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COMMENTARY

Expanding the Cultural Adaptation Framework for Population-Level Impact

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Abstract Attention to cultural diversity and cultural adaptation of evidence-based interventions (EBIs) has been a longstanding priority in prevention science. However, EBIs for diverse populations present several challenges for broad dissemination and population impact. The five papers in this special issue underscore some of these challenges and offer new ways of thinking and recommendations for the next generation of type 2 translation research. This commentary underscores three broad recommendations, including the need for a more expanded conceptualization and empirical understanding of the core tension between fidelity and adaptation; greater focus on the systems of care that deliver EBIs to culturally diverse populations, including increased attention to such issues as access and engagement; and greater flexibility in strategies to adapt and evaluate interventions within and across communities and settings that serve diverse populations. By offering exemplars and suggestions to address these challenges, these papers collectively help to realign research on cultural adaptation with its ultimate goal of reducing health disparities by ensuring greater access, impact, and equity of prevention services in a dynamic, multicultural society. However, other fundamental challenges remain unaddressed, including the need to reduce inequalities that exist in the health, education, social service, and justice systems that will ultimately support broad diffusion of EBIs for diverse populations.

Keywords Diversity · Cultural adaptation · Dissemination · Implementation

Priorities for prevention science have shifted considerably in recent years. In response to growing concerns that evidence-based interventions (EBIs) have yet to deliver on the promise of population-level impact (National Research Council and Institute of Medicine 2009), the current generation of translation science is concentrated on type 2 implementation and dissemination research needed to achieve large-scale integration of well-tested EBIs into practice in sustainable ways (Spoth et al. 2013). Attention to diversity will be crucial to achieve this goal across settings and populations, particularly given the high priority also placed on the reduction of health disparities in the USA and internationally (Brownson et al. 2012). Thus, research on cultural adaptation and EBIs for diverse populations should be especially relevant to advance current prevention science priorities.

In point of fact, EBIs for diverse populations present unique challenges for broad dissemination because they are often designed for delivery in segmented subgroups and settings (e.g., minority serving agencies) versus in systems that support broad-spectrum population impact. As well, there are practical limitations and barriers to development and rigorous testing of adaptations when transporting interventions across diverse populations and communities that are also shifting with the times. Further, despite systematic efforts to ensure that culturally adapted interventions fit the languages, cultural values, lifestyles, and unique risk and protective factors of distinct ethnocultural groups, problems of access and engagement remain. These significant challenges potentially threaten the future relevance of culturally adapted interventions and frameworks that have proliferated over the past three decades and may explain why culturally adapted EBIs have been even

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less likely to be adopted and implemented in real-world settings outside their original efficacy trials (Cabassa and Baumann 2013; Gonzales et al. 2016).

In the context of shifting prevention science priorities, the collection of papers in this special issue are important to realign research on cultural adaptation and research on culture in prevention science more generally, with their ultimate goal of reducing health disparities by ensuring greater access, impact, and equity of prevention services in a dynamic, multicultural society. The five papers in this volume, all written by prominent scholars in the cultural adaptation arena, illustrate that the guiding principles and goals of cultural adaptation are just as important as ever, but their application and focus must adapt and evolve to address the new challenges of dissemination and implementation. Herein, I underscore three broad shifts that these papers collectively recommend for the next generation of research.

Expanding the Fidelity Versus Adaptation Debate

One of the most significant advances in prior on cultural diversity in prevention science has been the development of process models that outline recommended steps and strategies to design, implement, and evaluate culturally adapted EBIs with significant input from relevant community stakeholders (for reviews, see Castro et al. 2010; Domenech Rodríguez and Bernal 2012; Ferrer-Wreder et al. 2012). Classical notions of fidelity that emphasize the inherent tension between adaptation and fidelity have been pivotal in cultural adaptation models that typically aim to adapt an intervention for one or more diverse groups in a way that retains fidelity to the core components or active ingredients of the original intervention (Castro et al. 2004). Following a sequence of planned iterations of adaptation, evaluation, and refinement, it is then expected that the newly adapted model will be ready for implementation with fidelity to the new model, and presumably stronger effects than the original model. Granting, as Mejia, Leitjen, Lachman, and Parra-Cardona remind us in this volume, evidence for this latter point remains inconclusive.

The papers in this special issue challenge longstanding assumptions that fidelity to a static intervention model should be the end goal and that cultural adaptation will occur primarily through a sequence of planned adaptations that are conducted by program designers prior to adoption and implementation. The reality, as any program developer who has attempted to implement in the real world well knows, evidence-based programs are rarely final products. Adaptations during adoption and implementation are not only common but inevitable in community-based practice (Ringwalt et al. 2004) and may even be necessary to boost sustainability by improving program quality, buy-in, and fit with an institution and its community context (Chambers et al. 2013). Adaptations during real-world delivery and at later stages of translation—at adoption, implementation, and sustainability—may be even more important than pre-implementation cultural adaptation efforts (i.e., during program design and efficacy testing) to address health disparities in community systems of care.

Acknowledging this reality, Kumfer, Magalhães, and Xe describe an approach that utilizes best practices in the field of cultural adaptation to support later stage adaptations. Their model has been feasible for real-world providers to achieve with relatively low cost and excellent outcomes in several diverse ethnic communities in the USA and internationally. As Kumfer et al. suggest, the central lessons from the cultural adaptation field, and the careful process of working with community stakeholder to evaluate what can and should be adapted, are highly relevant at these later stages of implementation and dissemination. Mejia et al. also articulate a broader vision of cultural adaptation in this volume and propose that the fidelity-adaptation debate should not be conceptualized as an "either-or" but as a "both-and" process. While fidelity to the core intervention certainly remains important, to the extent that core components have delineated, continuous adaptation should also be expected. Barrera, Berkel, and Castro take this point even further and advocate for research to understand the conditions that give rise to naturally occurring adaptations during implementation and the impact that these adaptations have on program effects, acknowledging that some naturally occurring adaptations potentially enhance intervention effectiveness in real-world practice. These fundamental shifts in thinking about fidelity and adaptation are important because they open new directions for research on cultural adaptation that may offer a more fruitful path to understand the relative benefits, tradeoffs, and joint influence of fidelity and adaptation with diverse populations (Berkel et al. 2011).

Expanding Adaptation Efforts to Encompass the Entire System of Care and Delivery

The papers in the special issue also highlight that cultural adaptations of evidence-based practice may require changes at multiple levels in the service delivery and implementation chain and should not only be directed at the intervention itself (Schoenwald 2008). This point has rarely been addressed in research on cultural adaptation that has predominantly focused on strategies for ensuring that the targets and content of an intervention are culturally compatible when working with diverse populations. In addition to the intervention content, several aspects of delivery might require revision or even re-invention when moving to effectiveness and dissemination, for example, to address efficacy-effectiveness gaps (e.g., fall-off in effects) and to promote participation engagement, adoption, and sustainability (Brownson et al. 2012). Zayas et al. (2012) previously argued that one of the shortcomings in the

cultural adaptation literature is lack of attention to the multiple service contexts that influence the implementation of interventions and the critical features that enhance uptake of interventions and services. Beyond intervention content, other adaptations may be necessary to better align an EBI with the particular service sector (e.g., child welfare, education, juvenile justice, medical) and the organizational contexts (e.g., agencies, hospitals, clinics, schools) in which it is implemented. For example, adaptations may be needed to the protocols for screening and selecting participants within the service setting, selection and training of service providers, technical assistance methods, and mechanisms for continuous monitoring of program quality and fidelity.

In support of this expanded view, Barrera et al. specifically call for greater attention to factors that enhance participant engagement and sustainability of adapted interventions within natural service delivery systems. The focus on engagement is important as it remains one of the most formidable barriers to the public health impact of prevention services in general, and for low-income and underrepresented families particularly (Winslow et al. 2016). In addition to research on the possible role of culturally adapted interventions in boosting engagement and sustainability, Barrera et al. recommend research more generally on the characteristics of interventions, institutions, and implementers that influence adoption and sustainability when working with diverse populations.

Dawson McClure, Calzada, and Brotman illustrate this point well in their description of ongoing efforts to prepare the *Parent Corp* parenting interventions for broad implementation with parents of low-income children in New York City public schools. Parent Corp is exemplary in many respects. Notably, Parent Corp utilized a unique strategy to address the complexities of low-income, urban communities that adopted an eye toward widespread and sustainable implementation from the outset. Rather than uniquely tailoring the intervention for distinct ethnic and racial groups, thereby producing separate models for African-Americans and Latino families, Parent Corp integrated culture at the core of the program in a way that allows families across many different cultural groups to adapt the program content themselves to achieve their own optimal fit. Although they have largely served African-American and Latino families, the model could theoretically be applied to any number of cultural groups because cultural adaptation is essentially built into the model. The Parent Corp example also illustrates the need to continuously refine and adapt the delivery of the intervention when moving from efficacy to implementation. In preparation for broad dissemination, a professional development component was added to enhance the service delivery model within the school and to address barriers to engagement. Professional development involved supplemental training of staff in the schools delivering Parent Corp to address implicit racial biases that create distrust of schools on the part of minority parents, as well as poor communication between parents and school personnel. This adaptation illustrates an evolving understanding of what it may take for systems of care to be culturally sensitive to the needs of diverse communities when implementing evidence based interventions.

Expanding Uptake of Prevention Research through Flexible Give and Take with Local Communities

As a whole, the papers in this special section portray efforts to address diverse populations and research on cultural adaptation as a more flexible process of give and take between research evidence and the multiple stakeholders and potential end users of prevention science. Although responsiveness to local needs has always been the defining aspirational tenet of the field of cultural adaptation, prior efforts to describe when, what, and how EBIs should be adapted have often portrayed unintended rigidity as to what is allowable or what counts as a viable cultural adaptation. In the real world of community-based practice, however, cultural adaptations are likely to take many forms according to what the local community deems necessary.

The varied examples of cultural adaptation described by Mejia et al. illustrate that as programs move further out from the lab and into a wide range of local communities and service agencies, they are likely to generate quite varied models. Some may result in programs that are largely indistinguishable from the original EBI. Others may involve extensive adaptations, including deep structural adaptations, which may bear little resemblance to the original EBI as local consumers make decisions as to what aspects of existing EBIs they deem relevant to their local consumers. For example, Mejia et al. described adaptations of parenting interventions that ranged from only minor surface structure changes to a well-established parenting EBI for low-income communities in Panamá City, Panama, on one hand, to more extensive cultural adaptations of yet another parenting EBI model for US Latino immigrant parents that added a significant amount of new cultural content to address issues such as acculturation, biculturalism, and discrimination experiences. In yet a third example, Mejia et al. described UNICEF-supported efforts to implement parenting interventions in South Africa that involved adaptations of evidence-based principles selected by community stakeholders from a number of existing evidence-based protocols versus a more traditional adaptation of a single EBI. These examples nicely illustrate the flexibility that may be needed when working with diverse cultural groups and the broad range of potential adaptation models that fall under the cultural adaptation umbrella. Flexibility also is needed to adapt to increasing globalization and the rapid pace of culture change across the globe that has challenged the static view that

cultural adaptations developed and tested at one phase will retain relevance at later phases or in future implementations of the same intervention with a later cohort of participants. Community ethnic composition and local needs can change quickly, potentially challenging the relevance of prevention efforts that are not flexible or when local buy-in is weak. Shifts in technology also require new adaptations and a more flexible and rapid approach to continual quality improvement and evaluation (i.e., Calear 2015; Stoll et al. 2017).

However, as EBIs evolve for diverse and changing populations, geographic regions across the globe, and varied service settings, fidelity to the intervention model must remain a core concern for the field. It will become even more imperative to define the essential elements of an EBI as it moves from efficacy to broad implementation because service providers need to know when they may be diluting research-based programs with changes that are potentially maladaptive or detrimental to the major goals of the intervention. As well, the future sustainability of effective EBIs will rest on a clear plan and infrastructure to support and monitor adaptations during implementation and dissemination. To support the national dissemination plan for the *Nurse-Family Partnership*, an evidence-based program of nurse home visiting (Olds 2002), a national nonprofit organization was established to ensure that partner organizations that wanted to implement the program were committed to conduct the program with adherence to 18 model elements (e.g., client and nurse characteristics, nurse education and training in the NFP model, site supports needed for quality implementation). The most critical support was a nationally led quality improvement data system used by every local agency implementing the NFP to gather data on key aspects of program implementation and outcomes that help them determine if they are conducting the program well and achieving outcomes that are comparable with those achieved in the randomized controlled trials. Using this model to guide ongoing program development and refinement of the model, cultural adaptations and new innovations can be integrated into practice if they are found to improve implementation or outcomes.

Greater flexibility also is needed in the research methods for testing interventions in culturally diverse communities and populations, a point cogently articulated in the paper by Henry, Tolan, Gorman-Smith, and Schoeny in this volume. Henry et al. emphasized the need for rigorous methodologies to evaluate preventive interventions when the traditional randomized controlled trial (RCT) is impractical, culturally unacceptable, or ethically questionable. They identify a wider range of impediments to traditional RCT methods when working in community-based prevention, particularly with minority, marginalized, and under-resourced communities, and present three viable alternatives that show reasonable robustness approximating that of RCTs: regression discontinuity, interrupted time series, and roll-out randomization designs. Considering the variety of intervention adaptations that are possible and the need for more efficient and cost-effective methods to speed the progress of translation research, these and other methodological innovations will be critical to evaluate and optimize the next generation of preventive interventions for culturally diverse populations (i.e., Collins et al. 2011).

Concluding Remarks

In order for research on cultural adaptation and cultural diversity to remain a major thrust in the next generation of efforts to design and diffuse EBIs, it will be necessary for this research to adopt a more forward looking and expansive orientation toward broad-spectrum population impact and the systems that support it (Rotheram-Borus et al. 2012). The recommendations offered in this special issue represent a step in the right direction. Moving forward, however, this agenda will require far more coordinated efforts. One practical challenge that only a few scholars have yet to address is whether and how EBIs developed for distinct cultural groups can be transported across communities and settings to achieve broad population impact. Will additional adaptations be required in response to shifting population trends (e.g., new patterns of migration, multicultural communities), how should decisions be made when selecting from among different versions that may result, and how will continuous adaptations be monitored and sustained? Clearly there is a need for the most promising, well-established culturally adapted interventions to confront these challenges. Additionally, if broad population impact is the ultimate goal for prevention science more generally, questions of cultural fit, adaptation, and subgroup differences should be a priority for the field at large, and not just for scholars and providers specifically focused on minority populations. Finally, among all scholars and providers who aim to move the needle on minority health disparities, far more attention is needed on the inequalities that exist in access for diverse populations and communities. Racial and ethnic minorities, and other marginalized groups, experience inequalities in the health, education, social services, and justice systems that will ultimately support diffusion efforts, and are often denied access to services altogether (i.e., Fiscella et al. 2000). A culturally adapted EBI will ultimately be of little use if inequalities at multiple systemic levels are not also addressed.

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