



The Dissemination and Utilization of Research for Promoting Evidence-Based Practice

Kathy Lemon Osterling PhD & Michael J. Austin PhD

To cite this article: Kathy Lemon Osterling PhD & Michael J. Austin PhD (2008) The Dissemination and Utilization of Research for Promoting Evidence-Based Practice, Journal of Evidence-Based Social Work, 5:1-2, 295-319, DOI: [10.1300/J394v05n01_11](https://doi.org/10.1300/J394v05n01_11)

To link to this article: http://dx.doi.org/10.1300/J394v05n01_11



Published online: 05 Nov 2008.



[Submit your article to this journal](#)



Article views: 153



[View related articles](#)



Citing articles: 12 [View citing articles](#)

The Dissemination and Utilization of Research for Promoting Evidence-Based Practice

Kathy Lemon Osterling, PhD
Michael J. Austin, PhD

SUMMARY. Social service practitioners and researchers have long been aware of the gap between research and practice. The evidence-based practice movement has brought increasing attention to the role of empirically based interventions within social service practice, however, effective methods of research dissemination and utilization have received relatively little attention. This article describes factors related to dissemination and utilization of research within human service agency settings, including those factors related to: (1) individual practitioners, (2) the organization, (3) the nature of research, and (4) how research is communicated. The implications of these factors for dissemination and utilization of research are also identified. Ultimately, effective dissemination and utilization of research will involve considerable collaboration between researchers and practitioners. If they are to reach the shared goal of improved interventions and client outcomes, effective collaboration will require both practi-

Kathy Lemon Osterling is Assistant Professor, School of Social Work, San Jose State University, San Jose, CA. Michael J. Austin is Professor, School of Social Welfare, University of California, Berkeley, CA.

The authors would like to acknowledge Jennette Claassen MSW Graduate Student Researcher for her assistance in searching and retrieving literature for this article.

[Haworth co-indexing entry note]: "The Dissemination and Utilization of Research for Promoting Evidence-Based Practice" Osterling, Kathy Lemon, and Michael J. Austin. Co-published simultaneously in the *Journal of Evidence-Based Social Work* (The Haworth Press) Vol. 5, No. 1/2, 2008, pp. 295-319; and: *Evidence for Child Welfare Practice* (ed: Michael J. Austin) The Haworth Press, 2008, pp. 295-319. Single or multiple copies of this article are available for a fee from The Haworth Document Delivery Service [1-800-HAWORTH, 9:00 a.m. - 5:00 p.m. (EST). E-mail address: docdelivery@haworthpress.com].

Available online at <http://jebsw.haworthpress.com>
© 2008 by The Haworth Press. All rights reserved.
doi:10.1300/J394v05n01_11

tioners and researchers to make changes to their practice and to their research. doi:10.1300/J394v05n01_11 [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>> © 2008 by The Haworth Press. All rights reserved.]

KEYWORDS. Evidence-based practice, research dissemination, research utilization, research-practice collaboration, individual factors, organizational factors

INTRODUCTION

Social service practitioners and researchers have long been aware of the gap between research and practice. Some scholars suggest that researchers and practitioners live in two separate worlds that rarely meet (Eisele & Gamm, 1981). Indeed, studies suggest that practitioners generally do not utilize research in their work with clients (Rosen, 1994). Conversely, researchers have traditionally done little to disseminate research findings or work with practitioners to implement evidence-based interventions (Huberman, 1990). Over the past few years, the evidence-based practice (EBP) movement has brought increasing attention to the role of empirically-based interventions within social service practice. The move toward EBP is shaping much of the current social work discourse, however despite increasing attention to EBP, relatively little attention has been given to effective dissemination and utilization methods. As social problems become more entrenched, it is critical for social service practitioners to become more strategic and systematic in their efforts to serve vulnerable populations. Effective dissemination and utilization of research has the potential to improve social service practice as well as outcomes for clients. In fact, the call for the integration of research into social work practice is featured in the Code of Ethics of the National Association of Social Workers (1999):

Social workers should critically examine and keep current with emerging knowledge relevant to social work. Social workers should routinely review the professional literature and participate in continuing education relevant to social work practice and social work ethics . . . (4.01b). Social workers should base practice on recognized knowledge, including empirically based knowledge . . . (4.01c).

While there is general agreement that using research to guide decision-making in social service practice is both beneficial and ethical, it is less clear how to disseminate and utilize research. The process of effective dissemination and utilization of research findings is multifaceted and goes far beyond simply publishing or reading journal articles (Gira, Kessler, & Poertner, 2004). Dissemination and utilization is considered to be a complex process involving the influence of numerous factors (Rogers, 2003). The purpose of this analysis is to provide a framework for understanding the factors related to effective dissemination and utilization of research within human service agency settings in order to identify future directions in the form of dissemination and utilization strategies. Ultimately, effective dissemination and utilization of research will involve considerable collaboration between researchers and practitioners (Huberman, 1990). In an effort to bridge the gap between the two worlds of research and practice, such collaboration will require practitioners to make adjustments to their practice and researchers to make adjustments and to their research.

The methodology used to identify literature for this review and analysis is consistent with systematic review procedures. Studies were selected based on pre-determined search terms, databases to be searched and an inclusion and exclusion criteria. Twelve academic databases were searched including those related to psychology, sociology, social work, and social services. Research institute Websites were also searched and a snowball method was also used in which additional materials were identified from primary reference lists of other studies.

FACTORS RELATED TO DISSEMINATION AND UTILIZATION OF RESEARCH

This analysis of the dissemination and utilization of research begins with the definitions of these two processes. Dissemination includes a range of activities designed to transfer knowledge to a target audience; for example, the distribution of written materials, in-service training events, or feedback to practitioners on the use of best practices (Gira et al., 2004; Lavis, Robertson, Woodside, McLeod, & Abelson, 2003). The concept of utilization is generally defined as putting the research to use in practice. Reid and Fortune (1992) define five types of utilization: (1) instrumental utilization occurs when research is used to make decisions or alter practices; (2) conceptual utilization takes place when research is used to enhance insight about an issue, without actually

influencing practice or decisions; (3) persuasive utilization involves the use of research to support a particular position; (4) methodological utilization includes the use of specific research or assessment tools; and (5) indirect utilization includes the use of theories, practice models or procedures that are the result of research but do not involve actual familiarity with the research itself. Instrumental utilization related to decision-making appears most frequently in discussions of dissemination and utilization.

While dissemination is a distinctly different activity from utilization, even highly effective dissemination techniques do not ensure that research will be utilized (Rodgers, 1994). For both dissemination and utilization to take place, multiple factors need to be addressed (Backer, 2000; Dal Santo, Goldberg, Choice & Austin, 2002; Rodgers, 1994). One of the most useful frameworks for understanding the multiple factors related to dissemination and utilization was developed by Rogers (2003) and includes the following factors: (1) characteristics of the individual (i.e., the practitioner), (2) characteristics of the organization, (3) characteristics of the innovation itself (i.e., the research), and (4) the nature of the communication (i.e., how the research is communicated). These factors, individually and collectively, can either act as barriers or facilitators to effective dissemination and utilization. They are summarized in Figure 1 and described in more detail in the next several sections.

INDIVIDUAL FACTORS

While there is limited research on practitioner characteristics that facilitate dissemination and utilization within the field of social services, several studies have addressed the role of individual characteristics within the health professions, most notably in nursing where the "Barriers Scale" has been utilized (Funk, Champagne, Wiese, & Tornquist, 1991). Based on Roger's diffusion of innovation theory, this scale includes items related to the individual, the organization, the research and the communication. Studies of nurses have found certain characteristics of practitioners that operate as barriers to research utilization; namely, (1) being unaware of research (Carroll, Greenwood, Lynch, Sullivan, Ready, & Fitzmaurice, 1997), (2) being isolated from knowledgeable colleagues with whom to discuss research (Carroll et al., 1997; Kajermo, Norstrom, Krusebrant & Bjorvell, 1998), and (3) not feeling capable of evaluating the quality of research (Carroll et al., 1997;

FIGURE 1. Factors Related to Dissemination and Utilization

I. Individual Factors*Barriers*

- Isolation from knowledgeable colleagues with whom to discuss research (Carroll et al., 1997; Kajermo et al. 1998)
- Not being able to evaluate the quality of research (Carroll et al., 1997; Parahoo, 2000)
- Not being aware of research (Carroll et al. 1997)

Facilitators

- Background in research methods (Kajermo et al. 1998)
- Positive attitude toward research (Grasso et al., 1989; Estabrooks et al. 2003; Estabrooks, 1999)
- Positive attitude toward a particular EBP (McFarlane, 2001)
- Higher educational level (Michel & Sneed, 1995)
- “Belief suspension:” Willingness to use research when it contradicts prior knowledge (Estabrooks, 1999)
- Number of in-service trainings attended (Estabrooks, 1999)
- A critical thinking disposition (Profetto-McGrath, 2003)

II. Organizational Factors*Barriers*

- Not enough time on the job to read research or implement new ideas (Carroll et al., 1997; Humphris, et al. 2000, Kajermo et al. 1998; McCleary & Brown, 2003; Parahoo, 2000; Rodgers, 1994)
- Staff and management not supportive of implementation of research (Carroll et al. 1997; McCleary & Brown, 2003; Parahoo, 2000)
- Not enough authority to change practices (Carroll et al., 1997; Kajermo et al. 1998; McCleary & Brown, 2003; Parahoo, 2000)

Facilitators

- In-service trainings on research methods and skills in searching for appropriate literature (Carroll et al., 1997; Humphris et al. 2000; Kajermo et al. 1998; Parahoo, 2000)
- In-service trainings on how to promote EBP or use research in practice settings (Barratt, 2003; Humphris et al. 2000)
- Providing scheduled time for reading research and discussing it with colleagues (Barratt, 2003; Carroll et al., 1997; Humphris et al. 2000; Kajermo et al. 1998; Parahoo, 2000)
- Strong leadership that prioritizes the use of research; improving administrative and organizational support for research utilization (Barratt, 2003; Carroll et al., 1997; Parahoo, 2000)
- Acceptance of the need to change practices (McFarlane, et al., 2001)
- Addressing resource and operational barriers directly (McFarlane et al. 2001; Parahoo, 2000)

III. Research Factors

FIGURE 1 (continued)

Barriers

- Research does not appear generalizable to local practice context (Carrion et al. 2004; Dal Santo, 2002; Hoagwood et al. 2001; Kajermo et al. 1998; Parahoo, 2000)
- Confusion about what constitutes evidence (Barratt, 2003)
- Confusion about conflicting results in the literature (McCleary & Brown, 2003)
- Time lag between research and practice (Beyer & Trice, 1982)

Facilitators

- Relevant research that incorporates the realities of the local practice setting (Carroll et al. 1997; Kajermo et al. 1998)

IV. Communication Factors*Barriers*

- Lack of availability or access to research reports or articles (Bryar et al., 2003; Carrion et al., 2004; Carroll et al., 1997; Kajermo et al. 1998; McCleary & Brown, 2003; Parahoo, 2000; Rodgers, 1994)
- Implications of research for practice are not made clear (Dal Santo et al. 2002; Kajermo et al. 1998; McCleary & Brown, 2003; Parahoo, 2000; Rodgers, 1994)
- Relevant literature is not compiled in one place (Bray et al., 2003; Kajermo et al. 1998; McCleary & Brown, 2003)
- Statistical analyses are not understandable (Bryar et al., 2003; Carrion et al., 2004; Carroll et al., 1997; Kajermo et al. 1998; McCleary & Brown, 2003; Parahoo, 2000)
- Research is not presented in an easily understandable fashion (Barrett, 2003; McCleary & Brown, 2003; Rodgers, 1994)
- Differing priorities and backgrounds of researchers and practitioners (Rosen, 1983; Shrivastava & Mitroff, 1984)
- Power dynamics between researchers and practitioners (Maurrasse, 2001)

Facilitators

- Presenting results in a user-friendly and understandable way (Barratt, 2003; Carroll et al., 1997; Grasso et al., 1989; Kajermo et al. 1998; Parahoo, 2000)
- Access to databases or libraries in order to access research (Barratt, 2003; Carroll et al., 1997)
- Researcher-practitioner collaborations that incorporate shared missions and goals (Carise et al. 2002)
- Researcher-practitioner collaboration that is characterized by strong links between researchers and practitioners, regular discussions of progress reports (Beyer & Trice, 1982; Huberman, 1990)
- Involvement of senior managers in the planning and implementation of research projects (Dal Santo et al. 2002)

Parahoo, 2000). Carrion, Woods and Norman (2004) surveyed forensic mental health nurses in the United Kingdom and found that 57 percent of nurses were unaware of the research, 57 percent felt isolated from knowledgeable colleagues with whom to discuss research, and 57 percent reported not feeling capable of evaluating the research. Similar findings were reported by Bryar, Closs, Baum, Cooke, Griffiths,

Hostick et al. (2003) in their survey of nurses, midwives, and health visitors in the United Kingdom. Depending on the locality, between 45-64 percent of nurses were unaware of the research; between 44-59 percent felt incapable of evaluating the research; and between 37-60 percent reported feeling isolated from knowledgeable colleagues with whom to discuss research.

Certain individual-level characteristics have also been linked to the facilitation of research utilization. Kajermo et al. (1998) found that nurses who had an educational background in research methods perceive fewer barriers to utilization of research than those without this educational background. Michel and Sneed (1995) also found that nurses with a master's degree reported greater research utilization than those with a bachelor's degree. Other research suggests that the attitudes of practitioners can affect dissemination and utilization. McFarlane, McNary, Dixon, Hornby, and Cimett (2001) examined predictors of dissemination of family psychoeducation practices in mental health centers in Maine and Illinois and found that when staff perceived the intervention more positively in the beginning stages of the utilization process, there was a greater likelihood of utilization.

Overall attitudes toward research in general are also predictive of utilization. Grasso, Epstein, and Tirpodi (1989) examined the process of research utilization within a residential treatment center serving adolescents and found that a positive attitude toward research was one factor that predicted research utilization and that pro-research attitudes were also related to research training within the agency as well as the previous education of the practitioner. Estabrooks (2003) conducted a systematic review of individual determinants of research utilization among nurses and found that the most frequently replicated result was related to the attitudes of practitioners toward research. Similarly, Estabrooks (1999) surveyed nurses in Canada and found that attitudes toward research were significantly related to research utilization. Other individual-level factors that predicted research utilization included the number of in-service training events attended in the previous year (e.g., the more events attended, the greater the research utilization), and a willingness to use research even when it contradicts prior knowledge (referred to as "belief suspension"). In addition, Profetto-McGrath, Hesketh, Lang and Estabrooks (2003) evaluated the role of a critical thinking in the utilization of research among nurses in Canada. They defined a disposition toward critical thinking as "attributes or habits of minds integrated into individuals' beliefs or actions that are conducive to critical thinking" (pg. 323) and found that practitioners who are most likely to utilize re-

search were: (1) inquisitive, (2) open-minded, (3) able to seek out the best available information (even when it contradicts their own beliefs), (4) analytical, (5) systematic, and (6) were prudent in their judgments.

ORGANIZATIONAL FACTORS

Organizational factors related to work pressures and a lack of time on the job frequently act as a barrier to research utilization. Using the Barriers Scale, studies have found between 51-80 percent of nurses report that there is not enough time on the job to read research and between 55-85 percent of nurses report that there is not enough time to implement new ideas (Bryar et al., 2003; Carrion et al., 2004; Carroll et al., 1997; Kajermo et al., 1998; McCleary & Brown, 2003; Parahoo, 2000). Additionally, Rodgers (1994) used qualitative methods to identify factors influencing the use of research among nurses and identified a lack of time to read research as a major contributor to a lack of research utilization. In the process of implementing evidence-based practice among occupational therapists, Humphris, Littlejohns, Victor, O'Halloran, and Peacock (2000) found that the three most frequently noted barriers involved workload pressures, time limitations and insufficient staff resources.

In addition to time and workload constraints, other major barriers include organizational structure, a lack of organizational support for research dissemination and utilization, and a lack of authority to change practices. Aarons (2004) found that mental health workers in "low bureaucracy" settings (e.g., programs that are under contract with a county) were more open to using evidence-based practice than those within "high bureaucracy" settings (e.g., programs within the county), suggesting that organizational structure may impact research utilization. Research also suggests that between 50-57 percent of nurses report that other staff who are not supportive of research utilization become barriers and between 57-75 percent of nurses report that they do not have enough authority to change practices (Bryar et al., 2003; Carrion et al., 2004; Carroll et al., 1997; McCleary & Brown, 2003; Parahoo, 2000).

The factors that facilitate research utilization can minimize common organizational barriers, such as providing scheduled time for reading research and discussing it with colleagues. Carroll et al. (1997) found that 64 percent of nurses reported that the utilization of research would increase if there was time to read and implement research findings and 52 percent reported that providing colleagues with support networks and mechanisms to discuss research would increase research utilization.

Likewise, Parahoo (2000) found that nurses requested time to reflect on and think about research findings, as well as time to attend courses or to conduct their own research. Similar findings were noted by Barratt (2003) in her study on organizational support for evidence-based practice within child and family social service settings with respect to staff needing regular time away from their normal work duties in order to read and synthesize research. However, managers also reported that providing scheduled time for staff to read research may not be realistic within the constraints of social service practice.

The use of in-service and pre-service training to facilitate an understanding of research and evidence-based practice can also improve research utilization. Kajermo et al. (1998) and Parahoo (2000) found that training and educating nurses in research methods and skills related to searching literature and implementing and evaluating change could improve their research utilization. Carroll et al. (1997) found that 50 percent of nurses reported that increasing their knowledge about research would facilitate research utilization. In addition, there is evidence to suggest that social workers may require additional training in order to implement evidence-based practices. Barratt (2003) found managers of social service agencies reported that they needed training in order to develop the abilities to promote evidence-based practice in their organizations.

The dissemination and utilization of research can also be facilitated by changing aspects of organizational culture so that the use of research becomes a priority. Barratt (2003) found that 90 percent of social service workers reported that senior level managers should be responsible for ensuring that evidence-based practice be disseminated and utilized throughout agencies. Likewise Parahoo (2000) found that nurses reported that managers who were “knowledgeable” and “research aware” were viewed as the most important facilitators of research dissemination and utilization. Nurses often attributed non-utilization of research to the lack of support from managers and reported that a supportive organizational culture in which organization leaders listened to staff and provided positive feedback helped to facilitate research utilization. Moreover, Carroll et al. (1997) found that 53 percent of nurses reported that improving support and encouragement from top management would increase research utilization.

Organizational leaders who address both resource and operational barriers as well as cultivate a culture that recognizes the need to improve practices are clearly in a position to support research utilization.

Parahoo (2000) found that the improvement of staffing levels (related to adequate patient coverage) was reported by nurses to be a factor that facilitates research utilization. Poor staffing levels were viewed as contributing to low morale among nurses and a general lack of interest in research innovations. Nurses also reported that hiring a staff member to help facilitate access to research and assist staff in integrating research into practice would also facilitate research utilization. In addition, McFarlane et al. (2001) found that the utilization of a new psychoeducation intervention was greatest in mental health centers that directly addressed resource and operational barriers; for example, successful utilization can be seen in staff behaviors that reflected a recognition that new interventions would require a change in existing practices as well as attitudes.

RESEARCH FACTORS

The nature and relevance of available research also impacts research dissemination and utilization. Between 45-67 percent of nurses report that a barrier to research utilization is that research results are often not generalizable to their setting (Bryar et al., 2003; Carrion et al., 2004; Kajermo et al. 1998; Parahoo, 2000). In addition, Dal Santo et al. (2002) found that managers may be somewhat suspicious of research because of its general inability to take into consideration external policies that affect practice, as well as the resource limitations of social service agencies.

Moreover, in their discussion of evidence-based practice in child and adolescent mental health services, Hoagwood, Burns, Kiser, Ringeisen and Schoenwald (2001) suggest that the research community does not generally address the match between a particular evidence-based treatment and the context in which the intervention will be delivered. Efficacy research is typically conducted within tightly controlled laboratory-type settings that seek to factor out the impact of “nuisance variables,” such as comorbidity of diagnoses or system-level factors such as payment systems and service availability. However, within real-world practice settings, the influence of so-called “nuisance variables” may be critical to the success of an intervention (Hoagwood et al., 2001). In addition, research on the efficacy of interventions has often been criticized for a general failure to attend to the influence of race/ethnicity on the success of an intervention (United Advocates for Children of California [UACC], 2005). Yet, within social service settings, many of which serve a culturally diverse population, information

on the efficacy of an intervention for various racial/ethnic groups can be critical. Researchers have attempted to address this problem by conducting “effectiveness” research on interventions that have proven to be successful in efficacy research. Effectiveness research is intended to test an efficacious intervention within “real-world” settings. Yet, in general, research is still lacking on the effectiveness of interventions with particular populations, and “real-world” settings can often vary greatly between localities, making application of interventions to unique practice settings problematic. Indeed, Kajermo et al. (1998) found that nurses reported their use of research could be facilitated by “more realistic and relevant research [that is] closer to reality” (pg. 804).

The general confusion about what constitutes evidence and the prevalence of conflicting findings in the literature can also leave practitioners unclear about whether a particular intervention is actually useful and should be disseminated and utilized. Barratt (2003) found that social service staff were generally confused about the nature of evidence and whether the term evidence-based practice refers to just published research or also includes unpublished administrative data, theory or expert opinion. Approximately 93 percent of the sample felt that it was crucial for organizations to develop a shared understanding of what constitutes the ‘best evidence’ in social service settings. Nurse practitioners also report that conflicting results in the research literature can be a barrier to research utilization (McCleary & Brown, 2003).

The timing of research may also affect dissemination and utilization. Beyer and Trice (1982) suggest that there is often a time lag between research and practice and that problems with coordinating relevant research with the needs of decision-makers and practitioners can hinder utilization. Even recently completed research can become irrelevant in the ever-changing practice setting that must respond to new political pressures, funding constraints, policy changes and shifting client populations. Correspondingly, the generally slow pace of research may not be able to keep up with the changing nature of practice due to limited funding, lengthy procedures for protecting human subjects, and the use of time-consuming research methods.

COMMUNICATION

The way in which research is compiled, presented and communicated can directly affect the way that research is utilized by practitioners. The

lack of availability or access to research can be a barrier to its use in practice. For example, between 32-78 percent of the nurses in several studies report that research reports and articles are not readily available and therefore not utilized in their practices, while between 48-66 percent report that research literature is not available in one location for easy access (Bryar et al., 2003; Carrion et al., 2004; Carroll et al., 1997; Kajermo et al., 1998; McCleary & Brown, 2003; Parahoo, 2000). In addition, the way in which research reports are written and presented can act as a barrier to their use in practice. For example, between 48-73 percent of nurses report that statistical analyses are not understandable and between 42-64 percent report that the implications of research for practice are not made clear in research reports (Bryar et al., 2003; Carrion et al., 2004; Kajermo et al., 1998; McCleary & Brown, 2003; Parahoo, 2000). Similarly, Dal Santo et al. (2002) found that social service practitioners reported that a barrier to research utilization was that research reports often do not translate general recommendations into specific action steps that agencies can implement, a process usually completed by agency staff.

Not surprisingly, research also suggests that addressing many of the barriers related to accessing research and increasing its understandability can facilitate research dissemination and utilization. Barratt (2003) found that 100 percent of surveyed social service staff felt that research evidence should be presented in a form that is readily understandable to practitioners. Grasso et al. (1989) also found empirical support for the usefulness of user-friendly research; research reports that were easily comprehensible and useful were more effectively utilized in residential children's centers. In addition, practitioners also suggest that having easy access to databases or libraries can facilitate their use of research (Barratt, 2003; Carroll et al., 1997). Research that is concise, understandable and written specifically for implementation within health care agencies can greatly facilitate the use of research by nurses (Carroll et al., 1997; Kajermo et al., 1998; Parahoo, 2000).

Research organizations have not adequately responded to the need to tailor research reports for use in agency settings. In assessing the extent to which research organizations engage in activities to transfer knowledge to their target audiences, Lavis et al. (2003) found that that 60 percent of research organizations tailor dissemination activities to specific audiences, approximately 50 percent spend time with their target audience discussing research or implications of the research for practice, 39 percent dedicate resources to get to know their target audience, and just

20 percent dedicate resources to skill-building among their target audience.

The differing priorities, backgrounds and ideologies of researchers and practitioners may also interfere with effective communication. Rosen (1983) notes that social service practitioners with a humanistic stance toward the alleviation of social problems and an individualized approach to client self-actualization may favor subjective and experiential sources of knowledge. In contrast, researchers are often described as seeking an objective understanding of the world that places importance on measurable phenomena, technical knowledge, theories and rationality (Shrivastava & Mitroff, 1984).

Such differing perspectives may contribute to communication and collaboration problems between researchers and practitioners. Fisher, Fabricant and Simmons (2004) suggest that the expertise and technical knowledge of researchers can conflict with the non-technical and informal nature of knowledge valued by community partners. Some scholars suggest that a power imbalance exists between the status of university researchers and that of community practitioners that can lead to mistrust and stifled communication (Maurasse, 2001). For example, Fisher et al. (2001) note: "When university . . . faculty . . . cite statistics or refer to sources (in order) to document points or use a language that is foreign to almost anyone outside of their field of study, its impact may be to reduce rather than open dialogue" (p. 29).

Involving practitioners in the research process and strengthening collaboration between researchers and practitioners may help address some of these communication barriers and power imbalances. Dal Santo et al. (2002) found that involvement of agency staff, especially senior staff in the development and implementation of research projects improved both dissemination and utilization of the research findings. In a study of linkages between researchers and practitioners in Switzerland, Huberman (1990) found that the following five types of linkages were related to dissemination and utilization of research: (1) "Hello-Goodbye," (2) "Two Planets," (3) "Standoff," (4) "Mutual Engagement," and (5) "Synergy." Each of these types is defined in Figure 2.

Clearly, the "mutual engagement" and "synergy" collaborations were the most effective in producing research that was ultimately welcomed by practitioners and disseminated within practice settings. Practitioners described the following factors as particularly important to increasing their understanding of the research or ensuring that the findings were put to practical use: (1) interim reports on study findings, (2)

FIGURE 2. Different Types of Relationships Between Researchers and Practitioners

- 1) *“Hello-Goodbye”*: No collaboration or communication between researchers and practitioners before, during, or after the study where findings were disseminated to a “passive target audience” whose priorities had not been addressed in the research and there was no communication between the researchers and the practitioners eighteen months after the study was completed.
- 2) *“Two Planets”*: Weak collaboration between practitioners and researchers throughout and after the study reflected episodic contacts that focused on providing training or technical assistance in order to carry out the study where “largely decorative” advisory groups were involved in the research (e.g. met infrequently, lacked a concrete purpose, did not understand research findings, and engaged in few, if any, dissemination activities). Eighteen months after the study was completed both practitioners and researchers were waiting for the other to disseminate findings.
- 3) *“Standoff”*: Moderate collaboration that remained stable throughout the study period and afterwards, but that ultimately did not directly affect utilization (e.g. the researchers did not consult with the practitioners in the development of the study’s focus or while the study progressed leading practitioners to feel that the researchers were “out of touch” with their practice setting and to perceive the findings with suspicion). The dissemination strategy was simply to send the final report to the practitioners who did little to disseminate the findings; there was no contact between researchers and practitioners eighteen months after the study completion.
- 4) *“Mutual Engagement”*: Weak initial collaboration that grew in strength throughout the course of the study based on frequent informal contacts and a series of interim reports that were concise, easily understandable and discussed in meetings between

researchers and practitioners which helped to neutralize power imbalances and created enthusiasm on the part of both practitioners and researchers to disseminate findings.

- 5) “*Synergy*”: Well-established collaboration prior to the implementation of the study and these linkages were “activated” during and after the study (e.g. regular discussions of interim reports, frequent informal contacts, meetings to discuss study findings and plan for dissemination, and efforts to use data within practitioner staff meetings and training events).

personal contacts with researchers, (3) co-worker involvement in the study, (4) extensive conversations with researchers before dissemination, (5) attitude changes regarding the value and use of research, and (6) continuous contacts between workers’ supervisors and researchers. Huberman (1990) concluded that collaborations that lead to greater dissemination and utilization are characterized by frequent contacts during the study and concerted effort to prepare locally-relevant and user-friendly reports that are of use to practitioners.

IMPLICATIONS FOR DISSEMINATION AND UTILIZATION OF RESEARCH

It is clear that the dissemination and utilization of research findings is a complex process that is influenced by the characteristics of individuals, organizations, research and communication. Most of the research on dissemination and utilization focuses on individual-level interventions that feature passive dissemination approaches (e.g., distributing written materials or attending lecture-style conferences) that generally do not result in actual utilization of research findings by practitioners (Bero, Grilli, Grimshaw, Harvey, Oxman, & Thomson, 1998; Gira et al., 2004; Grimshaw, Shirran, Thomas, Mowatt, Fraser Bero et al., 2001; Oxman, Thomson, Davis, & Haynes, 1995). Other dissemination strategies identified by Oxman et al. (1995) are somewhat more effective and they include outreach visits by experts (i.e., a trained person to provide information on research) and the use of local opinion leaders (i.e., trusted persons in the professional community who have the ability to influence people). There is also some evidence to suggest that audit

and feedback approaches can be useful; for example, an expert reviews the ways in which practitioners work with their clients in order to provide feedback on the connection between the actions of practitioners and research on best practices (Gira et al., 2004). Although some discrete individual-level approaches to the dissemination of research may be moderately effective in leading to research utilization, most studies suggest that effective dissemination and utilization of research usually involves a combination of different and complimentary strategies (Bero et al., 1998; Gira et al., 2004; Grimshaw et al., 2001; Oxman et al., 1995).

Although research has addressed dissemination and utilization on the individual-level, attention to other factors, including the organization, the nature of the research and the nature of the communication are also critical elements in how information is disseminated and whether or not it is utilized. Some scholars suggest that “sustained interactivity” between researchers and practitioners has the potential to address multiple barriers to dissemination and utilization on the individual and organizational level, as well as barriers related to the nature of the research and communication. Huberman (1994) defines sustained interactivity as a collaborative process between researchers and practitioners in which strong interpersonal links are formed throughout the course of a research study. Such a strategy has the potential to improve communication between researchers and practitioners as well as to improve dissemination and utilization in other areas as well. Indeed, some scholars suggest that strong linkages between researchers and practitioners are the most effective means through which to achieve dissemination and utilization of research (Beyer & Trice, 1982; Huberman, 1994). Figure 3 provides an overview of the potential benefits of practitioner-research collaborations.

As noted earlier, the use of research in practice is hindered by the practitioner’s lack of awareness of research, lack of ability to evaluate research, and feelings of isolation from knowledgeable colleagues (Bryar et al., 2003; Carrion et al., 2004; Carroll et al., 1997; Kajermo et al., 1998; Parahoo, 2000). Conversely, research utilization on the individual level appears to be facilitated by the positive attitude of practitioners toward research and the use of critical thinking skills (Estabrooks, 1999; Grasso et al., 1989; Profetto-McGrath et al., 2003). Strong practitioner-researcher collaboration may have the potential to address these barriers and facilitators.

On the individual level, practitioner-researcher collaborations can provide practitioners with research findings on particular topics of in-

FIGURE 3. Benefits of Practitioner-Researcher Collaborations

Level	Benefits
Individual	<ul style="list-style-type: none"> • Researchers can provide practitioners with overviews of research findings. Such syntheses may increase practitioner awareness of research, access to research and encourage practitioners to evaluate the quality and applicability of research • Researchers can participate in training events related to the use of critical thinking skills and the role of research in practice
Organizational	<ul style="list-style-type: none"> • The compilation of research findings by researchers can enhance staff's time to read and reflect on research • Ongoing practitioner-researcher collaborations require commitment from agency leaders; such commitment had the potential to increase organizational and leadership support for the use of research in practice.
Research	<ul style="list-style-type: none"> • Collaborations can ground research within the realities of local contexts
Communication	<ul style="list-style-type: none"> • Collaborations can help researchers to tailor research reports to the practice community • Increased accessibility to research reports • Reduction in power imbalances

terest in their practice setting based on collecting and synthesizing multiple studies (Schiller & Malouf, 2000). Such syntheses can increase the practitioner's awareness of research, access to research, and participation in evaluating the quality and applicability of research. In addition, practitioner-researcher collaborations also provide an opportunity for researchers to participate in training events related to discussing the role of research in practice and helping practitioners expand their use of critical thinking skills. The skill set that is common to both researchers and practitioners involves critical thinking skills. Figure 4 includes an array of critical thinking skills needed for the effective dissemination and utilization of research.

On the organizational level, barriers to dissemination and utilization include workload pressures, lack of time to read research or implement new ideas, and lack of organizational or leadership support (Bryar et al., 2003; Carrion et al., 2004; Carroll et al., 1997; Kajermo et al., 1998; McCleary & Brown, 2003; Parahoo, 2000). It is clear that research dissemination and utilization can be facilitated by providing on-the-job time for reading and discussing research, training and education programs, and strong organizational and leadership support for structured and sustained collaborations between researchers and practitioners (Barratt, 2003; Carroll et al., 1997; Kajermo et al., 1998; Parahoo, 2000). The compilation and discussion of research findings can greatly enhance the staff's time to read and reflect on research.

FIGURE 4. Major Skill Sets in the Critical Thinking Process*

- I. **Clarifying – What is being stated?**
 - Clarify problems
 - Clarify issues, conclusion, or beliefs
 - Identify unstated assumptions
 - Clarify and analyze the meanings of words and phrases
 - Clarify values and standards

- II. **Analyzing – What does it mean?**
 - Identify significant similarities and differences
 - Recognize contradictions and inconsistencies
 - Analyze/evaluate arguments, interpretations, beliefs, or theories
 - Distinguish relevant from irrelevant questions, data, claims, or reasons
 - Detect bias
 - Evaluate the accuracy of different sources of information (“evidence”)
 - Use sound criteria for evaluation
 - Compare perspectives, interpretations, or theories
 - Evaluate perspectives, interpretations, or theories

- III. **Applying – How can it be applied?**
 - Compare with analogous situations; transfer insights to new contexts
 - Make well-reasoned inferences and predictions
 - Refine generalizations and avoid oversimplifications
 - Compare and contrast ideas with actual practice
 - Raise and pursue root or significant questions
 - Make interdisciplinary connections
 - Analyze or evaluate policies or actions

- IV. **Owning – How do the results of critical thinking apply to my situation?**
 - Evaluate one’s own reasoning process
 - Explore thoughts underlying feelings and feelings underlying thoughts
 - Design and carry out critical tests of concepts, theories, and hypotheses
 - Discover and accurately evaluate the implications and consequences of a proposed action

 *Abstracted from “Examples of Critical Thinking Skills” (p 129), Gibbs, L & Gambrill, E. (1999) *Critical thinking for social workers*. Thousand Oaks, CA: Pine Forge Press. Based on Ennis, R.H. (1987). A taxonomy of critical thinking dispositions and abilities. In J.B. Baron & R.J. Steinber (Eds). *Teaching thinking skills: Theory and practice*. NY: Freeman. Paul, R.(1993). *Critical thinking: What every person needs to survive in a rapidly changin world*. Santa Rosa, CA: Foundation for Critical Thinking

On the research level, studies suggest that research is not perceived to be generalizable to local settings, fails to consider external policies and resource limitations that affect practice, and arrives too late to be utilized due to the time lag between research and practice (Beyer & Trice, 1982; Bryar et al., 2003; Carrion et al., 2004; Dal Santo et al., 2002; Kajermo et al., 1998; Parahoo, 2000). Jensen, Hoagwood & Trickett

(1999) note that community collaborations help to bridge the gap between research conducted in tightly controlled settings and the realities of real-world practice settings. They suggest six principles for successful collaboration between university researchers and community partners, including: (1) a broad focus on the applicability of the research to the population under consideration; (2) integrating the perspectives of community collaborators within the research; (3) a thorough assessment of outcomes relevant to the local context; (4) flexibility to address local needs and conditions; (5) modification of research methods; and (6) the use of long-term commitments beyond the current project.

There is some evidence to suggest that research grounded in the reality of local contexts is more likely to be disseminated and utilized. Simons, Kushner, Jones and James (2003) evaluated the impact of a program in the United Kingdom that was expressly aimed at encouraging teachers to use research, as well as conduct their own research. Collaborations between teachers and researchers from university departments of education found that teachers more likely to adopt the new practice when they saw a connection between a new practice and the context in which the evidence for the new practice arose. These findings suggest that the closer the link between research and the local contexts in which practitioners work, the more likely the research is to be utilized.

As noted earlier, the communication factors that act as a barrier to research dissemination and utilization include the inaccessibility of research, incomprehensible statistical analyses, unclear research implications, and inadequate communications due to differing perspectives between practitioners and researchers (Bryar et al., 2003; Carrion et al., 2004; Carroll et al., 1997; Dal Santo et al., 2002; Fisher et al., 2004; Kajermo et al., 1998; McCleary & Brown, 2003; Parahoo, 2000; Rosen, 1983). Factors that facilitate communications include user-friendly and understandable research reports, easy access to research information, and effective and sustained contact between researchers and practitioners (Barratt, 2003; Carroll et al., 1997; Grasso et al., 1989; Huberman, 1990; Kajermo et al., 1998; Parahoo, 2000).

CORE ELEMENTS OF EFFECTIVE PRACTITIONER-RESEARCHER COLLABORATIONS

The establishment of strong collaborations between practitioners and researchers has the potential to improve research dissemination and uti-

lization. A synthesis of the literature on effective collaboration, especially among researchers and practitioners is summarized in Figure 5 and includes four core elements: (1) incentive to collaborate, (2) shared values, trust, open communication, and respect, (3) ability to collaborate, and (4) capacity to build and sustain collaboration.

Incentive to Collaborate: Robertson (1998) notes that a necessary precondition to effective collaboration is an incentive to collaborate among all parties. Most notably, collaboration is often motivated by a need to gain access to resources or to use resources more efficiently. In the case of practitioner-researcher collaborations, a clear incentive for practitioners is to gain access to research and experts who can provide evidence relevant to practice. Researchers have incentives to collaborate with practitioners in order to improve the quality of the research and suggest areas of inquiry that may be new to researchers. Indeed, effective practitioner-researcher collaborations involve a high degree of reciprocity (Huberman, 1994). Such collaborations balance the flow of incentives as research informs practice and practice informs research.

Shared Values, Trust, Open Communication and Respect: The differing backgrounds and experiences of researchers and practitioners need to be addressed so that both parties can create an environment that reflects shared values, trust, open communication and respect. Both researchers and practitioners need to overcome biases and come to an understanding that although researchers and practitioners use different methods, both parties are interested in the same outcomes, namely improving services and client outcomes (Carise, Cornely & Gurel, 2002). Similarly, Robertson (1998) suggests that shared values create a willingness to collaborate and help to establish trust among collaborators. Trust is created by open communication among all parties and can lead to feelings of reciprocity in the collaboration. Correspondingly, open communication and mutual respect are often fostered by frequent contacts and communication between parties (Lane, Turner, & Flores, 2004; Robertson, 1998). For example, Lane et al. (2004) found that respect for the unique perspectives and pressures facing both practitioners and researchers led to open communication. Successful communications were characterized by both practitioners and researchers asking questions and listening to one another, informal sharing of meals and shared rides to meetings that provided opportunities to address disagreements and to develop compromises.

Ability to Collaborate: While the ability to collaborate (i.e., knowledge and skills) is a necessary prerequisite to effective collaboration, additional work on top of the regular work duties of researchers and

FIGURE 5. Core Elements of Effective Practitioner-Researcher Collaborations

Element	Description
Incentive to Collaborate	<ul style="list-style-type: none"> Practitioners can gain access to research and experts who provide evidence relevant to practice Researchers can use practitioner feedback to improve the quality of research and suggest areas of inquiry that researchers may not be aware of
Shared Values, Trust, Open Communication and Respect	<ul style="list-style-type: none"> Both researchers and practitioners need to overcome biases and come to an understanding that both parties are interested in improving services and client outcomes Shared values create a willingness to collaborate and help to establish trust among collaborators Trust results from feelings of reciprocity and is created by open communication and respect
Ability to Collaborate	<ul style="list-style-type: none"> Skills and knowledge are required in order to collaborate Collaborations typically involve additional work on top of regular work duties
Capacity to Build and Sustain Collaboration	<ul style="list-style-type: none"> Successful collaboration involves the use of systems and mechanisms to help coordinate activities and duties Mechanisms to build and sustain collaborations include: 1) the use of supraorganizational forums (e.g. parties from several collaborations come together to discuss successful collaboration and make decisions regarding their own collaborations), 2) a broker or strategy maker to coordinate activities, 3) the use of multiple communication channels, and 4) the establishment of guidelines to govern duties, activities and decision-making

practitioners is also required (Robertson, 1998). In addition, Carise et al. (2002) found that both practitioners and researchers required preparation before engaging in a collaborative research project, especially when evaluating the implementation of a new system that requires researchers to understand the practice setting and the experiences of practitioners. Such preparation is needed in order to prepare staff for future changes in their practices and prepare researchers to work effectively with practitioners.

Capacity to Build and Sustain Collaboration: Successful collaboration also involves the use of the following systems and mechanisms, identified by Robertson (1998) to help coordinate activities and duties: (1) forums to bring together the parties from several collaboratives to discuss experiences and learn from each other, (2) brokers to coordinate activities, (3) multiple communication channels, including the use of a board of directors, and (4) guidelines to govern duties, activities and decision-making related to the use of agency resources needed to conduct a study and the ownership of data collected in the study (Anderson, 2001). In their discussion of a successful researcher-practitioner collab-

oration, Lane et al. (2004) found that effective collaboration was facilitated by “conscious and continuous effort” on the part of researchers and practitioners to ensure that the collaboration was successful, especially in light of a variety of competing demands on the time and attention of both parties.

CONCLUSION

The gap between research and practice can be detrimental to both the quality of social service practice, as well as the quality of social service research. Research can inform practice, just as practice can inform research. While the EBP movement has brought increasing attention to the importance of using the best evidence to serve vulnerable populations, less attention has been given to the development of effective dissemination and utilization methods. Numerous interacting factors related to individuals, organizations, the nature of research and the nature of communication are involved in the dissemination and utilization process.

This analysis suggests that effective collaborations require both practitioners and researchers to change the ways they engage one another. In essence, practitioners need to shift from such statements as “Tell us what you found AND what we should do differently” to “Involve us in the research process so that we can share in the data interpretation and develop our own conclusions about what we should be doing differently.” In a similar fashion, researchers need to shift from such statements as “Tell us what you want to know and we’ll tell you what we found” to “How can we both use research to improve outcomes for clients and strengthen current practice?” Based on the shared goals of improving interventions and client outcomes, practitioner-researcher partnerships will need to focus more attention on improving the dissemination and utilization of research if they are to reach these goals.

REFERENCES

- Aarons, G. A. (2004). Mental health provider attitudes toward adoption of evidence-based practice: The Evidence-Based Practice Attitude Scale (EBPAS). *Mental Health Services Research, 6*(2), 61-74.
- Anderson, S. G. (2001). The collaborative research process in complex human services agencies: Identifying and responding to organizational constraints. *Administration in Social Work, 25*(4), 1-19.

- Backer, T. E. (2000). The failure of success: Challenges of disseminating effective substance abuse prevention programs. *Journal of Community Psychology*, 28(3), 363-373.
- Barratt, M. (2003). Organizational support for evidence-based practice within child and family social work: A collaborative study. *Child and Family Social Work*, 8, 143-150.
- Bero, L. A. Grilli, R., Grimshaw, J. M., Harvey, E., Oxman, A. D., & Thomson, M. A. (1998). Closing the gap between research and practice: An overview of systematic reviews of interventions to promote the implementation of research findings. *British Medical Journal*, 317, 465-468.
- Beyer, J. M. & Trice, H. M. (1982). The utilization process: A conceptual framework and synthesis of empirical findings. *Administrative Science Quarterly*, 27, 591-622.
- Bryar, R. M., Closs, S. J., Baum, G., Cooke, J., Griffiths, J., Hostick, T., Kelly, S., Knight, S., Marhsall, K., Thompson, D. R. (2003). The Yorkshire BARRIERS project: Diagnostic analysis of barriers to research utilization. *International Journal of Nursing Studies* 40, 73-84.
- Carise, D., Cornely, W., & Gurel, O. (2002). A successful researcher-practitioner collaboration in substance abuse treatment. *Journal of Substance Abuse Treatment*, 23, 157-162.
- Carrion, M., Woods, P., & Norman, I. (2004). Barriers to research utilization among forensic mental health nurses. *International Journal of Nursing Studies*, 41, 613-619.
- Carroll, D. L., Greenwood, R., Lynch, K., Sullivan, J. K., Ready, C., & Fitzmaurice, J. B. (1997). Barriers and facilitators to the utilization of nursing research *Clinical Nurse Specialist*, 11(5), 207-212.
- Dal Santo, T., Goldberg, S., Choice, P., & Austin, M. J. (2002). Exploratory research in public social service agencies: An assessment of dissemination and utilization. *Journal of Sociology and Social Welfare*, 29(4), 59-81.
- Eisele, F. R., & Gamm, L. (1981). Research utilization: Reaching decision makers. *Children and Youth Services Review*, 3, 291-303.
- Ennis, R.H. (1987). A taxonomy of critical thinking dispositions and abilities. In J.B. Baron & R.J. Steinber (Eds). *Teaching thinking skills: Theory and practice*. NY: Freeman.
- Estabrooks, C. A. (2003). Individual determinants of research utilization: A systematic review. *Journal of Advanced Nursing*, 43(5), 506-520.
- Estabrooks, C. A. (1999). Modeling the individual determinants of research utilization. *Western Journal of Nursing Research*, 21(6), 758-772.
- Fisher, R., Fabricant, M. & Simmons, L. (2004). Understanding contemporary university-community connections: Context, practice, and challenges. *Journal of Community Practice*, 12(3/4), 13-34.
- Funk, S. G., Champagne, M. T., Wiese, R. A., & Tornquist, E. M. (1991). Barriers: The Barriers to research utilization scale. *Applied Nursing Research*, 4, 39-45.
- Gibbs, L & Gambrell, E. (1999) *Critical thinking for social workers*. Thousand Oaks, CA: Pine Forge Press.

- Gira, E. C., Kessler, M. L. & Poertner, J. (2004). Influencing social workers to use research evidence in practice: Lessons from medicine and the allied health professions. *Research on Social Work Practice, 14*(2), 68-79.
- Grasso, A. J., Epstein, I., & Tripodi, T. (1989). Agency-based research utilization in a residential child care setting. *Administration in Social Work, 12*(4), 61-80.
- Grimshaw, J. M., Shirran, L., Thomas, R., Mowatt, G., Fraser, C., Bero, L., Grilli, R., Harvey, E., Oxman, A., & O'Brien, M. A. (2001). Changing provider behavior: An overview of systematic reviews of interventions. *Medical Care, 39*(8) II-2-II-45.
- Hoagwood, K., Burns, B. J., Kiser, L., Ringeisen, H., & Schoenwald, S. K. (2001). Evidence-based practice in child and adolescent mental health services. *Psychiatric Services, 52*(9), 1179-1189.
- Huberman, M. (1994). Research utilization: The state of the art. *Knowledge and Policy: The International Journal of Knowledge Transfer and Utilization, 7*(4), 13-33.
- Huberman, M. (1990). Linkage between researchers and practitioners: A qualitative study. *American Educational Research Journal, 27*(2), 363-391.
- Humphris, D., Littlejohns, P., Victor, C., O'Halloran, P., & Peacock, J. (2000). Implementing evidence-based practice: Factors that influence the use of research evidence by occupational therapists. *British Journal of Occupational Therapy, 63*(11), 516-522.
- Jensen, P. S., Hoagwood, K., & Trickett, E. J. (1999). Ivory towers or earthen trenches? Community collaborations to foster real-world research. *Applied Developmental Science, 3*(4), 206-212.
- Kajermo, K. N., Nordstrom, G., Krusebrant, A., & Bjorvell, H. (1998). Barriers to and facilitators of research utilization, as perceived by a group of registered nurses in Sweden. *Journal of Advanced Nursing, 27*, 798-807.
- Lane, J., Turner, S., & Flores, C. (2004). Researcher-practitioner collaboration in community corrections: Overcoming hurdles for successful partnerships. *Criminal Justice Review, 29*(1), 97-114.
- Lavis, J. N., Robertson, D., Woodside, J. M., McLeod, C. B., & Abelson, J. (2003). How can research organizations more effectively transfer research knowledge to decision makers? *The Millbank Quarterly, 81*(2), 221-248.
- Maurrasse, D. J. (2001). *Beyond the campus: How colleges and universities form partnerships with their communities*. New York: Routledge.
- McCleary, L. & Brown, G. T. (2003). Barriers to paediatric nurses' research utilization. *Journal of Advanced Nursing, 42*(4), 364-372.
- McFarlane, W. R., McNary, S., Dixon, L., Hornby, H., & Cimett, E. (2001). Predictors of dissemination of family psychoeducation in community mental health centers in Main and Illinois. *Psychiatric Services, 52*(7), 935-942.
- Michel, Y. & Sneed, N. V. (1995). Dissemination and use of research findings in nursing practice. *Journal of Professional Nursing, 11*(5), 306-311.
- National Association of Social Works (1999). *Code of Ethics*. Washington DC: Author.
- Oxman, A. D., Thomson, M. A., Davis, D. A., & Haynes, R. B. (1995). No magic bullets: A systematic review of 102 trials of interventions to improve professional practice. *Canadian Medical Association Journal, 153*(10), 1423-1431.

- Parahoo, K. (2000). Barriers to, and facilitators of, research utilization among nurses in Northern Ireland. *Journal of Advanced Nursing*, 31(1), 89-98.
- Paul, R. (1993). *Critical thinking: What every person needs to survive in a rapidly changing world*. Santa Rosa, CA: Foundation for Critical Thinking
- Profetto-McGrath, J. Hesketh, K. L. Lang, S., & Estabrooks, C. A. (2003). A study of critical thinking and research utilization among nurses. *Western Journal of Nursing Research*, 25(3), 322-337.
- Reid, W. J., & Fortune, A. E. (1992). Research utilization in direct social work practice. In A. J. Grasso, & I. Epstein (Eds.). *Research utilization in the social services* (pp. 97-116). New York: Hawthorne.
- Robertson, P. J. (1998). Interorganizational relationships: Key issues for integrated services. In J. McCrosky, & S. D. Einbinder (Eds.). *Universities and communities: Remaking professional and interprofessional education for the next century* (pp.67-87). Westport CT: Praeger.
- Rodgers, S. (1994). An exploratory study of research utilization by nurses in general medical and surgical wards. *Journal of Advanced Nursing*, 20, 904-911.
- Rogers, E. (2003). *Diffusion of innovations*. 5th Ed. New York: Free Press.
- Rosen, A. (1994). Knowledge use in direct practice. *Social Service Review*, 561-577.
- Rosen, A. (1983). Barriers to utilization of research by social work practitioners. *Journal of Social Service Research*, 6(3/4), 1-15.
- Schiller, E. P. & Malouf, D. B. (2000). Research syntheses: Implications for research and practice. In R. M. Gersten, E. P. Schiller, & S. Vaughn, (Eds.). *Contemporary special education research: Syntheses of the knowledge base on critical instructional issues. The LEA series on special education and disability* (pp. 251-262). Mahwah, NJ: Lawrence Erlbaum Associates.
- Shrivastava, P., & Mitroff, I. I. (1984). Enhancing organizational research utilization: The role of decision makers' assumptions. *Academy of Management Review*, 9(1), 18-26.
- Simons, H., Kushner, S., Jones, K., & James, D. (2003). From evidence-based practice to practice-based evidence: The idea of situated generalisation. *Research Papers in Education* 18(4), 347-364.
- United Advocates for Children of California (2005). Children's mental health and evidence based practices: Preliminary thoughts and issues. Sacramento CA: Author. Dissemination and Utilization of Research

doi:10.1300/J394v05n01_11