Implementation Science: Why it matters for the future of social work

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Abstract

Bridging the gap between research and practice is a critical frontier for the future of social work. Integrating implementation science into social work can advance our profession's effort to bring research and practice closer together. Implementation science examines the factors, processes, and strategies that influence the uptake, use, and sustainability of empirically-supported interventions, practice innovations, and social policies in routine practice settings. The aims of this paper are to describe the key characteristics of implementation science, illustrate how implementation science matters to social work by describing several contributions this field can make to reducing racial and ethnic disparities in mental health care, and outline a training agenda to help integrate implementation science in graduate-level social work programs.

Keywords

Implementation science; racial and ethnic disparities in mental health care; social work education; social work research

Introduction

Social work leaders (Brekke, Ell, & Palinkas, 2007; Proctor et al., 2009; Rubin, 2015; Thyer, 2015) and national reports from the Institute of Medicine (2001, 2003), the United States Department of Health and Humans Services (2001), and the National Institute of Mental Health (2008) have noted that there is a growing chasm between the knowledge generated from our best clinical and services research and the integration of this evidence in routine practice settings. This means that social workers in the community often lag behind the best available science and knowledge-base that should be informing their practices, and that researchers lag behind understanding critical services needs and questions relevant to social work practice that should be informing their studies. Bridging the gap between research and practice is a critical frontier for the future of social work.

Past approaches such, as the empirical clinical-practice movement, the increase in empirically-supported treatments, and the evidence-based practice model, have fallen short in narrowing the gap between social work research and practice (Thyer, 2015). These approaches have advanced the evidence-base of social work practice, but have tended to rely on "a unidirectional flow *from* research *to* practice" without a clear understanding of how the context and realities of practice shape the use of research in practice settings and how the generation of practice-base evidence can help integrate research and practice (Epstein, 2015,

p. 499). Implementation science can advance social work's effort to bring research and practice closer together since this emerging field focuses on understanding the processes and factors that influence the integration and use of research and empirically-supported interventions and policies into practice across multiple service sectors relevant to social work (e.g., health and mental health care systems, child welfare, schools, social services) (Proctor et al., 2009). The aims of this article are to: 1) describe the key characteristic of implementation science, 2) illustrate how implementation science matters to social work by presenting several contributions this field can make to reducing racial/ethnic disparities in mental health care, and 3) outline a training agenda to integrate implementation science in graduate-level social work programs.

What is implementation science?

Implementation science is the scientific study of methods that examines the factors, processes, and strategies at multiple levels (e.g., clients, providers, organizations, communities) of a system of care that influence the uptake, use, and ultimately the sustainability of empirically-supported interventions, services and policies into practice in community settings (Palinkas & Soydan, 2012; Proctor et al., 2009). It is commonly considered one of the last stages of the intervention research process that follows the results of effectiveness studies (Brekke et al., 2007; Fraser, 2004). At this stage, implementation focuses on taking interventions that have been tested using methodologically rigorous designs (e.g., randomized controlled trials, quasi-experimental designs) under real-world conditions and found to be effective and integrating the results of these studies into practice using deliberate strategies (Powell et al., 2012; Proctor et al., 2009).

Social work intervention research and implementation science are both applied disciplines but differ in fundamental ways (See Table 1). Social work intervention research examines the development, efficacy, and effectiveness of specified interventions while implementation science examines how to move and adopt these effective interventions into practice. The impetus of intervention research is to test whether a specified intervention usually applied to individuals, families, groups, providers, and sometimes communities compared to another intervention, no intervention at all, or the status quo, achieves desirable outcomes that focus primarily on improving health, social, and mental health indicators, functioning, quality of life, satisfaction with services, and quality of care among others. Implementation science also uses specified intervention or strategies, but these tend to be applied to providers, organizations, and even systems of care, to achieve desirable outcomes that focus on improving the uptake and use (e.g., acceptability, feasibility, fidelity, sustainability) of the intervention in a specific practice setting.

There are three fundamental characteristics that encapsulate implementation science. First, the implementation of empirically-supported interventions or practice innovations is a dynamic social process that is shaped by the context or ecology in which the practice innovation takes place and the people involved in this process (Damschroder et al., 2009). As stipulated by Everett Rogers (1995) in his influential diffusion of innovation theory, an "innovation almost never fits perfectly in the organization in which it is being embedded" (p. 395). This suggests that implementation can be characterized as mutual adaptation process

in which both the practice innovation (e.g., empirically-supported interventions, social policies) being implemented and the organizations and stakeholders (e.g., providers, administrators) involved in the implementation process must adjust to the new parameters of the innovation and the exchange of knowledge, attitudes, social norms, and practices that occur throughout this complex process (Damschroder et al., 2009; Palinkas & Soydan, 2012). Implementation is a social process that unfolds over time transforming the ecology of practice in order to enhance the fit, use, and eventually the integration of a practice innovation in organizations or systems of care (Cabassa & Baumann, 2013).

Second , implementation requires the interaction, collaboration, and participation of stakeholders at multiple levels of an organization or system of care (Aarons, Green, et al., 2012). Organizational leaders, directors, managers, administrators, service providers, front-line staff, clients, and their family members are all directly or indirectly involved as implementation entails a multitude of social processes, including planning, decision-making, negotiating, prioritizing, problem-solving, service delivery, restructuring and the allocation of resources. The more complex the practice innovation that is being implemented the more social interactions and involvement of stakeholders is needed. The participation and engagement of stakeholders is a critical ingredient of the implementation process as moving interventions into practice requires both knowledge and expertise about the intervention and locally-grounded knowledge, skills, and understanding about the settings and communities in which the intervention will be used. Implementation science is thus a collaborative endeavor.

Third, implementation is inherently a change process (Weisz, Ng, & Bearman, 2014). It entails the introduction, use, and integration of a new way of doing things within an organization or system of care. Implementation is a change in the status quo that requires alterations, modifications, adaptations, and adjustments in attitudes, social norms, practices, procedures, behaviors, and even policies. At the heart of this changes process is the use of implementation strategies which are systematic processes and practices intended to facilitate the adoption of a specified practice innovation into usual care in order to address gaps in services or in quality of care (Powell et al., 2012). In all, implementation science can help social work develop sustainable bidirectional bridges between research and practice in order to increase the relevance, use, impact, and sustainability of the best available evidence from clinical and services studies to improve the access, quality, and outcomes of social work interventions, services, and social policies.

How implementation science matters: A case study of how implementation science can help address racial/ethnic disparities in mental health care

Implementation science matters for the future of social work because it can help address many of the grand challenges facing our profession (American Academy of Social Work and Social Welfare, 2013). One such challenge where implementation science can make a significant difference is in the reduction of racial/ethnic disparities in mental health care in the U.S. Social workers are at the frontlines for combating these inequities in mental health care since our profession delivers the majority of mental health care in the U.S. (Proctor,

2004). In this section, I use examples from my own work and the work of others to illustrate how implementation science can help address racial/ethnic inequities in mental health care and help move this important area of social work forward. This discussion is not a systematic literature review but is meant to serve as a case study describing several contributions implementation science can make to the field of mental health care disparities.

In the Institute of Medicine (2003) report *Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care* inequities in care were defined as differences in health care treatments received by different groups (e.g., racial/ethnic minorities vs. non-Hispanic whites) that cannot be accounted for by differences in the health care needs or preferences of these groups and are impacted by the operations and ecology of the health care system, legal and regulatory climate, and discrimination and biases. In the area of mental health care, it is well established that racial/ethnic minorities in the U.S. face persistent inequities along the entire continuum of mental health care. Compared to non-Latino whites, racial/ethnic minorities are more likely to underutilize mental health services, discontinue treatments prematurely, and receive mental health care that is poor in quality even after adjusting for differences in educational levels, health insurance rates, and mental health needs (Institute of Medicine, 2003; United States Department of Health and Human Services, 2001). These mental health care disparities also contribute to greater persistence, severity, and burden of mental disorders among racial/ethnic minority communities (Alegria et al., 2008; Williams et al., 2007).

Social workers have ethical and professional obligations to eliminate racial/ethnic disparities in mental health care. As described in the Preamble to the National Association of Social Workers Code of Ethics, social workers "seek to promote the responsiveness of organizations, communities, and other social institutions to individuals' needs and social problems" particularly among historically underserved populations (National Association of Social Workers, 2015). Disparities in mental health care arise and are perpetuated because the providers, organizations, communities, and social institutions that are responsible for delivering mental health care fail to meet the needs of these vulnerable populations due to a constellation of factors (e.g., cost, lack of culturally-sensitive services, stigma, fragmentation of care, dearth of bilingual providers). In the following sections, I describe how implementation science can help reduce inequities in mental health care for these historically underserved communities by: facilitating the implementation of empirically-supported interventions known to reduce disparities in care, designing and selecting interventions with implementation in mind, and blending the cultural adaptations of interventions with implementation science (see table 2 for a summary of these areas).

Implement what we know works in racial/ethnic minority communities

There is a growing literature that supports the effectiveness of several empirically-supported interventions (e.g., depression treatments for adults, ADHD care for children, parent-management training) for reducing mental health care disparities, particularly for African Americans and Latinos (Miranda et al., 2005). Yet, these interventions are rarely implemented in community settings serving minority populations. Implementation science

can help address this important gap is by using implementation strategies to put these empirically-supported interventions into practice.

Implementation strategies are systematic and planned processes and actions that are designed to help move and integrate empirically-supported interventions into specific practice settings (Powell et al., 2012). As described by Powell and colleagues (2012), implementation strategies can take many forms, such as discrete single-actions (e.g., training workshops), multifaceted approaches that combine discrete actions (e.g., training workshops with supervision and fidelity feedback) or blended methods that incorporate a variety of actions into a specified package (e.g., learning collaboratives). Implementation strategies are used "to plan, educate, finance, restructure, manage quality, and attend to the policy context to facilitate implementation" (Powell, Proctor, & Glass, 2014, p. 193).

Primary care is one setting in which using implementation strategies to move empirically-supported interventions can have profound impacts in reducing disparities in mental health care. Primary care clinics are a common site where racial/ethnic minorities turn to for mental health care, particularly for depression (Cabassa & Hansen, 2007; United States Department of Health and Human Services, 2001). Quality improvement programs for depression in primary care that use a collaborative-care approach produce better depression outcomes than usual care for African Americans and Latinos (Cabassa & Hansen, 2007; Miranda et al., 2003). Despite these important results, racial/ethnic disparities in depression care still persist.

Linking specific implementation strategies with effective depression interventions can address disparities in depression care as shown in a recent group-level randomized comparative effectiveness trial conducted in racial/ethnic minority communities in Los Angeles, California (Wells et al., 2013). Ninety-three matched programs from health, social and other service sectors were randomly assigned to one of two different implementation strategies to translate a quality improvement program for depression care. The first strategy named resources for services (RS) offered technical assistance to community programs using a "train-the-trainer" paradigm that employed webinars plus site visits to train programs on the depression care program. The trainers for this strategy included a nurse care manager, licensed psychologist, three board-certified psychiatrists, support staff, and community service administrator to support participation and cultural competence. The second strategy called community engagement and planning (CEP) invited agency administrators to bi-weekly meetings for 5 months to build training capacity for delivering the intervention and networks to support services. The planning for the CEP strategy was co-led by community and academic partners and followed the principles of community-partnered participatory research, a form of community-based participatory research (CBPR) that promotes two-way knowledge exchange, trust, and capacity building (Jones & Wells, 2007). The CEP condition also used a workbook for developing implementation plans tailored to the community and for monitoring the implementation process in order to make course corrections as needed.

This study found that the CEP strategy was more effective than the RS strategy at improving mental health-related quality of life, increasing physical activity and reducing risk factors for

homelessness. CEP also shifted clients' use of services for depression by reducing hospitalizations and specialty medication visits and increasing visits to primary care and other community-based sectors for care (e.g., faith-based programs) (Wells et al., 2013) . These findings indicate that CEP is a viable implementation strategy that can be used in racial/ethnic minority communities for moving effective depression care programs into routine practice. This type of implementation study moves the field of mental health care disparities research and practice forward as it goes beyond testing the effectiveness of interventions and produces the necessary evidence to identify which implementation strategy work best for improving depression care in historically underserved communities. More studies linking mental health care disparities research and implementation science are needed to advance the knowledge-base on how to best implement what we know works in racial/ethnic minority communities.

Design and select interventions with implementation in mind

Although several empirically-supported interventions exist for addressing mental health care disparities, gaps in the knowledge-base continue to exist. Many mental health interventions are not developed and rigorously tested in racial/ethnic minority communities (Aisenberg, 2008). In a recent review of 75 RCTs conducted between 2001 to 2010 across several mental health conditions (bipolar disorder, schizophrenia, major depression) that included a total of 14,646 participants, racial/ethnic minorities were seriously underrepresented accounting for 19% of the total sample in these trials (Santiago & Miranda, 2014). Asian Americans/Pacific Islanders represented 1% and American Indians/Alaska Natives were less than 0.01% of the total sample. This stark underrepresentation raises serious concerns about the validity of the evidence-base of mental health interventions for racial/ethnic minority groups and points toward the need to reconfigure the process of intervention development for these historically underserved communities.

Implementation science can help address this need by informing the process of intervention development. This approach considers from the early stages of intervention development the typical circumstances in which the intervention will be used so that what is developed fits with the ecology of practice. Examples of implementation issues that can inform the selection and development of interventions include: client characteristics (e.g., health and mental health comorbidities, cultural factors, language proficiencies, income, competing social and economic demands, educational levels, etc.), provider factors (e.g., training, supervision, biases and discrimination, competing tasks and responsibilities, professional roles, attitudes toward evidence-based practice), organizational features (e.g., resources, policies, reimbursement regulations, organizational culture and climate, funding streams, leadership, institutional racism), and community-level factors (e.g., cultural norms toward mental illness and mental health treatments, stigma, community resources and assets, policies and political interests). Moreover, attention to implementation outcomes, such as feasibility, acceptability, appropriateness, cost, and sustainability, can also be considered in the early stages of intervention development (Proctor et al., 2011).

Designing and selecting interventions with implementation in mind can be accomplished by partnering with stakeholders (e.g., clients, community members, providers, researchers)

from the very beginning of this process. Community-based participatory research (CBPR) is one approach used in translational research that focuses on fostering synergistic collaborations between stakeholders by capitalizing on their shared knowledge, wisdom, and expertise (Cabassa et al., 2013). CBPR contributes to implementation science by: 1) helping contextualize interventions to the realities and conditions of specific communities and settings, 2) integrating social and cultural values, perspectives, and norms into the development and implementation of interventions to enhance their relevance, acceptability, and effectiveness, and 3) strengthening the capacities of stakeholders to produce community-engaged research and practices critical for reducing inequities in health (Jones & Wells, 2007; Wallerstein & Duran, 2010).

Our group recently published an article describing how we used photovoice, a CBPR approach, to partnered with two supportive housing agencies in New York City to inform the selection and design of an intervention aimed at improving the physical health of Latinos and African Americans with serious mental illness (SMI; e.g., schizophrenia, bipolar disorder) (Cabassa et al., 2013). Photovoice is a participatory-research method that empowers participants to use photographs, narratives, and dialogue to communicate and critically reflect upon their shared experiences and inform social action (Minkler & Wallesrstein, 2008). In this study, we conducted two photovoice groups, one at each agency. Each group met for six consecutive weeks and consisted of eight participants, mostly African Americans and Latinos recovering from SMI. In these groups, participants discussed the photographs that they took in their communities related to their physical health and wellness.

The results of this study showed how using photovice can generate valuable information about clients' preferences for the formant, content, and methods of a health intervention. Participants in the study indicated that they would preferred an intervention that is delivered by peer specialists rather than professionals (format), focus on weight-loss and physical activity (content), and use experiential approaches (e.g., cooking demonstrations) to help clients develop the necessary skills to engage in a healthy lifestyle (method). This study illustrated how participatory-research methods "can foster community engagement and social action among vulnerable and often overlooked populations by providing the space and tools for community members to actively contribute to the generation of knowledge and wisdom essential" for designing and selecting interventions that are grounded on the realities of the community (Cabassa et al., 2013, p. 628).

Using implementation science to inform the design of interventions in racial/ethnic minority communities requires community engagement that bridges research and practice and values multiple forms of knowledge. Designing and selecting interventions with implementation in mind is an approach that intends to reconfigure the process of intervention development by examining from the very beginning how the context of practice influences the use of the interventions in community settings in order to enhance their relevance, acceptability, cultural sensitivity and sustainability. The ultimate goal of this approach is to help accelerate the development and testing of empirically-supported interventions and practice innovations that can be implemented in the community to reduce inequities in mental health care.

Blend cultural adaptations of interventions with implementation science

Culture shapes many aspects of mental health care, including help-seeking decisions, pathways to care, the expression and identification of mental disorders and psychological distress, engagement and retention in mental health treatments, and the delivery of mental health care (Kirmayer, 2012; United States Department of Health and Human Services, 2001). The basic assumption of adapting existing mental health interventions to clients' culture is that "by explicitly integrating cultural factors (e.g., language, cultural values, gender roles) into care, the relevance, acceptability, effectiveness, and sustainability of treatments will be increased, and inequities in care will be narrowed" (Cabassa & Baumann, 2013, p. 2).

Recent meta-analyses have found that culturally adapted empirically-supported interventions can produce small to moderate treatment benefits when compared to different conditions (e.g., placebo, treatment as usual, waitlist conditions, non-adapted interventions) (Benish, Quintana, & Wampold, 2011; Griner & Smith, 2006; Huey & Polo, 2008; Smith, Domenech Rodriguez, & Bernal, 2011). These benefits seem to be linked to adaptations that target treatment goals, clients' explanatory models of illness, and the incorporation of metaphors that match clients' cultural views into intervention materials (Benish et al., 2011; Griner & Smith, 2006). Culturally-adapted interventions seem to work best for certain groups, such as low acculturated Latinos, non-English speaking clients, older clients, and when the intervention is delivered to a racially/ethnically homogenous group (Griner & Smith, 2006). Despite these results, culturally-adapted mental health interventions remain largely unused in racial/ethnic minority communities.

Cabassa and Baumann (2013) described three critical areas for integrating the fields of cultural adaptation of mental health interventions and implementation science to create better avenues for translating the best available mental health treatments into practice. First, the explicit use of existing cultural adaptation models in the implementation process can help clarify how cultural factors at the client- and/or provider-levels impact the use and outcomes of mental health interventions. Common features of these models include: collaborations between treatment developers and stakeholders, use of formative research methods (e.g., focus groups) to understand the context of practice and clients' needs and strengths, consideration of provider factors (e.g., skills, training, cultural-competence) to enhance the ecological validity of the intervention, use of iterative pilot testing to refine intervention adaptations, and use of rigorous designs to test the effectiveness of the adapted intervention (Ferrer-Wreder, Sundell, & Mansoory, 2012).

Second, blending the principles and methods used in these two fields can help specify and document what aspects of the intervention and/or the context of practice needs adaptations, at what levels (e.g., clients, providers, organization), and how these adaptations, if necessary, impact client-level and implementation outcomes. Third, applying the ecological lens commonly employed in implementation science into the adaptation process can help assess and identify contextual factors at multiple levels that influence the use and integration of interventions in community settings. Studies examining the relationships between contextual factors and the adoption of practice innovations indicate that these distal factors play an important role in the implementation process (Aarons, Horowitz, Dlugosz, & Ehrhart, 2012).

For example, organizational factors such as the size of organizations, the division of units and departments within organizations, having a decentralized decision-making structure, and having leadership support and champions, have been found to facilitate the implementation process (Greenhalg, Glenn, MacFarlane, Bate, & Kyriakidou, 2004).

The collaborative intervention planning framework provides an example of how to blend cultural adaptations methods and implementation science (Cabassa, Druss, Wang, & Lewis-Fernandez, 2011). This framework combines CBPR and intervention mapping (IM) to inform the intervention adaptation process. CBPR principles (e.g., mutual trust, capacity building) are used to develop and foster a partnership between researchers and stakeholders involved in the delivery of the intervention through the formation of a community advisory board. IM, a systematic approach that uses group activities (e.g., brainstorming exercises) and visual tools (e.g., logic models) to develop a road map for the development, adaptation and implementation of interventions (Bartholomew, Parcel, & Kok, 2006), is then used to put the CAB partnership into action. The collaborative intervention planning framework provides a set of steps, procedures, and methods drawn from cultural adaptation models and implementation science that enable stakeholders to systematically analyze the fit of each intervention component to the client population, provider groups, and local practice setting.

We recently applied this framework to adapt an existing health care manager intervention to a new client population (Latinos with SMI) and provider group (social workers) (Cabassa et al., 2014) to fit the context of a public outpatient mental health clinic in New York City. The adaptation process included: fostering collaborations between CAB members; understanding the needs of the local population through a mixed-methods needs assessment, literature reviews, and group discussions; critically examining intervention objectives to identify targets for adaptation; and developing the adapted intervention. The application of the collaborative intervention planning framework helped identify a series of cultural and provider level-adaptations that enhanced the relevance, acceptability, feasibility, and cultural-sensitivity of the health care manager intervention without compromising its core components. Overall, blending the cultural adaptations of mental health interventions with implementation science can create better avenues for translating the best available mental health treatments into routine practice in minority communities (Cabassa & Baumann, 2013).

Outline of an implementation science training agenda for graduate-level social work programs

In this section, I outline the beginning components of a training agenda that could be used to integrate implementation science in Master-level social work programs. The learning objectives for this training agenda include: 1) identifying and analyzing gaps between research and practice in different practice settings and populations; 2) critically examining and using different implementation science theories and frameworks to understand and address gaps in mental health care; 3) applying implementation science methods to understand the processes, factors, and practices that influence the integration of research and practice in different practice settings and populations; 4) using different implementation

strategies to facilitate the use of empirically-supported interventions and practice innovations; and 5) communicating to policymakers, practitioners and the public at large the benefits of using implementation science to improve the access, quality, outcome, and sustainability of mental health services across different settings and populations. This training agenda aims to increase students' knowledge of the gap between social work research and practice and provide students with the basic foundations on implementation science. This agenda includes integrating general knowledge of implementation science throughout the MSW curriculum, using implementation science to inform field education, and developing specialization programs on implementation science.

Integrate general knowledge of implementation science throughout the MSW curriculum

The integration of implementation science in the curriculum of MSW programs can take on many forms. Implementation studies and readings could be introduced and discussed in foundation-level courses particularly when presenting and discussing the principles and steps of evidence-based practices In research methods and program evaluation courses, instructors can present methods commonly used in implementation science, discuss existing implementation studies in areas relevant to social work, and discuss the relevance of these methods and approaches for examining social work practice and policies. They can also encourage students to develop projects and proposals that have a focus on implementation science. In policy courses, implementation theories and frameworks could be introduced to discuss how laws, regulations, funding mechanisms, and political forces impact the introduction, use, and sustainability of empirically-supported interventions in different systems of care relevant to social work.

In more advanced clinical courses where students learn how to deliver empirically-supported interventions, implementation science readings, discussions, and case studies could be presented to discuss the factors and processes that influence the use of these interventions in different practice settings and populations. Assignments in these clinical courses (e.g., papers, group presentations) could be included in which students use existing implementation science theories to conduct an ecological scan identifying factors and processes at multiple-levels of their field placement agencies that could facilitate or hinder the use of these empirically-supported interventions. Integrating general knowledge of implementation science throughout the MSW-curriculum would provide students with the basic knowledge and skills necessary to begin understanding implementation issues in their respective fields of practice.

Use implementation science to inform field education

Field education is one of the greatest yet under-developed assets that the social work field has for creating bridges between research and practice. Implementation science could be used to inform students' field education experiences to gain a deeper understanding of the gaps between research and practice and provide real-world experiences to prepare them to address these gaps as they move into the workforce. At a foundational-level, field placements could be structured to help students gain a deeper appreciation of the ecology of practice that impacts the integration of social work research and practice. Field placements could be organized for students to systematically rotate through various organizational roles

(e.g., quality assurance staff, administration) that go beyond providing clinical assessment and treatments within an agency to gain a deeper understanding of the day-to-day operations of an agency and the context of practice (Weisz et al., 2014).

Field placement sites could be developed within organizations that focus on implementing and scaling-up empirically-supported interventions within systems of care. A cadre of these types of organizations currently exists in some state and city governments and the Veterans Administration. For instance, the New York State Office of Mental Health in 2007 established the Center for Practice Innovations (CPI) to support the implementation of empirically-supported mental health interventions throughout New York State. CPI uses state-of-the art implementation approaches (e.g., learning collaboratives) to scale-up practice innovations (e.g., assertive community treatment, supported employment and education, treatment of first-episode psychosis), enhance and maintain practitioners' expertise, build stakeholder collaborations, and develop agencies' infrastructure to support the adoption and sustainability of empirically-supported interventions (Covell et al., 2014). A field placement at an organization like CPI would provide MSW students with rich practical experiences in the application of implementation science in real-world settings.

Field placements opportunities could also be integrated into implementation studies conducted by social work faculty members For example, at the Columbia University School of Social Work where I currently teach and conduct research, I established a field placement site with the help of our field education department for students in our advanced clinical social work practice and advanced generalist practice and programming concentrations as part of a National Institute of Mental Health funded study entitled "Implementing Health Care Interventions for Hispanics with Serious Mental Illness: K01 MH091108" (Cabassa et al., 2011). As part of this field placement, students were placed at a public outpatient mental health clinic in New York City, the community partner for our study. At this clinic, students received clinical training and experiences working with adults clients with serious mental illness (e.g., schizophrenia, bipolar disorder) from licensed clinical social workers and participated in a variety of implementation science activities, including discussing directed readings in implementation science, participating in a community advisory board charged with adapting and implementing a health care manager program for Hispanic clients with SMI and at risk for cardiovascular disease, helping in the analysis and interpretation of stakeholder (e.g., administrators, clinicians, peer advocates) interviews that informed intervention adaptations and implementation, and delivering the adapted health care manager program to a small group of clients under the supervision of our research staff and clinicians from their field placement. Using implementation science to inform field education can provide a useful training platform for students to learn about the application and practice of implementation science in community agencies.

Offer specialization programs or certificates on implementation science

This approach will enable social work students to develop a set of specialized knowledge and skills in implementation science. These specialty programs could combine classroom learning, on-line courses or workshops, and field placement opportunities. It could also include courses in other disciplines relevant to implementation science (e.g., organizational

psychology, management and administration, public health). Instructors for these programs should include existing social work faculty engaged in implementation studies as well as practitioners from multiple fields of practice with real-world expertise directing implementation efforts at their organizations.

These programs will require the development of a package of courses and training opportunities that focus on the theories, research methods, and practices necessary to prepare social work students to practice implementation science. Some of these courses already exist in some social work schools, such as courses in community-based participatory research, quality monitoring and improvement in the social services (see http://www.qualitysocialservice.com/ for a description and materials for this course) and implementing and evaluating evidence-based practice. Other courses relevant to implementation science would need to be developed (e.g., research and evaluation methods for implementation practice, introduction to the development and application of implementation strategies). This specialization in implementation science could cut across different fields of social work practice or be located within specific social work concentrations (e.g., health and mental health, gerontology, child welfare).

Given the applied nature of implementation science, field education should be integrated into these specialized programs in order for students to apply the knowledge and skills they learn in their specialization courses. Programs could also require students to complete a Master-thesis or an applied project that focus on a relevant implementation science topic. These could entail conducting practice-based research at a field placement site applying a variety of research designs relevant to implementation science (e.g., observational studies, quasi-experimental designs, mixed-methodologies, participatory-research designs) and focus on exploring, describing and/or testing how different processes and factors promote the use of empirically-supported intervention, practice innovations or social policies in routine practice settings to address a gap in care. The aims of these specialized programs are to develop the next generation of social work professionals that have specialized knowledge and expertise necessary to direct implementation efforts in different areas of social work practice and contribute to the development of a science and practice of implementation within the social work profession.

Conclusion

Bridging the gap between social work research and practice has been a long-standing problem in our profession (Thyer, 2015). In this article, I presented how implementation science can serve as a bi-directional bridge to advance our profession's efforts to bring research and practice closer together. From the research side, implementation science is an applied discipline that provides a variety of theories, frameworks, and methods to understand the factors and processes that influence the uptake, use, and sustainability of empirically-supported interventions, practice innovations, and social policies into practice. This research is critical for understanding how the ecology of practice influences the integration of our best available evidence from clinical and services studies into real-world practice settings. From the practice side, implementation science provides practitioners the skills, tools, and

knowledge-base to identify and analyze gaps in services and quality of care and use practical strategies to facilitate the integration of interventions, programs, or policies into practice.

In sum, integrating implementation science into social work can help advance our professions most basic mandate "to enhance human wellbeing and help meet the basic human needs of all people" (National Association of Social Workers, 2015) by putting into practice what we know works from our most rigorous social work interventions and services research, helping develop, adapt and use interventions and practice innovations that fit the conditions of practice, and meet the needs of our clients, and preparing our workforce to take leadership positions in implementation efforts. Implementation science matters for the future of social work because it can help our profession develop bidirectional bridges between research and practice to increase the relevance, use, impact, and sustainability of our best available interventions, services and social policies.

Acknowledgments

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Table 1

Characteristics of Social Work Intervention Research and Implementation Science

	Social Work Intervention Research		Implementation Science	
Key research aim	•	Develop and test the efficacy and effectiveness of social work interventions.	•	Understand the factors, processes, and strategies that shape the uptake, use, integration and sustainability of social work interventions and practice innovations in practice.
Example of research questions	•	Does the intervention work under ideal conditions? (efficacy)	•	What factors facilitate or hinder the widespread use of an empirically-supported intervention in specific practice settings?
	•	Does the intervention work under real-world conditions? (effectiveness)	•	What strategies can administrators, managers and clinicians use to increase the use of an empirically-supported intervention in a specific practice setting?
	•	What impact does the intervention has on individual and family-level outcomes?		
Common study designs	•	Quasi-experimental trials	•	Observational studies
	•	Randomized controlled trials	•	Mixed-methods designs
			•	Hybrid effectiveness/implementation designs
Common units of analysis	•	Clients	•	Providers
	•	Providers	•	Organizations
			•	Systems of care
Examples of change strategies or interventions	•	Cognitive behavioral therapy	•	Learning collaboratives
	•	Motivational interviewing	•	Train-the-trainer
	•	Anti-poverty program	•	Availability Responsiveness and Continuity (ARC) Intervention
Common outcomes	•	Health and mental health indicators	•	Adoption
	•	Social indicators	•	Acceptability
	•	Functioning	•	Appropriateness
	•	Quality of life	•	Cost
	•	Quality of care	•	Feasibility
	•	Satisfaction	•	Sustainability
			•	Fidelity

Table 2

Examples of How Implementation Science Can Help Address Racial/Ethnic Disparities in Mental Health Care

Implementation science contributions	Summary of key points	Examples of implementation science articles	Examples of research questions relevant to implementation science
Implement what works	• Implement empirically-supported interventions shown to improve access, quality and/or quality of care in minority communities. • Use implementation strategies to move empirically-supported interventions into minority communities.	Wells et al. (2013). This study used a group-level randomized comparative effectiveness trial design to test the impact of two implementation strategies to translated a quality improvement program for depression care in minority communities.	• Which type of implementation strategies (single, multifaceted, blended), produce the best implementation and client-level outcomes to reduce disparities in mental health care?
Design and select interventions with implementation in mind	• Consider the ecology of practice in which the intervention will be used to inform the intervention development process. • Engage stakeholders from the very beginning using CBPR approaches to inform the selection and design of interventions.	Cabassa et al. (2013). This study used photovoice in two supportive housing agencies to engage diverse clients with serious mental illness with SMI to inform the selection and design of a health intervention.	• What methods or approaches can be used to involve stakeholders in the process of intervention development? • How do CBPR approaches facilitate the development of interventions that are community-informed and sustainable?
Blend cultural adaptations of interventions with implementation science	• Blend implementation science and cultural adaptation of mental health treatments to create better avenues for translating the best available mental health treatments into routine practice in minority communities.	Cabassa et al. (2014). This study used the collaborative intervention planning framework to adapt an existing health-care manager intervention to a new patient population (Hispanics with serious mental illness) and provider group (social workers) to increase its fit with the local practice setting.	• What elements of an existing intervention or context of practice need to be adapted to enhance it's the cultural relevance and social validity?