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ORIGINAL PAPER

Barriers to Adoption of New Treatments: An Internet Study of Practicing Community Psychotherapists

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Abstract Over 1,600 North American psychotherapists from a wide range of disciplines and practice settings completed an open-ended question on perceived barriers to adoption of new treatments as part of an internet survey. Content analysis indicated that there were five overall themes: clinician attitudes, client characteristics, contextual or institutional factors, training issues and other. The most frequently endorsed theme revolved around training issues, particularly, insufficient time and cost for training, lack of confidence in mastering the technique, and lack of opportunities for refining skills. Specific ideas for overcoming these barriers are identified.

Keywords Psychotherapy · Education · Evidence-based medicine

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Introduction

Little is known about the processes by which psychotherapy treatments are evaluated, adopted, and integrated into routine care by community clinicians (Hohmann and Shear 2002). Effective dissemination and implementation of best practices requires an understanding of factors influencing practitioners to adopt a new treatment as well as barriers to their doing so. These clinician factors may affect the probability of acceptance and sustained use of psychotherapies, not only because the clinicians are key stakeholders themselves, but because their reactions may affect the receptivity of patients to new treatments.

There has been limited investigation of clinician barriers to adoption of treatments. While to our knowledge no study has specifically assessed barriers to adoption of new treatments, there are four relatively small empirical studies (Aarons 2004; Nelson et al. 2006; Pagoto et al. 2007; Varra et al. 2008) and three reports discussing the challenges encountered in adopting evidenced-based treatments (EBTs; Addis et al. 1999; Brown et al. 1997; Schmidt and Taylor 2002). While new treatments may or may not be evidence-based, these few studies are briefly reviewed to help provide some context for the current investigation.

Aarons (2004) surveyed 322 clinical and care management service providers from publicly funded programs in San Diego County who worked in child and adolescent mental health services regarding their attitudes towards evidence-based treatments (EBTs). The four attitudinal domains assessed (i.e., intuitive appeal, attitudes towards organizational requirements, openness to new practices, and perceived divergence of usual practice with research-based interventions) were found to vary by education level, level of clinical experience, and organizational context. Practitioners with higher educational status, less clinical

experience, and working in inpatient settings had more favorable attitudes towards adoption of EBTs.

Two focus groups were conducted with 19 child and adolescent mental health professionals regarding their attitudes toward EBTs (Nelson et al. 2006). Three major themes were found: applicability of research-based interventions to real-world settings, preference for treatments with relational emphasis, and greater flexibility in tailoring interventions to individual clients. In a survey of members of clinical psychology, health psychology, and behavioral medicine professional electronic mail listservs, 37 respondents identified barriers to adoption of EBTs (Pagoto et al. 2007). Seven themes were identified: training, attitudes, consumer demand, logistical considerations, institutional support, policy, and evidence. The most frequently cited barriers were negative attitudes about EBTs and lack of training. The next most highly cited barrier was logistical concerns surrounding implementation (e.g., access to resources to implement treatments such as manuals, high cost, time, and reimbursement).

Varra et al. (2008) elicited the response of 59 drug and alcohol counselors to a list of potential barriers to adoption of treatments. The most frequently endorsed barriers included: already using a treatment that works, other staff members resisting change, not enough time with clients, inadequate resources, another philosophy already being followed by coworkers, and workload dampening motivation.

In a case study of the implementation of an EBT in a children's mental health center, Schmidt and Taylor (2002) found that practical day-to-day obstacles interfered with uptake. These hurdles for clinicians included perceived need for troubleshooting with colleagues and an external supervisor. Brown et al. (1997) provided an illustrative example of implementation of a multisystemic EBT approach with juvenile offenders across two public sector mental health sites. Therapist barriers identified included later stage in professional career, strong preference for non-empirical therapeutic interventions, unwillingness to try a new treatment or venture outside of the client population one is accustomed to, and reluctance to peer supervision (Brown et al. 1997).

In conducting two clinical trials of cognitive-behavior therapy for panic disorder, Addis et al. (1999) informally asked clinicians to generate concerns about using manual-based treatments. The perceived major concerns included: negative impact on the therapeutic relationship, unmet client needs, competence in delivery and poor job satisfaction, restriction of clinical innovation and credibility, and feasibility of manual-based treatments.

Although these six investigations are an important step toward identifying barriers, they have several constraints that may limit their generalizability, particularly relatively small sample sizes or restricted sampling such as including only those residing in a particular geographical area or only a particular discipline. Additionally, although clinicians likely have heard the terms "empirically-supported" or "evidence-based," most are unclear on the formal definitions and unsure of which psychotherapies indeed met those categories (Aarons 2004). Thus in contrast to other investigators (Nelson et al. 2006; Pagoto et al. 2007), we specifically chose to orient questions to adoption of "new" treatments, thus avoiding confusion and addressing a more general question of implementation of innovations in mental health field.

Thus the main purpose of this study was to identify barriers to adoption of new treatments from mental health providers across a wide range of disciplines and practice settings. Similar to Aarons (2004), the second aim of the study was to determine, whether there were demographic, training, and work-related group differences on ratings of barriers. For e.g., significant differences between organizational settings (e.g., institutional vs. private practice), may indicate that different strategies are needed to effectively tailor dissemination and implementation efforts.

Method

Participants

The readership of *Psychotherapy Networker* (PN), a popular psychotherapy magazine, served as a pool of potential participants. Email invitations were sent to about forty percent of the readership, or 22,000 people, by the editor on two separate occasions. Between September 2006 and April 2007, a total of 2,739 participants attempted to complete the web-based survey. Of these, those living outside of the United States and Canada (92; 3%) and students (40, 2%) were excluded from further analyzes, leaving 2,607 participants. In brief, the participants' mean age was 51.21 ($SD = 9.99$). There were a wide range of disciplines, with social workers being the largest group ($n = 878$; 36%), followed by professional counselors ($n = 551$; 22%), psychologists ($n = 411$; 16%), marriage and family therapists ($n = 409$; 16%) and others (e.g., certified drug/alcohol counselors, pastoral counselors, etc.; $n = 398$; 10%). Although the majority of participants (52%) were in private practice and a significant number (48%) worked in outpatient mental health clinics, the remaining worked in a variety of settings including outpatient substance abuse clinics, inpatient psychiatric units, and correctional facilities. The typical participant was a Caucasian female social worker in private practice, holding a Master's degree.

Procedure, Measure and Analysis

This study was part of a larger investigation on psychotherapy practices including influences on or facilitators of adoption and sustained use of new psychotherapies (Cook et al. 2008). This report, however, addresses a related but distinct question on obstacles to adding a new practice that does not overlap with the forthcoming publication.

This study was approved by the Columbia University-New York State Psychiatric Institute Institutional Review Board (IRB). Since the number of unique visitors to the website, necessary to calculate the view and response rates, was unavailable, it is conservatively estimated that a minimum of 13% of those who were sent emails agreed to participate in the study. The completion rate or proportion who completed the survey among those who agreed to participate was 72%.

The data in this paper come primarily from psychotherapists' demographic and practice information and their responses to the open-ended question: "What are your major challenges/obstacles to adding new psychotherapy techniques/skills to your practice?" The open-ended question was placed at the end of the survey, and understandably, resulted in high percentage of missing values (35%). Comparison of the participants who did and did not provide an answer to this question revealed that gender was the only demographic variable on which the two groups significantly differed ($\chi^2 = 8.01$, $P < .01$): women were 1.3 times more likely to answer the question than men. The association, however, was negligibly small (Cramer's $V = .06$).

In this mixed-method study, a combination of qualitative and quantitative analyzes was utilized. Narrative analysis proceeded systematically in three main steps: generating initial themes through independent review and analysis of open-ended responses by two raters (JMC and TB); abstraction and condensation of themes through further discussion to identify commonalities and reconcile conflicting observations; and creation of summary statements for each theme. Procedures used to increase construct validity of this analysis were standardized data coding and an iterative approach to thematic extraction. Number and percentage of respondents who rated each theme was calculated. Potential effects of the following three therapist characteristics on rating of barriers were examined using cross tabulation procedure: organizational context (private practice vs. institutional settings); educational level (doctoral degree vs. all other degrees); and level of clinical experience (group with 0–10 years of experience vs. those with 11–48 years of experience). The alpha for this study was set at $P < .01$ to avoid committing Type I error.

Results

The total number of participants who gave at least one response to the open-ended question on barriers was 1,685 (65%). Of these, four invalid responses and 51 "no obstacle" responses were excluded from analyzes. Of the remaining 1,630 respondents, 795 (49%) endorsed one obstacle, 562 (35%) named two obstacles, 196 (12%) gave three responses, 62 (4%) provided four, and 15 (1%) gave five responses. Thus, there was a total of 2,830 responses.

Identified Barriers and their Frequency

Twenty-four obstacles emerged, which were grouped into five higher-order themes: training issues ($n = 1{,}917$, 68%); clinician attitudes ($n = 406$, 14%); contextual or institutional factors ($n = 221$, 8%); client attitudes and/or characteristics ($n = 132$, 5%); and various other obstacles ($n = 154$, 6%). The frequencies and percentages of the endorsed obstacles are presented in Table 1.

Training-related barriers encompassed a wide range of obstacles having to do with both objectively and subjectively experienced impediments. The objective hindrances included insufficient time and funds for training, lack of accessible local training, and lack of ongoing support needed to refine new skills (e.g., supervision and consultation). The subjective hurdles included perceived confidence in one's ability to perform the therapy successfully.

Training issues were the most frequently cited higher order theme, with five of its sub-themes receiving the most frequent mention. Within this category, insufficient time was by far the highest in frequency, being noted 795 times (28%). High cost of training was second and was mentioned 430 times (15%). Insufficient or lack of training and/or supervision for refining skills is third ($n = 249$, 9%). The fourth and fifth most frequently cited barriers were lack of experience, confidence, comfort or proficiency in using technique ($n = 208$, 7%) and lack of accessible (local) training opportunities ($n = 201$, 7%).

Another set of identified obstacles was attitudes of the clinicians towards new treatments. These included both doubts about effectiveness of the new technique (seventh most frequently cited barrier) and belief that one does not need to learn new therapies because what one is currently doing is sufficient/effective (eight); lack of interest in new techniques or energy to learn them either in general or due to advanced age or stage of career; and difficulty integrating new practices with existent approach or incompatibility with one's values, training, or style. Additionally, several clinicians opposed learning new techniques because of the belief that therapy does not equal

Table 1 Barriers to uptake of new psychological treatments

Barriers	Rank	Frequency	Percent	Examples
Clinician attitudes				
Question efficacy in general	7	115	4.1	Being convinced that they are worth the effort to learn and have measurable positive outcomes
				I need proof that it has been tried and is successful
Belief that psychotherapy is more than a set of techniques	21	26	0.9	I do not need techniques, they are not significant, the process is!
				My belief that the most important curative aspect of treatment is the client/therapist relationship
Belief that what one is currently doing is sufficient/effective	8	95	3.4	I am very comfortable with what I do and believe that it provides me the foundation I need to do effective therapy
				I have enough in my armamentarium and I do not find the need to add any
Belief that treatment must be compatible with therapist style/ viewpoint	16.5	33	1.1	Finding ones that are compatible with the way I am comfortable practicing
				It has to feel natural for me and consistent with my training and experience
Belief that treatment must be easily integrated with current approach	14	37	1.3	Difficulty integrating the new techniques/skills into my current approach in a systematic and meaningful way
				How to integrate it into who I am, what I do
Lack of interest or energy/inertia/ boredom	11	67	2.4	Boredom/burnout
				My own energy and enthusiasm
Late age/stage in professional development	16.5	33	1.1	Do not want to learn complicated systems at this stage of my career
				I am old and have been trained up the wazoo
Client attitudes/characteristics				
Client's resistance	12	57	2.0	Engaging the client to try something new and outside their comfort zone
				Getting the client to be open to the new technique
Question efficacy or applicability for particular client population	9	75	2.6	An impoverished public mental health clientele whose lives are often in chaos and who need much practical assistance on an ongoing basis
				Sufficient client base with relevant issues/interest to justify time and expense
Contextual or institutional factors				
Institutional restrictions/lack of institutional support	6	116	4.1	Agency practices from a specific theoretical perspective so techniques must be consistent with that.
				Limited time with clients, and the amount of non-therapy tasks that also have to be addressed
Insurance restrictions	10	69	2.4	Insurance demands on time and "accepted" models of treatment.
				Number of sessions allowed by insurance companies
Acceptance or support by other outside influences (e.g., colleagues)	15	36	1.3	Attitudes of other clinicians
				Professional associations not endorsing or not accepting these as valid without empirical research
Training issues				
Insufficient time	1	795	28.1	Getting the training. It is expensive and time consuming and it is difficult to get away from my practice. Time away is time without pay, and the pay is low enough as it is!
High cost of training	2	430	15.2	A lack of training opportunities that are affordable
				Financial support for training and supervision
Lack of accessible (local) training opportunities	5	201	7.1	Lack of available training in my area
				Lack of convenient training opportunities
Insufficient or lack of training/ supervision for refining skills	3	249	8.8	Lack of ongoing support for skill building
				Lack of opportunity to practice them under sufficient supervision

Table 1 continued

Barriers	Rank	Frequency	Percent	Examples
Lack of experience, confidence, comfort or proficiency in using technique	4	204	7.2	Developing enough proficiency in a new area to feel comfortable in using the new techniques
				Learning the new techniques successfully and completely, so these will come as naturally as the ones I already use
Lack of tools to assist learning	24	13	0.5	Finding the resources that lay out practical, usable curricula that can be easily adapted for different needs
				Lack of good video demonstrations of exactly how to do a particular therapy
Awareness or exposure to new techniques and knowing which one to choose from	22	25	0.9	Determining which of the myriad of available techniques would be the most relevant and useful to my work
				Discerning the most useful training
Other				
Implementation requires meeting certain special requirements	19	30	1.1	Becoming certified
				Lack of physical space needed for some techniques
Insufficient number of clients	23	20	0.7	Availability of clients
				Not enough clients
Ethical and legal concerns	20	27	1.0	Potential for litigation
				The test of time to insure they are not harmful
Isolation	18	31	1.1	Lacking peer professional support to keep update on new research findings
				Having colleagues to interact with that are doing the same techniques (within a 60 miles radius)
Other	13	46	1.6	Transcending my own internal biases and assumptions.
				Tedium or complexity of the approach
Total		2830	100.0	

a sum of techniques and stressed that relationship factors were the most important ingredient in the effectiveness of therapy.

Contextual or institutional factors included influences from organizations involved in patient care either directly (e.g., employers, insurance companies), or indirectly (e.g., professional organizations, colleagues). Restrictions experienced directly at respondents' work settings were the sixth most frequently endorsed barrier (4%). They ranged from lack of administrative support for training, conservative organizational culture, and heavy caseload, to the strict requirements of adhering to agency's treatment approaches and structure such as session length and quantity. Insurance restrictions included limited number of sessions, low reimbursement rate, and limits on session length.

Characteristics and attitudes of the clients were also identified as barriers to adoption of new therapies. Suitability for specific client populations were noted such as perceived restrictions due to age, chronicity of diagnosis or problems, specific needs, educational level, and client's financial constraints. In addition, lack of the client demand for specific therapies was mentioned, including clients' reluctance to trying new treatments because of lack of interest or resistance to change.

The remaining obstacles did not fit into the above categories and were grouped under "other." They included issues such as ethical and legal concerns about trying treatments that may be harmful to the clients, and difficulty meeting special requirements needed for implementing new treatments such as certification, lack of extra space or specialized equipment (e.g., one-way mirror).

Relationship Between Barriers and Key Demographic Variables

Bivariate relationships between barriers and organizational context, educational level, and level of clinical experience were examined. Significant intergroup differences for several obstacles were found. However, the overwhelming majority of the associations were negligibly small, i.e., the strength of associations measured by Cramer's V reached .10 (small association) for only one of the 13 identified significant group differences.

Those working in various institutional settings were 25 times more likely to endorse institutional restrictions and/or

lack of institutional support obstacle than private practitioners ($\chi^2 = 1.18$, Cramer's $V = .26$, $P < .001$). The overall trend was for private practitioners to show more reserved attitudes towards new treatments. Namely, they were more likely to question its efficacy ($\chi^2 = 7.7$, Cramer's $V = .07$, $P < .01$, OR = 1.8), to believe that psychotherapy was more than a sum of techniques ($\chi^2 = 7.8$, Cramer's $V = .07$, $P < .01$, OR = 3.3), be more satisfied with their current practices ($\chi^2 = 14.6$, Cramer's $V = .09$, $P < .001$, OR = 2.0), be more disinterested ($\chi^2 = 7.7$, Cramer's $V = .07$, $P < .01$, OR = 2.1), and be at a more advanced age and/or stage of their carrier ($\chi^2 = 8.6$, Cramer's $V = .07$, $P < .01$, OR = 2.0). On the other hand, those working at institutional rather than private settings were more likely to question applicability of new treatment to a specific client population ($\chi^2 = 11.4$, Cramer's $V = .08$, $P < .01$, OR = 2.3), and have more difficulty meeting special requirements for implementation of new practices ($\chi^2 = 6.9$, Cramer's $V = .06$, $P < .01$, OR = 3.8).

Clinicians with more experience were more likely to complain of lack of time ($\chi^2 = 11.6$, Cramer's $V = .08$, $P < .01$, OR = 1.5), whereas the less experienced group did not have sufficient number of clients ($\chi^2 = 11.2$, Cramer's $V = .08$, $P < .01$, OR = 3.7) and were concerned more about applicability of new treatment for specific client populations ($\chi^2 = 10.7$, Cramer's $V = .08$, $P < .01$, OR = 2.2).

Clinicians with a doctorate were significantly more likely to question efficacy of new treatment ($\chi^2 = 8.0$, Cramer's $V = .07$, $P < .01$, OR = 1.8) and believe that therapy is more than a set of techniques ($\chi^2 = 7.6$, Cramer's $V = .07$, $P < .01$, OR = 3.0) than those with a Master's degree.

Discussion

This is the largest examination to date of barriers to adoption of psychotherapies in terms of number and range of mental health providers surveyed. Content analysis indicated that there were five higher order themes: clinician attitudes, client characteristics, contextual or institutional factors, training issues and other, with sub-themes under training issues being the most frequently cited barriers. There are a few significant effects of demographic and practice variables on obstacles, but the effect sizes for most were negligible. These findings overlap somewhat with other published studies, even though most assessed barriers to evidence-based rather than new treatments (Aarons 2004; Nelson et al. 2006; Pagoto et al. 2007; Varra et al. 2008).

Insufficient time to choose, learn, practice, master, refine, and integrate new skills was by far the most frequently endorsed barrier in the adoption of new treatments. It appears as if lack of time may place training for new treatments lower on the clinicians' professional and personal priorities list when there is no urgent need for a new treatment. Things that take precedence mentioned by participants include "seeing too many clients", barely having time for anything more than "to put out fires", building and enlarging one's practice, and one's family demands.

Affordability of new training is also emphasized. Given that the cost of training often include tuition or conference fees, travel and lodging expenses and possibly loss of income during time away from practice or work it is not surprising that this is a serious hindrance to adoption of new treatments even for those working in institutional settings. Absence of affordable local training opportunities accompanied by a lack of ongoing supervision while refining new skills seem to contribute to a sense of frustration when one feels a need for more training but has no easy way of getting it. Additionally follow-up training appears to be just as important as initial training, with many practitioners voicing that they have difficulty finding a local mentor, an expert, or even a qualified colleague, for supervision while one is honing his/her new skills. Contrary to expectation that clinicians working in institutions may have an easier time getting free training through their organizations, we did not find significant differences between the institutional and private groups with regard to either time, cost, or training/supervision for refining one's skills (ranked first, second, and third, respectively, by both groups). However, clinicians in institutional settings appear to have a slightly easier time with local training, ranking this obstacle sixth rather than fourth as private practitioners do, although again, the difference between the two groups was insignificant.

There is some overlap between Aarons' (2004) findings and ours, despite important methodological differences between the two studies. Aarons (2004) investigation was theory-driven and relied on a predetermined set of items, while this study was based on open-ended responses. Aarons used quantitative analysis to find underlying factors, while in this study qualitative content-analysis was utilized to identify common themes. And, most importantly, all participants in Aarons' study were providers from publicly funded programs in one region in California who worked in child and adolescent mental health services, while our participants included practitioners from a wide range of practice settings within the US and Canada. Namely, more than half of our participants were in private practice and most provided psychotherapy to a wide age range. Thus, by including private practitioners this study we may have achieved a sample more representative of a larger general clinician population (Robiner 2006).

Our themes did not form the same groupings as Aarons' (2004) factors from his predetermined items, and only a few of the items were similar in both studies. Perhaps, this difference is due to divergence in assessed constructs, that is attitudes vs. barriers, and the nature of treatments addressed (evidence based practices only vs. all new treatments). The overlapping items included insufficient training, lack of acceptance, and support by colleagues, belief that therapy is more than a set of techniques, and institutional requirements. In Aarons' study, requirements by agency had the highest mean, but in our study institutional restrictions and lack of institutional support were less important (ranked sixth). This is partly because Aarons' sample was restricted to only those working in institutional settings. In our sample those working in institutional settings were 25 times more likely to feel institutional restrictions and lack of institutional support compared to private practitioners, although this effect was small. This obstacle was ranked fourth in those clinicians working in institutional settings, compared to 23rd ranking in private practitioners. Thus, unlike Aaron's results, in this study, even when institutional settings are considered alone, institutional obstacles still rank lower on the barriers list than time, cost, and the lack of training. This may surprising as those practicing in institutions typically do not have to pay out of pocket for educational trainings and usually are paid their salaries when in training.

Unlike Aarons, who found that interns show more positive attitudes towards new treatments, our results demonstrate the opposite and only for one attitudinal variable, that is less experienced clinicians are more likely to question efficacy or applicability of treatment for particular client population, although the association was negligible. We also found, though again the associations were negligible, that clinicians with doctoral degrees compared to those holding other degrees had more reserved attitudes towards new treatments with regard to their efficacy and were more likely to believe that therapy did not equal the sum of the techniques. Aarons, on the other hand, reports that participants with higher educational attainment showed more positive attitudes towards treatments, however, only for intuitively appealing ones.

There were more similarities between our large-scale investigation and another qualitative study (Nelson et al. 2006), a small focus group investigation of barriers. These are limited practitioner time due to heavy caseload, lack of training and supervision, economic restrictions such as reimbursement, client resistance and complex client presentation. Similar to Pagoto et al. (2007) survey of 37 practitioners, lack of time and money for training, a part of their logistical concerns surrounding implementation and issues with obtaining training were identified barriers in our study. In addition, our investigation found further support for the barriers identified in Varra et al. (2008) investigation of 59 substance abuse counselors. However, the frequency of the endorsement of these barriers was relatively low in our sample possibly due to restriction of their sample to a narrow subspecialty within the broader mental health field. Also similar to Schmidt and Taylor (2002), we found that clinicians were concerned about applicability of new techniques to specific client populations, although only 3% of clinicians in our study mentioned it.

There are several limitations of the present study that should be noted. The most important is the indeterminate view and participation rates of the web-based data collection, putting into question the generalizability of findings to the greater mental health workforce. However, similar to a large investigation of psychotherapists using a snowballing technique (Orlinsky et al. 2001), the various disciplines and treatment settings represented in this dataset give it ecological validity. Indeed, this study may have better captured a broad range of the psychotherapy field than studies targeting specific professional populations, particular practice settings or geographical regions. The fact that the findings here identify and verify other published studies in a much larger and presumably representative sample is noteworthy.

Implications for Dissemination

These results provide important insights into the nature of issues which interfere with implementation of innovative treatments, perhaps including empirically-supported treatments and evidence-based practices. These findings may help to re-establish priorities in the implementation process. For example, although important, clinician's opinion of new treatments and even its suitability to one's views or to clients' needs are secondary to such issues as lack of time, affordability of training, and opportunities to gain confidence in new skills by refining them in advanced training and supervision. Moreover, the results here indicate that lack of time dramatically outweighs all other barriers. If taken at face value, clinicians appear to have little time to devote to learning to apply new treatments, a potentially lengthy and complicated process. In order to better understand the limited time issue, future investigations could include additional indices to assess objective indicators rather than self-reported access to training or, at least, include questions about actual training opportunities offered at work settings, their duration, and cost. This would help to clarify whether there are actually limited training opportunities in organizations, or "lack of time" is merely an umbrella justification for unwillingness to or disinterest in adopting a new treatment. However, severe lack of time may also indicate a larger issue for the mental

health workforce, such as heavy caseloads and limited time to write notes, prepare for sessions, and attend meetings. Perhaps the lack of time in institutional settings is due to limited funding for additional staff positions or need for a larger caseload due to low reimbursement rates imposed by managed care. Clearly if lack of time is indeed a substantial issue for practitioners in implementing new practices, institutional settings would need to carve out time for attending training, practicing new techniques and receiving supervision, and ongoing consultation in order to encourage sustained implementation of new practices.

Past dissemination strategies have included distributing summaries of information about new treatments (Haynes and Haines 1998). In view of findings presented here, it is questionable whether this strategy would be effective since many clinicians admitted not having time for even reading about new treatments. Moreover, research articles, treatments manuals, and various internet-based media would have less impact on clinicians as we found in the study of factors influencing clinicians' adoption of new treatments (Cook et al. (2008)). Clinicians seem to prefer to acquire this information through interpersonal channels, such as mentors or peers.

The full list of the barriers identified in this study can be used to anticipate problem areas that may arise during various stages and levels of implementation. For eg., for those working in institutional settings, administrative support is required to protect sufficient time for clinicians to immerse themselves in learning a new treatment and implement it with clients on a trial basis (Schmidt and Taylor 2002). Time is particularly important when disseminating research-based treatments as many manualized treatments require a greater frequency and regularity of sessions than is common in many practice settings (Addis et al. 1999).

Reaching clinicians in private practice likely requires different strategies. For e.g., on-line interactive training with ongoing online supervision could be more affordable and could address the needs of those practicing in the rural areas. It could also address another important obstacle, reducing time necessary for travel to the training sites.

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