Implementing Evidence-Based Practice in Human Service Organizations: Preliminary Lessons from the Frontlines

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SUMMARY. Evidence-based practice (EBP) involves the integration of the expertise of individual practitioners with the best available evidence within the context of values and expectations of clients. Little is known about the implementation of evidence-based practice in the human services. This article is based on a comprehensive search of the literature related to the organizational factors needed to introduce EBP into a human service agency, tools for assessing organizational readiness for EBP, and lessons learned from the current implementation efforts. Three approaches to implementing EBP are investigated: the micro (increasing worker skills), macro (strengthening systems and structures), and the combination (focusing on both aspects). Conclusions and recommendations are drawn from the literature review and framed in the form of a tool for assessing organizational readiness for EBP implementation. doi:10.1300/J394v05n01_10 *[Article copies available for a fee from The Haworth Document Delivery Service: 1-800-HAWORTH. E-mail address: <docdelivery@haworthpress.com> Website: <http://www.HaworthPress.com>*

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INTRODUCTION

Evidence-based practice (EBP) involves the integration of the expertise of individual practitioners with the best available evidence within the context of values and expectations of clients (Sackett, Richardson, Rosenberg, & Haynes, 1997; Gambrill, 1999). The principles and practices of EBP are drawn from the health care field and only recently have become a part of the social service arena. As the social service and mental health fields move towards embracing EBP, most of the literature seeks to promote the adoption of evidence-based practices, rather than actually engaging in and evaluate the use of evidence-based practice (Mullen, Schlonsky, Bledsoe, & Bellamy, 2005). As a result, there are very few evaluations that examine the elements needed to successfully incorporate evidence-based practice into agency operations.

There is recognition in the literature that implementing EBP is a complex and difficult task. Organizational environments and individual capacities need to be considered in designing implementation efforts (Gerrish & Clayton, 2004; Proctor, 2004). The complexity of implementing EBP includes: 1) motivating and facilitating practitioners to gain interest and trust in utilizing research (Proctor, 2004; Mullen & Bacon, 2000), 2) increasing the capacity of staff and agencies to utilize the information available (Barratt, 2003), and 3) mobilizing resources to experiment and sustain EBP practices (Mullen & Bacon, 2000; Barratt, 2003).

Since EBP represents a change in the life of an organization, it is important to include in this analysis the research on implementing organizational change as well as findings on the dissemination and utilization of research. The focus of this review of research is on the different approaches to implementing EBP and the implications for human service organizations.

ORGANIZING CHANGE AND RESEARCH UTILIZATION

Since EBP is a new approach to practice, it is important to view it in the context of organizational change. The successful introduction and sustainability of an innovation into the life of an organization requires

an understanding of: (1) the process of change including its barriers and incentives, (2) the culture of an organization, and (3) the strategies for effective dissemination and utilization.

While it is widely recognized that organizational change is a complex process, there is little consensus about the strategies that can ensure successful change. However, there is growing consensus about the following key elements in understanding and managing change: (1) type of change (Damanpour, 1988; Frey, 1990; Pearlmutter, 1998), (2) degree of change (Pearlmutter, 1998; Damanpour, 1988; Proehl, 2001), (3) facilitators and inhibitors of change (Arad, Hanson, & Schneider, 1997; Frambach & Schillewaert, 2002), (4) staff receptivity and resistance to change (Diamond, 1996; Jaskyte & Dressler, 2005), and (5) organizational readiness for change (Robbins Collins, Liaupsin, Illback, & Call, 2003; Hodges & Hernandez, 1999; Lehman, Greener, & Simpson, 2002). Each of these element is explored in greater detail in Austin and Claassen (2006).

An essential component of organizational change strategies is the culture of the organization. Organizational culture and its impact on organizational change process has receive limited attention in the research literature. The focus on organizational culture as an ingredient in organizational change includes the following elements: (1) understanding organizational culture in terms of basic assumptions, values and beliefs, and symbolic artifacts that exist within the organization (Schein, 1985), (2) identifying the types of organizational cultures such as informal culture, role culture, and results-driven culture (Handy, 1995; Cameron & Quinn, 1999), and (3) developing strategies for managing organizational culture in relationship to the roles of leaders (Khademian, 2002).

Another aspect of organizational change related to EBP involves the dissemination and utilization of research. There are at least four critical elements needed to bridge the gap between research and practice and they include: (1) the *source* of the research information is credible and competent, (2) the *content* of the message is focused on practical application, (3) the *method* of transfer includes multiple, reliable delivery approaches, and (4) the *audience* is consulted prior to dissemination (Barwick, Blydell, Stasiulis, Ferguson, Blase, & Fixsen, 2005). In addition, there is a complex interaction between the individual, the organization, the research, and communication in dissemination and utilization processes (Rogers, 1995). Despite this complexity, the most promising dissemination strategies include the utilization of the following combination of experts: persons specifically trained to disseminate information, local opinion leaders who are trusted community profes-

sionals, and evaluators who can audit the process and provide feedback mechanisms (Oxman, Thomson, Davis, & Haynes, 1995). These issues are explored in more detail in Lemon and Austin (2006).

In essence, the introduction of EBP requires special attention to the processes of organizational change, the understanding of organizational culture, and the specialized expertise to promote the successful dissemination and utilization of research. With this view in mind, the focus of this analysis shifts to documented case studies that describe the implementation of EBP in human service organizations.

INTRODUCING AND IMPLEMENTING EVIDENCE-BASED PRACTICE

EBP as Change

Since evidence-based social service practice is a relatively new concept in the U.S., most of the literature focuses on assessing its appropriateness and feasibility. However, much can be learned from colleagues in the United Kingdom who have more experience in searching for the most effective methods for implementing and sustaining EBP (Sheldon, & Chilvers, 2000; Pawson, Boaz, Grayson, Long, & Barnes, 2003; Nutley, Walter, Percy-Smith, McNeish, & Frost, 2004; Smith, 2004). While there is growing agreement that EBP represents a significant change in social service practice (Lawler & Bilson, 2004; Proctor, 2004, Nutley & Davies, 2000), it is also clear that EBP requires special attention to the following types of barriers and facilitators of change: (a) ideological and cultural change related to creating "buy-in" to the value of evidence and the importance of using it in decision-making, (b) technical change that may require changes in the content or mode of service delivery in response to evidence on the effective interventions, and (c) organizational change affecting all levels of staff (Hodson, 2003, Nutley & Davies, 2000).

Creating an EBP Culture

Preliminary evidence suggests that the implementation of EBP is more likely to be successful if it is introduced into a supportive organizational culture that is reflected at all levels from front-line staff to top management (Barwick et al., 2005; Lawler & Bilson, 2004). Barwick et al. (2005) found that a supportive EBP culture includes: (a) clarity of

mission and goals among staff, (b) staff cohesiveness and autonomy, (c) openness of communication and openness to change, (d) low levels of job stress, (e) careful attention given to staff selection, training, coaching, and (f) the use of continuous quality improvement feedback systems. The major components of organizational culture that are supportive of EBP include: (1) *leadership* provided by change managers or champions, (2) the *involvement* of stakeholders at all levels and phases of implementation, (3) the development of a cohesive *team*, (4) the availability of organizational *resources*, and (5) readiness to become a *learning organization*. Each of these five areas is explored in this section.

Leadership: Effective managerial leadership that demonstrates open and honest communication can significantly influence the change process and create an environment open to learning (Barwick et al., 2005; Proctor, 2004). Barwick et al. (2005) found that, "only strong leadership can build an organizational culture supportive of change, establish aims for improvement, and mobilize resources to meet those aims" (p.101). In addition, agency leaders can set the tone for developing a culture that is supportive of innovation, risk-taking, and the continuous identification and evaluation of the most effective interventions.

While any staff member can assume a leadership role or champion an idea, the development of an evidence-based culture is heavily dependent on middle and top management. A study of 36 social service agency managers indicated that the responsibility and accountability for evidence-based practice should be devolved down through an agency but with a critical role for the director to "lead from the front" (Barratt, 2003). While identifying evidence and reflecting on its relevance for practice should be part of everyone's job, managers need to be mindful of the competing pressures on staff. For example, expecting staff to take the lead in locating and evaluating evidence is rarely feasible given the workload demands placed upon social service staff.

Involvement of Stakeholders: The process of introducing and sustaining EBP requires the involvement of stakeholders at all levels of the organization. (Barwick et al., 2005). Bringing together different parts of the organization, including multiple disciplines and levels of staff, to modify the current knowledge of staff creates an opportunity to develop new and promising practices (Wenger, McDermott, & Synder, 2002). The group of stakeholders needs to include individuals who are ready for change and can help inspire and motivate others. The involvement of the broadest array of staff can help to create "buy-in" where these future implementers understand the advantages of the EBP and the rele-

vance of valid and reliable evidence related to practice (Barwick et al., 2005). This "buy-in" can alleviate potential staff resistance and create a trusting environment where critical analysis can thrive.

Teamwork: Helping practitioners develop the capacity to evaluate evidence and modify practice requires teamwork (Lawler & Bilson, 2004, Barratt, 2003). Teamwork provides an important opportunity to reflect, question, and discuss practice in general. The process of change for practitioners might involve questioning their basic assumptions about practice, which can cause considerable discomfort. Implementing EBP can involve challenging long-held assumptions and altering patterns of behavior. The ability to reflect and change as members of a team can provide staff members with support and can ease their fears. The use of teams needs to be well-planned and managed. While teams can be a catalyst for change when given appropriate leadership and direction; if poorly led, they can lead to substantial resistant to change (Barratt, 2003).

Organizational Resources: In the Barwick et al. (2005) survey of mental health staff, there appeared to be adequate levels facilities, training, and equipment. Clinical staff and executive directors had a favorable view of the adequacy of office space, staff turnover was not a problem, and there was an appropriate amount of staff training. Access to computers and the internet, a commonly cited barrier of EBP, was not a problem as 95% of the clinical and executive staff have a computer in their personal workspace. In contrast, Sheldon and Chilvers (2002) found that over one third of clinical staff reported having no access to library facilitates, journals, or appropriate research material.

In addition to physical resources, it is also important to assess human resources. The attitudes and desires of staff to change has been linked to four key areas: (1) professional growth, (2) confidence in own skills, (3) willingness to persuade coworkers, and (4) ability to adapt to a changing environment. Several surveys noted that practitioners perceive few opportunities for personal and professional growth in their organizations (Mullen & Bacon, 2000; Barwick et al., 2005; Sheldon & Chilvers, 2002). Barwick et al. (2005) found that 42% of clinical staff report that they do not regularly (monthly) read about new techniques or treatments on a monthly basis. Similar results were found by Mullen and Bacon (2000) who noted that social workers do not use research methods or findings to inform their practice. Contrary to perceiving few opportunities for professional growth, Barwick et al. (2005) found that more than two-thirds of the clinical staff and executive directors in their study had a high level of confidence in their own clinical skills which, in turn,

facilitated the implementation of EBP. Barwick et al. (2005) also found that both clinicians and management perceived themselves as willing to try new ideas or to adapt quickly to changing situations (only 20% admitted to feeling too cautious or slow to make changes).

Readiness to Become a Learning Organization: Prior to introducing a new idea or change into an existing organization, it is important to assess the readiness for change, from an organizational, individual, and system level. While there are several instruments for assessing organizational readiness for change, Lehman, Greener, and Bilson (2002) Organizational Readiness for Change (ORC) instrument was found to be particularly helpful in assessing individual and organizational readiness (Barwick et al., 2005). The instrument focuses on motivation and personality attributes of program leaders and staff, institutional resources, staff attributes, and organizational climate. The three factors identified by the instrument are: (1) what is important for change to occur, (2) what is necessary but not always sufficient for change to occur, and (3) what change is appropriate in the current situation. The motivational dimensions are divided into individual and organization factors and include the following three areas: (1) program need for improvement (assessing program's current strengths and weaknesses); (2) training needs assessment; and (3) pressure for change from the internal or external environments. The institutional resources section is divided into five areas: (1) office, (2) staffing, (3) training resources, (4) computer access, and (5) electronic communication. The third section focuses on staff attributes and includes: (1) growth, (2) efficacy (3) influence, and (4) adaptability. The last section is the largest and evaluates organizational climate as indicated by: (1) clarity of mission and goals, (2) staff cohesion, (3) staff autonomy, (4) openness of communication, (5) stress, and (6) openness to change. The ORC was originally developed for drug abuse treatment agencies; in 2003, it was redesigned for use in social service agencies.

A second useful framework for understanding an organization and individual readiness for implementation of EBP is the use of the "four A's"–acquire, assess, apply, and adapt (CHSRF, 2001). By using the "four A's" concept, an organization is able to explore the capacity of staff to implement and adopt research information and identify barriers prior to implementation. The four A's explores the ability of an individual and organization to find research they need, assess whether the research is reliable, adapt the information to suit its needs, and implement the research within their context. Utilizing the "four A's", Barwick et al. (2005) designed a staff survey to identify organizational processes that

needed strengthening prior to the implementation of EBP as well as to develop a baseline of information on which to evaluate future progress.

In assessing staff readiness to implement EBP, the most important area was staff's capacity to understand research methods. The capacity of staff to seek out, understand, and utilize research findings is limited (Mullen & Bacon, 2000; Barwick et al., 2005; Tozer & Bournemouth, 1999). Social workers rely on a combination of their own experience and the experiences of consultants and supervisors for their practice-based decision-making rather than use research findings or research methods in their practice (Mullen & Bacon, 2002). In addition, a substantial gap exists between self-perceived knowledge of research and their ability to use it (Sheldon & Chilvers, 2002). For example, while a large percentage of clinical staff responded positively to reading published research, very few could actually identify or describe a study and reflected only a minimal understanding of basic research methods. These findings related to a reliance on experience and limited understanding of research methods suggest that an overview of research methods need to be incorporated in plans for introducing EBP.

Promoting a Learning Organization: The ability of an organization to successfully implement EBP requires an organizational culture that values and encourages learning. Such cultures promote the freedom of staff to work autonomously and make changes, share information openly, are flexible and adaptable, encourage and reward risk-taking and creativity, and accept mistakes (Jaskyte & Dressler, 2005). Efforts to create a learning organization require staff to be engaged in the learning process (Stevens and Gist, 1997), given opportunity to apply new knowledge or ideas, be motivated to increase their own knowledge (Noe & Schmitt, 1986), and work in an environment that supports feedback, coaching, and recognition (Huczybski & Lewis, 1980; Mathieu, Tannenbaum & Salas, 1996). The development of an organizational learning culture involves a "cultural overhaul" including making employee growth and development a priority, adopting a "development" philosophy, helping staff overcome fear through supportive relationships, adding rewards or incentives to application of learning, and establishing open lines of communication for staff to share thoughts and ideas (Danielson & Wiggenhorn, 2003).

DIFFERENT APPROACHES TO IMPLEMENTING EVIDENCE-BASED PRACTICE

Three approaches appear in the literature that utilize different strategies to address the challenges of implementing EBP. Each approach fo-

cuses on a different aspect of the change process: individual, systems, and context (Hodson, 2003). The micro approach focuses extensively on individual learning, the systems approach works from macro, "top-down" perspective, and the combination approach is a blend of the micro and macro approaches.

The micro approach to implementation of EBP involves the teaching of practice skills needed to appropriately utilize evidence (Hodson, 2003; Mullen, Bellamy, Bledsoe, 2004). This approach seeks to enhance motivation to engage in lifelong learning by providing the necessary learning and application skills. Practitioners are introduced to the process of problem formulation, evidence search tools, evidence appraisal skills, information integration skills, and the implementation process (Gibbs & Gambrill, 2002). This approach is generally found in pre-service university education programs. However, this approach has also been utilized successfully as part of agency in-service training (Newhouse, Dearhold, Poe, Pugh, & White, 2005; Thurston & King, 2004). The micro approach views the implementation of EBP as a long-term organizational process designed to slowly alter the attitudes, practices, and behaviors of individual practitioners (Hodson, 2003).

In contrast, the macro approach seeks to achieve planned change through the "top down" redesign of key organizational systems (Hodson, 2003). Top-level decision-makers identify evidence-based, empirically supported practices and develop tools for practitioners to use in adopting the new practices. Dissemination and utilization strategies (including guidelines, toolkits, intervention-specific training, and consultants) are employed to change practice through the adoption of a predetermined, specific intervention (Gira, Kessler, & Poertner, 2004). While this approach is frequently used in agencies, there is little empirical evidence related to assessing the outcomes of the macro approach. The largest example of this approach is the National Implementing Evidence-Based Practice Project (Torrey, Lynde, & Gorman, 2005) that promotes the adoption of six evidence-based practices for assisting mentally ill adults by using implementation guides designed at the national level but implemented at the local level.

The combination approach utilizes components of the micro and macro approaches in order to create structures and systems that support the sustainability of evidence-based practice. This approach involves the redesign of existing routines and practices in an effort to establish new cultures and behaviors (Hodson, 2003). Instead of viewing the introduction of EBP as a one-time activity, the combination approach combines the increase in the research knowledge, skills, and attitude of

staff with the organizational processes and procedures required to incorporate evidence-based approaches into the daily routine. This approach is relatively new and faces significant challenges. Several projects have been started but the outcomes of the efforts have yet to be reported, with the exception of a three-year longitudinal project in a mental health organization (Dickenson, Duffy, & Champion, 2004).

Findings Related to the Micro Approach

Two hospitals employed similar strategies for providing clinical nurses with the structure and tools necessary to acquire EBP knowledge, skills, and to incorporate EBP into their working environments. Both interventions focused on teaching professional staff to become critical thinkers, increase their skill levels, and become comfortable with evidence-based practices (Newhouse et al., 2005; Thurston & King, 2004).

The first hospital utilized the Johns Hopkins Nursing EBP Model (Figure 1) and Guidelines (Figure 2) focusing on a mentored educational experience. The framework in Figure 1 includes internal and external environments within a triangle of practice, education, and research which seeks to combine the expertise of the practitioner and patient, available research, expert opinions, and other accessible evidence. The guidelines provide a step-by-step approach to move from practice questions, to evidence, and finally to the translation to the practice setting. The pilot study was implemented on a large scale throughout the hospital using five education sessions (one-to two hours) over a period of eight weeks. Those identified as leaders, change agents, and potential champions of EBP were trained first with subsequent trainings for the remaining staff. The nurses were given paid time away from day-to-day responsibilities to participate in the education sessions. Mentors provided the nurses with support during the educational sessions to assist with the following areas: (1) problem identification, (2) literature searches, (3) rating of evidence, and (4) creation of recommendations for practice. The nursing units, with support from the mentors, identified questions using an evidence-based approach. For example, two question identified were: (1) "For patients experiencing pain who have a history of substance abuse, what are the best nursing interventions to manage the pain?" and (2) "Should a hyperthermia blanket be used for patients experiencing fever?" Similar examples could be generated in the social services (e.g., "what does research tell us about the most effective ways to recruit foster parents?").

FIGURE 1. The Johns Hopkins Nursing Evidence-Based Practice Model

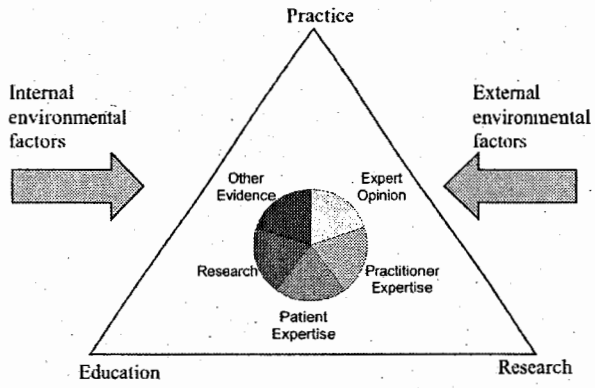
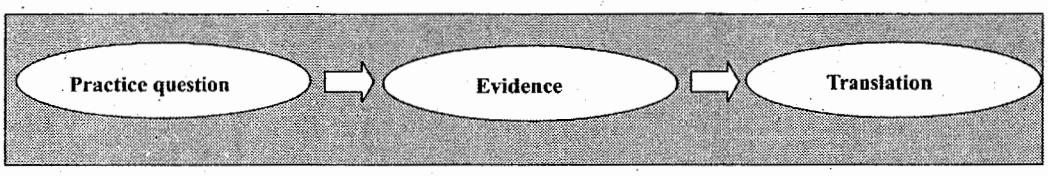


FIGURE 2. Guidelines for Implementation of Evidence-Based Practice Model



Practice question

Step 1: Identify EBP question
Step 2: Define Scope of practice question
Step 3: Assign responsibility for leadership
Step 4: Recruit multidisciplinary team
Step 5: Schedule team conference

Evidence

Step 6: Conduct internal and external search for evidence
Step 7: Critique all types of evidence
Step 8: Summarize evidence
Step 9: Rate strength of evidence
Step 10: Develop recommendations for change in processes of care or systems on the basis of strength of evidence

Translation

Step 11: Determine appropriateness and feasibility of translating recommendations into specific practice setting
Step 12: Create action plan
Step 13: Implement change
Step 14: Evaluate outcomes
Step 15: Report results of preliminary evaluation to decision makers
Step 16: Secure support from decision makers to implement recommended change internally
Step 17: Identify next steps
Step 18: Communicate findings

The second pilot study used a modified version of the Rosswurm and Larrabee Model (Figure 3) to implement EBP. This pilot also utilized a mentorship program and was designed to enable nurses in the hospital to understand and implement an evidence-based approach to practice (Thurston & King, 2004). Ten nursing teams devoted six hours a month for one year to identify a problem and work through the six-step EBP model. Participants were provided in-depth education (question formulation, research process, research design) and hands-on experience during half-day meetings held every six to eight weeks over one year.

Both pilot studies employed quantitative and qualitative surveys; unfortunately, each had a low response rate but yielded several positive results related to clinician and manager satisfaction. The Johns Hopkins Model demonstrated high staff satisfaction with: (1) clarity of the process (91%), (2) usefulness to practice (92%), (3) adequacy of training (90%), (4) feasibility for practicing nurses (87%), and (5) overall satisfaction with the EBP process (95%). Managers in both studies indicated that staff demonstrated enthusiasm for the process, renewed sense of professionalism and accomplishment, confidence with the EBP, improved staff morale, increased interest in nursing, and an increased willingness to question clinical practices. The following barriers to introducing EBP emerged and were successfully addressed: (1) staff "buy-in," (2) low levels of research knowledge and skill, (3) insufficient evidence available in the literature, (4) time constraints, and (5) lack of hospital-university partnerships.

Meaning to Staff: In both studies, staff raised concerns arose regarding the potential discrepancy between the needs of the clinical nurses and the priorities of the EBP process. The development of relevant and meaningful questions was facilitated by the inclusion of nursing staff in the initial formulation of relevant questions which drew heavily on their insight, clinical expertise, and needs. By involving staff in the initial development, the program gained significant "buy-in" and contributed to enthusiasm for the EBP.

Research Knowledge and Skills: Both studies did not require prior research experience in order to participate in the process, thereby attracting nurses with a wide range of research knowledge and skills. However, the lack of experience with research created tensions among staff. For example, in the Johns Hopkins model, nurses reflected feelings of inadequacy when attempting to analyze the research studies that they uncovered in the search process. To address this issue, educational sessions were designed to introduce participants to basic research methods in order to increase the comfort level of many of the nurses. The

FIGURE 3. Models for Implementing Evidence-Based Practice

Rosswurm & Larrabee Model (1999)		Thurston & King (2004) Modification	
Step One	Assess need for change by collecting and comparing data, identifying practice problem	**Step One**	Publicize program—stimulate discussion/identification of practice problems
Step Two	Link problem to intervention and outcome using standardized classification systems and language	**Step Two**	Ongoing discussion re: problem and decision to submit question to EBP Program
Step Three	Synthesize best evidence by searching research literature, critiquing, rating, and synthesizing best evidence, assessing feasibility	**Step Three**	Identify, critiquing and judging the evidence by accessing and critiquing the research, seeking clinical expertise and stake holder input, benchmarking, summarizing—decision re: change/no change
Step Four	Design practice changes by defining protocol change, planning a pilot/demonstration including implementation, education, resources needed	**Step Four**	Design and implement the change through colleague involvement and education, procedure/policy changes, ensuring stakeholder support, planning evaluation
Step Five	Implement and evaluate the practice change including evaluation of pilot and decision to adapt/adopt/reject change	**Step Five**	Monitoring and evaluating the change through quality monitoring system and patient data; continued staff education and wider communication
Step Six	Integrate and maintain change by communicating to stakeholders, in-		

mentor component in both programs proved extremely beneficial to reducing initial feelings of inadequacy. The mentors were available and accessible throughout the process, responding to questions or concerns in a timely manner. This consistent feedback and support prevented the nurses from becoming frustrated or discouraged.

Insufficient Evidence: Thurston and King (2004) reported that the lack of published evidence related to their search questions limited the opportunities for participants to fully critique and rate the evidence using the EBP protocols. This limitation was also experienced by participants and one site used this discovery to emphasize that change does not need to occur if research is too limited to support a change.

Time Constraints: As noted in the literature, time constraints on line staff create the most obvious barrier to the implementation of EBP. However, in both of these pilot studies, staff were given paid leave from their day-to-day responsibilities in order to participate. The participants clearly valued the time and felt it indicated strong administrative support. These two factors of time and administrative support were critical to the success of the program.

Hospital-University Partnerships: In both studies, the hospitals worked in partnership with a local university which provided significant technical support in the form of mentors, publications, and scholarly expertise while the hospitals provided clinical expertise and experience.

Findings Related to the Macro Approach

The macro approach is best illustrated by the National Implementing Evidence-Based Project (EBP Project) which is a nation-wide project to assist staff who work with severe mentally ill adults and have limited access to evidence on effective services (Torrey et al., 2005). A group of stakeholders identified six practices that are currently supported by rigorous research; namely collaborative pharmacologic treatment, assertive community treatment, family psycho-education, supported employment counseling, illness management and recovery skills training, and integrated dual disorders treatment for substance abuse and mental illness. The main goal of the EBP project was to create resources to facilitate the implementation of these six practices. The project was divided into three phases: (1) development of implementation packages, (2) pilot test the implementation packages and modify as necessary, and (3) the implementation process. The packages contained teaching material, re-

source kits, videos, demonstration skills, workbooks, and implementation tips.

Phase one consisted of designing and creating the implementation strategy and package by a team of stakeholders. This strategy used a planned change approach to develop an intensive program that was sensitive to site-specific conditions. For example, different parts of the implementation packages were designed to address motivation for change, enabling change, and reinforcing change. All sites were asked to identify one person who understood the specific culture and situation of the site in order to translate the implementation package into the local circumstances. Once these implementation strategies were developed, the implementation packages were created with input from researchers, clinicians, program managers, consumers, and family members.

Phase two involved the identification of eight states to participate in the pilot test. Each state agreed to develop a selection process to obtain three to five agencies per practice area. Each agency was given the implementation package as well as on-site training programs and yearlong consultation by a trainer. While research reports account for the early stages of phase two, there are no published results on the progress of implementation. However, four major observations were reported by trainers and consultants: (1) *research is not a priority in the agency.* The organizational culture of many of the implementing agencies is not naturally oriented towards the use of research evidence. Such evidence is not highly valued in many agency cultures. Therefore, changing practices based on such research is difficult, (2) *EBP needs to address immediate and previously identified needs.* For example, those agencies that already identified employment as a service delivery need were eager to embrace the Supported Employment intervention. However, those packages that addressed un-recognized needs were difficult to promote and proved difficult to implement. For example, Integrated Dual Disorders Treatment package was difficult to promote in sites that did not perceive substance abuse to be an obstacle for their clients, (3) m*ixing unanticipated changes with the complexity of EBP* requires more time than anticipated. The implementation of a new practice involves unanticipated changes and shifts in the philosophy of care, finance, daily operations, or personnel issues. The trainers in the EBP project found that implementing the new practice required time spent educating staff about the EBP philosophy before promoting procedural changes, and (4) *the importance of leadership* provided by the trainers or consultants. Having a confident and competent site trainer/consultant is critical to successful implementation.

Combination Approach

Dickinson et al. (2004) reported on a three-year project that introduced EBP into a mental health organization using a combination of micro and macro approaches. The project goal was to change the culture of the organization in order to effectively facilitate the introduction of EBP and maintain it on an ongoing basis.

The project began with the formation of a steering group comprised of clinicians representing a variety of disciplines working in various settings (including day hospitals, community rehabilitation, residential centers, and continuing care facilities). Nine teams consisting of 180 staff were created. The steering group administered a survey to identify staff needs and found three major areas of need: (1) education (knowledge, skills, and technical advice to conduct research), (2) resources (access to evidence or other resources), and (3) organizational supports (the need to work as "teams").

The steering group first addressed education by conducting formal training sessions, including two workshops led by external facilitators. Additional informal training and support was provided on each stage of the EBP process (e.g., critical analysis of evidence, target setting, implementation of change based on evidence, monitoring, feedback, and developing recommendations). Financial resources were secured to allow the introduction of internet facilities, journal subscriptions, and paid time to participate in the process. Throughout the process, the steering group conducted regular team-building activities to address team dynamics and support.

The limited evaluation of EBP in mental health setting is based primarily on the observations of the steering group members and on a low response to a staff survey (25%). After one year of implementing EBP processes, five of the nine teams had completed the EBP cycle and implemented new changes based on critically assessed evidence in the areas of discharge process and the use of standardized assessment protocols. The remaining four teams (out of nine) encountered delays in the first year and were unable to complete a full EBP cycle. Additional support was given to these four teams during the second and third years but the teams had still failed to complete the EBP cycle. In all four of these teams, problem identification and target setting had taken place but change and implementation had not occurred. It is unclear if the five successful teams continued to implement EBP beyond their initial success.

The delays in the process by the four teams were attributed to: (1) staff transfers, (2) leadership ambivalence, (3) lack of team cohesion, and (4) insufficient time. In comparing the two groups of teams, the group that successfully implemented changes served more stable clients, possibly allowing them more time within the workday to focus on the EBP process. The limited findings from the staff survey included the following impediments to the EBP process: (1) personal factors (poor motivation, lack of confidence, and lack of knowledge) and (2) organizational factors (limited access to resources, poor teamwork, insufficient time, staff transfers, and disruptive staffing schedules).

CONCLUSIONS AND RECOMMENDATIONS

In comparing all three approaches, it would appear the micro approach had the most successful outcomes, while the macro and combination ran into more obstacles. However, it is important be cautious about drawing conclusions based on these three demonstration projects. The micro approaches relied heavily on informal surveys of practitioners to assess their experiences. While the satisfaction of practitioners with the implementation model and improved knowledge and skill are important, there is no evidence yet that EBP has improved practice related to client outcomes or been sustained within the agency. The incomplete findings from the macro approach make it difficult to draw any concrete conclusions. While lessons can be drawn from all three approaches, there is no conclusive evidence that one approach is more effective than another.

Incorporating EBP into the daily practices of an organization is complex. It requires involvement of all staff levels, adequate resources, strong planning, and the development of an evidence-based culture. Drawing on lessons learned from the literature as well as the implementation pilot studies, there are several important elements to consider as a social service agency seeks to implement EBP. In order to assess the organizational readiness of a social service agency for implementing EBP, a specially designed assessment tool is featured in Figure 4. The major components of the tool include a four-point scale to assess organizational capacity, organizational culture, staff capacity, and the implementation plan. These four components are defined through the use of the following questions:

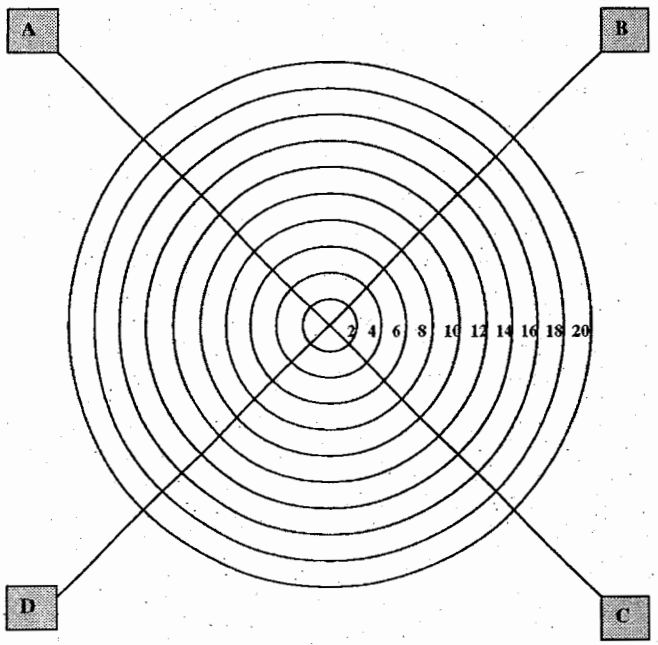
Organizational Capacity: Does the organization have the financial and human resources needed to implement EBP? Does the organization

FIGURE 4. Assessing Organizational Readiness for Implementation of Evidence-Based Practice

		Not even close	Some way to go	Nearly There	We're there
A. Organizational Capacity		**1**	**2**	**3**	**4**
1.	There is leadership support from top management in the form of a designated change manager or champion				
2.	The mission reflects a commitment to being a learning organization and is linked to EBP				
3.	Human resources are adequate and available to introduce and sustain EBP				
4.	Financial resources are adequate and available to introduce and sustain EBP				
5.	Change at this time is appropriate and feasible in the life of the organization				
		Section Total:			
B. Organizational Culture/Climate					
1.	Staff understand the mission and goals of the organization as it relates to EBP				
2.	There is cohesiveness and trust among all staff				
3.	Staff are given high levels of autonomy in their work and encouraged to question				
4.	There are open lines of communication in place				
5.	Risk-takers are rewarded				
		Section Total:			
C. Staff Capacity					
1.	Professional growth and development is desired by staff				
2.	Staff have confidence needed to acquire new skills				
3.	One or more staff currently show interest or skills in EBP				
4.	Staff are not overstressed with other responsibilities or tasks				
5.	Staff are comfortable with research methods				
		Section Total:			
D. Implementation Plan					
1.	There is a mechanism to involve all staff (at all levels and across all program) in the phases of implementation				
2.	There is a cohesive team of implementers (oriented, trained, and supported)				
3.	There is capacity to implement an EBP training program				
4.	Resources are available to pilot an implementation process				
5.	There is capacity to "stay the course" for 3-5 years in order to evaluate the impact				
		Section Total:			

Directions for mapping the four scores:

Sum the total score for each section. Plot the results on the corresponding line (e.g. if the total for component A is 16, place a dot on the circle marked 16 on the axis labeled "A" and then do the same for the other three components) and then connect the dots. This gives a visual display of the organizational strengths (highest scoring component) and areas for continued development (lowest scoring component) prior to embarking on a process to implement EBP.



Adapted from (2006) Firm Foundations: A practical guide to organizational support for the use of research. Research in Practice. www.rip.org.uk

have resources to support staff devoting a significant amount of time to acquiring, assessing, and applying the research to practice? Does the organization have the financial means to support the required trainings or other inputs needed?

EBP Culture: Can the culture of the organization support EBP? For example: (1) how clear is the agency's mission and goals among staff, (2) what is the nature of staff cohesiveness and autonomy?, (3) how open are the lines of communication, (4) how open is staff to change, (5) what are the levels of job stress, (6) how are risk-takers rewarded, and (7) how are continuous quality improvement feedback systems utilized?

Staff Capacity: What is the capacity of staff to acquire, assess, apply, and adapt research into practice? Where is capacity already sufficient? Where are staff members currently implementing these steps? Where

do staff need additional training? With these strengths and limitations, how are ways identified to strengthen the gaps and build upon the strengths?

The response to the questions in Figure 4 can be plotted to create a visual description of strengths and areas for improvement. The tool is designed for multiple stakeholders to complete in order to foster dialogue about the results.

In summary, the development, implementation, and sustainability of EBP within an organization require participation and engagement of all stakeholders at all levels of the organization. In order to begin the process of implementing EBP, it is important to bring together multiple disciplines and levels of staff, especially line staff in order to draw upon their expertise and perspectives on workload and client issues. Implementation of EBP cannot be accomplished alone; line staff need manager support and managers need line staff. The implementation of EBP is a change that may involve shifts in organizational practices, structures, and resource allocation. These changes may appear radical and unfamiliar to some staff members who may be skeptical and need space to address their questions. Leaders of the EBP implementation process need to be prepared to give tangible meaning to the purpose of the shifts. Time spent on orientation and training can provide staff with a more complete understanding and appreciation of EBP and thereby alleviate fears and feelings of inadequacy. The steps for implementing EBP identified in this analysis suggest that implementation is not a linear process with well-tested action steps. Rather, it is complex and requires considerable discussion, planning, field-testing, and oversight by everyone involved.

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