Use of Research Evidence by Criminal Justice Professionals

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Abstract

This essay reviews and critiques the current state of use of research evidence in policymaking and practice by criminal justice professionals. It focuses on the direct use of research by criminal justice administrators and practitioners in the field. While some policies and practices are mandated by laws or funding sources, field professionals have much discretion in determining the policies, programs, and practices of their agencies or organizations. Thus, understanding how they acquire, view, and use (or not use) research evidence is essential for improving evidence-based policymaking and practice and collaboration with academicians. The authors review and analyze research and other literature to 1) explain the existence and persistence of a research-practice gap in criminal justice 2) recommend strategies for increasing the use of research evidence in decision-making and 3) suggest future research needed to understand and promote use of research by criminal justice professionals.

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Introduction

This paper examines the problem of research evidence under-utilization in criminal justice policy and practice. Research evidence is very important to the development of criminal justice decision-making. Through well-designed and implemented research, we can better explore the impact of policies, programs, and daily practices; we can "see if they work," for example if they reduce crime. The results obtained from empirical research provide valuable information for making more objective decisions about which interventions to use. Interventions designed and implemented based on research evidence have increased our potential to serve public interests more effectively and efficiently. Benefits from these strategies include reduced victimization, better lives for at-risk youth, and cost savings from more efficient programs. Conversely, non-evidence-based interventions are at a higher risk of failing to produce desired outcomes or even worsening problems. For example, mass imprisonment has proven to be very costly, diverting resources from other important needs such as education, while doing little to reduce crime (see, e.g., Durose, Cooper, & Snyder, 2014). However, research shows that investment in early (developmental) crime prevention programs and using sentencing alternatives can save a great deal of the money that is spent on imprisonment and other responses to crime (Welsh & Farrington, 2011).

Criminal justice professionals may use research in a variety of ways. They may examine publications such as comprehensive reviews, meta-analyses, and studies of exemplary or model ("brand name") programs. They may also use research-utilization toolkits, become familiar with standards of judging the quality of research and interventions, and collaborate with academic researchers. Despite the availability of these kinds of opportunities, a large gap between research and public policy and practice persists (Cherney, 2009).

The research-practice gap is particularly significant in the field of criminal justice, where a decades-long debate over the goals of the criminal justice system (rehabilitation vs. retribution and containment) has had a substantial negative impact on both the development of the research base of "what works" as well as the implementation of that research into practice (Cullen, 2013). It is only relatively recently that the scientific knowledge base has developed enough to provide concrete guidance to practitioners as to what programs are most effective in reducing recidivism, and which programs are most effective in providing health and human services that lead to successful outcomes (Frost & Clear, 2012; Lutze, Johnson, Clear, Latessa, & Slate, 2012). Much progress has been made in our understanding of effective programs, and in our conceptual understanding of

implementation processes and various factors that appear to influence the effectiveness of implementation. However, it remains well-documented that few government or private agencies providing crime prevention or rehabilitation services utilize research-supported practices in their respective agencies (Garner, Hunter, Funk, Griffin, & Godley, 2016).

In professions such as medicine, the link between scientific evidence and decision making seem largely clear. Whether an intervention works depends on if it is empirically shown to eliminate or reduce illness or injury. Thus, it is widely accepted in the medical community that scientific standards are the primary, if not only, bases for interventions. In criminal justice, however, the link between scientific evidence and policy is more complex. In the criminal justice system, scientific standards are considered relevant but not dominant. In court, for example, decisions are more likely to be based upon consistency with current statute, legal precedent, and attorneys' ability to advocate rather than scientific evidence. Further, criminal justice policy is gauged heavily by its political or ideological appeal (Blumstein, 2013; Currie, 2004).

Colleges and universities obviously have a vested interest in use of research evidence, as much of the evidence in question is produced by their scholars. However, these institutions must also be concerned with use of research evidence as an important learning outcome of their educational programs. College course assignments often require students to complete "research papers," which involve searching for qualified relevant sources on a topic, analyzing and summarizing information from those sources, and applying this information toward understandings of and solutions to social problems. Further, a variety of smaller assignments and exercises (e.g. in-class activities) are used to teach secondary-source research skills. By graduation, a student should have completed many such assignments. With these assignments, instructors hope to develop students' abilities to find and use good information in their daily lives, including at work. This includes the ability to find, discern, scrutinize, and apply research evidence. Thus, the use of research evidence by criminal justice professionals, in a productive way, may be considered the achievement of an important program learning objective.

Therefore, a better understanding of why social research is underutilized in policy and practice is needed. Presumably, most researchers hope that their work has a beneficial impact upon social policy and practice, and most policymakers and practitioners desire to learn of innovative approaches to solving social problems. Thus, it seems that they have a stake in working together. Further, evidence-based policy and practice is often mandated or incentivized by funders, accreditors, state

and federal government agencies, and other governing bodies. To respond to the need for more evidence-based practices and researcher-practitioner collaboration, we must specifically understand how research is currently being acquired, viewed, and used (or not used) by policymakers and practitioners.

This paper focuses on the direct use of research by criminal justice administrators and practitioners. While some policies and practices are mandated by laws or funding sources, field professionals have much discretion in determining the policies, programs, and practices of their agencies or organizations. To maintain focus, this paper does not directly address an important related issue: *implementation* of policies, programs, and practices known to be evidence-based, for example problems associated with gaining cooperation in employing "best practices." Rather, the focus is on professionals' relationships with the research, itself, that serves as evidence. The authors review and analyze the literature to 1) explain the research-practice gap in criminal justice 2) recommend ways to increase the use of research evidence and 3) suggest future research needed to understand and promote use of research by criminal justice professionals.

Why the Gap Exists

First, it should be acknowledged that some explanations for the research-practice gap may not be valid, especially those based on anecdotal evidence, mere speculation, and negative stereotypes of "the other side" (Bogenschneider & Corbett, 2010). For example, academicians may assume that policymakers and practitioners refuse to utilize their scholarship because it interferes with personal, cultural, political, or economic goals. Conversely, policymakers and practitioners may assume that academicians conduct research and develop theories that are irrelevant to "real world" practice or promote special interest agendas. In reality, policymakers and practitioners probably want to apply research evidence (Latessa, 2004), and researchers may want to find out what they can do to help, but they may be unable or afraid to do so for a variety of reasons. The gap between research and policy and practice is likely caused by characteristics of both research and practice, and the relationship between the two realms (Weiss, Murphy-Graham, Petrosino, & Gandhi, 2008).

Academicians and field professionals belong to different professional communities that make it difficult to understand each other's needs and motives, collaborate, and bring research and practice together (Bogenschneider & Corbett, 2010). For instance, researchers often work primarily in academic settings, such as universities and research centers, while policymakers and practitioners often work strictly in the field. In addition, scholars and field professionals tend to discuss their work using their own professional jargon and dissemination outlets (e.g. journals

vs. internal reports), with each group having limited access to or familiarity with the other's primary modes of communication. This may make it difficult to establish the practical relevance of research. Academicians and field professionals thus have trouble communicating, facing barriers such as differing backgrounds, contrasting priorities, power dynamics, restricted access to reports or articles, unclear practical implications of studies, scattered relevant literature, and confusing data analyses and presentation of results (Osterling & Austin, 2008). This separation of environments, then, seems to be matched by a separation of research and service delivery.

Much of the work of academicians is not translated into conceptual frameworks and language familiar to policymakers and practitioners, which creates confusion about the relationship between research and practice (Innes & Everett, 2008). Social science communication often employs a value-neutral vocabulary of operationalization, consistent with the positivist tradition of attempting to objectively identify causal forces in the world. Positivism is more concerned with how to generate, rather than how to use, knowledge. While the language of operationalization is useful for conducting research (e.g. designing and testing hypotheses) and scientific debate, it is not necessary for discussing the practical significance of findings. However, scholars may carry over scientific jargon to discuss practical applications. This is not necessarily a neglectful action. Researchers may, for example, use this jargon to insulate their interpretations from common pressures within the research community, such as accusations of bias or oversimplification. (Jargon may sound more objective and sophisticated.) Some researchers may not even recommend interventions, to avoid a role conflict (i.e., objective researcher vs. advocate). It is important for social scientists to be rigorous and objective, but efforts to maintain value-free social science may interfere with its practical use. Also, it seems quite possible for researchers to be relatively value-free and use precise scientific concepts when conducting research, and then, when finished, take steps to help others understand their research and its practical value, especially considering the possibility that others will misinterpret and misapply results (Innes & Everett, 2008).

Because scholars have generated a compelling body of evidence supporting alternative policies and practices, they may tend to identify problems with agencies, governments, public perceptions, and special interests as reasons for the continued failure to adopt and implement what they see as best practice. However, problems with the body of research evidence itself may also stand in the way of its application to policy and practice. Wright, Zhang, and Farabee (2010, p. 6) point out that many studies may not qualify as evidence.

Some evaluation research has serious flaws in its methodology. Researchers are faced with their own biases, pressures from funding agencies and other stakeholders, and limited time and other resources. Thus, it is difficult to conduct studies with ideal methodological rigor, and the quality of data and analyses suffer. In some cases, evaluators examine interventions that they carried out, which presents a conflict of interest. Another problem arises when research evaluates improperly implemented programs. Good research will likely show such a program to be ineffective, which will be deceiving, because the true strategy was not tested. It is possible, then, that some strategies are good ideas that were never given a proper chance. Furthermore, it is not uncommon for individual studies to use cases or samples that cannot be generalized to contexts, and, at some point, they become outdated. Thus, these studies often will not meet a certain agency's or practitioner's immediate needs. Problems also exist in the biased reporting of results. For example, journals are reluctant to publish null findings, although these too are important in showing what does or does not work. Consequently, findings across studies are inconsistent or contradictory, and it is difficult to decide which to use as evidence (Weiss et al., 2008).

Some critics of research conceptualize evidence not simply as the results of evidence research but the results of research that meets rigorous criteria (Wright et al., 2010). For policymakers and practitioners to have faith in research evidence, they have to be able to believe that 1) policies, programs, and practices have been properly implemented and 2) the research examining their effectiveness is sound. Understandably, having this kind of faith will be difficult for many decision makers. Thus, it is important to understand what policymakers and practitioners consider to be "evidence," which may be quite different from the positions of academic scholars. However, in criminal justice, it seems clear that there is a gap between even good research evidence and policy/practice (Lutze et al., 2012; Cullen, 2013; Wright et al., 2010; Wright, Pratt, Lowenkamp, & Latessa, 2012).

Perhaps the public too is responsible for under-utilization of research evidence, by "irrationally" supporting ineffective interventions. For example, "law and order" or "get tough" laws and policies, regardless of research support for them, resonate with public feelings about safety, appropriate punishment, and taking a firm stand against crime. Public support for such approaches is driven more by disgust for or outrage against criminal acts, and sometimes fear or panic, rather than research evidence. Non-evidence-based policies often express widely held values and beliefs, or perhaps, populist sentiments. They may also symbolically alleviate fears of experiencing horrific, though infrequently occurring, events (e.g. child abductions by strangers). It is difficult to get appeals to rationality and evidence heard when

policy discourse, in a political forum, is driven by anger, fear, sadness, etc. (Freiburg & Carson, 2010). Approaches based on emotions, then, win out over research utilization in determining some interventions.

Thus, proponents of research evidence may attempt to remove emotions from policy development. They may assume that research will be applied according to a naïve rational (objective, utilitarian) model of adoption: decisions are to be made strictly according to "what works." In addition to being unrealistic, this may be counter-productive. Accounting for the emotional significance of policies is necessary, as emotions are part of the human condition (and social policy is a part of human social life). After all, emotion and reasoned thought (cognition) are closely tied. Emotional responses to events and issues can be intelligent, logical, and appropriate. For example, it is understandable that people become upset in response to an act of violent victimization. Also, emotions are often positive, such as compassion and forgiveness, which presents opportunities to reconcile research evidence and emotional needs in policy development. Like other important matters in life, policy decisions are made through cognitive-emotional processes. Thus, research evidence may get ignored or under-utilized, because attempts to apply it ignore the feelings and psychological needs of the general public and the people who work in or with the criminal justice system (Freiburg & Carson, 2010).

Apart from research production and dissemination, the research-practice gap is also attributable to the context of policymaking and practice, and the beliefs and actions of policymakers. Due to their biases, pressures, and limitations, policymakers may make rushed judgments about research evidence, demand premature or oversimplified reports of findings, alter purposes of projects after they have begun, ignore some results or dismiss them on false grounds, spend little time examining reports, and lose interest in projects (Weiss et al., 2008).

Agencies receive a wide variety of information on their interventions. Research evidence is only one piece of information considered by decision makers. It may not get used adequately, because decision makers give more weight to other considerations, such as competing values, political consequences, public opinion, budget, anecdotal evidence, "conventional wisdom," and legal implications. Policies and practices are expected to work efficiently and effectively, in some objective way, but they also serve important symbolic purposes. Thus, to a variety of actors (e.g. programmers, administrators, stakeholders, and clients), administering them is just as important as whether they achieve tangible results (Jennings & Hall, 2011). Jennings and Hall (2011) found in a national study that state agencies often have access to scientific evidence, and consider it, but also base their policy and program

decisions upon political and constituent sources of information such as governors, legislators, other agencies and officials, and special interest groups. Users, or potential users, of research evidence are often in "a tough spot," in which they must reconcile conflicting demands and expectations placed upon them by interested parties who vary in their influence and power. In the end, political and cultural forces, for example, may "win out" over research promoters in influencing decision making.

Some professionals may not use research evidence because they are not familiar with it. Johnson, Elam, and Lebold (2016) explored use of research evidence in practice through focus group interviews with 35 juvenile justice and youth service professionals. They found that while participants were quite familiar with *implementing* evidence-based programs, they had limited awareness and knowledge of research evidence itself, although some expressed skepticism toward research evidence backing certain policies and practices. Consequently, participants typically did not seek out research evidence on their own to make decisions. Still, participants rarely expressed hostility toward research evidence, for example voicing that it conflicts with their personal beliefs and interests. The researchers speculated that professionals closely involved with daily practice may be concerned with whether an intervention *is* evidence-based, and if it works for them, more than matters concerning the production, dissemination, and direct utility of research evidence. Many field professionals' use of research evidence may be limited to what is externally required of them. However, lack of familiarity with research evidence may be a manifestation of the research-practice gap, rather than a cause of it. The study did not uncover *why* participants lacked this familiarity, for example if they simply lacked time.

Recommendations

Despite the persistence of the research-practice gap, there are reasons to be optimistic about our ability to bridge this gap--to increase the use of research in policy and practice. A review of academic and professional literature, as well academic and professional society conference abstracts, reveals that there are several academicians concerned with improving policy and practice and several practitioners interested in working with these academicians to improve policy and practice. After all, there has been a strong movement among scholars over the past thirty years to identify "what works" and apply that research to criminal justice settings (Cullen, 2013; Latessa & Lowenkamp, 2005; Wright et al., 2012).

Solutions extend beyond imposing use of research evidence in policy and practice. While mandates from regulatory and funding agencies are justified, and potentially helpful, there are drawbacks to imposed use, including that evidence-based models or procedures do not apply equally well to all circumstances (e.g. type of population served). Weiss et al. (2008) point out that the research basis for a mandate cannot be assumed to be strong (studies may have serious methodological and generalizability problems), and authorities who determine which evidence-based approaches are best may be influenced by biases, such as self-interest in certain programs. Aware of these issues, field professionals may view evaluation evidence with resentment and skepticism and thus fail to implement in the true spirit of evidence-based practice.

There is much that academicians can do to improve the practical use of their work. Obviously, the research community must continue efforts to improve the quality of research. However, good and relevant research has been and is currently being done. In promoting this research, academic scholars should explore the perspectives of field professionals, improve research dissemination, and pursue joint action with field professionals. As examples, academicians may communicate in more accessible ways (e.g. low in academic jargon), help field professionals understand scholarly publications and interpret study results, consider publication outlets that are accessible to a wider audience, participate in public education, engage in collaborative community service, conduct literature reviews and meta-analyses tailored to specific intervention needs, and involve students. Involving students not only adds a resource, but it better prepares them to become a professional research user when they acquire leadership roles, and thus invests in future use of research evidence. Again, graduates' abilities to draw from literature to solve problems is an important learning outcome.

Latessa (2004) suggested four ways in which academics can do better in bridging the gap between academics and practice. The first is to *leave the office*, for example "attend and present at nonacademic conferences, conduct workshops for local professionals, testify at legislative hearings, and, in general, be willing to lend our expertise and knowledge when asked to do so" (p. 552). This may involve getting "our hands dirty," for example winning over skeptical or even hostile audiences. The second is to *make research understandable*, for example focusing more on research findings and their relevance, more than methodology or statistical techniques, when addressing practice-oriented audiences, and writing in ways that are more accessible to a broader readership. For policymakers and practitioners to understand the value of research, it must be translated into understandable concepts and terms. The third is to *include integrity and quality measures in research*.

As mentioned earlier, results of tests of intervention effectiveness are deceptive if the interventions are improperly implemented. Differences in fidelity could explain differences in outcomes among similar programs. The fourth is to *better prepare undergraduate students* for work in the field. More effort is needed to teach them the discipline's knowledge base and its relevance to the field, provide them with core skills and competencies, and expose them to other relevant disciplines such as psychology and social work. Regarding this last point, employees may not see the value of evidence-based practices, because they were not sufficiently exposed to it as students. To ensure that students learn about them, it may be necessary to officially recognize EBPs in program curriculum (e.g. in course titles), as opposed to just compelling instructors to teach about them (Matthews, 2015).

Since policymakers must consider multiple needs and options in making decisions, research will be more applicable if information is gathered on multiple criteria, as well as the relative importance of each criterion. Research-based recommendations often focus on a few aspects of an intervention such as cost-benefit or cost effectiveness. Ignored may be the less tangible benefits of an intervention, such as improvements in personal or group well-being, results of other studies, expert judgements, past experiences, consideration of longer-term outcomes, such as later offending, and implementation capabilities. Thus, it is important that researchers conduct structured multicriteria analyses when working with decisionmakers in addressing complex policy problems (Manning, Smith, & Homel, 2013).

Sampson, Winship, and Knight (2013) argue that policymakers also need information on causal processes and contexts, not just whether an intervention is associated with an outcome. Experimental and quasi-experimental evaluation research tests if an intervention led to a desired outcome (e.g. reduced crime)—if it *caused* that outcome. When rigorous, this kind of research may be our best option for deciding "what works," but it has major limitations, including the possibility that interventions only work under specific conditions. Translators of this kind of research must recognize that policymakers and practitioners may think about "what works" differently than researchers. Decision-makers must be concerned with "what *will* work" more than "what *has* worked," and are often worried that an intervention that has worked in the past will not work in a different context (e.g. time, place, or population). In academic terms, experimental studies can make strong cases for internal validity (cause and effect shown in one case) but not external validity (this cause and effect can be generalized—will occur in other cases). A "black box" view of evaluation studies—being concerned with study results

only—ignores the possibility that an evidence-based intervention will not work in future applications.

Thus, decision-makers need information that speaks to whether an intervention will work more generally, and recommendations must be based on broader evidentiary standards than those determining the merit of one study. This is particularly true with *policy* recommendations. As rules for institutional behavior, policies cannot be viewed the same way as other interventions, such as a program treatment or practice (e.g. a substance abuse counseling model or technique). Thus, policy changes based simply on the results of tests of specific treatments are risky. The process of translating cause-and-effect oriented research into policy must include inquiry into 1) the multiple *mechanisms and causal pathways* by which interventions produce results—exactly "how" causation occurred, which includes indirect relationships, 2) the possibility of *effect heterogeneity*—that an intervention works differently for different or future populations, including that it is beneficial for some but not others (e.g. reduces offending among whites but not racial minorities), and 3) the social *context* within which causation occurred, such as geographic environment (neighborhood, city, country etc.), available opportunities (e.g. jobs), and institutional setting (family, school, work, justice system, etc.) (Sampson et al., 2013).

Since these three types of information are rarely found in experimental studies, other sources must be used. Studies replicated in other populations and contexts speak to how broadly an intervention may be applied, but there may not be enough of them to provide a policy basis. Thus, information may also be added from non-experimental research, such as surveys and interviews (which often provide important demographic and contextual data), as well as theoretical arguments. Theory and non-experimental research are also useful in designing future evaluation studies. Sampson et al. (2013) recommend the use of causal graphs to integrate information from experimental research, non-experimental research, and theory. These graphs outline the conditions under which cause and effect are more likely to take place; they show the "wider causal picture." To better inform policymakers, these graphs may be translated into "policy graphs" that relate causal systems to policy needs.

Efforts to make scholarship more widely accessible, such as reporting research in alternative outlets, must be supported by universities (Currie, 2007). Scholars are pressured to conduct types of research and write papers that lead to publication in select journals that are not very accessible to field professionals. These prestigious journals publish fine work, but it is difficult for many agencies and employees to

access them, and their articles are written mostly in a discourse that is unfamiliar to non-academics. However, this kind of scholarship is often given dominant weight in determining a scholar's career status—namely tenure, promotion, and merit raises. Newer institutional mechanisms must be developed to equitably recognize the value of broader synthesis and dissemination activities. Otherwise, university scholars may be reluctant or less able to engage in "public criminology." Currie (2007) recommends that we 1) reward work in public criminology 2) train graduate students to do this kind of criminology 3) try to convince funding sources that analysis and dissemination of completed research, not just original research, is important 4) develop more and deeper partnerships with a wide variety of actors—such as policy makers, journalists, citizens, community leaders, nonprofit organizations, public officials, and legislators—to develop research agendas, not just share results 5) build relations with relevant disciplines in a true multi-disciplinary effort to remove isolation from the public and 6) increase advocacy for the practical use of criminology through existing criminological organizations or the creation of new advocacy organizations.

Since emotions play an important part in developing social interventions, it is necessary to understand and embrace them in promoting use of research evidence, without abandoning the creation and use of rigorous research. Freiburg and Carson's (2010) review suggests that scholars and policymakers should 1) identify the nature of the emotional and symbolic concerns that influence policymaking 2) appropriately appeal to emotional needs (without letting emotions undermine discourse) to gain public and official support for putting research evidence into action 3) use emotional reactions as warning signs that decisions need more careful scrutiny and 4) conduct more research on the emotional dimensions of policymaking, including the emotional motivations of policymakers and how it interacts with research evidence, and include results in the body of research to be applied to future policymaking. These goals are better pursued through dialogue with the public, advocacy groups, and other stakeholders in a transparent, democratic process, in which actors are "enlightened" about the significance of evidence, values, emotions, and possible consequences in decision-making processes.

In their study of directors at US public child welfare agencies, Horwitz et al. (2014) found that new programs and practices are often generated by research done by agency staff, and most agencies paid for or provided continuing education for their staff. Thus, they reason that adding discussions of research evidence to continuing education offerings will promote its use, by fostering a sense of exploration into new, evidence-based programs and practices and reducing staff

resistance to them. The researchers also found that directors relied on state and local colleagues, rather than researchers and conferences, to explore new programs and practices. Thus, they also reason that decision makers' naturally occurring or newly developed social networks should somehow be employed to spread knowledge of and support for EBPs.

Ensuring that good research has a place in practice requires more than just good intentions by academicians and field professionals. Bridges must be formed between the two communities, which is not easy considering the obstacles reviewed above. Researchers and policymakers and practitioners stand a better chance of forming partnerships if they learn more about each other's work environments. For example, academicians should learn more about the needs of practitioners and policymakers in implementing research, and even undergo training to improve the practical utility and accessibility of the research evidence they create or recommend. Also, practitioners and policymakers should learn more about the utility of research evidence and develop practitioner training in the use of research evidence. There is much that academicians and field professionals can teach each other in the practical application of research.

More is needed than simply increasing the *amount* of communication between academics and field professionals. The quality of their interactions must be improved, which involves changing the nature of their relationships. For example, researchers cannot simply treat practitioners as passive recipients of information, dictating results and recommendations on their own terms to them. In turn, despite the difficulties of their positions, policymakers and practitioners cannot expect researchers to translate complex research into simple, quick, easy to understand terms and ideas (e.g. bullets, sound bites, one-page summaries) that distort the meaning of research. However, practitioners do not need to think like academics nor vice versa. Effective partnerships must be developed between the two "so each can bring their respective strengths to the process through a constructive division of labor" (Innes & Everett, 2008, p. 54).

Although difficult, it is important that academicians and field professionals collaborate in applying research evidence, in more than superficial ways. *Process use* of research evidence is a type of use that involves collaboration between researchers and field professionals to generate research *for use* in developing policy, practice, and programming (to meet an organization's specific need). In this process, rather than engaging in separate roles (e.g. one simply providing data to the other), the two parties jointly plan research and intervention activities. Process use thus has the potential to overcome some major problems in applying research

evidence: the unclear relevance of research to specific contexts and intervention development that eventually strays from the evidence basis (lack of fidelity). Some studies indicate that interventions are more likely to be evidence-based when they involve process use of research (Cherney, 2009).

Academicians and field professionals should also work together to diversify how research evidence is used. The dominant type of research use employed in the field appears to be *instrumental use*. Here, "explicit knowledge" (that which is "objective," relatively uncontested—often involves quantitative data) is drawn from to directly solve a specific problem. For example, crime incident mapping can reveal "hotspots" that show where policing efforts should be directed. Instrumental use thus focuses on the design of an intervention. Although valuable, this approach is limited as it is geared more toward short-term results, a focus that potentially undermines long-term goals. Selecting a specific solution to a problem is risky without first gaining a conceptual understanding of it. The *conceptual use* of research, then, focuses on an analysis of the problem that an intervention is intended to solve. In this approach, "strategic knowledge" is developed that defines the problem and places it in a theoretical context, which is an important first step in research utilization. Conceptual use does not necessarily imply an immediate specific intervention; however, it may impact policy and practice more generally over longer periods. Thus, it supports the sustainability of interventions. According to Cherney (2009), crime prevention problem solving requires a mix of instrumental and conceptual use in which conceptual use precedes decisions about instrumental use. This allows decision makers to conceive changing research use needs during different stages of problem solving processes.

Innes and Everett (2008) discuss a five-stage model of collaborative knowledge building and application, or, "technology transfer." In the first stage, *generation*, researchers conduct studies according to their methodological expertise, but practitioners actively participate as equal representatives on panels rather than just advisors. Next, during *organization*, empirical evidence is placed within a practice framework that suggests model interventions (i.e. in a language and package more digestible to practitioners). During *testing*, model interventions developed in the prior stage are implemented in the field and evaluated. During *translation*, the accumulated body of research, from the initial phase and model testing, are translated into the most accessible language and formats for broader audiences. Here, practitioners take the lead "in articulating the body of knowledge into 'how-to language' by developing program plans or manuals and providing training or technical assistance" (p. 55). Finally, during *application*, practitioners assume full control over the implementation and discretionary use of evidence-based

interventions. Thus, this multi-stage process begins with researchers taking the initiative and practitioners providing "reality checks" to theories and explanations. Then it shifts toward practitioners taking the lead in translating and applying knowledge and researchers providing their own reality checks regarding what is truly evidence-based and working.

Johnson et al. (2016) recommend that "third party" public policy and evaluation firms play an increased role in facilitating use of research evidence, mostly by bringing the "two communities" closer together. These firms are in a good position to help "fill the gap," as their purpose is to provide helpful information to decisionmakers. Academic institutions are geared more toward generating knowledge than implementing it. Field professionals oversee policy and implementation but are not always in a good position to access and use this knowledge. Policy research firms, especially those which can consider research and practice issues objectively, may act as liaisons, sharing the realities of policy and practice with academicians, and new research knowledge with agencies. Johnson et al. (2016, p. 416) wrote: "Public policy and research/evaluation firms can be considered 'catalytic organizations' that take the lead on strategic thinking, coaching and implementing what is often discussed in conceptual conversations among practitioners and empirical researchers.**"**

However, partnerships among policy research firms, criminal justice agencies, and academic institutions must be established and sustained much more often than is currently the case. Developing these partnerships will of course require more resources. Currently, there are limited funds to spend on research and program implementation. Thus, researchers and agencies may lack money to spend on getting third party groups involved in bridging the two. Some policy research firms rely heavily upon collaboration with community leaders and stakeholder groups to find funding and other resources. These collaborations also have the benefit of increasing the effectiveness of policy research firm interventions. Thus, it is important that community agencies and leaders, policy research and evaluation firms, and colleges/universities and research centers learn how to better work together in generating and allocating resources and making research, policy, and practice decisions (Johnson et al., 2016).

If ideological and political considerations drive the use of non-evidence based interventions, then we should reach out for public support for evidence-based interventions (Currie, 2007). It is important that the public have accurate information about social policies and programs, and the social problems to which they respond (e.g. crime). Bousfield, Cook, and Roesch (2014) conducted a pre/post-

test survey study in Canada and found that after being presented with empirical evidence relating to justice policy, citizens' opinions of policy became more similar to those of mental health and legal professionals. Their study suggests that public education and awareness efforts can change public opinions favorably toward evidence-based interventions. However, current efforts to get social science information out to the public are inadequate. Thus, academicians, advocates, and other interested parties must do more to make their work more widely and accurately known (Bousfield et al., 2014; Currie, 2007).

More strategies for improving use of research evidence are needed than covered here, but they too must be *evidence-based*. To develop stronger bases for strategies to improve practical use of research evidence, more research on "what works" in facilitating use of research evidence is needed. To this end, more knowledge must be acquired on how research is currently being acquired, viewed, and used (or not used) by criminal justice policymakers and decisionmakers.

Suggestions for Future Research

The two-communities theory offers a grounded explanation of the research-practice gap, but it provides an incomplete understanding, because it does not account for human agency. Field professionals and academicians are highly educated, capable people. They can be creative, and can certainly seek out information, scholarly or practical, beyond their immediate realms of work. Neither is "trapped" by their institutional contexts. While circumstances make it difficult for field professionals and academicians to work together, they do not make it impossible or too difficult. It is likely that some in fact do work together. More research examining organizational practices and system influences that impact implementation decisions is, therefore, needed to test theoretical assumptions. As Cherney (2009, p. 245) noted, "the way crime prevention guidance is adopted and applied (that is used) is largely unknown. There exists a critical need for studies on research utilization within the crime prevention field." For example, interviewing decision-makers in the field is needed to discover if their work lives support a "two communities" frame for understanding research underutilization and, more generally, to empirically verify the factors that influence administrator decision-making, particularly as it relates to any inability or reluctance to utilize research evidence in making policy and practice decisions.

It is important to identify problems that policymakers and practitioners experience in utilizing research. Policymakers and practitioners may desire and attempt to apply research evidence but be unable or hesitant to do so because of a

variety of reasons, including lack of time and limited job duties. More research is needed to identify the barriers to utilizing research evidence and what can be done to overcome them. To explore better ways to translate scientific findings into policy and practice, it is necessary to examine problems associated with processes of research knowledge acquisition, implementation, and dissemination. This includes identifying factors which inhibit or facilitate its use and areas of professional development needed for both practitioners and academics.

As the field of criminal justice develops a much-needed body of research about which programs are effective (or not), there is a corresponding need for research into the factors that influence the decision-making processes that lead to *adoption and implementation*. There is a growing body of implementation research that examines the contextual nature of implementing evidence based practices, the need for networks and communities of support that increase the capacity to provide effective services, and the relationships between researchers and their community based partners (Cherney, 2009). Furlong and McGilloway (2015, p. 1816) state that it is "increasingly important that evaluators highlight key agency factors and processes involved in routine delivery." Research examining implementation outcomes seeks to identify factors specific to the implementation process that are linked to effectiveness of particular interventions (Henderson, Young, Farrell, & Taxman, 2009; Proctor et al., 2011).

Implementation science as applied to criminal justice settings is an emerging field, and promises to provide frameworks, models and insights that will assist both researchers and practitioners in their quest to apply evidence-based practices in the field (Hanson et al., 2016). This is an important development because there is a strong push among criminal justice academics to find effective ways to hold "agencies accountable for producing outcomes related to program goals" (Lutze, et al., 2012, p. 48). In discussing their finding of the strong relationship between program integrity and program effectiveness, Wright et al. (2012, p. 793) called for more research that would help researchers and practitioners understand the "myriad paths that may be responsible for this relationship."

However, failure to properly implement evidence-based practices may be based on implementers' lack of faith in the empirical as well as theoretical bases for practices. Thus, future research should also explore the extent to which implementation decisions made by policymakers and practitioners stem from beliefs that 1) policies, programs, and practices have been properly implemented, and 2) the research examining their effectiveness is sound. Applying research evidence in everyday practice is difficult and uncertain. Using it in specific situations

requiring discretion, in particular, may be more "art than science." Problems may arise during application of research to service delivery, including failure to meet clients' needs. These problems may have a feedback effect that illegitimates research evidence in the minds of practitioners—a possibility that future research should explore (Johnson et al., 2016).

Existing literature seems to concentrate on only a few user communities. In criminal justice, research evidence based policy and programs appear to be emphasized more in corrections (Myers & Spraitz, 2011), and more attention seems to be given to decisions made by lawmakers and administrators in governmental agencies (Jennings & Hall, 2011). Little attention has been paid to the experiences of administrators closer to the frontline of criminal justice practice. Research should include participants such as executive level personnel in charge of agencies, organizations, or centers (e.g. CEOs, presidents, directors, coordinators). Although agencies must adhere to external requirements (e.g. laws, governmental policies, and funding requirements), their administrators have much control over internal policies, discretionary decisions, and daily practices. They may be the most likely in the agency to consult research literature. Thus, they represent an important population to study with respect to how research evidence is used in determining responses to crime.

More studies are particularly needed on how private agencies and practitioners use research in their decision-making processes. Little is known about how research evidence is acquired, interpreted, and used by professionals who are contracted by or collaborate with governmental agencies, such as those who provide child welfare services. The private sector is heavily involved justice processes, particularly juvenile justice. For example, the Office of Juvenile Justice and Delinquency Prevention reports that across the U.S., private residential facilities house roughly 30% of the juveniles in residential placement, and this number has held fairly steady over the last fifteen years, from 1997 to 2013 (Sickmund et al., 2015). This percentage does not include the large numbers of youth receiving community-based services. Thus, it is important to know how private professionals acquire their knowledge of research evidence (the mechanisms and strategies they use to access it); how they apply this information to policy and practice; how practice evolves based on new research evidence and how research evidence has led to policy changes at their agencies or organizations; the facilitators of and barriers to the use of research evidence that they experience; and the various factors or characteristics that impact their use of research evidence (e.g., of research itself, researchers, research organizations, the field, field professionals, relationships, and other contextual factors).

Finally, in addition to evidence-based research, research participants should be asked about their perceptions of pure (non-applied) research—that which extends beyond experimental and quasi-experimental studies designed to evaluate interventions, tests of social theory for example. Although not designed specifically to inform policy and practice, pure research attempts to make major discoveries about human behavior and society, and thus has major implications for how to respond to social problems. Recalling the importance of conceptual use of research evidence (Cherney, 2009), it can be argued that best practices and effective policies have both a strong empirical and theoretical foundation. Thus, research should also explore if and how pure academic research is being translated into policies and practices.

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