TWO

CONCEPTUAL MODELS FOR MIXED METHODS AND CULTURE-SPECIFIC INTERVENTION DEVELOPMENT

Learning Objectives

The key objectives of this chapter are for readers to understand the following:

- Models for designing culture-specific interventions
- Conceptual foundations for applying MMR to culture-specific program development and evaluation
- Issues related to adopting existing EBIs, developing new culture-specific programming, or adapting EBIs to match culture and context

INTRODUCTION

As discussed in Chapter 1, translating research to practice has been at the center of discussions in intervention and prevention literature across multiple disciplines (psychology, education, public health, and medicine). In particular, at the center of these discussions have been questions about how to facilitate the translation of EBIs to applied settings; how to ensure effective implementation of EBIs given the multiple factors that affect feasibility, fidelity, and sustainability; and, most important to our discussion, how to promote cultural

and contextual match. As we contended in Chapter 1, attention to context and culture is essential to effective application of EBIs. Moreover, we contend that the use of MMR is essential to answering questions about translation of research to practice in order to address the complexity inherent in applied settings.

We begin the chapter with an exploration of models for conceptualizing intervention programs, drawing from research across multiple disciplines. We then explore models for the application of MMR to program development. We conclude with an MMR design framework to guide subsequent discussion of development of culture-specific intervention programs.

CONCEPTUAL MODELS FOR INTERVENTION DEVELOPMENT

We propose a categorization of conceptual models for intervention development based on the primary focus of research: (a) establishing the evidence base for intervention effectiveness, (b) facilitating interventions within a systems framework, (c) facilitating effective implementation, (d) adapting programs to local culture and context, (e) ensuring **cultural competence** of stakeholders in program development, and (f) adding participatory models. These models reflect the current thinking in the field of implementation science and the progression from establishing EBIs to addressing the challenges in the application of EBIs to real-life settings. As we describe each model, we attend to the extent to which the model addresses several key factors: (a) cultural specificity or cultural (co-)construction, (b) **program adaptation** (i.e., the modification of program to local culture and context), (c) the application or applicability of MMR, and (d) partnership/collaboration with key stakeholders.

Establishing Evidence of Intervention Effectiveness

The first conceptual model addresses questions related to establishing empirical support for specific interventions and reflects a progression from basic research, or the study of key construct and relationships, to EBP, or the translation of empirically validated interventions (under highly controlled conditions) to applications in real-life settings (see Forman et al., 2013; Kratochwill & Stoiber, 2002; Ringeisen, Henderson, & Hoagwood, 2003; Saul et al., 2008; Wandersman et al., 2008). Although there are variations across

specific depictions of the process, generally the progression reflects the following sequence: (a) **basic (formative) research** to establish understanding of the phenomenon and develop theory to guide interventions; (b) **efficacy (small-scale) trials** to test theory-driven interventions, typically under highly controlled conditions (using experimental designs, i.e., RCTs); (c) **effectiveness (small-scale) trials** to test the interventions in naturalistic settings (using experimental or quasi-experimental designs); (d) **dissemination (large-scale) trials** ("scaling up") to test the interventions across multiple naturalistic settings (e.g., using quasi-experimental designs or RCTs); and (e) **implementation (large-scale)**, with evaluation research to establish effectiveness and identify variables that influence program success (e.g., systemic factors, implementer expertise, and population variables).

Effectiveness research has traditionally relied on quantitative research methods; for example, in basic research, testing relationships among variables or establishing individual differences based on developmental and sociodemographic variables; using experimental designs (typically RCTs) to establish intervention efficacy; or using quasi-experimental design to establish effectiveness across multiple settings and populations. However, large-scale dissemination and implementation efforts are more likely to rely on MMR through the inclusion of qualitative research to explore contextual and cultural factors that influence the success of implementation. At this level, programmers also are more likely to consider issues related to cultural specificity, program adaptation, and involvement of key stakeholders in decision making.

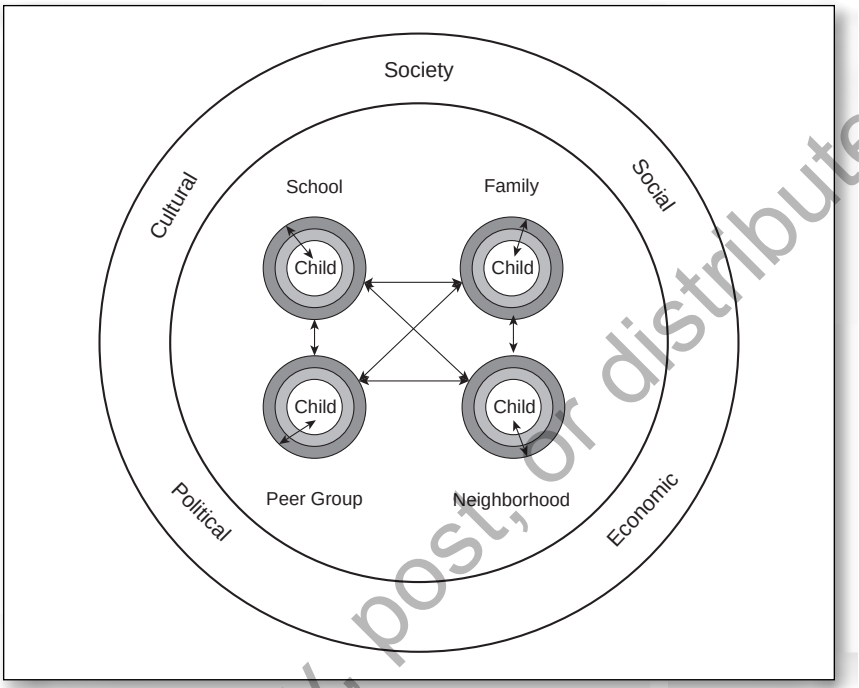
The progression from basic to implementation research reflects chronological influences in the field of **intervention research** across multiple disciplines (e.g., psychology, public health), characterized by a growing concern about failures in research-to-practice efforts and recognition of the influence of systemic (e.g., organizational, community, policy) factors, the complexity of human behavior and its relationship to ecological factors including culture, the roles of multiple stakeholders (decision makers, implementers, recipients), and the dynamic nature of program implementation. We address responses to these concerns as we explore the remaining models.

Interventions Within a Systems Framework

Bronfenbrenner's (1989, 1999) EST has been a major influence in psychology and related disciplines in terms of underscoring the importance of

social ecology for understanding human behavior and development. We have used EST as the major systems framework to guide our own research and intervention development work (e.g., Nastasi, Moore, & Varjas, 2004) and employ the theory to structure discussions about culture and context and application of MMR in this book. Figure 2.1 depicts the ecological system of the child in all of its complexity. According to EST, the individual (child) functions within an unlimited number of *microsystems*—that is, immediate social contexts that define the person's social ecology (e.g., school, family, neighborhood, peer group) and in which critical social interactions occur (e.g., parent–child, child–sibling). Each microsystem is embedded within an *exosystem* (e.g., larger family unit of parents and siblings and extended family), which indirectly influences interactions in the microsystem (e.g., parent–parent relationship can influence each parent's interaction with the child). Interactions across system boundaries (depicted by arrows in Figure 2.1) are referred to as the *mesosystem* and can occur within respective ecosystems (family) or across systems (family–peer group). The broadest level of the ecology is the *macrosystem*, which includes the social, cultural, economic, and political factors that have indirect influence on the child's interactions within specific microsystems. For example, the beliefs, values, and norms within the society or within a particular cultural group influence expected behaviors for the individual and the interactions between individuals. Similarly, the federal and state laws influence public educational practices at the school district, building, and classroom level. Also critical to EST is the *chronosystem*, the developmental and historical background for the individuals and systems (e.g., child's early developmental experiences, history of racial segregation in schools). There is a reciprocal nature of interactions within any given ecosystem; that is, the child is not only influenced by the social environment but also has influence over it. Thus, the child (individual) is viewed as an active agent in the social ecology. Furthermore, one's interpretations of experiences also affect the nature of interactions. The interactions across systems (mesosystemic) are also bidirectional (as indicated by arrows in Figure 2.1). The bidirectionality of interactions across the elements of the ecological system contributes to the dynamic and complex nature of the social ecology. As we explore throughout this book, EST provides a structure for exploring the complexity and ever-changing nature of the cultural and contextual factors that influence design, implementation, and evaluation of interventions.

Figure 2.1 Child's Ecological System



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NOTE: Depiction of the social ecology of the child is based on Bronfenbrenner's EST (1989, 1999). The *microsystem* (white inner circle) is the immediate context in which the *child* is interacting with key social agents, for example, with teachers and classmates in school. The *exosystem* (outer grey circles) refers to the systems that encompass the microsystem and have indirect influence on the child and the interactions within the microsystem (e.g., school [light grey], school district [darker grey]). The *mesosystem* refers to the connections or interactions between systems (e.g., between school and family, or between micro- and exosystems within the school, indicated by arrows) that have an indirect influence on the child and the interactions within the microsystem. The *macrosystem* refers to the societal or global level, specifically, the social, cultural, political, and economic factors that influence the systems in which the child functions (e.g., cultural values influence expectations within the school district, school, and classroom and the interactions of the child with the teacher and classmates). Note that interactions are bidirectional, including the child's direct interactions within the microsystem. The bidirectionality of interactions across the ecological system contributes to the dynamic and complex nature of the social ecology.

Several systems models have been proposed to guide intervention dissemination and implementation—that is, to bridge the research-to-practice gap. These models generally focus on identifying and understanding the systemic factors that influence the application and sustainability of EBIs. In particular, researchers using systemic approaches call attention to factors such as institutional and community context (including resources, mission, etc.); role of stakeholders, training, and expertise of implementers; and match of the EBI to cultural and population factors.

The APA Task Force on Evidence-Based Practice for Children and Adolescents (Kazak et al., 2010; Kratochwill et al., 2012) proposed a *meta-systems social–ecological framework*, consistent with EST. The task force identified key elements of the child's "metasystem" as follows (note the match to components of the EST):

> The various contexts and environments that surround and influence a child's adaptations and development. The core contexts that typically exert the most direct influence on children include their family; the cultural norms and values of their heritage; their peers; social institutions created to inculcate certain societal values (such as churches or schools); and for children with emotional or behavioral needs, the various systems that society creates to provide services to address these problems. (Kazak et al., 2010, p. 86)

This group acknowledged the importance of contextual and cultural factors related to organizational and population diversity. While citing the current body of research evidence to guide EBP, the task force members called attention to the lack of research on implementation and dissemination.

Wandersman et al. (2008) proposed the *interactive systems framework (ISF)* to guide both researchers and practitioners in the dissemination and implementation of EBIs. The ISF calls attention to three systems that interact to influence dissemination and implementation: (1) the synthesis and translation system—that is, those responsible for the synthesis and translation of existing research evidence (making EBI knowledge available); (2) the delivery system—that is, the site of delivery and its capacity to support the interventions; and (3) the support system that provides technical assistance and consultation to enhance the capacity for successful implementation and sustainability. Influencing these three systems are factors such as the body of

existing research and theory, organizational climate, funding and other resources, and macrolevel policies. Though not explicitly addressed by Wandersman et al., MMR could facilitate the articulation of the myriad factors in the ISF to inform our understanding of dissemination and implementation. Moreover, the multisystemic focus requires the consideration of collaboration across stakeholders. Finally, Gregory et al. (2012) have proposed incorporating a cultural component into ISF, through attention to organizational culture and cultural competence of partners (i.e., researcher, program developers, and implementers). (We return to the topic of cultural competence in a later section of this chapter.)

Program Implementation

Although models to facilitate the dissemination of research are important and can inform program selection and adoption, the "translation" of EBIs to practice has taken center stage within the field of implementation science, an interdisciplinary field applied to health sciences, psychology, and other social sciences. In this section, we explore conceptual models and research frameworks within this emerging field (Fixsen, Naoom, Blase, Friedman, & Wallace, 2005; Forman et al., 2013; May, 2013; Weisz, Sandler, Durlak, & Anton, 2005).

Fixsen et al. (2005), building on a comprehensive review of existing implementation research, proposed a conceptual model for guiding future implementation research and practice. For the purposes of discussion, Fixsen et al. defined *implementation* as "a specific set of activities [intervention activities and implementation activities] designed to put into practice an activity or program of known dimensions" (p. 5). Furthermore, two sets of program activities warrant attention in practice and research: (1) *intervention* activities (what is delivered to participants, e.g., an EBI) and (2) *implementation* activities (those related to the efforts of practitioners and other organizational or community stakeholders). The importance of both intervention and implementation cannot be overstated and is reinforced as we subsequently discuss issues related to adaptation, cultural specificity, cultural competence, and partnerships.

With regard to implementation, Fixsen et al. (2005) propose a model of *multilevel influences on successful implementation*, represented as a set of three concentric circles: (1) core components (at center, e.g., staff training and

coaching), (2) organizational components (e.g., administration), and (3) macrosystemic factors (e.g., social, economic, or political). The model is intended to emphasize the complexity of implementation and to guide program developers from the outset of program design (e.g., assessing all levels prior to program initiation). At the center are a set of integrated and compensatory core components: (a) staff selection (implementers, evaluators, etc.), (b) staff training, (c) staff consultation and coaching, (d) formative evaluation of staff (e.g., fidelity and competence), (e) program evaluation (fidelity and effectiveness), and (f) administrative support. The inclusion of staff competence, training, and support as core components reflects the perceived importance of staff for successful program implementation: "In human services, *practitioners are the intervention*" (Fixsen et al., 2005, p. 45). In guiding future research on implementation, Fixsen et al. (2005) recommend MMR (in recognition of the complexity of program implementation), partnerships between interventionists and researchers, site-specific communities of practice, and dissemination across sites.

Forman et al. (2013) examined implementation science in the context of school psychology, and thus the implementation of EBIs in the context of schools with psychologists as agents of implementation. They propose four common elements of implementation: (1) the innovation (e.g., an EBI), (2) a communication process (e.g., about the innovation), (3) a social system (context for implementation such as a school), and (4) the change agents (those attempting to bring the innovation to the system). They adopted the definition of implementation science proposed by Eccles and Mittman (2006), "The scientific study of methods to promote the systematic uptake of research findings and other evidence-based practices into routine practice, and, hence, to improve the quality and effectiveness" (p. 1) of service delivery. Moreover, they identified the purpose of implementation science in school psychology as understanding the factors and processes that influence successful integration of EBIs into schools, including enhancing organizational readiness (e.g., organizational culture), translation of EBIs to practice, adaptation of program components to local context, and evaluation of program acceptability and engagement, fidelity, and outcomes (see also Odom, 2009; Rabin & Brownson, 2012). With regard to future research directions, they recommend attention to examining core components of EBIs; effectiveness of EBIs across diverse contexts and populations (including necessary adaptation); effective methods for engaging stakeholders, training and supporting implementers, and ensuring

fidelity; and conditions that influence the success (or failure) of implementation as well as sustainability and capacity building. Furthermore, Forman et al. (2013) encourage researcher–practitioner collaboration. Although not directly addressing the use of MMR, these authors commented on the limitations of and ongoing debates about the use of traditional research designs focused on establishing causal relationships (e.g., RCTs, single-case designs) given the complexity of program implementation.

May (2013) proposed an interdisciplinary *general theory of implementation* to depict and elucidate the implementation process. In recognition of the complexity and multiplicity of interrelated components of any intervention, he characterizes the focus of implementation science as "complex interventions" and describes the implementation processes as

> interactions between "emergent expressions of agency" (i.e., the things that people do to make something happen, and the ways that they work with different components of a complex intervention to do so); and as "dynamic elements of context" (the social-structural and social-cognitive resources that people draw on to realize that agency). (p. 1)

The core components of May's (2013) model include (a) *capability*, the likelihood that the agents (those responsible for implementation) can operationalize the intervention based on feasibility and contextual fit; (b) *capacity*, the social–structural resources available to implementation agents (i.e., social norms, roles, material, and cognitive resources within the system) and the agents' capacity to interact with these resources; (c) *potentials*, social–cognitive resources (beliefs and values) available to implementation agents and the agents' capacity to link social–cognitive and social–structural resources to bring about collective action (i.e., the intervention); and (d) *contributions*, what the agents (individually and collectively) do to implement the intervention, both cognitively (e.g., sense making, reflexive monitoring) and behaviorally (e.g., collective action). Thus, May acknowledges the importance of individual and collective action within the dynamic organizational context. Though not explicitly addressed, May's general theory of implementation could be applied to the study of cultural specificity, program adaptation, and participatory processes. The complexity of the implementation process also warrants the application of MMR.

Finally, Weisz et al. (2005) propose an *integrated model* for linking prevention and treatment for youth mental health that necessitates consideration of service delivery within a public health model (ranging from health promotion to treatment to continuing care) and an ecological systems approach (e.g., viewing youth as embedded in family, community, and culture). Based on a review of existing research, these authors recommended research directions consistent with the focus of this text and with the current efforts within implementation science: (a) identifying core elements of interventions, including change processes that account for outcomes; (b) addressing mismatch between research-based interventions and clinical practices that influences translation of research to practice; (c) understanding the contexts in which and populations for whom interventions work (i.e., limits of translation to practice); and (d) addressing the cultural appropriateness of existing interventions across diverse populations. The recommendations of Weisz et al. call into question the application of manualized treatments/interventions (detailed in the manual for standardized application) without attention to contextual and population/cultural variables. In the next section, we examine models for program adaptation as a response to such concerns.

Program Adaptations

Drawing on the ISF proposed by Wandersman et al. (2008), Lee, Altschul, and Mowbray (2008) proposed a model of *planned adaptation* to guide practitioners in adapting EBIs to address population needs (e.g., cultural and contextual variations) while maintaining core program components (i.e., those elements that account for outcomes and are determined by theoretical or conceptual foundations of the intervention). Successful adaptations require that researchers identify and articulate the core components for dissemination (e.g., in program manuals) and possibly provide technical assistance to practitioners in making adaptations. Furthermore, documenting adaptations and outcomes can facilitate further dissemination.

Planned adaptation involves a four-step process for the practitioner (Lee et al., 2008): (1) examine the theory of change for the selected EBI (i.e., understanding the causal and moderating mechanisms that account for outcomes); (2) identify population differences (i.e., between original and intended population) and determine the extent to which these differences are likely to affect the core program elements; (3) systematically adapt program content

based on population differences; and (4) adapt the evaluation to examine outcomes given the changes. This type of adaptation is referred to as *designer adaptation* (i.e., by the program developer) and is distinguished from *implementer adaptation* (i.e., by the practitioners engaged in implementation) (see Colby et al., 2013).

One limitation of planned adaptation is that population differences (Step 2) are identified based on practitioner experiences with the population and existing research that suggests that these differences may moderate outcomes, and they typically focus on the most apparent differences (e.g., race and ethnicity). We propose, and discuss in a later section, a stage of formative research conducted by program developers to systematically examine the potential cultural and contextual factors and use these data to guide adaptations. Thus, adaptations are based on an inductively derived understanding of cultural narratives that reflect population beliefs, values, and norms relevant to the intervention—what we refer to as *cultural construction* (cf. cultural grounding, Colby et al., 2013; Hecht & Krieger, 2006)—which in turn drives "evidence-based cultural adaptation" of EBIs (Barrera, Castro, & Steiker, 2011; Colby et al., 2013).

Colby et al. (2013) articulate the process of *cultural grounding* as an approach to designer adaptation to ensure cultural sensitivity in program design (i.e., evidence-based cultural adaptation). Critical to this discussion is the distinction between surface and deep structure intervention components: *Surface structure* components refer to more superficial elements in "'packaging' the programs to give the appearance of cultural appropriateness" (e.g., images, language; Colby et al., 2013, p. 192). *Deep structure* components refer to the more fundamental elements such as cultural values, beliefs, and practices, which are more likely to influence program messages, narratives, and potentially core elements.

As suggested by the work of Colby et al. (2013) and others (Cappella, Jackson, Bilal, Hamre, & Soule, 2011; Cappella, Reinke, & Hoagwood, 2011; Goldstein, Kemp, Leff, & Lochman, 2013; Nastasi et al., 2004; Nastasi, Hitchcock, Varjas, et al., 2010), achieving **evidence-based cultural grounding** is best facilitated by an iterative, reflexive, and participatory research process that relies on qualitative methods (e.g., observations, focus groups, interviews; see Chapter 3) to facilitate understanding of the culture (beliefs, values, norms) of the target group and engages stakeholders as partners in the process of program development and/or adaptation. This process is potentially

transferable across intervention sites to promote cultural and contextual fit, as an alternative or complement to manualized EBIs. We will return to the discussion of methodology in a later section of this chapter.

Cultural Competence for Programming

Culture has become an important part of the discussion about EBP, with a particular focus on questions about cultural relevance, cultural specificity, and/or cultural grounding of interventions. In addition to ethical concerns about the development and implementation of interventions that address the needs of particular cultural groups (e.g., racial and ethnic groups; Fisher et al., 2002; Trimble, Scharrón-del-Río, & Hill, 2012), concerns about the external validity of EBIs have been raised (e.g., generalizability across diverse populations; Whaley & Davis, 2007). The concerns focus on the extent to which we can confidently use EBIs that were validated on restricted segments of the population (e.g., White, middle-class, suburban, U.S.) without adaptation to culture and context (e.g., African American, poor, urban; populations in Asia or Africa). The responses to such concerns have focused on the design or adaptation of interventions to be culturally and contextually specific (e.g., evidence-based cultural grounding), as well as the cultural competence of the program designers, implementers, and evaluators. In this section, we explore *cultural competence models*.

Different definitions of *cultural competence* have been proposed in the literature.[1] We adopt a dynamic, and process-oriented, definition of cultural competence consistent with the notion of cultural co-construction (see Chapter 1) and with the definition adopted by Whaley and Davis (2007):

> Cultural competence [is] as a set of *problem-solving* skills that includes (a) the *ability to recognize and understand* the dynamic interplay between the heritage and adaptation dimensions of culture in shaping human behavior; (b) the *ability to use the knowledge* acquired about an individual's heritage and adaptational challenges to maximize the effectiveness of assessment, diagnosis, and treatment;

[1] A full discussion of the varied definitions in the literature is beyond the scope of this chapter. For readers interested in more in-depth discussion, see D'Augelli (2003), Fisher et al. (2002), Gregory et al. (2012), Serpell, Clauss-Ehlers, and Weist (2013), Whaley and Davis (2007).

> and (c) *internalization* (i.e., incorporation into one's clinical problem-solving repertoire) of this process of recognition, acquisition, and use of cultural dynamics so that it can be routinely applied to diverse groups. . . . It should also be noted that the internalization stage of cultural competence proposed here is akin to Lopez's (1997; Lopez et al., 2002) notion of *shifting cultural lenses* in his model of cultural competence. (p. 565)

Particularly noteworthy for our discussions of applying MMR to intervention development is the assumption that cultural competence is critical for all intervention agents (developers, implementers, evaluators). In addition, cultural competence is a way of thinking and acting that enables intervention agents to engage in a dynamic process of considering cultural and contextual variables throughout the process of program development, implementation, and evaluation. This process requires perspective taking and communication skills that facilitate the negotiation of perspectives to reach a shared understanding that in turn guides collective action (see Friedman & Antal, 2005; Kapadia, Mehrota, Nastasi, & Rodriquez, in press.) Furthermore, the consideration of culture is not restricted to the individual but encompasses the social ecology (e.g., at micro-, exo-, meso-, and macrosystem levels; see also Bronfenbrenner's [1989, 1999] EST), thus necessitating consideration of organizational culture (Gregory, et al., 2012). The dynamic nature of both culture and program implementation requires continual attention to cultural and contextual factors.

As D'Augelli (2003) suggests, culturally competent intervention research necessitates a *culturally sensitive methodology*, which he characterizes as a mixed qualitative–quantitative approach:

> Developing a culturally sensitive methodology is no easy task. . . . As is common among analysts arguing for a strong cultural analysis, Zea et al. [2003] stress the importance of qualitative methodologies to map the nature of relevant cultural meanings. These methodologies must be complemented by quantitative methods so that ideographic and nomothetic perspectives can be integrated. The challenge is one faced by any cultural analyst: the systematic deconstruction of embedded meanings must be followed by a reconstruction of some kind. There are, unfortunately, no scripts for the reconstruction process except for the requirement of the use of

> multiple sources of data gathered in diverse ways as well as methods to determine the correspondence of interpreted meanings by different observers. (p. 348)

In a subsequent section of this chapter on MMR models, we discuss the importance of participatory, synergistic approaches for facilitating the process of reconstruction of a shared narrative—that is, the cultural (co-)construction of interventions. Essential to our discussion of negotiated meaning is consideration of collaborative or participatory models of intervention research.

Participatory Models

Participatory approaches to intervention development are grounded in the work of applied anthropology and international development, and in recent years, they have been adopted in educational, social, and health sciences to facilitate EBP. **Participatory action research (PAR)**, with roots in applied anthropology (Greenwood, Whyte, & Harkavy, 1993; Schensul, 1998; Schensul & Schensul, 1992), stems from efforts to create social change by involving stakeholders (those with vested interests and/or resources) in a recursive integration of theory, research, and action (action research [AR] or praxis, i.e., theory → research → practice or policy; Partridge, 1985). Intervention researchers have adopted PAR to achieve cultural grounding and/or to facilitate program acceptability, social validity (i.e., relevance to daily life), ownership, and sustainability (Cappella, Jackson, et al., 2011; Leff et al., 2009; Nastasi et al., 2004).

Before we move forward, we would like to clarify terminology. First, our choice of the term *participatory*, rather than collaborative, is based on the distinction made by Serrano-Garcia (1990): "*Collaboration* . . . denotes engaging the researched in executing the research; whereas *participation* entails their full involvement both [*sic*] in planning, decision making, and execution of tasks in the research process" (p. 174). Second, we use the term *participatory action research* although other intervention researchers use the terms *community-based participatory research* (CBPR; e.g., Jacquez, Vaughn, & Wagner, 2013; Lindamer et al., 2009) or *community-based participatory action research* (CBPAR; e.g., Maiter, Simich, Jacobson, & Wise, 2008) to denote the involvement of community members as partners in the research process. We prefer PAR because of its origins in AR *or praxis* (see Partridge,

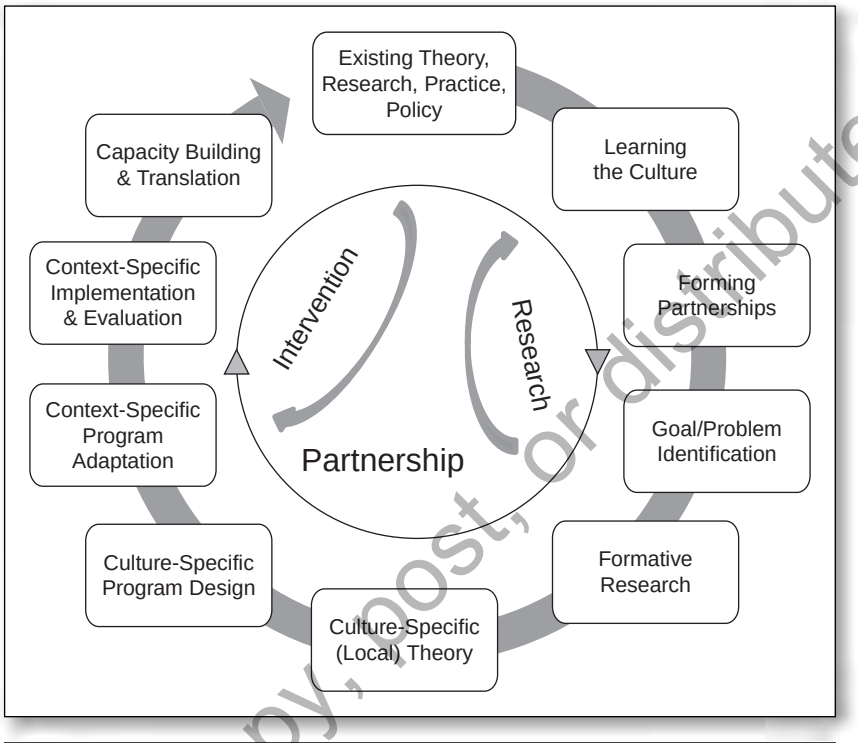
1985) that denotes the application of research to bring about social and cultural change. Finally, the notion of praxis is consistent with science-based or reflective practice that characterizes current approaches in professional psychology, health care, and education. That is, service providers in these professions are expected to engage in EBP that relies on the recursive and reflective integration of theory, research, and practice. Indeed, concerns about translation of research to practice have their origins in the world of practice, as service providers have struggled with the mismatch between EBIs and the needs of individual clients.

Also important to our discussion is the purpose for which intervention researchers/developers have adopted participatory approaches. As noted in the previous section, participatory approaches have been recommended as critical for facilitating cultural grounding or the development of programs that address cultural and contextual diversity (e.g., Cappella, Jackson, et al., 2011; Colby et al., 2013; Gregory et al., 2012; Leff et al., 2009; Nastasi et al., 2004). Participatory approaches also have been applied for the purpose of facilitating capacity building and sustainability (Gregory et al., 2012; Ozer et al., 2008).

Furthermore, the responsibilities of intervention researchers engaged in partnerships with community members warrant attention. For example, Maiter et al. (2008) suggest that reciprocity, "[the] ongoing process of exchange with the aim of establishing and maintaining equality between parties" (p. 305), guides our relationships with community partners. Jacquez et al. (2013) propose that we examine the potential impact of research partnerships on the community members, such as the extent to which engagement of children and adolescents as partners in CBPR contributes to their own development.

In the remainder of this book, we draw examples from our own work based on the **Participatory Culture-Specific Intervention Model (PCSIM**; Nastasi et al., 2004; see also Bell, Summerville, Nastasi, MacFetters, & Earnshaw, 2015; Nastasi, Hitchcock, Varjas, et al., 2010; Varjas et al., 2006). The PCSIM reflects the application of PAR to the design, implementation, evaluation, and institutionalization of culture-specific (i.e., culturally grounded) interventions. The key elements include the involvement of key stakeholders as partners throughout the process (depicted in Figure 2.2); the recursive integration of theory, research, and practice; the primary focus on developing culturally and contextually relevant interventions; the goal of developing organizational capacity to meet the changing contextual and cultural needs; and the use of MMR.

Figure 2.2 Participatory Culture-Specific Intervention Model



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NOTE: The model includes 10 phases of program development, starting from existing research, theory, practice, and policy and concluding with capacity building and translation. The process as depicted is dynamic and recursive and involves continual reflective application of research to inform program design, implementation, adaptation, and evaluation. The goal of PCSIM is to develop acceptable, sustainable, and culturally grounded (i.e., culturally constructed or culture-specific) interventions in partnership with key stakeholders (e.g., researchers, developers, implementers, recipients, administrators).

MMR MODELS FOR PROGRAM DEVELOPMENT

This section addresses the use of MMR in intervention research to facilitate implementation, adaptation, and cultural grounding within a systems framework. The challenges faced by attempts to implement EBIs, given the myriad

cultural and contextual factors that influence effective programming, have led to considerations of alternative research designs. The traditional designs for testing the efficacy of interventions are RCTs or single-case designs. Fabiano, Chafouleas, Weist, Sumi, and Humphrey (2014) identified current alternative designs that address some of the challenges we have explored in this chapter. For example, they describe cluster RCTs (CRCTs), a variation of RCT in which the unit of randomization is the context (e.g., classroom, school, school district) rather than the individual. CRCTs can be helpful in testing the efficacy of interventions delivered to groups defined by context (all students in classroom) and for examining contextual (e.g., at the school organization level) and mediating (e.g., intervention fidelity) factors. Fabiano et al. also describe adaptive treatment designs, which permit examination of the efficacy of adaptations. In these designs, when adaptations are warranted (based on ongoing evaluation), participants in the original design (e.g., RCT) are randomly reassigned to the adapted intervention, which is then tested for efficacy. The adaptive treatment designs are intended to correspond to what happens in actual practice when adaptations to the original intervention are made because there was evidence that the intervention was not effective in this context (e.g., through progress monitoring or formative evaluation). Fabiano et al. also acknowledge the potential contributions of mixed methods designs when quantitative designs are not appropriate or feasible, for example, to examine acceptability or feasibility in pilot studies or to help explain quantitative findings.

Whaley and Davis (2007) also recognize the limitations of efficacy trials; for establishing external validity and especially for addressing issues related to cultural adaptations (i.e., changes to an EBI to incorporate the cultural values, beliefs, norms, and practices of the target group). Although they do not discuss the use of mixed methods, they endorse an expanded definition of "evidence" to include qualitative methodology as a complement to traditional quantitative designs (see also Gergen, Josselson, & Freeman, 2015).

In the remainder of this section, we examine MMR designs that address the issues raised by researchers such as Fabiano et al. (2014) and Whaley and Davis (2007), namely, how to expand our definition of evidence to better examine factors related to implementation, adaptation, and cultural grounding within a systems framework. To do this, we draw from our own examination of MMR design typologies (Nastasi, Hitchcock, & Brown, 2010[2]).

[2] The scope of this chapter does not permit a full articulation of all MMR design typologies; for a detailed treatment of the topic, see Nastasi, Hitchcock, and Brown (2010).

First, we clarify some terminology. We use the term *research phase* to refer to the conceptualization–experiential–interferential process inherent in a research study. *Conceptualization* refers to establishing theoretical foundations, identifying purpose, and formulating research questions; e*xperiential* refers to the data collection and analysis process; and *inferential* refers to data interpretation, application, and dissemination (Nastasi, Hitchcock, & Brown, 2010). Complex designs are typically **mixed methods multistrand designs**—that is, the researchers engage in two or more research phases (i.e., iterations of conceptualization–experiential–interferential; Teddlie & Tashakkori, 2009). Multistrand designs are distinguished from *monostrand*, which refer to those with a single conceptualization–experiential–interferential sequence.

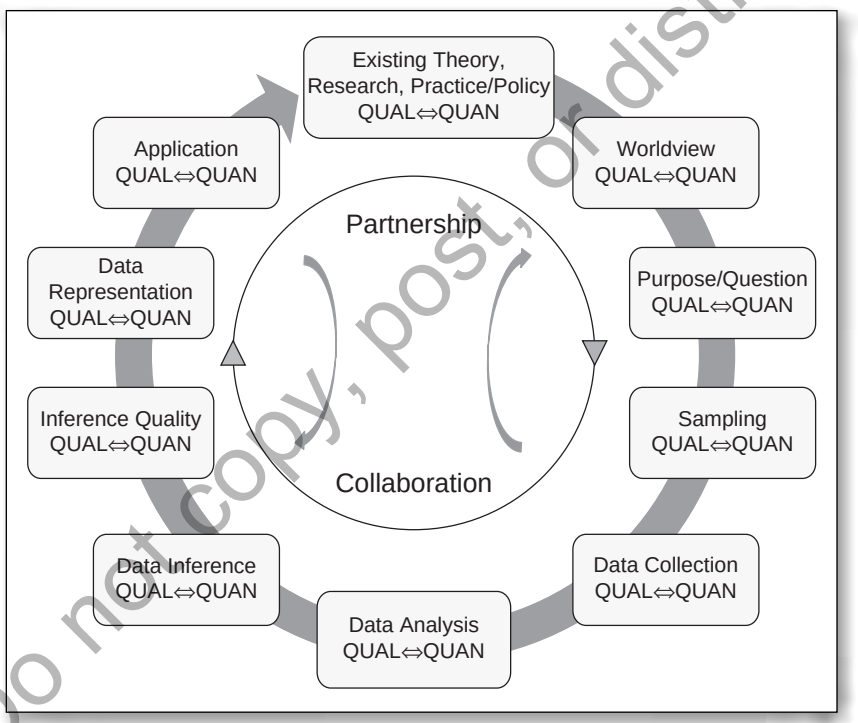
Multistrand designs require (a) the mixing of qualitative and quantitative research methods within or across two or more research phases and (b) the integration of qualitative and quantitative data during analysis and inference (see Teddlie & Tashakkori, 2009, for full discussion). Multistrand designs, by definition, go beyond single studies and thus are more likely to be implemented in multiyear research projects. *Iterative multistrand designs* involve the mixing of quantitative and qualitative methods in a dynamic and recursive manner over the course of the research project, with earlier research phases and related findings influencing decisions about later phases. **Synergistic multistrand designs**, the most complex of iterative mulitstrand designs, are those in which the integration of qualitative and quantitative methods occurs at conceptual, experiential, and interpretative stages in each phase/strand of the research. Hall and Howard (2008) propose four core principles that define synergistic MMR designs: (1) *concept of synergy*—that is, the combined effect of mixing is greater than the effect of qualitative or quantitative alone; (2) *position of equal value*—that is, qualitative and quantitative data are equivalent in importance to research; (3) *ideology of difference*—that is, the dialectical process of mixing qualitative and quantitative is critical to synergism; and (4) *reflective stance of the researcher*—that is, the necessity of critical reflection to resolve potentially conflicting qualitative–quantitative perspectives.

This integration of qualitative–quantitative perspectives in a synergistic design is likely to require interactions among multiple researchers (Hall & Howard, 2008). The reliance on partnerships and collaboration also characterizes participatory research approaches (e.g., PAR) discussed in an earlier section, but it extends the notion of partnership to include a range of stakeholders such as developers, implementers, recipients, and administrators (Denscombe, 2008; Mertens, 2007; Nastasi et al., 2007; Shulha & Wilson, 2003). The primary assumption of participatory approaches is that inclusion of other

stakeholders can contribute to the development of acceptable and sustainable interventions that meet cultural and contextual needs.

We contend that multistrand (complex) MMR designs, particularly synergistic participatory approaches, are required to address the myriad questions related to implementation, adaptation, cultural grounding, and systemic factors in intervention research. The remainder of this book addresses how those

Figure 2.3 Synergistic Partnership-Based Fully Integrated Mixed Methods Research: Cycle of Research



SOURCE: by B. K. Nastasi, J. H. Hitchcock, & L. M. Brown. In A. Tashakkori & C. Teddlie (Eds.), *Handbook of mixed methods in social and behavioral research* (2nd ed.; p. 323), 2010, Thousand Oaks, CA: Sage. Copyright 2010 by Sage. Reprinted with permission

NOTE: This cycle reflects the proposed inclusive framework for MMR designs applied to intervention research. The key features of the cycle are the (a) centrality of partnership with stakeholders and collaboration among researchers; (b) the cyclical nature of research from conceptualization to application; (c) the iterative nature of the cycle, depicted by the central arrows (reflecting the potential return to earlier stages based on outcomes of subsequent stages; e.g., data inference leads back to more data collection); and (d) the ongoing "mixing" and attempts at synthesizing qualitative and quantitative perspectives, methods, and data at each stage in the cycle (depicted as QUAL ←→ QUAN).

designs can be applied in a recursive research–intervention approach. To frame the subsequent discussion, we use the **synergistic partnership-based fully integrated mixed methods design model**, depicted in Figure 2.3 (Nastasi, Hitchcock, & Brown, 2010). The model is aspirational and meant to guide researchers in developing MMR designs that involve the inclusion and mixing of qualitative and quantitative data at each phase of the research process. Thus, researchers are encouraged to consider, and integrate, qualitative and quantitative perspectives as they (a) examine existing theory and research, (b) consider the worldviews of all partners, (c) formulate research purpose and questions, (d) formulate sampling strategies, (e) identify data collection and analysis methods, (f) engage in data inference, (g) plan for assurances of inference quality (e.g., reliability, validity, trustworthiness), and (h) prepare data for dissemination and application. In addition, intervention researchers are encouraged to engage research partners to maximize the expertise and perspectives necessary for an integration of qualitative and quantitative methods. Furthermore, researchers are advised to engage as community partners the full range of stakeholders who have vested interests and resources and, most important, can facilitate cultural grounding of the intervention. The model depicted in Figure 2.3 is expected to guide considerations of research design as we explore intervention design, implementation, and evaluation in subsequent chapters.

Key Terms[3]

- **Cultural competence:** Refers to a set of skills that lead to the internalization of a process of problem solving by which one recognizes, acquires, and uses information about cultural dynamics to facilitate effective interactions (communication, negotiation, intervention) across culturally diverse individuals and groups (Whaley & Davis, 2007).
- **Evidence-based cultural grounding:** Refers to an approach to adaptation that is based on formative research to systematically examine the cultural factors relevant to the intervention (see Cappella, Jackson, et al.,

[3] See also Chapter 1 Key Terms: context (also, ecological systems theory [EST]), culture, culture specific, cultural (co-)construction, evidence-based practice (EBP), implementation science, program (also, program services and program evaluation), translational research, and mixed methods research (MMR).

2011; Cappella, Reinke, et al., 2011; Colby et al., 2013; Nastasi et al., 2004; Nastasi, Hitchcock, Varjas, et al., 2010).

- **Intervention research:** The study of interventions that encompasses formative, efficacy, effectiveness, dissemination, and implementation studies (see Forman et al., 2003; Kratochwill & Stoiber, 2002; Ringeisen et al., 2003; Saul et al., 2008; Wandersman et al., 2008).
  - **Basic (formative) research** focuses on understanding target phenomena and developing theory to guide interventions.
  - **Dissemination (large-scale) trials** ("scaling up") are conducted to test interventions across multiple naturalistic settings (e.g., using quasi-experimental designs).
  - **Efficacy (small-scale) trials** are typically conducted under highly controlled conditions (using experimental designs, i.e., RCTs) to test theory-driven interventions that were developed based on basic (formative) research.
  - **Effectiveness (small-scale) trials** are designed to test the interventions in naturalistic settings (using experimental or quasi-experimental designs), typically following efficacy trials.
  - **Implementation (large-scale) research** is conducted in naturalistic settings to not only establish effectiveness but also to identify variables that influence program success (e.g., systemic factors, implementer expertise, population variables). Implementation research is typically concerned with identifying the conditions under which interventions are effective (see also implementation science defined in Chapter 1).
- **Mixed methods multistrand designs:** A form of complex MMR design in which researchers apply the mixing of qualitative and quantitative methods in two or more iterations of the basic research cycle (i.e., study conceptualization, data collection and analysis, data interpretation and dissemination) and engage in the integration of qualitative and quantitative data during analysis and inference (Teddlie & Tashakkori, 2009).
  - **Synergistic multistrand designs** involve the integration of qualitative and quantitative methods in all phases of the research cycle—that is, in conceptualization, data collection and analysis, and data interpretation (Hall & Howard, 2008).
  - **Synergistic partnership-based fully integrated mixed methods design model** aims to address the myriad questions related to

implementation, adaptation, cultural grounding, and systemic factors in intervention research (Nastasi, Hitchcock, & Brown, 2010). It involves the mixing of qualitative and quantitative methods and engagement of partners (coresearchers and other stakeholders) at every stage of a recursive (iterative) research process, from conceptualization to interpretation and translation. The goal of the model is to facilitate the cultural grounding of interventions that address cultural and contextual factors and promote sustainable interventions through capacity building.

- **Participatory action research (PAR):** Refers to the conduct of research in partnership with key stakeholders (those with vested interests and/or resources) for the purpose of creating social change. PAR typically involves a recursive integration of theory, research, and action (see Greenwood et al., 1993; Nastasi, Varjas, Bernstein, & Jayasena, 2000, 2004; Partridge, 1985; Schensul, 1998; Schensul & Schensul, 1992).
- **Participatory Culture-Specific Intervention Model (PCSIM):** Involves the application of PAR to the design, implementation, evaluation, and institutionalization of culture-specific (i.e., culturally grounded) interventions (Nastasi et al., 2004).
- **Program adaptation:** Refers to making changes in EBIs to accommodate cultural and contextual needs. *Designer adaptations* (by the program developer) have been distinguished from *implementer adaptations* (by the program implementers; Colby et al., 2013). In addition, *surface structure* changes to superficial elements of the program (e.g., language, images) are distinguished from *deep structure* changes to fundamental elements such as cultural values, beliefs, and norms. Adaptations to deep structure elements are more likely to threaten the internal validity of the intervention if they affect core elements (i.e., those components that are theory driven and account for program efficacy or effectiveness).

Reflective Questions and Exercises

1. Conduct a literature review on intervention programs in your area of interest. Critique the research using the following questions:

   a. What is the nature of evidence supporting the program's effectiveness? Have researchers conducted formative research? Efficacy

trials? Effectiveness trials? Dissemination trials? Implementation trials?

b. To what extent have researchers considered systemic factors when establishing evidence of program effectiveness?

c. If researchers have conducted implementation trials, what variables have been investigated? Consider factors related to staff competence, organization (e.g., policies), and macrosystem (e.g., social and cultural considerations). Which of these factors were identified through the research as critical (influential) for program implementation?

d. To what extent does the research address cultural competence of stakeholders, particularly program planners, implementers, and evaluators? Describe how cultural competence is addressed.

e. To what extent was the research participatory?

2. Related to your area of interest, identify an example of program adaptation. Describe the approach to adaptation and critique for attention to deep and surface structural elements, cultural grounding, and perspectives of key stakeholders. Based on your critique, make recommendations for how you might address the aforementioned elements.

3. Identify an intervention in your area of study and outline how you would approach adaptation for a particular culture and context. Outline the steps using PCSIM as a guide. Consider how you would use MMR to facilitate adaptation and evaluation. This task may seem daunting but is a good start for thinking about application of PCSIM and MMR to program development and evaluation. Use the outline to further develop your plan as we explore application of MMR and PCSIM in subsequent chapters.

References

Barrera, M., Castro, F. G., & Steiker, H. (2011). A critical analysis of approaches to the development of preventive interventions for subcultural groups. *American Journal of Community Psychology, 48,* 439–454.

Bell, P. B., Summerville, M. A., Nastasi, B. K., MacFetters, J., & Earnshaw, E. (2015). Promoting psychological well-being in an urban school using the Participatory Culture Specific Intervention Model. *Journal of Educational and Psychological Consultation, 25,* 1–18. doi:10.1080/10474412.2014.929955

Bronfenbrenner, U. (1989). Ecological systems theory. In R. Vasta (Ed.), *Annals of child development* (Vol. 6, pp. 187–249). Greenwich, CT: JAI Press.

Bronfenbrenner, U. (1999). Environments in developmental perspective: Theoretical and operational models. In S. L. Friedman & T. D. Wachs (Eds.), *Measuring environment across the life span: Emerging methods and concepts* (pp. 3–28). Washington, DC: American Psychological Association.

Cappella, R., Jackson, D. R., Bilal, C., Hamre, B. K., & Soule, C. (2011). Bridging mental health and education in urban elementary schools: Participatory research to inform intervention development. *School Psychology Review, 40*(4), 486–508.

Cappella, E., Reinke, W. M., & Hoagwood, K. E. (2011). Advancing intervention research in school psychology: Finding the balance between process and outcome for social and behavioral interventions. *School Psychology Review, 40*(4), 455–464.

Colby, M., Hecht, M. L., Miller-Day, M., Krieger, J. L., Syvertsen, A. K., Graham, J. W., & Pettigrew, J. (2013). Adapting school-based substance use prevention curriculum through cultural grounding: A review and exemplar of adaptation processes for rural schools. *American Journal of Community Psychology, 51,* 190–205. doi:10.1007/s10464-012-9524-8

D'Augelli, A. R. (2003). Coming out in community psychology: Personal narrative and disciplinary change. *American Journal of Community Psychology, 31,* 343–354. doi:10.1023/A:1023923123720

Denscombe, M. (2008). Communities of practice: A research paradigm for the mixed methods approach. *Journal of Mixed Methods Research, 2,* 270–283.

Eccles, M. P., & Mittman, B. S. (2006). Welcome to *implementation science*. *Implementation Science, 1*(1). doi:10.1186/1748-5908-1-1

Fabiano, G. A., Chafouleas, S. M., Weist, M. D., Sumi, W. C., & Humphrey, N. (2014). Methodological considerations in school mental health research. *School Mental Health*. Advanced online publication. doi:10.1007/s12310-013-9117-1

Fisher, C. B., Hoagwood, K., Boyce, C., Duster, T., Frank, D. A., Grisso, T., . . . Zayas, L. H. (2002). Research ethics for mental health science involving ethnic minority children and youths. *American Psychologist, 57*(12), 1024–1040. doi:10.1037//0003-066X.57.12.1024

Fixsen, D. L., Naoom, S. F., Blase, K. A., Friedman, R. M., & Wallace, F. (2005). *Implementation research: A synthesis of the literature* (FMHI Publication No. 231). Tampa: University of South Florida, Louis de la Parte Florida Mental Health Institute, The National Implementation Research Network. Retrieved from http://nirn.fpg.unc.edu/resources/implementation-research-synthesis-literature

Forman, S. G., Shapiro, E. S., Codding, R. S., Gonzales, J. E., Reddy, L. A., Rosenfield, S. A., . . . Stoiber, K. C. (2013). Implementation science and school psychology. *School Psychology Quarterly, 28*(2), 71–100. doi:10.1037/spq0000019

Friedman, V. J., & Antal, A. B. (2005). Negotiating reality: A theory of action approach to intercultural competence. *Management Learning, 36*(1), 69–86. doi:10.1177/1350507605049904

Gergen, K. J., Josselson, R., & Freeman, M. (2015). The promises of qualitative inquiry. *American Psychologist, 70*(1), 1–9. doi:10.1037/a0038597

Goldstein, N. E. S., Kemp, K. A., Leff, S. S., & Lochman, J. E. (2013). Guidelines for adapting manualized interventions to new target populations: A step-wise approach using anger management as a model. *Clinical Psychology Science and Practice, 19*(4), 385–401.

Greenwood, D. J., Whyte, W. F., & Harkavy, I. (1993). Participatory action research as a process and as a goal. *Human Relations, 46,* 175–192.

Gregory, H., Van Orden, O., Jordan, L., Portnoy, G. A., Welsh, E., Betkowski, J., . . . DiClemente, C. C. (2012). New directions in capacity building: Incorporating cultural competence into the interactive systems framework. *American Journal of Community Psychology, 50,* 321–333. doi:10.1007/s10464-012-9508-8

Hall, B., & Howard, K. (2008). A synergistic approach: Conducting mixed methods research with typological and systemic design considerations. *Journal of Mixed Methods Research, 2,* 248–269.

Hecht, M. L., & Krieger, J. K. (2006). The principle of cultural grounding in school-based substance use prevention: The drug resistance strategies project. *Journal of Language and Social Psychology, 25,* 301–319. doi:10.1177/0261927X06289476

Jacquez, F., Vaughn, L. M., & Wagner, E. (2013). Youth as partners, participants or passive recipients: A review of children and adolescents in community-based participatory research (CBPR). *American Journal of Community Psychology, 51,* 176–189. doi:10.1007/s10464-012-9533-7

Kapadia, S., Mehrotra, C., Nastasi, B. K., & Domenech Rodriguez, M. M. (in press). International research: Possibilities and partnerships for psychology and psychologists. In M. Bullock & C. Shealy (Eds.), *Going global: How psychologists and psychology can meet a world of need*. Washington, DC: American Psychological Association.

Kazak, A. E., Hoagwood, K., Weisz, J. R., Hood, K., Kratochwill, T. R., Vargas, L. A., & Banez, G. A. (2010). A meta-systems approach to evidence-based practice for children and adolescents. *American Psychologist, 65*(2), 85–97. doi:10.1037/a0017784

Kratochwill, T. R., Hoagwood, K. E., Kazak, A. E., Weisz, J. R., Hood, K., Vargas, L. A., & Banez, G. A. (2012). Practice-based evidence for children and adolescents: Advancing the research agenda in schools. *School Psychology Review, 41*(2), 215–235.

Kratchowill, T. R., & Stoiber, K. C. (2002). Evidence-based interventions in school psychology: Conceptual foundations of the *Procedural and Coding Manual* of Division 16 and the Society for the Study of School Psychology Task Force. *School Psychology Quarterly, 17*(4), 341–389.

Lee, S. J., Altschul, I., & Mowbray, C. T. (2008). Using planned adaptation to implement evidence-based programs with new populations. *American Journal of Community Psychology, 41,* 290–303. doi:10.1007/s10464-008-9160-5

Leff, S. S., Gullan, R. L., Paskewich, B. S., Abdul-Kabir, S., Jawad, A. F., Grossman, M., Power, T. J. (2009). An initial evaluation of a culturally-adapted social

problem solving and relational aggression prevention program for urban African American relationally aggressive girls. *Journal of Prevention & Intervention in the Community, 37*(4), 260–274. doi:10.1080/10852350903196274.

Lindamer, L. A., Lebowitz, B., Hough, R. L., Garcia, P., Aguirre, A., Halpain, M. C., . . . Jeste, D. V. (2009). Establishing an implementation network: Lessons learned from community-based participatory research. *Implementation Science, 4*(17). doi:10.1186/1748-5908-4-17

Maiter, S., Simich, L., Jacobson, N., & Wise, J. (2008). Reciprocity: An ethic for community-based participatory action research. *Action Research, 6*(3), 305–325. doi:10.1177/1476750307083720

May, C. (2013). Towards a general theory of implementation. *Implementation Science, 8*(18). Retrieved from http://www.implementationscience.com/content/8/1/18

Mertens, D. M. (2007). Transformative paradigm: Mixed methods and social justice. *Journal of Mixed Methods Research, 1,* 212–225. doi:10.1177/1558689807302811.

Nastasi, B. K., Hitchcock, J. H., & Brown, L. M. (2010). An inclusive framework for conceptualizing mixed methods design typologies: Moving toward fully integrated synergistic research models. In A. Tashakkori & C. Teddlie (Eds.), *Handbook of mixed methods in social and behavioral research* (2nd ed., pp. 305–338). Thousand Oaks, CA: Sage.

Nastasi, B. K., Hitchcock, J., Sarkar, S., Burkholder, G., Varjas, K., & Jayasena, A. (2007). Mixed methods in intervention research: Theory to adaptation. *Journal of Mixed Methods Research, 1*(2), 164–182. doi:10.1177/1558689806298181

Nastasi, B. K., Hitchcock, J. H., Varjas, K., Jayasena, A., Sarkar, S., Moore, R. B., . . . & Albrecht, L. (2010). School-based stress and coping program for adolescents in Sri Lanka: Using mixed methods to facilitate culture-specific programming. In K. M. T. Collins, A. J. Onwuegbuzie, & Q. G. Jiao (Vol. Eds.), *Research on stress and coping in education: Vol. 5. Toward a broader understanding of stress and coping: Mixed methods approaches* (pp. 305–342). Charlotte, NC: Information Age.

Nastasi, B. K., Moore, R. B., & Varjas, K. M. (2004). *School-based mental health services: Creating comprehensive and culturally specific programs*. Washington, DC: American Psychological Association.

Nastasi, B. K., Varjas, K., Bernstein, R., & Jayasena, A. (2000). Conducting participatory culture-specific consultation: A global perspective on multicultural consultation. *School Psychology Review, 29*(3), 401-413.

Odom, S. L. (2009). The tie that binds: Evidence-based practice, implementation science, and outcomesfor children. *Topics in Early Childhood Special Education, 29,* 53–61.

Ozer, E. J., Cantor, J. P., Cruz, G. W., Fox, B., Hubbard, E., & Moret, L. (2008). The diffusion of youth-led participatory research in urban schools: The role of the prevention support system in implementation and sustainability. *American Journal of Community Psychology, 41,* 278–289. doi:10.1007/s10464-008-9173-0

Partridge, W. L. (1985). Toward a theory of practice. *American Behavioral Scientist, 29,* 139–163.

Rabin, B. A., & Brownson, R. C. (2012). Developing the terminology for dissemination and implementation research. In R. C. Brownson, G. A. Colditz, & E. K. Proctor (Eds.), *Dissemination and implementation research in health* (pp. 23–51). New York, NY: Oxford University Press.

Ringeisen, H., Henderson, K., & Hoagwood, K. (2003). Context matters: Schools and the "research to practice gap" in children's mental health. *School Psychology Review, 32*(2), 153–168.

Saul, J., Wandersman, A., Flaspohler, P., Duffy, J., Lubell, K., & Noonan, R. (2008). Research and action for bridging science and practice in prevention. *American Journal of Community Psychology, 41,* 165–170. doi:10.1007/s10464-008-9169-9

Schensul, J. J. (1998). Community-based risk prevention with urban youth. *School Psychology Review, 27,* 233–245.

Schensul, J. J., & Schensul, S. L. (1992). Collaborative research: Methods of inquiry for social change. In M. D. LeCompte, W. L. Millroy, & J. Preissle (Eds.), *The handbook of qualitative research in education* (pp. 161–200). San Diego, CA: Academic Press.

Serpell, Z. N., Clauss-Ehlers, C. S., & Weist, M. D. (2013). Next steps: Advancing culturally competent school mental health. In *Handbook of culturally responsive school mental health: Advancing research, training, practice, and policy* (pp. 251–260). New York, NY: Springer.

Serrano-Garcia, I. (1990). Implementing research: Putting our values to work. In P. Tolan, C. Keys, F. Chertok, & L. Jason (Eds.), *Researching community psychology: Issues of theory and methods* (pp. 171–182). Washington, DC: American Psychological Association.

Shulha, L. M., & Wilson, R. J. (2003). Collaborative mixed methods research. In A. Tashakkori & C. Teddlie (Eds.), *Handbook of mixed methods in social and behavioral research* (pp. 639–670). Thousand Oaks, CA: Sage.

Teddlie, C., & Tashakkori, A. (2009). *Foundations of mixed methods research: Integrating quantitative and qualitative approaches in the social and behavioral sciences*. Thousand Oaks, CA: Sage.

Trimble, J. E., Scharrón-del-Río, M. R., & Hill, J. S. (2012). Ethical considerations in the application of cultural adaptation models with ethnocultural populations. In G. Bernal & M. M. Domenech Rodríguez (Eds.), *Cultural adaptations: Tools for evidence-based practice with diverse populations* (pp. 45–67). Washington, DC: American Psychological Association.

Varjas, K., Meyers, J., Henrich, C. C., Graybill, E. C., Dew, B. J., Marshall, M. L., . . . Avant, M. (2006). Using a Participatory Culture-Specific Intervention Model to develop a peer victimization intervention. *Journal of Applied School Psychology, 22*(2), 35–57. doi:10.1300/J370v22n02_03

Wandersman, A., Duffy, J., Flaspohler, P., Noonan, R., Lubell, K., Stillman, L., . . . Saul, J. (2008). Bridging the gap between prevention research and practice: An interactive systems framework for building capacity to disseminate and

implement innovations. *American Journal of Community Psychology, 41*(3–4), 171–181. doi:10.1007/s10464-008-9174-z

Weisz, J. R., Sandler, I. N., Durlak, J. A., & Anton, B. S. (2005). Promoting and protecting youth mental health through evidence-based prevention and treatment. *American Psychologist, 60*(6), 628–648. doi:10.1037/0003-066X.60.6.628

Whaley, A. L., & Davis, K. E. (2007). Competence and evidence-based practice in mental health services: A complementary perspective. *American Psychologist, 62*(6), 563–574. doi:10.1037/0003-066X.62.6.563