual clients (i.e., effectiveness studies). According to the results of this project, practitioners do consider research evidence when making treatment decisions; however, they value applied studies far more than highly controlled investigations. While conducting research in applied settings presents a number of challenges, such research

appears necessary in order to demonstrate to practitioners that a given treatment can work with severe clients in “real world” settings.

In addition to increasing the prevalence of effectiveness research, the results of this project point to the importance of “other” types of evaluation. Moving beyond treatment outcomes, practitioner treatment selections are influenced by the appeal of the treatment to clients and other practitioners (see study two). Furthermore, practitioners in this project indicated that economic considerations are also important when selecting a treatment. Recognizing the influence of these factors, it is recommended that treatment evaluators assess a treatment’s appeal in each of these areas. Nelson and Steele (in press) offer a more detailed discussion of these forms of evaluation and provide recommendations for integrating these “multifaceted” investigations into ongoing treatment outcome research.

#### *Recommendations for Treatment Dissemination*

The results of this project also suggest several recommendations for treatment dissemination. First, the results of studies one and four indicate where practitioners receive their information on treatments and where they would like to receive such information. In order to effectively reach a wide range of practitioners, researchers are advised to disseminate their work in sources that are easy for practitioners to access. Online resources can be useful tools for disseminating treatment information, and recommendations for utilizing the vast potential of the internet in treatment dissemination have been discussed elsewhere (see Ollendick & Davis, 2004). In

addition to making information available online, time limitations faced by many practitioners must be considered in dissemination efforts. Because few practitioners have time to keep up with the vast and rapidly growing treatment outcome literature, practitioner-oriented summaries are a useful way to convey treatment information in a brief format (see study one).

In a similar vein, practitioner time can be optimized by disseminating treatment information during required practitioner activities. For example, licensing requirements dictate that clinicians attend a certain number of continuing education hours each year. Because they are already a part of the practitioner's schedule, such workshops are an ideal outlet for treatment information and training. Although many state boards specifically require continuing education credits focusing on treatment, few, if any, guidelines currently exist requiring continuing education opportunities to focus on *evidence-based* approaches. Stricter guidelines governing continuing education workshops are recommended in order to ensure that information presented in these trainings reflects strong research evidence. Likewise, researchers are encouraged to actively seek out continuing education settings as opportunities for treatment dissemination.

The findings of the present project support the need for social strategies in the dissemination of treatments with research support. Given the central role of colleagues and supervisors in treatment decisions, implementation programs must employ social dissemination strategies (see Stirman et al., 2004). Perhaps most importantly, such

efforts need to identify and target the “opinion leaders” within clinical settings as a part of any successful treatment dissemination plan (see Smith-Boydston & Nelson, in review). By educating and training key individuals, the openness of the clinical setting to a particular approach may be positively affected. In contrast, efforts to disseminate treatments that ignore social processes and fail to enlist the help of influential individuals within the setting are unlikely to be successful. Therefore, a “multi-level” approach to dissemination and training might be warranted. Using such an approach, supervisors and other opinion leaders might first receive intensive training in the treatment, and then be enlisted to facilitate training of others and more widespread implementation. By gaining the support of key staff first, the staff as a whole may be more likely to be open to training and see the treatment as consistent with institutional goals.

Overall, the recommendations for dissemination aim to facilitate a more positive response to evidence-based approaches by making information easily accessible to practitioners. Such information, supported by social dissemination strategies, is likely to be more successful than “passive publication” strategies that have been historically favored.

#### *Recommendations for Training*

Finally, the results of this project have implications for practitioner training. At a broad level, this project found that training may be a particularly important issue in the movement to encourage the use of EBPs. Coursework in EBPs was found to be a

significant predictor of later EBP use (study three) and lack of training in specific approaches was identified as an important obstacle to using treatments with research support (study one). Consistent with these findings, it is recommended that practitioner training programs continue to require training in EBPs and aim to provide intensive training opportunities in a variety of evidence-based protocols. By increasing the breadth and intensity of EBP training, the next generation of clinicians and supervisors should be better equipped to implement treatments with research support in clinical settings. Although EBP training requirements in professional psychology (i.e., doctoral-level training programs in psychology) have likely had a positive effect on EBP use, similar requirements in related mental health fields (e.g., social worker, master's-level psychology programs) are likely necessary to ensure more widespread use of these approaches. In addition to enhancing practitioner knowledge and competence with specific protocols, EBP training should be helpful in encouraging open attitudes toward the role of science in treatment, generally, and the use of EBPs, specifically. As study three suggested, the movement toward EBPs will be largely predicated on practitioners being open to the results of treatment research, and open attitudes toward research might be encouraged through training.

### **Conclusions and Future Directions**

While the results of this project may be helpful in understanding practitioner perspectives on EBP and developing a model for encouraging widespread use of EBPs, some caution should be used in interpreting the findings. First, as discussed earlier, the

generalizability of the samples in this project to the larger group of practicing clinicians is unknown. Mental health practitioners are a diverse population and efforts to generalize trends among practitioners may be overly simplistic. Second, practitioner perspectives on EBP is a relatively new area of study and, as such, the constructs investigated in this project are not yet well-understood. While this project provides useful data in exploring these ideas, it is best viewed as a preliminary investigation. As such, future research should aim to build upon the results of this project and further clarify the issues raised here.

Several specific recommendations for improving on the present project are offered here. First, the findings of this project should be replicated with larger and more representative samples of practitioners. Larger samples will allow for a more detailed analysis of not only practitioner trends, but also differences between practitioners from different disciplines (e.g., psychology, psychiatry, social work). Second, as researchers begin to better understand the issues related to EBP, studies should expand on these issues, offering more sophisticated examinations of important ideas. Third, because the present project is considered a primarily exploratory investigation, much room exists for the improvement of construct measurement. For example, practitioner EBP use was measured using only one item and self-report. As discussed in study three, more sophisticated measures of EBP use are likely to emerge and should be used to replicate and expand the findings of this project. Finally, the model presented in the project discussion is intended as a first step in facilitating EBP

use and is open to revision as new evidence emerges. This project used a “theory-building” approach to construct the model for promoting EBP use; future investigations may benefit from a “theory-testing” design. As more specific recommendations for promoting EBP use in clinical settings proliferate, the effectiveness of these recommendations in actually affecting widespread change should be evaluated. Just as therapeutic decisions should be based on an ongoing evaluation of the research evidence, attempts to implement treatments with support should be grounded in the available evidence on treatment dissemination.

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