Published in final edited form as:

Am Psychol. 2020 November ; 75(8): 1033–1037. doi:10.1037/amp0000774.

Expanding the Reach of Psychological Science Through Implementation Science: Introduction to the Special Issue

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Abstract

Implementation science is the study of methods to promote the systematic uptake of effective practices into routine care settings with the broad goal of ensuring that scientific discoveries realize their potential and improve people's lives. As a field, implementation science includes three primary foci: (a) understanding the context in which individuals will implement practices that have a strong, established evidence base (b) developing implementation approaches that target the factors that may accelerate or hinder implementation, and (c) conducting pragmatic trials to test these implementation approaches. Psychological science has contributed substantially to the knowledge and methods used in implementation science. In medicine and public health, these contributions have been leveraged to facilitate the uptake of screening and prevention programs, hand hygiene to reduce infection transmission, and many medical innovations. In behavioral health settings, implementation science has often focused on specific forms of psychotherapy, with emphasis on the evidence-based psychological practices that are highlighted in treatment guidelines. This article provides an overview of the field with an emphasis on the bidirectional relationship between implementation science and psychological science illustrated through the articles accepted for this Special Issue of the *American Psychologist*. It concludes with recommendations for future research at the intersection of implementation science and psychological science.

Background: Opportunities for Bidirectional Learning at the Intersection of Implementation Science and Psychological Science

Reducing the gap between science and practice is the great challenge of our time. Decades of psychological science has yielded discoveries that support psychological health and well-being. Yet this knowledge is not typically effectively disseminated to the public or implemented in applied settings, thus not achieving its promise to meet population health needs. Difficulties in reducing the science to practice gap have been driven by an incomplete understanding of the realities of specific practice settings, suggesting that bidirectional learning and contributions from multiple stakeholders are

needed to successfully implement and sustain new and effective practices. In the broader healthcare field, implementation science has emerged as a potential solution to address this challenge, as it focuses on increasing the likelihood that evidence-based interventions can be successfully implemented in non-research contexts. Implementation science is the study of methods to promote the application of research findings and evidence-based practices and principles (EBPs) into routine practice (Eccles & Mittman, 2006; Stirman & Comer, 2018).¹ As a field, implementation science includes three primary foci. First, implementation science emphasizes the importance of understanding the context in which individuals will implement EBPs and how these contextual factors contribute to implementation success or failure. Contextual factors include the knowledge, skills, beliefs and attitudes of those asked to implement such as therapists or teachers, as well as the broader organizational, social, policy, and economic context. Second, implementation science focuses on developing implementation approaches that target the factors that may accelerate or hinder implementation. Third, implementation science involves conducting pragmatic trials to test these implementation approaches in real world settings to improve implementation, with the ultimate goal of improving health and quality of life.

Advances made at the intersection of implementation science and psychological science can move both fields forward in two important ways. First, implementation science can reduce the science to practice gap and ensure that discoveries made through psychological science actually reach those who will benefit from them. Implementation scientists have been exploring how best to implement EBPs in public mental health settings to increase access for children and adults who seek or could benefit from these treatments (Beidas, et al., 2012, 2016, 2019; Stirman et al., 2010, Monson et al., 2019, Marques et al., 2019, Johnson et al., 2019). Second, implementation science is fundamentally focused on adult behavior change within organizational constraints (Williams & Beidas, 2019). Its typical focus benefits from understanding behavior change, and implementation researchers have applied core findings from psychological science to our understanding of motivation, leadership, and attitudes (Aarons et al., 2009, 2010, 2017; Fishman et al., 2018). Findings from areas of psychology such as organizational psychology are foundational to implementation science and clinical psychology has increasingly embraced the importance of implementation science. The articles in this special issue highlight and leverage insights from many areas of psychology that have informed implementation science.

Overview of Articles in the Special Issue

The first section of the special issue demonstrates the value in drawing on psychological science in implementation strategy development and deployment. Both Becker and colleagues (2020) and Purtle and colleagues (2020) employ principles from consumer psychology and marketing to identify strategies to disseminate information about EBPs to different audiences. Becker et al. (2020) examine approaches to disseminate information and increase awareness about EBPs for adolescent substance use among parents of adolescents. Next, Purtle et al. (2020) draw from theory and research on methods to

¹Evidence-based practices in this special issue include some interventions that are not psychotherapy, and in this context we define them as psychosocial interventions that demonstrate rigorous scientific evidence that they improve clinical outcomes.

influence key stakeholders through persuasive communication, applying these principles to the dissemination of information about treatment guidelines to practice audiences. They explore ways in which these theories from consumer and social psychology can increase therapist receptivity to recommendations and guidelines. Lyon, Brewer, and Areán (2020) draw from human centered design and human factors research to inspire new thinking about how best to develop and deploy implementation strategies. This approach, which grounds product development in an understanding the needs, preferences, capabilities and limitations of people who will use it, can ensure that both implementation strategies and EBPs are tailored to the unique needs of the individuals and settings in where they will be practiced.

The second section of this special issue draws on cutting edge innovations and digital mental health interventions (DMHIs). DMHIs are typically developed using principles of human-centered design, and are designed to make these interventions on a broader scale in order to improve access to and practice of effective behavioral health strategies. However, they are not widely used in health care settings, either as adjuncts to psychotherapy or as standalone interventions. Schueller and Torous (2020) employ a widely-used implementation framework to describe the myriad potential barriers and facilitators to the use of DMHIs. Next, Graham and colleagues (2020) provide recommendations regarding appropriate strategies to address the contextual factors that can hinder DMHI implementation in healthcare settings. Both articles describe key ethical considerations related to the use of DMHI and how organizations and clinicians can foster transparency regarding the use of consumer data and safeguard consumer privacy.

The third section of this special issue spotlights implementation within systems and organizations. Melgarejo and colleagues (2020) examine the associations between leadership, implementation climate (i.e., whether an EBP is expected, supported, and rewarded), and fidelity (i.e., adherence and competent delivery) to EBPs for autism in school settings. Their findings have implications for the role of leaders in supporting interventions that may require greater flexibility and teacher skill, and point to the importance of bringing organizational psychology to bear on efforts to implement EBPs. To address concerns about how few veterans receive EBPs within the VA healthcare system, Crowe and colleagues (2020) assembled a workgroup comprising stakeholders from all levels of the system and employed an intervention mapping process (Kok et al., 2004) to identify the most appropriate implementation strategies to address barriers and leverage facilitators to implementation. Intervention mapping, a multistep process for developing effective behavior change interventions, was first developed by an educational psychologist. The resulting recommendations at the system, hospital, program, therapist, and patient level, may serve as a model for identifying the most appropriate strategies within other organizations and systems. Hoagwood and colleagues (2020) advocate a different approach, suggesting a move away from specific EBPs and toward health policy initiatives and to redefine implementation science to focus on the implementation of policies to support children and families. Their work suggests the types of policy interventions and advocacy that may be needed to see broader improvement in public health.

The last section of the special issue includes examples of essential aspects of implementation science applied in routine care settings. Wyatt and colleagues' (2020)

study provides an illustration of a hybrid effectiveness-implementation study for an EBP to increase the use of HIV risk-reduction strategies in serodiscordant couples. While the study's results indicate positive outcomes, the implementation component provides rich contextual understanding of the low levels of full participant engagement, something that could ultimately lead to discontinuation of the intervention at the organization level. These findings point to a need to address critical barriers to care through adaptation of the EBP and integration of strategies to address social determinants of health that are barriers to care. Orenge-Aguayo and colleagues (2020) demonstrate the power and importance of partnership and flexibility in implementing EBPs in under-resourced settings through close partnership with diverse communities. Their work illustrates the need for flexibility in both the training and the provision of the intervention in implementing trauma-focused CBT for youth in three low-resourced settings (rural South Carolina, Puerto Rico, and El Salvador). Despite the stark contrast between these communities and the academic settings in which EBPs are often first developed and tested, their program evaluation data indicated a magnitude of improvement that was similar to, and even exceeded, that found in controlled trials. These studies demonstrate the promise of integrating psychologically informed implementation principles into efforts to broaden the reach of EBPs to the communities that need them.

Conclusion and Future Directions

This strong collection of work suggests that the future is promising with regard to the potential to move the need on population health through implementation science and psychological science. It is remarkable that there were over 70 strong submissions from all over the world for this special issue, showcasing work at the intersection of implementation science and psychological science. This is strong evidence that our field understands that to achieve the promise of our scientific discoveries in psychological science, it is essential to integrate implementation science into our efforts. Similarly, to advance implementation science, the approaches must be infused with evidence-based psychological science. Notably, though, the call for papers sought examples of implementation science across the field of psychological science, including areas such as clinical, counseling, or health psychology, geriatric psychology, school/educational psychology, forensic psychology, environmental, and sports psychology, but most of the submissions focused on clinical and healthcare settings. Implementation science has the potential to increase the impact of scientific discoveries in these other areas of psychology, as well and we hope to see growing work in this area in the coming decade.

Since initially conceptualizing this special issue, the world has dramatically changed with the COVID-19 pandemic and a national reckoning in the United States of the impact of racist and discriminatory structures and policies (Hardeman & Karbeah, 2020), and the stark economic inequities that impact health and mental health. Implementation science and psychological science must continue to move the needle on public health. To do so, the field must refocus our efforts on the relevant questions of the current moment. First, there is no implementation without equitable implementation - in other words, it is at the intersection of implementation science and health equity where we will truly ensure that EBPs meet the needs of all populations, particularly those that have been systematically marginalized due to their race, ethnicity, gender, or other characteristics. Second, the need

for psychological research to meet the needs of the global community has never been more pressing. Anxiety, depression, suicidal ideation, and other psychological sequelae of trauma have increased over the past year due to the pandemic (Czeisler et al., 2020). Psychologists and implementation scientists must continue to innovate to ensure that we can meet the needs of all individuals who require mental health care and to find ways to take services to scale. Promising research by colleagues on DMHI (Weisel et al., 2019) and single session interventions (Schleider et al., 2020, in press) suggest the potential of a stepped approach globally. Seeing how implementation principles have been used to address the stark need for change in change in hospital practices (Taylor et al., 2020) and delivery of care via telepsychiatry over the past year (Beidas & Stirman, 2020; Connolly et al., 2020) is cause for hope that the field will continue to innovate in a post COVID-19 world. Research that focuses on these matters at the intersection of implementation science and psychological science can promote equitable implementation and improved health and mental health outcomes for all.

Acknowledgements

This material is also the result of work supported with resources from, and the use of facilities at the National Center for PTSD and the VA Palo Alto Healthcare System. The views represented are the authors' own and do not necessarily reflect the views of the Veterans Health Administration. Preparation of this manuscript was also supported by funding from the National Institute of Mental Health (P50 MH 113840; Mandell, Beidas, Buitenhuis).

Biography

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