# Culturally Adapted Preventive Interventions for Children and Youth

Nancy A. Gonzales

Arizona State University

Anna S. Lau

University of California Los Angeles

Velma M. Murry

Vanderbilt University

Armando A. Piña

Arizona State University

Manuel Barrera, Jr.

Arizona State University

Address for Correspondence: Nancy A. Gonzales, Psychology Department, Box 871104, Arizona State University, Tempe, AZ 85287-1104, nancy.gonzales@asu.edu.

Abstract

As evidence to support the efficacy and long-term benefits of interventions to prevent social, emotional, and behavioral problems of childhood and adolescence has accumulated steadily over the past three decades, scholars involved in intervention development and evaluation have tackled concerns about the relevance and fit of these interventions for distinct ethnic and racial minority groups. A critical mass of scholars have engaged the fundamental question as to whether intervention adaptation is required and, if so, how adaptations should be conducted to best reach and address the needs of diverse ethnocultural groups. In this article we summarize the historical context, key conceptual challenges, and methods that have shaped the emerging field of cultural adaptation during this period. Current progress and empirical evidence regarding the effects and relative benefits of culturally adapted interventions are highlighted by presenting the most influential exemplars that have been developed and evaluated to date. Conclusions are offered about the current status of the field, future research directions, and remaining challenges for launching effective population-based strategies that address the needs and health disparities of ethnocultural groups in the U.S. and internationally.

Culturally Adapted Preventive Interventions for Children and Youth

This 25th anniversary issue of Developmental Psychopathology will be the first to include a chapter focused on the cultural adaptation of evidence based interventions (EBIs), a topic that represents a point of convergence for many of the core values and goals of the field. Whereas the overarching goal of developmental psychopathology is to elucidate the interplay among the biological, psychological, and social-contextual aspects of normal and abnormal development, the ultimate goal is to inform intervention strategies to promote resilience and prevent or ameliorate dysfunctional outcomes and disorder across the lifespan (Cichhetti & Toth, , 1992). Infusion of cultural factors into EBIs is consistent with the fundamental tenet of developmental psychopathology that maturational, experiential and cultural aspects of development are inseparably coalesced in ontogeny (Cichhetti, 1990; Cairns & Cairns, 1999). To the extent this produces differences in the existence, patterning or impact of risk and protective processes for distinct subcultural groups, modifications to intervention programs and protocols may be needed to provide the best means of reducing psychopathology for these groups. Cultural adaptation has been defined as "the systematic modification of an evidence-based intervention or intervention protocol to consider language, culture, and context in such a way that it is compatible with the client's cultural patterns, meanings, and values" (Bernal et al., 2009, p. 362). Introduction of this topic in the current volume is well-timed with respect to several disciplinary advances in developmental, cultural, clinical, public health and prevention science, and specifically with respect to research on cultural adaptation that has evolved over the past three decades to become a systematic and rigorous field of study in its own right (Barrera, Castro, Holleran Steiker, 2011; Bernal & Domenech-Rodríguez, 2012; Castro, Barrera, & Holleran Steiker, 2010; Lau, 2006).

This chapter reviews the historical context and challenges that have given rise to this field, the methods and models used to address these challenges, and exemplars of culturally adapted interventions for children and adolescents. Although interventions to address the needs of vulnerable youth exist on a continuum from those that seek primarily to promote health and positive development for whole populations to those targeted at individuals with severe disorders (Weisz, Sandler, Durlak, & Anton, 2005), our presentation of exemplars

broadly encompasses the preventive end of the spectrum that addresses risk before it has evolved into debilitation forms, including: *universal* prevention approaches that address risk factors in general populations, *selective* preventive interventions that target those segments of the population with greater than normal risk of developing a disorder, and *indicated* approaches that focus on subgroups exhibiting early signs or symptoms of developing a disorder (Mrazek & Haggerty, 1994). The specific goals of the chapter are to (a) articulate the issues and challenges that have shaped current approaches to cultural adaptation of EBIs, (b) review approaches and models for designing cultural adaptations of EBIs, including frameworks for deciding when, what and how adaptations should be made, (c) present exemplars of cultural adaptations of EBIs targeting a range of social, emotional, behavioral and health outcomes; and (d) summarize strengths, limitations, and future directions for the field.

*Definition of Culture*

Culture is a complex construct that describes the characteristics of a particular group of people, defined by everything from language, religion, cuisine, social habits, music and arts. A distinct group of people (a tribe, an ethnic group, professional organization, a nation) can be described as "having a culture," meaning that its members share a collective system of values, beliefs, expectations, and norms, including traditions and customs, as well as sharing established social networks and standards of conduct that define them as a cultural group (Betancourt & Lopez, 1993). Although culture can be conceptualized at multiple levels to apply to more universal characteristics of the human experience to narrower conceptualization of the lifeways and world - views of specific cultural groups and subgroups (Munoz & Mendelson, 2005), the majority of prior research on cultural adaptation equates culture with ethnicity/race; consistent with this trend, our review of exemplars will focus on adaptations for distinct ethnocultural groups. However, as noted by many scholars (e.g., Castro, et al., 2010; Wilson & Miller, 2003), the tendency to equate cultural adaptation with adaptation for specific ethnocultural groups may be misguided in some cases because there are numerous other potential sources of mismatch between an EBI and potential consumers that may be more relevant (Reyno & McGrath, 2006). For example, among the many adaptations of Parent Training (PT) interventions that have been conducted for

distinct ethnocultural groups, a few researchers have adapted PT interventions in ways that transcend ethnicity/race to address issues of low socioeconomic status (Brotman et al., 2003; Webster-Stratton, 1998).

A focus on ethnicity per se is further complicated by considerable heterogeneity that exists within racial/ethnic groups (Murry, Hill, & Smith, 2001). In the United States, the four major ethnic groups (Latinos/Hispanics, African American, Asian Americans, Native Americans) collectively comprise approximately 37% of the total population and they range in size from about one million among Native Americans to over 52 million for Hispanics/Latinos (U.S. Census Bureau, 2010). Within each of these broad groups, there exist many homogenous subcultural groups based on factors such as nationality, socioeconomic status, religious background, immigration history, and generational status (Castro et al., 2004). Asian Americans as an ethnic minority group, for example, are quite heterogeneous with over 20 subgroups (e.g., Chinese, Japanese, Filipino, Korean, Vietnamese, Laotian, Cambodian, etc.) each made unique by linguistic, cultural, and sociodemographic backgrounds, and immigration histories in the United States (Sue & Morishima, 1982). Diversity between these Asian subgroups has been associated with a variety of differences in mental health service need, utilization, and outcome. Many scholars advocate population segmentation (Balcazar et al., 1995), the identification and targeting of subgroups based on the intersection of these cultural dimensions, to avoid ethnic gloss (Trimble 1995) in planning an intervention. However, opposing arguments counter that the adaptation of interventions for increasingly smaller segments of the population is not feasible given the number of treatments, disorders, developmental stages, and a host of other factors that would generate a matrix impossible to manage (Kazdin, 2000). Moreover, many interventions will ultimately be delivered in multicultural settings and for populations that are changing on cultural dimensions. Alternative models proposed to address this issue have included adaptive approaches (Collins, Murphy, & Bierman, 2004 ) that provide opportunities for dynamic sizing (Sue, 2006) or tailoring (Zayas, Bellamy, & Proctor, 2012) of culture-specific program elements on a case-by-case basis (Piña, Villalta, & Zerr, 2009). In most cases, however, clarity regarding one's conceptualization of "culture", including the theoretical rationale or empirical evidence for

expecting cultural differences among subcultural groups or between individuals within a distinct subgroup are often lacking to support such nuanced models.

*Historical Context of Cultural Adaptation Research*

Cultural adaptation takes the position that, to be effective, interventions must be responsive to the cultural practices and worldviews of the subcultural groups for whom these interventions are intended (Resnicow, Soler, Braithwaite, Ahluwalia, & Butler, 2000). Although this view has gained significant traction over the years as the diversity of the U.S. population has expanded exponentially, this point continues to be a matter of significant debate with strong arguments still voiced about the wisdom, necessity, and feasibility of this position (Elliot & Mihalic, 2004 ; Kazdin, 2008; Ortiz & Del Vecchio, 2013). Objections notwithstanding, cultural adaptation has emerged as an active research area in response to several key developments across disciplines grappling with the role of culture in the provision of behavioral, psychological and health interventions for diverse populations (Bernal & Domenech-Rodríguez, 2012; Barrera et al., 2013).

Historically, the broader debate about the cultural relevance of psychology to ethnically diverse populations has been a fundamental driving force**.** The cultural movement in psychology, including the emergence of cross-cultural, multicultural, ethnicity, culture and race studies over the past three decades, challenged the universality of contemporary theories and raised awareness regarding the lack of representation of ethnic minority populations and the lack of attention given to culturally relevant processes in both basic and intervention research (Betancourt & Lopez, 1993; Markus & Kitayama, 1991; Sue, 1988). In developmental science, seminal papers highlighted the importance of testing integrative, ecologically and culturally valid models that could better account for unique cultural experiences of ethnic minority children and families, and the role of culture in shaping or altering normal and abnormal development (Garcia-Coll, Lamberty, Jenkins, McAdoo, Crnic, Wasik, Vazquez-Garcia, 1996; Szapocznik& Kurtines, 1993). In intervention sciences, Schinke et al. (2004) and others (McGoldrick & Giordano, 1996) argued that the majority of science-based interventions, while characterized as universal, are often validated on and influenced by the values and interests of urban or suburban, White, middle class samples. Consequently, EBIs may not be relevant for addressing

issues confronting differing subgroups, including racial-ethnic minority and rural White populations. Even more serious assertions have been expressed that interventions developed without respect for diversity might be used, intentionally or not, to inculcate values, beliefs, and norms of the dominant culture with the result of devaluing, dismissing, replacing, or even eliminating the culture and language of origin (Comas-Diaz, 2006; Gone, 2004). Short of such imperialistic concerns, yet still troubling, was mounting evidence of massive health disparities between European-American and American ethnic minorities (U.S. Department of Health and Human Services, 2001) coupled with data showing minority populations lack access, enroll at lower rates, and are more likely to drop out of interventions that might reduce these disparities (Smedley, Stith, & Nelson, 2003). Beginning in the 1990s, these developments and other awareness-raising efforts paved the way to policy changes regarding inclusion of cultural minorities in funded research (NIH, 1994) and a growing imperative to provide culturally relevant interventions and services for these populations (U.S. Department of Health and Human Services, 2010). Although ethnic minority groups remain underrepresented in clinical trials and published research (Ortiz & Del Vecchio, 2013; Wendler, Kington, Madans, Wye, Christ-Schmidt, 2006), particularly in top-tier journals (Hartmann, Kim, Kim, Nguyen, Wendt, Nagata, & Gone, in press), the number and quality of culturally informed developmental studies and interventions trials has increased steadily since the early 1990s.

A second major influence, beginning in the 1990s, was the emphasis on empirically validated interventions as the gold standard for professional practice (Chambless & Hollon, 1998) and a prerequisite for broad diffusion of prevention and health promotion programs (Flay, Biglan, Boruch, Gonzalez-Castro, et al., 2005). On the basis of established criteria for EBIs to receive the label of "efficacious" or "effective," special initiatives and governing bodies across public health service sectors were charged with the task of creating registries to identify and catalog EBIs ready for public dissemination (e.g., the National Registry of Evidence-Based Prevention Programs and Practices; the Collaborative for Academic, Social, and Emotional Learning [CASEL], the Blueprints Violence Prevention Initiative, the What Works Clearinghouse). By prioritizing programs with established evidence, the majority which had been validated initially without representation or attention to cultural diversity, the cultural adaptation agenda was solidified. During the past decade and a half,

increasing attention has been given to adapting EBIs for use with ethnic, cultural, and racial minority groups who were not part of the original intervention development process. The ascendancy of EBIs and standards of evidence also resulted in a high premium being placed on fidelity of implementation, often as detailed in program manuals (Addis & Cardemil, 2006), and the belief that program effects are best attained under strict adherence to the intervention's procedures as designed and validated (Elliot & Mihalic, 2004). Thus, the fundamental fidelity-adaptation dilemma, which consists of a "dialectic involving arguments favoring fidelity in the delivery of an EBI as designed versus arguments favoring the need for adaptations to reconcile intervention-consumer mismatches in accord with the needs and preferences of a subcultural group" (Castro et al., 2004, pp. 221) became the core challenge for this emerging field.

Significant developments in prevention science over the past three decades have also been important in shaping the cultural adaptation agenda. Because the goal of prevention, even more so than treatment, is to maximize public health access and achieve population-level impact (Spoth, Rohrbach, Greenberg, Leaf, Brown, Fagan, Catalano, Pentz, Sloboda & Hawkins, 2013), ensuring relevance to diverse populations has long been a central concern. A 2009 report on prevention of child social, emotional and behavioral disorders summarized an impressive body of evidence demonstrating that, when carefully implemented, prevention and health promotion programs can prevent a wide range of health problems, promote positive development, and achieve economic benefits (National Research Council and Institute of Medicine [NRC-IOM], 2009). As summarized in this report, numerous randomized trials have shown that these types of interventions have had significant, long-term effects in reducing unhealthy eating, physical inactivity, alcohol, tobacco and other drug abuse, teen pregnancy, school failure, delinquent behavior, and violence, as well as other mental, emotional, behavioral and physical health problems (NRC-IOM, 2009). However, this same report also summarized studies showing that a relatively small percentage of these interventions are actually implemented by community-based program delivery systems (e.g., public schools, health care facilities, social service agencies). This report thus underscored a significant problem and an important shift in emphasis, already underway in the field, toward greater focus on effectiveness and implementation studies and a push toward broader community diffusion of

EBIs. Distinctions between *efficacy* and *effectiveness* are important for the field of cultural adaptation. Whereas efficacy measures how well an intervention works when tested within the controlled conditions under which it was designed, effectiveness measures how well the intervention works in an applied real-world setting (Flay et al., 2005). The shift in emphasis toward evaluating the evidence of effectiveness studies to determine what preventive programs work, for whom, and under what circumstances is greatly needed to move the field forward in launching successful population-based prevention strategies (Brown, Berndt, Brinales, Zong, & Bhagwatt, 2000). Further, a rigorous evaluation of broad dissemination and implementation has important implications for the future of research on cultural adaptation. Moving EBI's into widespread, population-level diffusion requires attention to cultural diversity yet also puts a high priority on adaptation to meet the needs of the local community as well as the service settings in which interventions are delivered (Brownson, Colditz, & Proctor, 2012). As such, the integration of findings from cultural adaptation and from implementation science has the potential to reduce racial and ethnic disparities in health (Cabassa & Baumann, 2013).

A final, emergent historical force likely to shape future research on cultural adaptation is the spread of evidence-based practice throughout the world. Countries across the globe are increasingly implementing interventions developed in other countries to address their own public health problems. This trend has already resulted in the wide adoption of EBIs and a growing number of controlled trials of imported and culturally adapted EBIs. The government of Norway implemented a countrywide dissemination of the Parent Management Training-Oregon Model (Forgatch, 1994; Patterson, Reid, & Dishion, 1992) and Multisystemic Therapy (Henggeler, Schoenwald, Borduin, Rowland, & Cunningham, 1998) to target youth behavior problems (Ogden, Amlund Hagen, Askeland & Christensen, 2009). The Swedish National Board of Health and Welfare (2011) reported that, in the last 10 years, imported EBIs made up a sizeable portion of the total number of social and behavioral interventions tested in Sweden (i.e. 40%). A recent review of randomized trials narrowly focused on parent training interventions to reduce family violence in low- to middle-income countries (Knerr, Gardner, & Cluver, 2012) identified trials spanning 9 countries (Brazil, Chile, China, Ethiopia, Iran, Jamaica, Pakistan, South Africa, and Turkey); given the strict criteria for inclusion in this study of randomized trials, the

actual practice of international implementation is likely to be even more extensive.

Although the majority of imported EBIs are based on interventions initially developed in the United States, programs such as the Olweus Bullying Program developed in Norway (Schroeder, Messina, Schroeder, Good, Barto, Saylor, Masiello, 2012) and the Triple P parenting intervention from Australia (Sanders, 2012) are examples of programs successfully implemented in the U.S. and several other countries. Thus, the proliferation of interventions crossing international boundaries is well underway and many of the same debates are taking place about the need to adapt interventions for international diffusion, with some experts cautioning against the trend for global dissemination without careful attention to cultural adaptation (Bernal & Scharron-del-Rio, 2001) and others challenging the assumption that such adaptations are necessary (Knerr, Gardner, & Cluver, in press). Noting some examples of imported EBIs that have failed to show expected benefits, Ferrer-Wreder, Sundell and Mansoory (2011) recently advocated systematic, theory driven international adaptation studies to give researchers an improved ability to empirically test degrees of intervention adaptation in relation to intervention effectiveness, and thereby improve the field's ability to learn from both its successes and failures. Their approach draws on models that have evolved in the U.S. for domestic adaptations, as described below, yet also highlights additional challenges for the future of cultural adaptation as a global endeavor.

Propelled by historical forces described above and attempts to address the underlying tensions and controversies they have engendered, cultural adaptation of EBIs has evolved over the past three decades into a well-defined area of study that now spans multiple disciplinary boundaries. The number of interventions that have been adapted and evaluated has grown and, in the process, systematic, data-driven, consumer-sensitive processes have been established for determining if EBIs should be adapted, how they should be adapted, and the results of those adaptations on engagement and intervention efficacy and effectiveness (Barrera et al., 2013). We summarize these developments in the next section, then follow with a summary of exemplars of culturally adapted EBIs that target a range of child and adolescent psychological, behavioral, and health problems.

*The Rationale for Cultural Adaptation: Guidelines toward a more Systematic and Targeted Approach*

In 2006, Lau proposed a compelling framework for identifying circumstances that would justify a cultural adaptation of an EBI. This thoughtful discussion articulated a balanced perspective on cultural adaptation, assuming its importance yet also allowing there are likely to be interventions and conditions for which it is not warranted. For example, prominent examples exist of non-adapted preventive interventions, including some of the most widely disseminated programs in the field, that have demonstrated efficacy in trials with large numbers of ethnic and racial minorities (e.g., Multisystemic Therapy; Schoenwald et al., 2008) or when specifically applied to distinct ethnocultural groups in the U.S. (e.g., Nurse Family Partnerships; Olds, Eckenrode, Henderson, et al., 1997). Lau's *Selective and Directed Treatment Adaptation Framework (SDTAF)* advocated a theory and data-driven approach for determining if an EBI should be culturally adapted and, if so, which intervention elements might be altered.

The "selective" dimension of this framework recommended cultural adaptations should be pursued only when evidence suggests that delivering a standard treatment would result in a high probability of failure. Some scholars suggest adaptations should not be made to interventions until the original version has been implemented and problems have arisen (Kumpfer et al., 2008). Sanders (2012) argues for a deployment-focused model of adaptation that privileges the responses from participants who may be in a better position to gauge the acceptability of an intervention, as reliance on the perceptions of professionals serving ethnic minority communities may result in filtering by "cultural gatekeepers" who hold views on cultural acceptability that may differ from intended recipients (Lau, 2012; Morawska et al. 2011). The "directed" part of the Lau's framework addresses the question of what to adapt, indicating that adaptations to content or procedures should only be pursued when evidence suggests such modifications are needed. This framework was additionally important for highlighting that adaptations directed at attracting and engaging distinct ethnocultural groups are equally important as those directed at improving intervention outcomes.

Lau's framework prompted dialogue among cultural adaptation scholars that lead to significant changes in the conceptualization of cultural adaptation. In a response to Lau (2006), Barrera and Castro (2006) elaborated on the conditions in which an adaptation would be justified, which they organized into four

categories: (a) ineffective engagement such as poor recruitment, retention, program attendance, or participation in intervention activities, (b) unique risk or resilience factors underlying the intervention target (e.g., discrimination experiences), or that function differently across cultural groups, (c) unique symptoms of a common disorder, and (d) poor intervention efficacy for a particular subcultural group. Other models of cultural adaptation to be discussed later have since incorporated these suggestions by placing a high priority on initial data-gathering as a way to determine whether and what to adapt. However, despite these aspirational frameworks, it has been rare for such systematic decisions to be articulated in the cultural adaptation literature. EBI adaptations often have been conducted without first demonstrating diminished engagement or benefit, and often without theory or evidence about unique risk and resilience factors guiding adaptation efforts.

*The Content of Cultural Adaptation: Surface Structure, Deep Structure, and Core Components*

Focusing on the content of cultural adaptations, Bernal and colleagues (Bernal, Bonilla, & Bellid, 1995) were among the first to identify the intervention elements that may require adaptation to increase ecological validity or congruence between the client's ethnic and linguistic context and the cultural properties embedded in an intervention. The Ecological Validity Model (EVM) identified eight dimensions in which intervention adaptations are likely to be made. Some of these dimensions are more likely to involve adaptations to specific aspects of the intervention itself (e.g., language, metaphors, content, concepts, goals, and context), while others are more relevant to the intervention's implementation support structures (e.g., persons and methods). Resnicow and colleagues (2000) also focused on the content of cultural adaptation, describing aspects of the program, protocol or delivery system that might require adaptation and introduced the influential distinction between *surface structure* and *deep structure* adaptations. In their words, ''Surface structure establishes feasibility, whereas deep structure determines program impact'' (Resnicow, Soler, Braithwaite, Ahluwalia, & Butler, 2000, p. 274). Surface structure adaptations typically involve change in an original EBI's materials or activities that address observable and superficial aspects of a target population's culture, such as language, music, foods, clothing, and other observable aspects. An intervention's deep structure involves the processes related to the

problem of interest and is more likely to involve the theory-based mediators of the intervention that are thought to affect therapeutic change mechanisms or outcomes.

There is wide agreement that surface structure changes are not only permissible but often necessary to convey respect and achieve "cultural attunement," a term coined by Falicov (2009) to refer to additions to EBIs that are intended to boost engagement and retention of subcultural groups in treatment. Providing services in clients' native language, including familiar cultural traditions and teaching methods (e.g., storytelling, games), and utilizing individuals of color as educational facilitators are examples of features that might attract subcultural groups into treatment and increase their sustained participation. Surface structure changes are also important to maximize comprehension (e.g., understandable content that is matched to the linguistic, educational, and/or developmental needs of the consumer group), motivation (e.g., content that is interesting and important to this group), and cultural relevance (content and materials that are applicable to participants' everyday lives), as described by Castro et al. (2004).

Advisability of deep structure change is a matter of debate among adaptation experts. The reluctance to make deep adaptations is related to the belief that there are features of a program that should not be changed because they reflect the *core components* or the internal change processes of the intervention responsible for program effects (Falicov, 2009). However, the boundaries of deep structure are not always clear and are generally a matter for program developers to define. Evidence from mediation studies that aim to identify core components (MacKinnon, Fairchild, & Fritz, 2007) can provide guidance, but tests of mediation are not always available nor do they include all components that program developers might include in their definition of the program's core components. For example, in the cultural adaptation of the New Beginnings Program for divorcing parents that was conducted to prepare for an effectiveness trial in family courts (Wolchik, Sandler, Jones, Gonzales et al., 2009), mediation analyses identified specific parenting strategies to retain because they accounted for both immediate and sustained program effects (Zhou, Sandler, Millsap, Wolchik & Dawson-McClure, 2008; Tein, Sandler, MacKinnon, & Wolchik, 2004) but, in addition, program experts identified intervention processes (e.g., home practice assignments and review) as additional aspects of what they

considered to be "core components" to be preserved in the adaptation process. Kumpfer et al. (2008) drew a strong line at making changes to program components, the timing, and the overall structure of the Strengthening Families Program (SFP) when adapting it for international dissemination. They defined these as deep structure adaptations based on experiences and evidence from effectiveness studies of SFP with American ethnic subgroups that showed diminished effects when such adaptations were made (Kumpfer, Alvarado, Smith & Bellamy, 2002).

A second major class of adaptation involves the introduction of novel intervention content to target risk factors for youth psychopathology that fall outside the foci of the original EBI. In this way, interventionists targeting culturally diverse populations supplement intervention content to address ecological risk and protective factors pertinent to specific cultural communities (e.g., Coard, Wallace, Stevenson, & Brotman, 2004; Lau et al., 2011; Martinez & Eddy, 2005; Murry, Brody et al., 2005). Intervention development studies that draw from existing EBIs but infuse additional elements in which culture is a primary consideration sometimes favor the term "culturally informed" (Falicov, 2009) or "culturally tailored" (Bernal & Domenech Rodríguez, 2012) over "cultural adaptation." Bernal and Domenech Rodríguez (2012) highlight that incorporation of cultural dimensions such as interdependence, spirituality, relational views of self, and particular worldviews into an intervention can serve goals of supporting the culture and language of origin and the development and maintenance of cultural values, both of which are empowerment strategies. These added elements may not necessarily change core components, but can enrich program effects in ways that are specific to the struggles, needs, and strengths of distinct ethnocultural groups. Even the Kumpfer et al. model (2008) drew a hard line against deep structure change but did not tacitly prohibit augmented content so long as core components are not displaced. When it occurs, clear documentation of augmented cultural components and inclusion of measures to assess change on these cultural dimensions can facilitate understanding of whether, how, and to what extent these components contribute to intervention outcomes, yet these types of analyses are rare in the literature (Castro et al. 2010)

The admonition against changing core components in the process of cultural adaptation is based on the assumption that the theory of change involved is universally powerful. To the extent that these assumptions are not accurate, more extensive modifications may be needed. Castro et al. (2004) described a continuum among interventions that incorporate cultural elements that varies between the extremes of making minor surface structure alterations to an original EBI to the complete rejection of the EBI in favor of a novel, culturally grounded approach; the latter falls outside the boundaries of what some scholars would define as "culturally adapted." Unlike cultural adaptations that begin with an established EBI and then work to integrate cultural elements that increase relevance and fit for subcultural groups, *culturally-grounded approaches* begin with an assessment of need obtained from members of a particular subcultural group who then participate actively in developing the intervention (McKay et al., 2004). The latter approach is based in models of community-based participatory research (CBPR; Minkler & Wallerstein, 2003) and is contrasted with the *Prevention Research Cycle (PRC)* that includes a series of stages that begins, instead, with (a) basic research typically conducted in a university setting to identify a disorder's risk and protective factors, (b) the design of an intervention that changes modifiable risk and protective factors, (c) empirical trials of the intervention to determine efficacy and to inform intervention modifications, (d) effectiveness trials to assess generalizability to real world applications, and (e) large-scale intervention dissemination (Mrazek and Haggerty 1994). Interventions based on the CBPR framework have gained in popularity recently, partially in response to problems that university-based EBIs developed in the PRC tradition have encountered in going to scale (Barrera et al., 2011). The belief is that programs developed through a CBRP model may be more likely to be adopted and sustained because they are responsive to the cultural and local conditions, organizational structure, and history that influence implementation and because the community has an established investment in the program from the outset (Wandersman, 2003).

*Process Models of Cultural Adaptation: Systematic Application of Best Practices*

Perhaps the most significant advance in the cultural adaptation literature over the past two decades is the proliferation of conceptual frameworks that describe the processes that can be used in designing, implementing,

and evaluating a culturally adapted EBI. To date, more than 13 different models of cultural adaptation spanning both prevention and treatment have been published, almost all within the past 10 years (for reviews, see Castro et al., 2010; Ferre-Wreder, Sundell, & Mansoory, 2012; Domenech-Rodriguez & Bernal, 2012). Frameworks relevant to prevention are listed in Table 1 that also identifies similarities and differences in their content, comprehensiveness, and scope. Although developed independently, these frameworks exhibit considerable consensus in their recommendations. For example, most models delineate specific stages or phases in the adaptation process, ranging from 3 to 9 steps across models, but generally covering the four phases recommended by Barrera and Castro's (2006) *Heuristic Model (HM)*: gather information, make preliminary adaptations to the intervention, test the preliminary adaptations, and refine adaptations.

Like most models, the first step outlined by Barrera and Castro (2006) involves a formative stage of information gathering to be used in planning along the lines of Lau's selective and adaptive recommendations. Across models, this phase relies on multiple sources of both quantitative and qualitative information, such as reviews of the literature to understand common and unique risk factors and focus groups to assess perceived positives and negatives of the original EBI. Domenech-Rodriguez and Bernal (2012) highlight the importance of blending a positivist paradigm in which randomized controlled trials are the gold standard for testing the utility of interventions with a pragmatist view that also uses qualitative sources of knowledge to guide decisions. Collaboration with relevant community stakeholders such as program developers, agency staff, and community members is another common feature at this stage, and throughout the cultural adaptation process. The second phase in Barrera and Castro's model involves program design in which changes are made along the many dimensions described by Bernal et al. (1995) and Resnicow et al. (2000), including to the intervention protocol, interventionists, training, recruitment, and monitoring systems. This stage often involves multiple iterations of cultural adaptation and feedback from community stakeholders, including intervention participants themselves, in an attempt to maximize cultural fit. In the third step, case studies or pilot studies are used to refine recruitment, intervention and assessment processes, again using both quantitative and qualitative data to evaluate impact of the intervention on engagement, consumer satisfaction, and intervention processes. This

stage also may involve multiple iterations of pilot testing and refinement to prepare for the fourth stage in which the final intervention package is prepared for a more robust test of the culturally adapted intervention.

Although most of the models listed in Table 1 cover similar phases and recommendations, there are important differences between them. Two of the models were developed in relation to the adaptation of specific programs, whereas others offer generic or general guidelines for the field. The models also vary in terms of their intended application in different countries versus a primary focus on domestic ethnocultural groups. Finally, whereas some models are focused on the end point of preparing for evaluation of program efficacy, others are oriented toward effectiveness and dissemination. For example, the model for International Implementation of MST was developed to support cross-national adaptation and dissemination of *Multisystemic Therapy* (Schoenwald et al. 2008). MST is a systems-oriented family therapy designed to benefit troubled adolescents who have exhibited conduct and/or substance abuse problems that has been implemented in 34 states in the U.S. and 15 countries to date (Henggeler & Schaeffer 2010). In contrast to cultural adaptation models focused primarily on the content and design of the program, the International Implementation of MST model attends to implementation issues, such as the selection of appropriate clinical staff, training materials and procedures, and the clinical delivery system. Kumpfer and colleagues (2008) delineated a model based on their experience disseminating the *Strengthening Families Program* around the globe. Their nine step model (See Table 1) begins with a needs assessment and selection of an appropriate EBI and ends with a model that is ready for cross-national dissemination.

The *Planned Intervention Adaptation (PIA)* protocol is unique because it is a generic model for cross-national adaptation of interventions and is geared toward the design of effectiveness and dissemination trials of imported EBIs (Sundell and Ferrer-Wreder, in press). In PIA, cultural groups are conceptualized as nested, recognizing that distinct subgroups (e.g., Swedes with a Latino family background) are nested within a larger cultural context (e.g., a Swedish community), thus attempting to address the challenge of attaining cultural sensitivity to the unique conditions produced by these intersecting aspects of culture. PIA begins with formative research (Phase I), followed by an effectiveness trial (Phases II) which provides evidence that may indicate a

need for another round of adaptation or a dissemination study. At the conclusion of PIA's phase II, the feasibility of a dissemination trial is evaluated by program developers and new stakeholders. PIA also specifies a time period for the initial adaptation stages and a sampling strategy for formative studies. Phase 1 of PIA is recommended as a roughly 1.5-2 year period when intervention developers and stakeholders (agency staff, potential consumers) agree to collaborate on five preliminary steps that are summarized in a table and detailed in text (e.g., language translations, tests of translated materials, focus group checks on cultural appropriateness of intervention materials and activities). These preliminary steps help shape the adapted intervention. In Phase 2 of PIA, the authors recommend a three-arm effectiveness study in which a minimally adapted intervention (just surface structure changes such as language translation), a fully adapted intervention (both surface and deep structure changes), and a control condition are tested. They also recommended the inclusion of appropriate measures and data analytic procedures to identify possible mediators and moderators of intervention effects. Unfortunately, based on Sundell et al.'s (in press) article, it is not certain that the PIA framework actually has been used in international adaptations of interventions.

Common to all models is the expectation that cultural adaptations will be evaluated, either in randomized efficacy or effectiveness studies. Several questions are critical to address, including effects on engagement and program outcomes, and test of mediators and moderators. In efficacy trials, effects on program mediators are useful to identify core components of the intervention to guide future dissemination and effectiveness studies in other contexts or with other populations (e.g., Gonzales et al., 2011; Lau et al., 2011; Murry, McNair, et al., 2012). Studies of culturally adapted interventions also offer important opportunities to test whether cultural variables included in the adaptation contribute to intervention efficacy (Castro et al., 2010; Wilson & Miller, 2003). Evaluation of cultural adaptation in the context of effectiveness studies can test whether cultural adaptations impact program uptake and fidelity, the best methods to train interventionists and monitor delivery, and program effects on distinct ethnocultural groups receiving services in natural delivery settings. whether interventionists are more or less likely to adhere to the intervention protocol when delivering culturally adapted interventions (Spoth et al., 2013). Test of moderators can identify subgroups that may show

differential response in terms of engagement or outcomes based on dimensions such as acculturation or adversity (Gonzales et al., 2011; Lau et al., 2011), thus advancing understanding of the need for population segmentation while also identifying subgroups most likely to benefit and those that may need further adaptations. Perhaps the most important question rarely addressed when evaluating culturally adapted interventions is whether the adapted EBI is more effective or offers other added benefits (e.g., increased likelihood of adoption in the community, higher enrollment rates) when compared with the original EBI (Castro et al., 2010; Resnicow et al., 2000).

Although it remains a largely unaddressed empirical question, it is possible that the extent of optimal changes to an EBI also will depend on the nature of the EBI to be adapted. For example, adaptations may be more important for interventions that target family processes than for those delivered in schools, or when they target specific mediators or outcomes. In the following sections we present a qualitative summary of culturally adapted interventions to prevent a range of child and adolescent emotional, behavioral, and health problems that have been evaluated in randomized controlled trials. Our presentation features exemplars and is not intended as an exhaustive review. Because the question of whether the types or impact of cultural adaptations may vary depending on the nature of the intervention, we selected four distinct domains to focus our review and discussion. Two broad domains, adaptations of parent training interventions and adaptations of sexual risk and drug preventive interventions, were chosen because they represent the most active areas for past research on cultural adaptation. We also include a summary of adapted prevention interventions targeting child and adolescent internalizing outcomes that are less common due to a lack of focus in prevention on problems such as anxiety and depression. Our final domain includes health-focused preventive interventions, a newly emerging and important area of emphasis for reducing minority health disparities. Our purpose in presenting this collection of exemplars is to examine the extent to which child and adolescent interventions have been adapted for distinct ethnocultural groups, including for which groups and for what types of preventive interventions; the processes used and the nature of adaptations that have resulted; and the evidence base for addressing key question about efficacy or effectiveness, including tests of underlying cultural dimensions that account for

program effects, subgroup differences in intervention responsiveness, and the most salient question: Do cultural adaptations make a noticeable impact on outcomes? In each section, we first describe the prevention domain, the types of EBIs in each domain that have been culturally adapted and the evidence base to support them, and the empirical or epidemiological basis to suggest that cultural adaptations of these EBIs may be relevant to the public health needs of targeted groups.

## PARENT TRAINING INTERVENTIONS

Maladaptive parent-child interactions have been found to precede the onset of, or maintain multiple forms of child psychopathology, across both externalizing and internalizing spectrums. Even in conditions not primarily driven by environmental socialization factors, research had documented the ameliorative effects of instantiating specific types of parent-child interactions in improving outcomes of various forms of psychopathology (e.g., joint attention and symbolic play for autism spectrum disorders). As such, family-based interventions often form the foundation of prevention and intervention programs across a range of psychopathology targets. In particular, EBIs for conduct disorder and related externalizing behavior problems in youth almost uniformly include parent training, as the sole or first line intervention, or as a major component of a multi-systemic intervention. The purpose of parent training (PT) is to prevent and decrease disruptive behavior and increase prosocial behaviors in children. The efficacy of PT is well established with robust evidence of clinically significant improvements in child conduct problems (Eyberg, Nelson & Boggs, 2008; Sheldrick, Kendall & Heimberg, 2001). Treatment aims to improve upon parents' skills and increase the consistent use of those skills. PT is rooted in social learning theory (Bandura, 1977) with specific strategies designed to interrupt cyclical coercive interactions during which aversive behaviors emitted by parents and children are negatively reinforced (Patterson, Chamberlain, & Reid, 1982). Common elements across PT interventions serve to reinforce appropriate child behavior (e.g., positive attention, praise, tangible rewards) while removing reinforcement or punishing negative child behavior (e.g., differential attention, time-out, response cost) (Garland et al., 2008). Parents are also instructed to structure expectations for appropriate behavior through limit-setting, routines and rules, and effective commands. Consistent with the Hanf (1969)

two-stage model, PT interventions typically begin with instruction, modeling and rehearsal of positive reinforcement skills to increase prosocial behavior before introducing elements intended to address child misconduct. The rationale is that a more positive parent-child relationship sets the stage for more child compliance and better uptake of positive discipline strategies. Yet some experimental evidence refutes this assumption (Eisenstadt et al., 1993).

The application of interventions prescribing fundamental changes in childrearing practices at the population level has been questioned. Parenting sensibilities and routines are embedded within a system of meanings, shaped by cultural context and values regarding the socialization of the moral child and the expected roles of adult caregivers and children within family structures (Harkness & Super, 1996; Weisner, 2002). Discourse on the application of PT with ethnic minority families has enumerated potential cultural barriers to engagement among parents whose own socialization experiences fall outside middle-class European American heritage (e.g., Barker et al., 2010; Forehand & Kotchick, 1996; Lau, 2006). Given that parent–child relations and discipline practices are the proximal targets of change, many have cautioned that cultural barriers may threaten the generalizability of PT effects. Wide cultural variation in parenting practices and values across ethnic groups may influence receptivity to PT elements, perhaps accounting for increased attrition (e.g., Kazdin & Whitley, 2003), low enrollment (e.g., August et al., 2003; Cunningham et al., 2000) and reduced participation (e.g., Orrell-Valente, Pinderhughes, Valente, & Laird, 1999) among ethnic minorities and immigrants.

Central questions concerning the application of PT with culturally diverse families emerge from socio-political and moral perspectives, as well as from epistemological and developmental science perspectives. First, widespread dissemination of PT might be viewed from the standpoint of concerns about cultural hegemony or colonialism – as promoting assimilation to European American childrearing as superior (Dionne, et al., 2009). Second, the dissemination of PT interventions that were largely developed with middle class European American families to culturally diverse communities reflects the assumption that treatment effects will generalize across distinct social and cultural family contexts (Bernal & Scharron-del-Rio, 2001). Yet, some research suggests diversity in relations between parenting behaviors, family processes, and child developmental

outcomes (e.g., Deater-Deckard & Dodge, 1997; Halgunseth, Ispa & Rudy, 2006; Ho, Bluestein & Jenkins, 2008; Lansford et al., 2005).

For these reasons, PT has come under scrutiny as a class of interventions with effects that may be subject to boundary conditions. PT has been well represented among efforts in the cultural adaptation of behavioral interventions. Two distinct themes have emerged in endeavors to enhance the outcomes of PT with ethnic minority and international populations (Lau, 2006). Beyond surface adaptations and basic translation, the range of adaptations that fundamentally alter intervention content or process can be organized into those that work toward enhancing engagement versus those that focus on tailoring intervention content to augment skills training.

*Cultural adaptations to enhance engagement in PT*

Limited engagement in PT represents a major threat to effective dissemination and implementation in disadvantaged and ethnic minority families. Clinical observations from single case design experiments and controlled trials of PT with ethnic minority families had previously suggested notable cultural distance between skills typically taught in PT and values governing parent-child relations in ethnic minority families (Borrego, Ibanez, Spendlove, & Pemberton, 2007; Ho et al., 2011; Lau et al., 2010, 2011). For example, because of a cultural priority to avoid losing face and the need for constant correction of improper behavior, Chinese parents objected to ignoring misbehavior based on principles of differential attention (Lieh-Mak, Lee, & Luk, 1984). Likewise, Mexican American parents have rated differential attention as less acceptable than other PT practices (Borrego et al., 2007), with some parents objecting because ignoring may harm the parent-child relationship (Pemberton & Borrego, 2007). While praise is often rated as among the most acceptable PT techniques (Ho et al., 2011), some interventionists have noted that praise is problematic for Chinese parents owing to beliefs that it results in a lack of humility, and complacency over persistence (Crisante & Ng, 2003; Ho et al., 1999).

Given that many of the concerns about PT for culturally diverse populations have focused on issues of acceptability, and most disparities in PT controlled trial research relate to differential enrollment and premature attrition, PT interventions targeting ethnic minority families have been culturally adapted by attending to

barriers to engagement (e.g., Carpentier et al., 2007; Matos, Bauermeister, & Bernal, 2009; McCabe & Yeh, 2009). Engagement focused adaptations encompass surface structure modifications (Resnicow et al., 2000) intended to sufficiently engage the target community and so that the intervention can be delivered with fidelity to the so-called deep structure. Fidelity to deep structure maintains the key elements of the intervention's theory of change, or logic model specifying the theoretical relations between the treatment procedures (e.g., teaching parents to praise children for appropriate behavior), mechanisms of change (e.g., alteration of reinforcement schedules), and ultimate outcomes (e.g., increased child compliance) (McKleroy et al., 2006). Most such adaptations focus on adopting a collaborative stance by soliciting and defusing concerns about specific skill elements in PT, reframing techniques to optimize fit with parents' values, and using motivational strategies to stoke parental investment in agreed upon treatment goals.

There is, of course, within-group heterogeneity in attitudes toward PT interventions, with these attitudes covarying with cultural values in distinct ways for different groups. Among Chinese-American parents, low levels of acculturation and endorsement of traditional values concerning strict discipline and shaming are associated with lower perceived acceptability of PT (Ho, McCabe, Yeh, & Lau, 2011). Yet endorsement of familismo values among Mexican Americans has been associated with positive attitudes toward PT (Pemberton & Borrego, 2007). Notably, at least one culturally adapted intervention has adopted an adaptive assessment-driven strategy, described below, to tailor the delivery of PT to promote optimal participation and acceptance among parents with a range of baseline attitudes (McCabe et al., 2005).

*Augmenting Intervention Content to Improve Outcomes for Ethnic Minority Families.*

A second major class of adaptations to PT involves the introduction of novel intervention content to target risk factors for youth psychopathology or family adjustment difficulties that fall outside the original foci of PT. In this way, interventionists targeting culturally diverse families have supplemented PT content to address ecological risk and protective factors associated with child behavior problems and parenting competence pertinent to specific cultural communities (e.g., Coard, Wallace, Stevenson, & Brotman, 2004; Lau et al., 2011; Martinez & Eddy, 2005). As with other efforts to augment PT, these adaptations address ancillary

family stressors that can heighten child vulnerability and interfere with parent skill acquisition (Miller & Prinz, 1990). These culturally adapted PT protocols have addressed risk processes such as parental acculturative stress, family level acculturation dissonance, and experiences of discrimination (Lau, 2006). In this way, these adaptations revise the intervention's deep structure or theory of change within a causal model informed by studies of risk and protective factors that highlight potential mediators of change that can improve target outcomes in the population of interest.

## Cultural Adaptations of Evidence-Based Parent Training Interventions

*Parent-Child Interaction Therapy (PCIT).* PCIT is designed to treat 2 to 7 year olds with conduct problems (Herschell, Calzada, Eyberg, & McNeil, 2002). Parents are taught skills to establish a nurturing and secure relationship while reinforcing prosocial behavior and decreasing negative behavior. It is conducted in the context of parent-child play interactions during which the therapist actively coaches the parent in the use of skills, often unobtrusively from behind an observation window. PCIT is assessment-driven and terminates when parents demonstrate mastery of the skills and their child's behavior is within the normal range on a validated scale of child conduct problems (Eyberg Child Behavior Inventory, ECBI, Eyberg & Pincus, 1999). Treatment begins with the Child Directed Interaction (CDI) phase designed to create a mutually rewarding parent-child relationship. Toward this end, parents are taught to praise, imitate, and describe the child's appropriate play behavior, reflect appropriate child speech, ignore inappropriate behavior, and allow their child to lead the activity. Parents are also taught to refrain from criticism, commands, and questions. The goal of the second Parent-Directed Interaction (PDI) phase is for parents to decrease problematic behavior by directing child activity using clear, positively stated, direct commands and consistent consequences (e.g., praise for compliance, time-out for noncompliance).

PCIT has been used with diverse ethnic minority families in the U.S. with positive results. For example, the effects of PCIT in reducing recidivism in child maltreatment appeared to generalize across racial/ethnic groups including Non-Hispanic Whites, Latinos, and African Americans, with no apparent intervention by ethnicity interactions (Chaffin et al., 2004). However, some data reveal disparities in rates of engagement and

outcomes in PCIT. Fernandez, Butler & Eyberg (2011) reported a 60% rate of attrition from PCIT in a sample of low-income African American families of preschoolers with disruptive behavior disorders. Further, only half of the treatment completers showed clinically significant change in child conduct problems and there was no significant effect of treatment on parenting stress as has been shown for Non-Hispanic White families in PCIT. Previous trials have revealed associations between low SES and drop out from PCIT (Fernandez & Eyberg, 2009) and motivational enhancement appears to prevent such attrition among ethnically diverse and disadvantaged families (Chaffin et al., 2009).

Multiple investigators have culturally adapted PCIT using varying approaches to increase responsiveness to the needs of Latino families. Borrego et al. (2006) first demonstrated the feasibility of delivering PCIT in Spanish. Matos and colleagues (2006) went further to adapt PCIT for Puerto Rican families of young children with hyperactivity. This also represented primarily a language-based adaptation that included translation of written materials, and modification of examples to reflect the daily experiences and idiomatic expressions of Puerto Rican families. Unstructured additional time was allotted to the beginning of each PCIT session to establish and maintain therapeutic rapport through personal interactions and to discuss any issues that could be affecting treatment progress. Matos, Baumeister and Bernal (2009) reported large effect sizes (Cohen's $d$ = 1.37 to 2.04) in their wait-list controlled trial, with 65-75% of treated families evincing clinically significant decreases in conduct problems.

McCabe and colleagues (2005) described a more comprehensive adaptation of PCIT for Mexican American families that adopted a tailoring approach to address barriers to engagement. The adaptation design involved the integration of studies of treatment barriers among Latino families, and original qualitative research. They noted that cultural barriers for Mexican American parents included feared negative consequences of treatment (e.g., breached confidentiality), disapproval from family members, and doubts of effectiveness or alternately unrealistic expectations of rapid improvement. Specific adaptations of PCIT were informed by focus groups and interviews with Mexican American parents of youth with disruptive disorders. PCIT was described and participants were invited to comment on its features and suggest improvements. The considerable

variability in attitudes (e.g., some Latino parents viewed time-out as not punitive enough, while others felt it was too severe) suggested that adaptations must flexibly accommodate variation in values and acculturation. Yet, several clear themes emerged. Given concerns about blame and stigma, mothers preferred the program to be framed as educational rather than therapeutic. Mothers highlighted the need for clear rationale for how activities, such as play, can reduce behavior problems. They requested support for involving fathers and extended family, through the use of father testimonials and discussing the consequences of paternal absence.

Based on these data and consultation with an expert panel and the PCIT developer, McCabe et al. developed Guiando A Ninos Activos (GANA) to include an intensive engagement protocol beginning with the initial phone contact to problem solve barriers to attendance, increase investment in treatment, and create a plan to enlist fathers and other caregivers. GANA is framed as an educational program, offered by a teacher (maestro). CDI teaches communication skills (Ejercicios de Communicacion[ECO]) while PDI teaches consistent discipline (Disciplina Consistente [DISCO]). Particularly unique is the use of assessment-based tailoring. Given the heterogeneity in attitudes, McCabe designed an initial assessment to direct the implementation of treatment elements. GANA teachers receive a computer-generated report with guidance for addressing potential issues (e.g., unrealistic expectations for treatment), and highlights elements that may require reframing to increase acceptability. For example, among parents favoring strict discipline, time-out is framed as a punishment (silla de castigo) whereas for parents who disavow punitive methods, time-out is framed as a time for calming and reflection (silla de pensativa).

In a controlled trial that was noteworthy as one of few that compared the culturally adapted intervention with the original EBI, McCabe and Yeh (2008) randomized 58 Mexican American parents with a child with a disruptive disorder to receive standard PCIT, GANA, or treatment as usual (TAU). McCabe and Yeh (2009) found that both PCIT and GANA outperformed TAU at post-treatment, and although the differences between PCIT and GANA were not statistically different, the mean effect sizes associated with the GANA-PCIT planned contrast were encouraging (Cohen's $\delta = .28$ for conduct symptoms, $\delta = .42$ for parenting). At follow-up, McCabe, Yeh, Lau, and Argote (2012) reported that GANA outcomes were superior to TAU on most parent-

report measures, while PCIT did not maintain an advantage over TAU. Thus, the efficacy and maintenance of gains in GANA have been supported, and there is some limited evidence to suggest GANA may yield greater longer-term benefit than standard PCIT. However, although GANA adaptations were explicitly designed to enhance engagement, there was no effect of condition on premature termination.

*The Incredible Years (IY)*. The Incredible Years group intervention is effective in reducing child behavior problems, improving parents' child management skills, and decreasing parenting stress (Reid, Webster-Stratton, & Baydar, 2004). Videotape modeling is an important feature of IY, to both demonstrate techniques and stimulate discussion. As with other PT programs, skill rehearsal is emphasized through role play and homework. IY incorporates many features that may promote parental engagement by introducing skills in a collaborative rather than didactic manner. As each skill is introduced, parents discuss the benefits and barriers to using the skill, opening up issues of perceived acceptability and fit with parents' values. The group leader encourages investment by highlighting how the benefits of the skill fit with the parent's own goals. The group leader uses Socratic questioning to allow the parents to identify the principles underlying effective parenting skills. Treatment manuals orient group leaders to common concerns about each PT skill (e.g., concerns that praise will ''spoil'' children, worries that time-out is not severe enough). Group process leverages peer-to-peer teaching and experiential learning, such as praising and rewarding parents in session as they are instructed to do with their children. Thus, IY builds in multiple, effective strategies for enhancing engagement for culturally diverse families. Data from prevention trials fielded in Head Start preschools have shown IY achieves parity in parenting and child behavior outcomes and parent satisfaction across Non-Hispanic White, Latino, African American, and Asian American families, with the number of ethnic differences in attrition and outcomes not exceeding that expected by chance (Reid, Webster-Stratton, & Beauchaine, 2001).

However, some independent investigations of IY suggest that treatment gains among African American and Latino families may not be lasting. For example, Gross et al. (2003) showed improvements in parenting behaviors from IY among low-income, largely African American (57%) and Latino (29%) parents of toddlers in Chicago. However, there were no lasting reductions in child behavior problems based on parent reports or

observer ratings at the 1-year follow-up. Similarly, Brotman et al. (2003) found significant initial improvements in parent responsiveness and parent-reported behavior problems following IY in a sample of 20 African American and 10 Latino preschoolers, but these effects were not maintained over 6-months.

IY has been augmented in order to address risk factors that appear relevant to the development of disrupted family relations and child behavior problems in ethnic minority populations. Lau et al. (2011) adapted IY to address risk factors for maladaptive discipline in high-risk immigrant Chinese families in southern California. Lau (2010) found that children's school problems are strongly associated with harsh physical discipline among Chinese immigrant families and that parent-child acculturation conflicts were related to physical discipline when parents held traditional values about firm parental authority. In a wait-list controlled trial including 54 families, PT was augmented with three skill components to reduce contextual stress to allow parents to follow-through with effective PT strategies. First, cognitive restructuring was added to help parents to control upsetting thoughts about children's bids for autonomy and school problems that lead to ineffective parenting. Second, psychoeducation and communication skills training helped parents reframe and resolve acculturation-related conflicts. Parents were taught active listening skills and problem-solving steps to elicit the child's perspective, communicate their own concerns effectively. Third, to prevent punitive responses to school problems, parents were taught to increase positive involvement in children's schooling by showing interest in their child's learning, structuring a homework routine, and limiting (television and computer) screen time.

Results of the trial revealed good retention with 83% of families completing the 14-week intervention. Relative to parents in the delayed-treatment condition, parents who received the intervention responded with lower levels of negative discipline and child internalizing and externalizing problems. Post-treatment effect sizes were in the medium to large range for child behavior problems, with good durability of results at 6-month follow-up. Mediation analyses revealed that decreases in negative discipline accounted for improvements in child externalizing problems. Treatment effects were moderated by baseline parenting stress, such that more distressed parents benefitted less from treatment. In contrast, an analysis of outcomes of IY among 514 families across 6 randomized trials did not find baseline parenting stress to moderate outcomes (Beauchaine, et al.,

2005). Moreover, despite the inclusion of augmented PT content to address stress in immigrant parent–child relations, intervention effects on parenting stress were not observed at posttreatment. This suggests that the cognitive restructuring and communication training components were not sufficient to produce effects among the most distressed immigrant parents in the sample.

*ParentCorps* is a culturally adapted PT protocol, strongly informed by IY, to prevent child behavior problems and promote school readiness in low-income African American and Latino families of preschoolers in New York (Brotman et al., 2010). Intervention content and process aims to be universally relevant and engaging to all families, yet sufficiently intensive and tailored for families residing in disadvantaged, urban communities with risk factors such as community violence, overcrowded schools, and diverse immigrant populations. Guided by the presumption that culture informs all aspects of caregiver psychology (i.e., expected family roles, appraisals of child behavior, future aspirations, and appropriate parenting), ParentCorps focuses explicitly on cultural values, beliefs, and norms, and encourages parents toward treatment goals that are culturally relevant. For example, session plans outline discussions concerning values related to obedience and respect for elders, and the influence of parents' own childhood experiences on their beliefs about parenting. As in IY, videotape modeling introduces each skill in the context of the daily lives and interactions of three ethnic minority families. Group leaders individualize the use of the skill for each family's unique context, use group activities, role-plays, and trouble shoot homework. Parents also receive a ParentCorps item each session to spur uptake of the assigned skill (e.g., a timer for time-out).

A randomized trial of ParentCorps including 171 families of 4 year olds in a university preschool program in a large New York public school district revealed effect sizes in the .50 range for parenting practices and child behavior problems. Recruitment results in this trial were good for a universal prevention design: 71% of parents in the intervention schools attended at least one session. However, in terms of retention only 54% attended at least 5 of 13 sessions.

*Indian Family Wellness Program.* In their cultural approach to implementing IY, Dionne et al. (2009) designed an initial motivation phase, to engage American Indian parents in PT by acknowledging the historical

role of colonization in the disruption of traditional parenting and resultant social illnesses. This phase is a 3 session motivational interview designed to help parents recognize: (a) how intergenerational transmission of parenting knowledge has been disrupted by colonization, (b) the impact of historical trauma and ongoing injustices on parenting, (c) strengths across generations despite this history, and (d) their responsibility for summoning strengths and adapting their parenting to protect their children from social illnesses. In the intervention phase, IY was delivered with fidelity, but at the beginning of each session, the interventionists drew connections between the PT skill and central American Indian traditions, beliefs and values. For example, when teaching alternatives to corporal punishment, parents were reminded that this tactic was introduced by European colonists and in boarding schools and were not consistent with Indian teachings that children were gifts who were never to be hurt. In a controlled trial, 49 American Indian families received the motivational interview and were then randomized to receive the culturally adapted IY or no treatment. Results at post-treatment revealed significant reductions in ineffective parenting and child externalizing and internalizing problems in the treatment group relative to controls.

*The Chicago Parenting Program (CPP).* CPP is another intervention building upon IY that capitalizes on the strengths of videotaped modeling followed by group discussion to elicit principles of effective behavior management, and a collaborative approach to engage parents. The CPP was designed in partnership with a parent advisory council of African American and Latino parents from different Chicago neighborhoods. The council advised the program developers on challenges they faced as parents, situations that should be portrayed in videotape modeling, and how best to depict PT skills to be congruent with their cultural values and lifestyle (Gross et al., 2007). Videos were shot in homes and in public places and depicted African American, Latino, and White families in situations that are familiar, relevant, and stressful. In a departure from IY, the CPP intervention did not proscribe spanking given the views in some communities. The 11 sessions covered child-centered time; family routines and traditions; praise and encouragement; rewards for reducing challenging behavior; setting clear limits and following through; consequences for misbehavior; strategies of ignore, distract, and time out; stress management; and problem-solving skills. A booster session is offered two months

later to help parents maintain gains.

The efficacy of CPP was demonstrated in a controlled trial of families from Chicago area preschools serving low-income families. Families were randomized to receive CPP or assessment only. The study had a recruitment rate of 34%, with average attendance of 4.3 (39%) of 11 sessions. Results indicated that CPP reduced corporal punishment, commands, and observed child behavior problems up to 1-year post-intervention. Dosage effects were clear; mean effect sizes for observed child behavior problems, parent behaviors, and parenting self-efficacy increased by 50% when dose was included in the model. Parents of children with more behavior problems at baseline attended more sessions suggesting that CPP was differentially reaching families who need it most.

*Parent Management Training – Oregon model (PMTO*). PMTO was derived from Social Interaction Learning (SIL) theory and grounded in direct observation of family interactions with a critical focus on reducing coercive family processes (Forgatch & Patterson 2010). Child behavior problems are thought to begin with small negative behaviors that escalate over time (e.g., noncompliance to shouting to tantrums) through repeated escape conditioning sequences. Common parental responses to child aversive behaviors inadvertently increase their frequency. For example, a mother finds her son watching television instead of doing homework. The mother scolds, the boy complains and claims he has no homework, the mother relents and changes the topic, and the boy stops arguing. The interaction has increased the likelihood of the boy protesting; he has learned how to turn off the mother's aversive behavior. He may escalate his protest behavior in ensuing interactions. This is conceptualized as a coercive cycle. Blame is not directed toward individuals in the family, rather the interaction between them. Five core parenting practices are identified as mechanisms for change: skill encouragement (promoting prosocial behavior through teaching and contingent positive reinforcement), limit setting (decreasing deviant behavior through appropriate and contingent use of mild sanctions), positive involvement (ways to invest time and plan activities with children), problem solving (negotiating disagreement, establishing rules and consequences for rule violations), and monitoring (protecting children from involvement in risk behaviors and affiliation with deviant peers).

Cultural adaptations of the PMTO model have been described in the literature. Domenech-Rodriguez, Baumann, and Schwartz (2011) described the process by which they developed, *Criando con Amor: Promoviendo Armonı´a y Superacio´n* (CAPAS) for Latino parents, using their *Cultural Adaptation Process Model* listed in Table 1. CAPAS is a product of systematic adaptations to PMTO guided by Bernal's (1995) ecological validity model, and a 3-stage process employing community engagement and deployment focused iterative adaptation. CAPAS incorporated adaptations to content and process to promote active parental engagement in PMTO. Adaptations focused on (a) careful language translation, with simplified terminology and greater reliance on visual aids, (b) inclusion of Latino-specific dichos to provide familiar metaphors for concepts, (c) incorporating Latino values (e.g., *respeto*, *buena educacion, valerse por si mismo*) to frame treatment goals, discussion of parent versus child values reflecting emphasis on Latino versus American orientations, (d) framing PT as promoting family harmony and success, (e) inviting extended family members, and (f) attending to contextual challenges in parenting (e.g, fear of children calling child protective services, deportation). These adaptations preserve the core PMTO elements, and the putative mechanisms of change - increasing skill encouragement, positive involvement, problem solving, limit setting, and monitoring.

Consistent with the CAPAS example, Martinez and Eddy (2005) attended to many of the same cultural and contextual considerations in their adaptation of PMTO called *Nuestras Familias: Andando Entre Culturas* (Our Families: Moving Between Cultures) for Latino families. *Nuestras Familias* was developed over a 2-year period through a collaborative effort between the Oregon Social Learning Center (OSLC) project team, Centro Latino/Americano, other community partners, and senior Latino family intervention researchers around the country. During the intervention development phase, five Latino family interventionists from the community were provided training in basic OSLC PMT. After training (which included applying PMT principles to real and fictional cases), project staff, together with community experts and trained interventionists, began the process of adapting the existing PMT intervention model. In addition to keeping the core PMTO components and framing the intervention with consonant cultural values, Martinez and Eddy augmented intervention content with two modules that focused explicitly on bridging two cultures. This augmentation focused on differential

acculturation between Latino parents and youth as a specific risk factor for youth maladjustment and behavior problems. Differential acculturation is related to increases in family stress and decreases in effective parenting practices, and these processes mediated the association between discrepant acculturation and adolescent substance risk (Martinez, 2006). *Nuestras Familias* targets "acculturation gaps" that can increase stress and disrupt effective parenting. Martinez and Eddy reasoned that for PT to be maximally effective in this context, it must address how parents manage family relations in the context of differential acculturation. In addition to the core PMTO content, *Nuestras Familias* includes four components to provide psychoeducation about differential family acculturation and empower parents to bridge acculturation gaps through the use of effective parenting practices associated with standard PMTO. In a randomized trial of *Nuestras Familias*, parents in the intervention condition reported an increase in overall parenting effectiveness and a decrease in child behavior problems compared to the no-intervention control. Furthermore, some evidence indicated that the intervention resulted in stronger effects for families with U.S. born youth, for whom family adjustment difficulties associated with differential acculturation may be more prominent (Martinez & Eddy, 2005).

PMTO was implemented nationwide in Norway in 1999 with an effectiveness trial indicating positive intervention effects. Yet, the sample enrolled in the trial was predominantly native Norwegian families, with few ethnic minorities represented (Ogden & Amlund-Hagen, 2008). Developmental research was conducted in 2005-2007 to investigate strategies for recruiting immigrant Somali and Pakistani families, and to determine what types of cultural adaptations may be necessary. The investigators studied the cost-effectiveness of three strategies for recruiting ethnic minority mothers to participate: (a) referrals from human service professionals from public agencies, (b) open information meetings in community settings, and (c) social network referrals from research staff link workers. All three recruitment strategies yielded families eligible with regard to risk for child conduct problems. However, the information meetings were the most cost-effective strategy and the highest proportion of the sample was recruited this way. The intervention groups were not mixed gender owing to Islamic religious norms requiring gender segregation. Groups were ethnically homogeneous and led by a Norwegian therapist assisted by trained bilingual assistants (i.e., link workers) who provided direct translation

in Somali/Urdu. Link workers also served as 'culture-builders' to strengthen relationships between therapists and mothers. In terms of intervention content, there was an expanded focus on certain topics relevant in the context of the immigrant communities targeted, including large sibling groups, and emphasis on cultivating control over emotions.

Findings from intent-to-treat analysis of a randomized wait-list controlled trial of 96 Somali and Pakistani mothers revealed that PMTO was effective in increasing positive parenting and decreasing harsh discipline and child conduct problems, according to maternal report (Bjorknes & Manger, 2012). The largest effect sizes were found among mothers who attended more than 50% of sessions. However, teacher reports showed no significant intervention effects on conduct problems and social competence. This study provides support for contextual and cultural adaptation in order to secure recruitment to and participant attendance in available interventions.

*The Triple P Positive Parenting Program.* Triple P spans the prevention-intervention continuum and aims to prevent behavioral, emotional, and developmental problems in children by enhancing the knowledge, skills, and confidence of parents (Sanders, 1999). Within a public health model, Triple P incorporates five levels of intervention on a tiered continuum of increasing intensity and narrowing reach. Level 1 includes media-based psychoeducation campaigns targeting whole communities. Level 2 is Selective Triple P delivered in 1 to 2 brief consultations during well child pediatric care. Level 3 Triple P is a 4-session consultation model for use in primary care. Level 4 Standard Triple P is an 8 to 10 session parenting skills program that can be delivered in a group, individual, or self-help format. Level 5 is Enhanced Triple P which provides adjunctive interventions for families in which parenting concerns are situated in the context of other problems, such as marital conflict and parental depression. Most trials with diverse populations have examined Level 4 Standard Triple P. Meta-analyses have concluded that Triple P has a positive effect on children's behavior and adjustment, with evidence being strongest in the toddler, preschool, and elementary school age groups (de Graaf et al., 2008). Effect sizes range widely from small to large positive effects, which may not be surprising that Triple P contains multiple levels of intensity across prevention and treatment trials.

Data from controlled trials, focus groups, and survey methods support the acceptability and effectiveness of parenting strategies used in Triple P with samples of parents from Australia, the United States, New Zealand, Japan, Singapore, Hong Kong, Iran, Scotland, England, Ireland, Sweden, Belgium, the Netherlands, Germany, Turkey, Switzerland, South Africa, and Panama (Sanders, 2012). The International Triple P Research Network coordinates a network of scientists and facilitates communication about research activity around the world involving Triple P. The network has created a data repository for outcome studies and coordinates an international conference for researchers, practitioners, and policymakers in a different country annually. Training in Triple P encourages practitioners to work collaboratively with parents and to be responsive to parent values, preferences, and context while preserving core elements. These needs for tailoring can be met by adapting examples used to illustrate teaching points and by customizing homework assignments.

Perhaps given the foregoing discussion of workforce training in flexible and tailored delivery, there have been few cultural adaptations of Triple P. A notable exception is Turner, Richard, and Sanders' (2007) Group Triple P tailored for Australian Indigenous families. The authors concede that mainstream parenting programs have difficulty in recruiting and engaging Indigenous parents. In collaboration with Indigenous workers over 5 years, Triple P was tailored to reduce barriers for Indigenous families and develop resources. The team assumed that the core principles of positive parenting would transcend cultures, but the goals and target behaviors, practical implementation of skills, and ways of sharing information would require adaptation. Modifications were made to the language, images, and examples used to illustrate skills in the production of tailored videos, workbooks, and presentation aids. In addition, more time was devoted in sessions to sharing personal stories, developing trust, discussing the social and political context for parenting, and slowing the pace of presentation.

In a wait-list controlled trial of the adapted Triple P program with 51 Indigenous families, treatment parents reported decreased child behavior problems and less frequent dysfunctional parenting compared to waitlist families. Effects were primarily maintained at 6-month follow-up. Qualitative data revealed high satisfaction with the intervention. Yet engagement was lower than in previous trials of Group Triple P, with

only 60.9% families commencing groups. Moreover, only 28% of families randomized to waitlist subsequently attended treatment suggesting the importance of engaging families upon first contact, reducing barriers to care, and providing care whenever family circumstances permit.

*The Effective Black Parenting Program (EBPP)***.** EBPP was an early example of a culturally adapted PT intervention developed by Myers and colleagues (1995) and adapted from the Confident Parenting Program (Eimers & Aitchison, 1977). Specific skills training is provided in describing and monitoring child behavior, specific labeled praise for appropriate behavior, special incentives for respectful child behavior, as well as the use of mild social disapproval, active ignoring and time out for misbehavior. Parents are instructed in two general approaches to parenting within which these skills can be marshaled. First, parents are taught a Family Rule Guideline Strategy in which they examine the rules they have for their children, and the reasoning behind their rules. This orients parents toward developing rules that have an articulated rationale. Next, the Thinking Parents Approach encourages parents to think before they act and to entertain multiple possible attributions for their child's behavior, including stage of development. The intervention is introduced in a discussion that asks parents to contrast the goals of *traditional Black discipline* (i.e., discipline is achieved through punishment and spanking to instill obedience) versus *modern Black self-discipline* (i.e., internalizing standards of effective behavior). Discussion aims to situate coercive parenting practices as once protective in African American families but perhaps no longer as adaptive in empowering African American children in striving for achievement and social change. Additional discussion is devoted to instilling pride in Blackness, avoiding racial self-disparagement, and promoting strategies for coping with racism. The program is delivered by African American professionals and organized within a framework called the Pyramid of Success for Black Children.

In a quasi-experimental design, seven schools with high African American enrollment were assigned to the intervention condition (5 schools) or to the control condition (2 schools). All African American families with children in the 1st or 2nd grade were invited to participate in 15 3-hour sessions of EBPP. Across two cohorts, 109 parents were enrolled in treatment and compared over time to 64 parents in control schools. Results suggested that the intervention produced improvements in some target outcomes including parental

rejection, family relationship quality, and child behavior outcomes. One year follow up data from the first cohort suggested maintained effects in parental rejection and selected child behavior problems, though some return to coercive parenting practices was noted. Ultimately, the authors note that the intensive short-term EBPP program was promising, but that results were modest and circumscribed, even when delivered in a culturally sensitive manner.

*The Black Parenting Strengths and Strategies (BPSS)***.** BPSS **(**Coard, 2004) is a cultural adaptation of the Parenting the Strong-Willed Child program (Forehand & Long, 2002). BPSS teaches behavioral management skills (i.e., attending, rewarding and ignoring, giving effective directions, and how to use time-out appropriately), while also mobilizing racial socialization practices found to be protective among African American families. Coard's work is guided by the premise that for African American youth, developmental competence requires the ability to make sense of and cope with prejudice, and discrimination. Coard and colleagues (2004, 2009) reviewed research linking parent racial socialization practices to child outcomes including a positive racial identity, academic functioning, self-esteem, positive parent–child interactions, and decreased depression and anger. Coard conducted qualitative interviews to analyze socialization messages related to racial achievement, preparation for bias, racial equality, and racial pride emphasized by mothers of young African American children living in low-income neighborhoods. The narratives provided the basis for program components for BPSS, a PT intervention augmented to mobilize culturally specific protective factors. Content adaptations included lessons on how to: (a) deal with common in-group events (e.g., overt and subtle incidences of racism, prejudice, and discrimination), (b) problem solve negative peer interactions (e.g., social exclusion because of skin color), (c) promote achievement despite barriers (e.g., advocating for a child when low expectations are evident), (d) reflect on one's own experiences as an African American woman or man, (e) discuss race-related content in a developmentally appropriate manner; and (f) access culturally affirming resources for children. Delivery-related adaptations included: (a) using African American language expression, and the African American–perspective use of 'we'; (b) emphasis on African American values about collective responsibility, cooperation, and interdependence; (c) the use of African proverbs, sayings and affirmations,

poems, quotes, symbols, and pledges; (d) the use of prayer, role-playing, storytelling, extended family participation, and humor; and (e) use of a setting and motifs representative of the population. Throughout the adaptation process, consultation with the original developers helped to ensure that key elements of the standard PT program were maintained and not diluted when content was augmented.

In a wait-list controlled trial of BPSS, 32 parents from urban, low-income neighborhoods were randomized to immediate or delayed 12-week treatment. Attendance and retention were strong with 88% of parents being retained in the study, with participants attending 85% of sessions on average and all participants attending at least 6 sessions. Results indicated significant effects of treatment on 6 of 8 parent-reported outcomes assessed post-treatment. Relative to controls, intervention parents used significantly more racial socialization strategies, positive parenting practices, and less harsh discipline. Parent-reported externalizing problems increased in the control group but decreased in the immediate treatment group. Effect sizes were large for positive parenting, harsh discipline, racial socialization, and conduct problems.

## Culturally Grounded Parent Training Interventions

*The African Migrant Parenting Program.* The African Migrant Parenting Program is a PT intervention for immigrant and refugee families from Africa who resettle in high-income countries such as Australia (Renhazo & Vignjevic, 2011). The program aims to enhance effective parenting and relationship skills, in order to help parents to raise their children confidently and understand their children's needs across developmental stages in the new cultural, social, and educational environment. Resettlement challenges encountered by refugee and migrant families include adaptation to new work demands, needs for housing and schooling, changing family structure, roles, and responsibilities, establishing social networks, and learning English (Renhazo, 2002). Previously accepted practices such as reliance on sibling care and corporal punishment may no longer be viable. Differential family acculturation and acculturative family distancing are pertinent for these families who are transitioning from collectivistic cultures into high-income countries with social environments promoting individualism. In this context, strain on family relations and parenting are pressing (Renhazo, Swinburn, & McCabe, 2008).

The African Migrant Parenting Program consists of eight 2-hour sessions co-facilitated by African parenting educators and experienced family counselors, and three 45-minute home visits by African parenting educators were used to monitor barriers to learning and skill enactment. The sessions were modeled on the Parent Skills module of the 'Parenting in a New Culture Guide' developed for Australian—Samoan parents. Session activities incorporate computer slide presentations, discussions, mini-case studies, and videotape modeling. Sessions were devoted to a variety of issues including improved family relations, family stress reduction, and even family finances and legal issues.

In an open trial, 44 families receiving counseling for parenting issues at a social service agency were invited to participate. All agreed to participate, and 88.6% of families completed treatment despite a very low level of literacy and multiple barriers to treatment (e.g., housing, transportation, legal problems). Pre-post analyses suggested change on key dimensions: appropriate expectations of children, increased empathy toward children's needs, attitudes toward corporal punishment. Treatment dose was associated with degree of change on developmental expectations and views on corporal punishment. However, key outcomes of parenting behavior and child adjustment were not examined.

*The Exploring Together Program.* The Exploring Together Program is a preventive intervention adapted to reduce disparities in in the developmental profiles of Australian Aboriginal children relative to the general Australian population. Disparities include the higher prevalence of emotional and behavioral disorders, and lower performance of Aboriginal children on national tests for literacy and numeracy. The Exploring Together Preschool Program combines elements of PT and children's social skills training for parents of children aged 4 to 6 years old (Littlefield et al., 2005). Children attend with one parent for 10 weekly 2-hour sessions. The first hour consists of an interactive group with all parents and children facilitated by four group leaders and focusing on parent–child interaction. Components of group activity involve turn-taking, talk and play based on themes which complement content of the other groups. Then the dyads split into separate groups for parents and children for an hour. Facilitated by two group leaders, parent groups discuss observations of children's behavior, triggers for problem behaviors in the context of family interactions, and factors affecting

parenting. Children play together in a separate group, with a focus on social skills and the learning of rules and consequences.

Collaboration with Aboriginal team members resulted in adaptations that drew upon songs and storytelling in Aboriginal languages. Drawing activities were used to promote discussion of families, networks and relationships and to tap into cultural symbols and idioms. These practices aimed to encourage parents to talk about the place of parent and child in the family, and values of shared responsibility for children among caregivers in extended family networks. The focus was on identifying strengths and sources of difficulty in each family.

The delivery of interventions for this population is met by formidable challenges in geographical dispersal, and the linguistic and cultural diversity of Aboriginal communities. An open trial evaluation study was mounted for both Aboriginal and non-Aboriginal children in urban Darwin and for Aboriginal children in three communities of the Tiwi Islands, near Darwin (Robinson et al., 2012). A wide variety of implementation strategies was used to promote reach of the intervention. Children were referred from schools; parents were invited by teachers and then visited at home when they expressed interest. Community leaders explained the program at public meetings, spoke to parents privately, and sought referrals from schools. Group leaders were mature community members with backgrounds in health, childcare, or education.

Following the intensive and multi-pronged approach to recruitment, over 250 children were referred over 3 years, yielding an evaluation sample of 225. However, only 110 (48.9%) commenced the intervention, and only 86 (38.2%) attended at least half of the sessions. The lowest commencement and completion rates were observed among urban Aboriginal families (14% commenced and 11.5% attended at least half of the sessions). Despite the high attrition, outcomes suggested significant reduction in problem behavior and parental distress at post-treatment. However, improvement was significantly greater for non-Aboriginal families, with the least change observed among urban Aboriginal families. Despite highly flexible strategies of engagement and cultural adaptation of the intervention, results suggested the adapted program still had limited reach and impact on urban Indigenous families.

*Discussion*

In summary, the research base on cultural adaptation in the area of parenting interventions is relatively mature. The four most frequently cited PT interventions – Triple P, Incredible Years, Parent-Child Interaction Therapy, and Parent Management Training –Oregon model – have all been subject to cultural adaptations. In addition, other extensive adaptations and culturally grounded PT interventions have been developed and evaluated. We now have ample data suggesting that culturally adapted PT can be efficacious, yielding positive effects in the improvement of parenting behaviors, and the prevention and treatment of externalizing as well as internalizing child behavior problems. Thus, the effects of PT interventions appear robust to cultural adaptations.

*Enhancing Engagement – Remaining Questions*

Most such adaptations tested to date target changes to promote engagement of underserved or culturally diverse groups. However, there is as yet no conclusive evidence that these engagement-focused adaptations improve the attendance and retention of ethnocultural groups for whom disparities in engagement in standard PT have been observed. Benchmarking studies may be called for since it would typically be neither pragmatic nor ethical to randomize to conditions in which PT is not optimized to engage targeted ethnocultural groups (Cardemil, 2010). Only a single small controlled trial has addressed this question, with negative results on engagement outcomes. McCabe and her colleagues (2008; 2012) found culturally adapted PCIT (GANA) did not outperform standard PCIT in terms of promoting attendance or retention even though adaptations focused on engagement through enhanced treatment orientation, framing PCIT skills based on a pretreatment values assessment, or situating PT as educational rather than therapeutic.

Moreover, although positive engagement results were found in many studies, our review noted examples of trials of PT adapted for engagement that yielded disappointing recruitment, commencement and completion rates. For example, the CPP adaption of IY yielded a recruitment of 37% of African American and Latino parents in low-income preschools and the average family attended only 39% of sessions (Gross et al., 2009). Once recruited into the trial, there was high attrition from the Indigenous adaptation of Triple P for Australian

Aboriginal families with nearly 40% of families failing to attend a single session in the immediate treatment group (Turner et al., 2007). Even lower commencement and attendance rates were found in the Exploring Together PT program also targeting Aboriginal families in urban and rural Australia (Robinson et al, 2012). These and other findings demonstrate that even complex and concerted efforts to connect with families and communities are at times insufficient for reducing barriers to PT.

Indeed, engagement may remain an impediment to the public health impact of PT. It can also be argued that modifications to intervention content and process do little to address problems with low recruitment and intervention commencement rates. Parents' perceptions of acceptability of PT when they do arrive at treatment may help to explain low retention, which may be a smaller part of the implementation problem. Sanders argues that the single major threat to the reach of PT stems from the fact that they are commonly restricted to small numbers of vulnerable parents with problems. As such, the interventions are seen as for "failed" parents, such as those involved in child protection or mental health systems, and participation is stigmatized. Thus, he argues that a public health approach offering PT to all can result in greater engagement at the population level, and that cultural adaptations to intervention content need not be emphasized.

On the other hand, reliance on self-referred parents and mass media outreach may result in self-selected samples who are motivated, able to attend, and whose parenting may more closely resemble PT skill targets (Robinson et al., 2012). These recruitment strategies may screen out disadvantaged groups with high need. When Triple P moved beyond universal outreach to target a disadvantaged underserved group with an Indigenous adaptation of Triple-P, substantially lower commencement rates were observed than in general community trials (Turner et al., 2007). Again, the challenge may be getting parents into the room, rather than engaging them once they arrive.

*Augmented Intervention Content – Paucity of Data*

Relatively few PT interventions have been augmented to address the etiological context of parenting dysfunction or child behavior problems in diverse families. Frameworks guiding cultural adaptation often mention the need to address unique etiological factors, but provide little guidance on the development of this

content. The few examples of augmented PT interventions have addressed: (a) the protective factor of racial socialization in African American families (Coard, Wallace, Stevenson, & Brotman, 2004; Myers et al., 1992), (b) the school achievement context of ineffective discipline in Asian American immigrant families (Lau et al., 2011), and (c) the risks associated with differential acculturation between immigrant parents and their children (Lau et al., 2011; Martinez & Eddy, 2005; Renhazo & Vignjevic, 2011). Although the absolute efficacy of these augmented PT interventions has been established, dismantling and process studies are needed to understand whether the additional content remediates the risk processes targeted and whether those changes facilitate ultimate outcomes on child psychopathology.

*Additional Directions for Adaptation*

Although some models of cultural adaptation stress that changes to the pacing, sequence and length of standard PT should not be made (Kumpfer et al., 2008), these proscriptions appear to guard against unwanted omission of core content. However, some observations from controlled trials suggest that pacing and dosing of PT might be an explicit focus of cultural adaptation to help bridge the cultural distance between cultural traditions of diverse families and prescribed changes to parent-child interactions in PT. In general, controlled trials have revealed dose-response effects associated with standard and culturally adapted PT (e.g., Baydar, Reid, & Webster-Stratton, 2003; Gross et al., 2007, Renhazo et al., 2008). In trials of PCIT, which uses mastery based criteria to determine length of treatment, trials have shown that the number of sessions required for ethnic minority families to reach performance criteria on CDI and PDI skills exceeded that found in trials of predominantly European American families (Fernandez & Butler, 2011). For example, in Matos et al.'s (2009) trial, the investigators adapted their mastery criteria using different criterion goals that they felt could be more easily attained by the Puerto Rican families in their sample, and hoped to limit CDI to 8 sessions and PDI to 9 sessions (doses that are still above published averages), but many families required additional sessions above this limit. McCabe and colleagues (2008) likewise found that Mexican American parents required 4-5 more sessions than is typical to complete PCIT. Differences in treatment duration may reflect the need for more behavioral rehearsal of practices that are unfamiliar and culturally foreign. These problems may be pronounced

for immigrant and ethnic minority parents who, given their diverse upbringing, are unacquainted with skills like child-directed play, labeled praise, differential attention, and time-out. Qualitative data from group leaders in Lau et al.'s (2011) trial of IY adapted for Chinese Americans, suggested that slowing the pace of skill lessons and increasing the dosage of behavioral rehearsal may be a promising adaptation to achieve meaningful and enduring changes in parenting in immigrant families. This is, of course, not a culturally specific proscription for enhancing PT, and could be said of parents from across cultural groups. The issue of dosing may be vital in implementation of PT with diverse parents domestically and internationally, and yet this consideration has generally not entered discussions of cultural adaptation.

## YOUTH RISK PREVENTION PROGRAMS

National data from the 2011 Youth Risk Behavior Survey revealed that youths in grades 9-12 participated into multiple risky behaviors. During the 30 days before the survey, 38.7% had drunk alcohol, 23.1% had used marijuana, 47.4% of the students had ever had sexual intercourse, 33.7% had had sexual intercourse during the three months before the survey, and 15.3% had had sexual intercourse with four or more people during their life. Further, 18.1% of high school students had smoked cigarettes and 7.7% had used smokeless tobacco (Eaton et al, 2011). Studies also consistently find that youth's risky behaviors co-occur, specifically, drinking, smoking, risky sexual behaviors might have occurred in the same situation because they lost control of themselves. The co-occurrence of substance use and risky sexual practices has been associated with increased prevalence of HIV/AIDS among youth. In 2009, youth aged 13-29 accounted for 39% of the new cases of HIV infection, but they represented only 21% of the American population. African American youths disproportionately represented 65% of the new youth HIV infection cases (CDC, 2011).

Further, the report published by the Center for Disease Control and Prevention in 2011 showed that, among all new cases of HIV infection in the United States, more than 45% are African American adolescents and adults, and more than 20% are Hispanic/Latino adolescents and adults. African American females are particularly at higher risk, representing 63% of all new female cases of HIV infection. More than 50% of the new cases were caused by male-to-male sexual contact (38.2% are African American, 23.5% are

Hispanic/Latino), with other new cases due to heterosexual contact (65.3% are African American, 18.1% are Hispanic/ Latino), and injection drug use (47% are African American, 25% are Hispanic/Latino).

One unambiguous implication of these statistics is that African Americans and Hispanics are confronted with high risk of HIV infection. Consequently, they are in more urgent need of access to HIV/AIDS knowledge, skills to negotiate and refuse, and support from family and peer leaders. A second clear implication is that unprotected sexual intercourse and drug use are the primary causes of HIV/AIDS infection among minority youth. Whenever these behaviors co-occur, the risk grows tremendously. Multiple sexual partners worsen the situation as it increases the risk of exposure for youths who do not have a direct relationship with an HIV/AIDS infected partner (Santelli, Lindberg, Abma, McNeely, & Resnick, 2000). It has been suggested that the consequences of poverty and racism are the most salient predictor of risk taking behaviors, education, urbanization, social norms, values and life goals influence academic aspirations and future orientation. Lack of opportunities for success may cause these youth to seek nontraditional methods of achieving adult status, such as early sexual onset and the initiation and escalation of substance and drug use (Bakken & Winter, 2002; Stanton et al., 1994). African American and Hispanic youth have traditionally reported high rates of these risk behaviors (CDC, 2007). For example, among adolescents surveyed in 2007, only 67.3% of African Americans and 61.5% of Hispanics reported using condoms during the last time they had sexual intercourse. Additionally, greater percentages of African American (27.6%) and Hispanic (17.3%) youth have had four or more sex partners than non-Hispanic Whites (11.5%). Studies also show that Hispanic and African American youth report higher rates of lifetime drug use than do non-Hispanic White youth (Johnston et al., 2008). For example, 25.0% of Hispanic, 19.4% of Black, and 17.9% of non-Hispanic White 8th graders report using drugs in their lifetime (Johnston et al., 2009).

Racial-ethnic substance and drug use comparison data that include American Indians and Alaska Natives, however, also show that these youths initiate tobacco, alcohol, and other drugs earlier, at higher rates, and with more severe health, social, and economic consequences than adolescents of other ethnic-racial groups in the U.S. The prevalence rate of smokeless tobacco use is especially high among American Indian and Alaska

Native children, adolescents, and young women (Schinke, Gilchrist, Schilling, Walker, Locklear, et al., 1986). Further, rates of cigarette smoking and heavy use of cigarettes—consumption of at least a pack of cigarettes a day for the last 30 days—are dramatically higher among American Indian and Alaska Natives, exceeding rates for every other ethnic-racial group (Schinke, Moncher, Holden, & Aragon, 1988). Drunkenness and use of substances, including alcohol and nearly all other drugs, is higher among American Indian youth compared to youth in other racial-ethnic groups (Young, 1988; Nelson &Nazbah, 2013). Collectively, these findings underscore the importance of identifying effective ways to prevent risk engaging behaviors that compromise the health and well-being of all youth, and especially that of racial-ethnic minorities.

A plethora of youth risk preventive intervention programs have been developed and have taken many forms, including school-based prevention programs, mass media campaigns, youth clubs and activities designed as alternatives to substance use, family interventions, and comprehensive, community-wide prevention strategies (Sloboda & Bukoski, 2003). Earlier school-based substance abuse prevention approaches included either resistance-skills training, alone or in combination with competence-enhancement or life-skills training (Botvin et al., 1990), that were based on social influence models of risk taking and Bandura's social learning theory (Bandura, 1977). In this approach, drug use and abuse were conceptualized as socially learned and functional behavior resulting from an interplay between social (e.g., modeling, imitation, reinforcement, pro-drug norms) and individual (e.g. personality) factors. In contrast to drug-specific resistance strategies, competence-enhancement approaches aim to teach a repertoire of skills that adolescents can use to deal with many of the challenges confronting them in their everyday lives, not just drug and alcohol use, such as: decision-making and problem-solving skills, cognitive skills for resisting interpersonal and media influences, skills for enhancing self-esteem (goal-setting and self-directed behavior-change techniques), adaptive coping strategies for dealing with stress and anxiety, general social skills (conversational skills, and skills for forming new friendships), and assertiveness. These skills are typically taught using a combination of proven cognitive-behavioral methods, such as instruction and demonstration, group feedback and reinforcement, behavioral rehearsal, and extended practice through behavioral homework assignments.

Although resistance and life skills training remain central features, prevention programing expanded over the years to better address the co-occurrence of multiple risk-taking behaviors (e.g., alcohol and drug use, sexual risk taking, HIV) and a widening range of risk and protective processes identified as possible targets (Hawkins et al., 1992). Programming enhancements also were informed by developmental and social learning research and theories suggesting that adolescents face pressures to engage (or motivations to avoid) risk-taking from multiple sources and transactions outside of school (e.g., peers, parents, other adults in the community, mass media, community policies), and by evidence that single channel programs (e.g., school-based drug prevention) may not be powerful enough to produce lasting prevention effects against these broader influences (Dryfoos, 1993). Alternative models, particularly family interventions to be used as the primary approach (Dishion, Kavanagh, Schneiger, Nelson & Kaufman, 2002) or in combination with youth-focused programs (Spoth, Redomond, & Shin, 2001) were developed to strengthen family relationships, bonding, communication about difficult topics (e.g., sex, drugs) and parent management practices, and to engage parents in supporting skills taught in youth programs (Anderson, Koniak-Griffin, Keenan, et al., 1999). Comprehensive prevention strategies that combine school-based interventions with those affecting the family, social institutions, and the larger community (e.g., Pentz et al., 1989) were recommended in the National Institute of Drug Abuse publication titled "Preventing Drug Abuse Among Children and Adolescents: A Research-Based Guide" that is recognized for marking the beginning of the evidence-based drug abuse prevention movement (NIDA, 1997). This report identified the tailoring of interventions to address risks specific to ethnic minority populations as one of 14 principles guiding the field.

In this section we assemble the scattered collection of culturally adapted youth risk prevention programs that have been evaluated to date, all but one published since the 1997 NIDA report, and the effectiveness of such programs for preventing and reducing risky sexual behavior and alcohol and substance use among racial/ethnic minority adolescents. As in the prior section on parent training, our review is organized to distinguish culturally adapted programs, including those that might be more aptly described as "culturally tailored" (Bernal, 2012), from culturally grounded programs in which community members were involved

throughout the initial program inception, design and evaluation, although we acknowledge again that these are not precise distinctions..

Cultural Adaptations of Youth Risk Preventive Interventions

*Aban Aya Youth Project (AAYP).* AAYP is a four-year-long culturally tailored intervention that is designed to prevent multiple risky behaviors among urban African American youth (Flay et al., 2004). The program screened the public schools in metropolitan Chicago and built the initial sampling pool based on following standards: enrollment greater than 500; more than 80% of the students are African American and less than 10% are Latino or Hispanic; not on probation or slated for reorganization; not a special designed school; and moderate mobility. The 155 schools selected were then stratified into 4 quartiles of risk (based on school report card data such as enrollment, attendance and truancy, mobility, family income, and achievement scores), and 12 of them were sampled (9 inner city schools and 3 near-suburban schools).

The participants were 153 fifth graders in the 1994-1995 school years. Using schools as units, the students were randomly assigned to one of the three conditions: The social development curriculum (SDC), the school/community intervention (SCI), and the control condition. Student in the SDC arm received 16 to 21 lessons each year, which taught them cognitive-behavioral skills to avoid drug use, risky sexual behaviors, and other risky behaviors. SDC is the Afrocentric arm intervention and was based on Nguzo Saba principles, which promote "unity, self-determination, and responsibility" (Flay et al., 2004, p.377). Instructional methods were based on oral traditions of African American's heritage including storytelling, the use of proverbs, history, and literature. Finally, the project assigned homework which aimed at encouraging parental involvement and communicative skill-building. The authors did not indicate whether community members and parents were involved in the curriculum development and design of SDC.

The SCI arm is a comprehensive intervention designed to enhance the SDC classroom intervention by providing community empowerment sections that include programs for parents, school staff, and youth. This component of the intervention also has an overarching community element to promote positive connections between parents, schools, local businesses, and agencies. Parent support sought to increase skills to boost

children's learning in school and to enhance parent-child communication. Students in the control condition received similar amounts of classes as those assigned to the SDC with topics focused on promoting healthy behaviors such as nutrition, physical activities, and general health care. The intervention classes were taught by university-based health educators. Data were collected at multiple points for each condition. The pretest was done in the fall of 1994, and the follow-up posttest was done in the fall of 1995. Further follow-up tests were done annually until 1998.

Results revealed intervention effects differed for boys and girls. For boys, both the intervention arms (SDC and SCI) lead to a salient reduction on drug use and recent sexual intercourse, and improved condom use compared to boys in the control condition. It was worth noting that, boys exposed to the SCI intervention arm fared better than those assigned to the SDC arm. Neither intervention condition was shown to be effective for girls (Flay et al., 2004). Lack of program effectiveness for girls was attributed to low baseline risk compared to males, as boys demonstrated higher baseline levels than girls on each of the targeted outcomes (Flay et al., 2004).

*Adult Identity Mentoring (Project AIM)***.** Project AIM is a school-based intervention program designed to reduce risky sexual behaviors among African American youth. The primary goals of Project AIM include delaying initiation of first sexual intercourse, promoting abstinence and increasing condom use (Clark et al, 2005). The conceptual framework was based on the theoretical tenets of the "Possible Selves" (Oyserman & Markus, 1990) which posits that people's current lives are motivated by their mental images of their future self. Such mental images can be enhanced by a balance between the positive images (desired selves) and negative images (selves to be avoided). AIM was delivered in small groups in which role modeling was used as a teaching strategy to highlight negative connections between desired future life and risky behaviors. Project AIM targeted seventh grade primarily low-income African American families in a suburban town near a southeastern metropolitan area. African American students who were previously enrolled in a required 9-week health education class were enrolled in the program. A total of 248 students completed pre-intervention assessment, six were dropped due to missing data; 211 completed posttest, 19 weeks after baseline, and 156 completed one-

year follow-up assessment.

In terms of implementation, AIM consisted of 10 sessions delivered over the course of six consecutive weeks during the school year, and offered in 20 health education classes. Of the 20 classes, 11 were randomly assigned to receive AIM intervention and 9 were assigned to receive standard health education curriculum. AIM sessions were conducted by trained African American college students, while the health education classes were taught by the regular classroom instructor. Besides inclusion of African American educational facilitators, *Project AIM* also had a session that focused on the importance of "legacy, positive role models, and peers" for youth identity development. In this session, African American youths saw examples of African Americans who left legacies, and each participant was required to compose thank you letters to the visiting positive role models and peers. The inclusion of positive role models and peers was based on the premise that African American youth "lack strong role models and mentors to guide them through the explorations that naturally occur as a part of adolescent self-identity development" (Clark et al., 2005, p. 337). Youths also participated in discussions on topics such as how peers, family, and other environmental factors influence their lives and how their choices affect future goals. The authors gave limited information about ways in which the program was specifically tailored for African American youths. There were no details, for example, on how they recruited the role models to visit the classes. Findings revealed that adolescents in the intervention group reported higher rates of abstinence and less sexual intentions than those in the control group when assessed 19 weeks after the baseline survey. For the youths who did not have any sexual behaviors before the start of the study, those in the intervention groups were less likely to report the initiation of sexual activity than were controls. At one-year follow-up, the abstinence effect was still significant among the male participants in the intervention group.

*The Strengthening Families Program (SFP)***.** SFP is a family skills training approach developed in the United States that uses 2-hour long sessions with parallel Parent Skills Training and Children's Skills Training groups in the first hour, followed by multifamily Family Skills Training groups in the second hour. This multicomponent approach combines youth enhancement with a focus on family strengthening and improve parenting to support and guide youth. Designed to increase resilience and reduce risk factors for a broad range

of behavioral, emotional, academic, and social problems in children 3-16 years old, the program is widely recognized as an effective substance abuse prevention program. SFP has been evaluated many times by independent researchers in randomized control trials or health services research with very positive results in reducing substance abuse and delinquency risk factors by improving family relationships (e.g., Aktan, Kumpfer, & Turner, 1996; Gottfredson, Kumpfer, Polizzi-Fox, Wilson, Puryear, Beatty, & Vilmenay, 2006; Kumpfer, Alvarado, Tait, & Turner, 2002; Spoth & Molgaard, 1999).

During the 1990's, cultural adaptations of SFP were made and evaluated among five ethnic minority groups (African, Hispanic, Asian, Pacific Islander, and Native American). Findings generally supported the efficacy of these adapted versions, however, important insights were gained. Although the culturally specific adaptations did not yield better effects compared to the core version, improvements were shown on recruitment and retention. Kumpfer, Alvarado, Smith, and Bellamy (2002) also reported that an adaptation of SFP for Hawaiian families (Kameoka, 1996) resulted in weakened prevention effects when behavioral skills training was curtailed to allow for extended focus on Hawaiian cultural values. This was an early exemplar of the principle of maintaining fidelity of deep structure or core intervention components while including adaptations to promote engagement. In 2003, the Cochrane Collaboration Reviews published a meta-analysis identifying SFP having demonstrably larger effects than other alcohol prevention programs (Foxcroft, Ireland, Lister-Sharp, Lowe, & Breen, 2003). This prompted international dissemination efforts in a number of nations. Several international adaptations that have used the Kumpfer model of cultural adaptation (see Table 1) have been subject to controlled trials, and all have demonstrated positive results among families with substance using parents (Kumpfer et al., 2008).

*The Multiethnic Drug Abuse Prevention Program (MDAPP).* MDAPP was developed by Botvin et al. (2001) using a cognitive-behavioral approach to enhance risk resistance skills among youth. Specific components of the curriculum include building self-esteem, resisting advertising pressure, managing anxiety, communicating effectively, developing personal relationships, and self-advocacy. The project was first tested on White youths in the state of New York in the 1990s and adapted for multicultural implementation with

African American and Hispanic youth in 2001. While the curriculum content and core elements of both programs were similar, several adaptations were made in preparation for delivering the program to youth of color. Focus groups were used to obtain feedback on ways to modify the intervention manual and adopt culturally appropriate and relevant teaching strategies. Adaptations included multiple strategies, such as creating graphics that contained the image of minority youth, translating and adjusting the reading levels of program materials and questionnaires, adding culturally relevant stories and role-play scenarios to the curriculum.

To test the culturally adapted program, participants were recruited from 29 public schools in New York City. Of the 5,222 seventh graders recruited, 3,621 completed the pre-intervention test, the posttest, and the 12-month follow up survey. More than 60% of the participants were African American, and 22% were Hispanic. The schools were randomly assigned to an intervention condition or a control condition. Students in the intervention arm were taught by trained classroom teachers in 15 sessions in the seventh grade and 10 booster sessions in the eighth grade, while youths in the control group did not receive any project interventions (Botvin et al., 2001).

The findings in the 3-month and 12-month post intervention tests revealed that the youth assigned to the drug prevent program reported greater reduction in smoking, drinking, as well as use of inhalant and poly-drugs, compared to youth in the control group. Programmatic effects observed in the culturally tailored program were similar to what Botvin et al. found among White, middle class youth (Botvin et al, 1990, 1994). This program is one of few to advocate for programs that are multicultural rather than mono-cultural. Further, Botvin et al, found positive programmatic effects for both inner city minority and white, middle-class youth by making surface changes to the generic curriculum. These surface structure changes included inserting language and words to ensure that the reading level was appropriate for the targeted audiences and photos of each racial/ethnic group increase a sense of program relevance for each targeted audience.

*Life Skills Training for Native American youth.* Schinke et al (1998) adapted the core curriculum from the Life Skills Training Program (Botvin et al., 1990, 1994, 2001) to prevent drug abuse among Native American adolescents. The program aimed to teach cognitive and behavioral skills to resist smoking of

cigarettes or smokeless tobacco, drinking alcohol, and marijuana use. The participants (N = 1,396) were recruited from 27 tribal and public schools in 10 reservations in five states: North Dakota, South Dakota, Idaho, Montana, and Oklahoma. Participating schools were randomly assigned to one of three arms: two intervention arms (a skills only intervention group and skills + community involvement intervention group) and a control arm. Youth assigned to the two interventions attended fifteen 50-minute weekly sessions. The intervention sessions were designed to contain the important common cultural elements of Native American tribes, including values, legends, and stories that reflected issues in the Indian society. Specific consideration was given to including cultural content that celebrated Native American's traditions, which were further tailored to be reflective of various reservations, tribes, and Indian groups. Similar to other culturally tailored programs, Schinke et al.(2000) included role-playing, storytelling, programmatic activities and small group discussions to foster cognitive behavioral skill development. In addition, homework was assigned to encourage youth to use lessons learned in sessions in their everyday lives. Native American leaders facilitated the group sessions and also served as coaches and to facilitate resistance skills usage and efficacy. Family and community members who had frequent contact with youth also were involved in the intervention to elevate their awareness of substance use prevention and ways to support and encourage youth to avoid drugs and substances. Youth in the intervention arms received boosters semiannually, delivered in two 50-minute sessions. Youth in the control did not receive any intervention. The authors did not provide detailed descriptions of how the curriculum itself was culturally tailored or pilot-tested prior to implementing the program.

All youth completed a pretest, immediate and six months posttests, and follow-up assessments every 12 months over the course of three years. Outcome analyses showed lower levels of alcohol, smokeless tobacco, and marijuana use among youth exposed to the skills only intervention, compared to those assigned to the skills + community involvement arm and those in the control group. The absence of intervention effects for the skills + community involvement condition was thought to have been associated with potential dilution of the program effectiveness. The skills-only program allowed youth to focus more on internalizing core elements of the program, thereby enhancing resistance skills to prepare youth to avoid risky situations. Given the prior lack of

culturally sensitive interventions for Native American youth, these findings were important for demonstrating that benefits of culturally tailored risk prevention programs for tribal communities. There remains a great need for conceptual models to guide the development and testing of new prevention approaches and to refine existing interventions for Native American youth.

*Keepin' It R.E.A.L.!* Keepin' It R.E.A.L. is a program designed to reduce sexual risk among African American adolescents, with specific emphasis on relationship development between mothers and sons (DiIorio, et al., 2006). Mother-son dyads are randomly assigned to one of two conditions: a program based on social cognitive theory (SCT) or the life skills program (LSK) based on problem behavior theory. Participants in both conditions meet for seven sessions over 14 weeks for two hours each session. In the SCT condition, mothers and adolescents attended joint sessions together for four of the seven sessions, and separately in concurrent sessions for the remaining three. Sessions included information about reducing HIV transmission, general communication skills, as well as specific communication about sex, values, decision making and peer influence. In the LSK condition, participants attended separate concurrent sessions, except for a portion of the first and last sessions, where they attend joint sessions. In addition, mothers participated in a stress reduction activity and discussion about ways to apply session topics to personal life. Youth also receive a stress reduction activity at the beginning of session that is accompanied by discussion about a specific risk behavior. The LSK condition also includes community service activities, such as an overnight trip to a Historically Black College or University. Both the SCT and LSK conditions were highly interactive and home practice exercises were assigned at each meeting.

*Keepin' It R.E.A.L.!* was evaluated in a RCT with the two described intervention conditions (SCT: n= 194; LSK: n = 187) and a control condition (n = 201) that received one hour of training on HIV prevention. Assessments were given at baseline, followed by 4, 12, and 24 months post-intervention assessments. Results revealed greater change in HIV knowledge and more recent conversations about sex with their sons among mothers assigned to the SCT condition compared to those in the LSK and control conditions. Mothers in the SCT and LSK conditions, however, scored higher on intent and comfort about discussing sex with their sons

than mothers in the control group. Regardless of conditions, sons demonstrated significant increases in sexual behavior over time, and increased sense of self-efficacy for abstinence. Further, SCT youth reported greater increase in HIV knowledge, twice the rate reported by those in the LSK condition. Further, compared to youth in the control condition, youth in both SCT and LSK conditions, who were sexually active, were more likely to use condoms and reported having intentions to end their sexual activity until they were older.

Keepin' It R.E.A.L.!, was subsequently adapted as a father and son program, based on the SCT approach, which was similar in format and content to the mothers' program (DiIorio, McCarty, Resnicow, Lehr, & Denzmore, 2007). The father-son program was evaluated with a randomized cluster design comparing effects of the SCT condition (n = 141) with a control condition focusing on nutrition and exercise (n = 132). Fathers in the SCT condition reported more communication and greater intent to communicate. Sons in the SCT condition reported less sexual behavior, and more condom use among those who were sexually active. Increased condom use was a more robust finding than abstinence, despite being addressed in only one of the program sessions. The authors suggest that for African American male adolescents, condom use may be a more acceptable HIV prevention strategy than abstinence. The implications of cultural tailoring for study findings were not addressed.

## Culturally Grounded Interventions

*Strong African American Families (SAAF).* SAAF is a family-based preventive intervention program, specifically designed for rural African American families to delay sexual debut and prevent the onset and escalation of alcohol and substance use during early adolescence. SAAF's theoretical and empirical underpinnings were based upon data that Murry, Brody and colleagues (Brody et al., 1994; Brody et al., 1998; Brody, Murry, Kim, & Brown, 2002; Brody et al., 2004; Gibbons, Gerrard, Cleveland, Wills, & Brody, 2004; Wills, Gibbons, Gerrard, & Brody, 2000; Wills, Gibbons, Gerrard, Murry, & Brody, 2003) gathered for more than a decade from the target population. Community members were involved in numerous aspects of SAAF's design, development, and implementation. Community members, who are residents of the counties in which SAAF families live, act as contacts between Murry's research group and the prevention targeted communities. These individuals are selected on the basis of their positive reputations and extensive social contacts in their

communities. Their feedback is sought on the cultural relevance and sensitivity of measures, protocols, and procedures for rural African American parents and youth. They also provide feedback about families' and communities' cultural identities, meanings, customs, religious practices, languages, expectations, world views, and cultural values, all of which impact the successful design and implementation of the SAAF program. Community members reviewed and provided feedback on each session and the program was pilot tested with rural African American families and refined prior to implementation. Further, to enhance rapport, minimize cultural bias, and enhance cultural understanding, African American community members serve as home visitors to collect data and African American community members were trained to implement the program.

The SAAF program consists of two-hour sessions that take place for seven consecutive weeks. After a meal catered by local African American providers, caregivers and children attend concurrent breakout sessions, and then join together for the last hour of large group discussion. Parent sessions focus on both general (e.g., monitoring and communication with children about sex) and racially-specific (e.g., racial socialization) parenting practices via videotaped vignettes and group discussions designed to foster social support. Adolescent sessions focus on topics such as dealing with difficult situations (e.g., racism), images of risk behaviors, and peer pressure resistance strategies via games and activities. Family sessions reinforce the messages from parent and adolescent sessions and build mutual understanding and communication. Each session includes videotapes of African American family interactions that were specifically produced for the SAAF program to illustrate key points. Further, each participating family receives program worksheets, homework assignments, and publications designed to reinforce program content. Every session includes a review of homework, didactic presentation of information, group discussion, and skills training activities designed to reinforce learning.

The SAAF program was evaluated by randomizing counties in the rural South to either the SAAF condition or a minimum-control condition in which parents were mailed information about early adolescent development, stress management, and techniques to promote exercise. Pre-test assessment occurred prior to SAAF exposure, followed by three month- post-test, with follow-up assessments at nine, 27, 54, and 65 months post-intervention. The trial included 677 families with an 11year old child and has yielded favorable behavioral

outcomes, and supported SAAF's efficacy in delaying sexual debut , substance and drug use avoidance, 54 months post-intervention (Murry et al., 2009), with sustaining effects 65 months post-intervention (Murry et al., 2011) among SAAF youth. The researchers tested the mediating mechanisms of the program and found that participating in SAAF evoked increases in regulated-communicative parenting and in youth intrapersonal protective processes (racial identity, self-esteem, self-regulation, and positive self-image). SAAF-induced effects on parenting behavior deterred not only precursors to risk behavior such as risk-related attitudes, future orientation, self-regulatory capacity, and resistance efficacy, but also immediate HIV-related risk behavior, including early onset of substance use and sexual intercourse and alcohol use trajectories (Berkel, Murry, et al., 2009; Brody, Murry et al., 2004; Brody, Murry, McNair et al., 2005; Gerrard, Gibbons, Brody, Murry, et al. 2007; Murry, McNair, et al., 2012; Murry, Berkel, et al., 2011; Murry, Gibbons, Gerrard, et al., 2007).

*Mexican/Mexican American Keepin' it REAL.* Mexican/Mexican American REAL is a school-based program to reduce drug/substance use, alcohol use and other risky behaviors that included a multicultural version and a specific adaptation for Hispanic youth. The developers describe the program as a culturally grounded intervention (Hecht et al., 2003) because the core elements of the curriculum were selected and designed to specifically reflect narratives and stories of indigenous youth (Hecht et al., 2006). The curriculum focuses on five core components: communication competence, narrative knowledge, motivating norms, social learning, and resistance skills. In addition, cognitive skills, appropriate behaviors, and communication for effective use of four 'REAL' resistance strategies (refuse, explain, avoid, and leave are emphasized (Kulis et al., 2005).

Multiple strategies were used to adapt the curriculum to fit the ecological culture of the targeted audience. Each session was translated into Spanish for the Mexican American version, while English was the language included in programs targeting White and African American youths. Local youth were involved in the production of curriculum videos, as part of the development team, and also served as actors for the videos. Examples from local mass media also were included as supplemental materials. For the boosters, activities were added that were developmentally appropriate for eighth-graders, such as group poster projects, mural paintings,

neighborhood nights out, and an essay contest (Kulis et al., 2005). The adapted curricula were subsequently tested on the three ethnic groups.

Three versions of Keepin' it REAL were taught by trained classroom teachers of 7th graders in an efficacy trial to address the question as to which version was most effective for Mexican American youth: a Mexican American-focused version, a White and African American version, and a multicultural version. The program was delivered in ten 40-45 minutes sessions to a large sample of 3,402 7th graders from 35 middle school in Phoenix, Arizona (Hecht et al., 2006; Kulis et al., 2005). Participants in the multicultural version received half of the lessons from the Mexican Americans-focused version and the other half from the White and African American version. After the intervention sessions were conducted, the youth in the intervention group received monthly boosters for the following year. Youth in the control group were not exposed to programmatic materials or information. Data were collected at four time points, with a pre-intervention survey and three follow-up surveys. Results revealed significant reduction in substance and drug use, intentions for future drug/substance use, and positive images of peers who use drug/substance among participants across each of the program versions. Further, Hecht et al. (2006) noted that Mexican youth exposed to the program, regardless of version, delayed onset of drug/substance use and reported lower rates of increase in drug/substance use, over time, compared to youth in the control groups. On the contrary, the White and African American version had no significant effect. The authors highlighted the importance of cultural inclusion rather than exclusion in program content, targeting risk reduction among Mexican American youth. The positive behavioral outcomes manifested in a multicultural risk prevention curriculum suggests that programs narrowly tailored to each specific subgroup, in this instance Mexican Americans, may not be necessary.

*Familias Unidas.* Familias Unidas is a preventive intervention for Hispanic youth based on Ecodevelopmental Theory (Pantin et al., 2004) that promotes four major family processes that are protective against substance use and unsafe sexual behavior: positive parenting, parent-adolescent communication, parental involvement, and family support (Pantin et al., 2003; Prado et al., 2007). Consistent with Hispanic cultural expectations, Familias Unidas places parents in positions of leadership and expertise in helping to

prevent problematic outcomes in their adolescents.

Familias Unidas has been evaluated in two separate RCTs, and a third and a fourth are ongoing. In the first RCT Pantin, Coatsworth, et al. (2003) found that Familias Unidas was efficacious (in a sample of 167 Hispanic youth), relative to a no-intervention control group, in (a) increasing parental involvement, parent-adolescent communication, and parental support for the adolescent; and in (b) reducing adolescent behavior problems, a risk factor for drug use and HIV risk behaviors. Results also indicated that increases in parental investment were related to decreases in behavior problems. In the second RCT, Prado et al. (2007) evaluated the efficacy of Familias Unidas relative to a family-centered HIV preventive intervention and a family-centered adolescent cardiovascular health intervention over a three year period of time. The results of the study found that over time Familias Unidas was efficacious in reducing illicit drug use relative to the cardiovascular preventive intervention. Familias Unidas was also found to be efficacious in reducing cigarette use over time, when compared to both the HIV preventive intervention and the cardiovascular preventive intervention. Finally, Familias Unidas was efficacious in reducing unprotected sexual behavior and preventing the incidence of sexually transmitted diseases. The effects of Familias Unidas on smoking and illicit drug were partially mediated by improvements in family functioning. Specifically, improvements in positive parenting (reward contingencies offered by parents) and in parent-adolescent communication explained some of the effects of intervention condition on cigarette and illicit drug use.

*CHAMP Family Program*. CHAMP was designed in close collaboration with community members, who played major roles in the program's design, implementation, and evaluation to reduce HIV risk amongst urban African American adolescents (McKay et al., 2004). CHAMP utilized a community participatory approach and framework to design, develop, and implement the program. The framework focuses on several core principles: "(a) ) linking collaborators from outside and within a setting to design a program; (b) creating a stakeholder advisory group to oversee program activities; (c) designing programs that integrate scholarly and indigenous knowledge and perspectives relevant to a setting to shape prevention messages and activities; and (d) using

credible messengers, such as those already connected to a setting, to implement interventions in their own neighborhoods" (Baptiste et al., 2006).

All CHAMP participants (N =227 families) were chosen randomly from a roster of 550 youth attending four inner city public elementary schools. Families were recruited via research staff making presentations to 4th and 5th grade classes, personal contact with parents at schools, telephone calls or home visits to parents. As with other family based interventions, CHAMP was designed as a multiple family group format. This delivery format was thought to be especially useful in increasing social support and mutual aid, creating strategies to deal with common problems, and reducing the stigma associated with talking about sensitive issues (McBride et al., 2007). The format is somewhat unique in that pretest data collection occurs in Session 2, after the participants have had the opportunity to meet facilitators and other families and find out more about the goals of the program. Posttest data collection occurs in Session 11, before the celebration in the final session. In the non-data collection sessions, families meet for 20 minutes to discuss the topic of that night's meeting and then break out for 45 minute concurrent parent and child sessions. In youth sessions, participants learn and role-play peer pressure scenarios and communication with parents. The parent sessions focus on monitoring, social support, problem solving, and communication with young people about sensitive topics. At the conclusion of each meeting, parents and children reconvene to make an action plan for their home practice activities.

CHAMP was initially evaluated with a pretest-posttest design which included a no-treatment comparison group from the CHAMP longitudinal study (McKay et al., 2004). Results from parents demonstrated a positive increase in family decision making relative to the comparison group, as did comfort in communicating about sensitive topics with their children. Among adolescents, those in the intervention group were less often exposed to mixed-gender settings without parental supervision (McBride et al., 2007). Youth in the intervention condition reported higher family conflict, perhaps because the intervention encouraged them to communicate more with their parents about sensitive topics. In addition, CHAMP has demonstrated effects on externalizing behaviors. Moreover, the CHAMP Family Program has been adapted for and piloted in several other contexts, including HIV+ youth (McKay et al., 2007), including multiple international settings, such as

South Africa (Bell, et al., 2008) and Trinidad and Tobago (Baptiste, Voisin, Smithgall, Martinez, & Henderson, 2007). The program developers attribute positive results to the use of core community participatory principles to inform and guide efforts to refine a disease prevention and health promotion model, and to refine research methods that embed culture, as well ascontext in the design, development, and implementation of the CHAMP program.

The initial CHAMP outcome study did not include a control arm, but subsequent adaptations of the program have added experimental control comparisons, showing continued strong programmatic effects on increased HIV transmission knowledge, less stigmatizing attitudes toward people with HIV, increased sexual conversation between parent and youth, and increased community protective influences, via more social control and the promotion of social action to foster health-enabling communities for youth (Peterson, Jason, et al., 2006).

*Puentes a la Secundária / Bridges to High School (Puentes/Bridges).* Puentes/ Bridges is a family-based program originally intended to prevent mental health disorders and prevent school dropout amongst Mexican American adolescents attending schools in low-income, urban communities (Gonzales, Dumka, Millsap et al., 2011), however, it also produced reductions in adolescents' substance use and sexual risk taking (Gonzales, Wong et al., in press: Gonzales et al., 2011; Germán, 2009) Content and structural elements of Bridges/Puentes were based on (a) qualitative interviews and focus groups with Mexican-origin families including Spanish-speaking and English-speaking parents who were born in the United States or Mexico, (b) key informant interviews with school personnel and service providers, (c) more than a decade of programmatic, longitudinal research on risk and protective processes within the targeted communities (Dumka, Gonzales, Wood & Formoso, 1998; Gonzales, Dumka, Mauricio, & Germán, 2007), and (d) extensive pilot testing and refinement with schools and families in these communities (Dumka, Gonzales, Wood & Formoso, 1998; Gonzales et al., 2004). The program's nine weekly sessions and two home visits targeted parenting practices, child coping, family cohesion, and school engagement. Bridges/Puentes was guided by an ecodevelopmental framework (Szapocznik & Coatsworth, 1999) which recognizes unique cultural factors and experiences that impact youth

development at multiple levels and the challenges they encounter in their families, peers, neighborhoods and schools. In particular, school engagement can be a challenge for Mexican American youth in the U.S. For example, since 1980, Mexican Americans have had the lowest rates of high school completion, compared to Whites, Blacks, Asian and Pacific-Islander groups, and also compared to youth from other Latino groups (U.S. Census Bureau, 2010). Mexican American youth in low-income communities find it difficult to envision positive future possibilities (possible selves) in a context of low wage jobs, unemployment, experiences of discrimination, and reduced expectations directed at them (Oyserman & Markus, 1990). These constraints combine with other features of low-income communities, such as the availability of drugs, deviant peers, and parents' diminished capacity for effective parenting to reduce investment in education and increase risk for mental health problems (Barrera, Prelow, et al., 2002). Immigrant youth also encounter cultural conflicts in their schools and families and their parents often have a poor understanding of U.S. schools and are therefore ill-prepared to monitor and intervene when they have academic difficulties (Suarez-Orozco & Suarez-Orozco, 1995). Bridges/Puentes aimed to promote family and youth competencies shown in the general literature to protect against youth risk behaviors while also empowering families to address these unique challenges and support their adolescents' school engagement across the middle school and high school years. In addition to program content specifically designed to increase knowledge and engagement of families in promoting their adoelscents educational success, the program integrated the values of *familsmo* through both content (cohesiveness, co-parenting, adolescent family support-seeking) and structure (recruiting multiple caregivers, joint sessions with parents and children). . Furthermore, traditional values were used as a motivational tool to encourage parents and adolescents to internalize and incorporate elements of the program into regular practice (Gonzales et al., 2007).

Bridges/Puentes was evaluated via a RCT with 516 families from four middle schools in Phoenix (Gonzales et al., 2011). An efficacy trial showed desired effects on adolescent externalizing, internalizing, substance use, school disciplinary actions, and grades, and also provided evidence that these effects were mediated by targeted changes in parenting, adolescent coping efficacy, family cohesion, and school

engagement. However, tests of moderation also showed that effects on program mediators varied on the basis of family acculturation level. Greater changes in parental monitoring and family cohesion were found for more acculturated English-dominant families, whereas the less acculturated Spanish-dominant families showed greater intervention effects to reduce harsh parenting and to increase adolescent coping efficacy and school engagement. Patterns of engagement also varied, with less acculturated families enrolling and attending at higher rates. However, despite acculturation-related differences at immediate post-test, long term follow-up showed similar improvements across groups on the quality of parent-child relationships (Jensen, et al., in press) and school engagement (Gonzales et al, 2013) following transition to high school (9th grade), and these changes mediated subsequent effects to reduce internalizing and externalizing symptoms, substance use, diagnosed internalizing and substance use disorder , and school dropout at five years post-test (when most adolescents were in the 12th grade).

*Be Proud! Be Responsible!* Be Proud! Be Responsible!, developed by Jemmott, Jemmott, and Fong (Jemmott et al, 1992; 1999; 2010), was designed to increase minority youths' knowledge on STDs, HIV and AIDs, to affect their attitudes and beliefs about safer sex (condom use and other prevention strategies), to inspire their understanding on individuals' vulnerability to STDs, HIV and AIDs, and to build their skills on negotiation and resistance to risky sexual behaviors. This culturally grounded intervention was subsequently adapted and evaluated with different ethnic groups and subpopulations. Be Proud! Be Responsible! The African American Male version (Jemmott et al., 1992) sampled 157 Black male adolescents (mean age 14.4 years) from three sites in Philadelphia, PA: a medical clinic, a local high school, and a local YMCA. Following a pretest evaluation, a total of 27 small groups were formulated of which 14 were assigned to the intervention condition and 13 to the control condition. Both conditions consisted of small group interventions lasting 5 hours in which the curriculum was delivered via videotapes, small-group discussions, exercises, and games. Prior to program implementation, curriculum materials were pilot tested and revised to fit the interests of African American boys in urban regions. Although limited information was provided about specific adaptations for African American males, it appears that the cultural tailoring primarily involved the use of African American

images in the videos and a gaming format to deliver program content. For example, they revised the AIDS knowledge content to be delivered as "AIDS Basketball", with the game organized around how to avoid risky sexual behaviors. The program developers also characterized the selection of program implementers as evidence of cultural tailoring, all were African American adults with at least a 4-year college degree, and were employed as educators, social workers, or health professionals. Posttests were administered immediately after the intervention and a follow up assessment was conducted three months later. Findings revealed that intervention targeted youths reported greater change in AIDS knowledge, less favorable attitudes toward risky sexual behaviors, and fewer intentions to participate in such behaviors. Intervention effects remained significant at three months follow-up.

*Be Proud! Be Responsible! The New Jersey version* (Jemmott et al., 1999) targeted 496 African American youth (male and female) residing in Trenton, an economically distressed urban community with high prevalence rates of unintended pregnancies and STIs. The participants were recruited from local public schools in 7th- and 8th- grades (mean age 13.8 years). Similar to the original version, the students were randomly assigned to the intervention groups (HIV reduction intervention) and the control groups (general health promotion intervention). Each small group contained 6 to 8 adolescents, with youth attending a 5-hour session in one day. The intervention targeted "hedonistic beliefs about the positive consequences of condom use on sexual enjoyment and self-efficacy to implement condom use" (Jemmott et al., 1999, p. 168). Prior to implementation, this curriculum was pilot tested to ensure that the program content and activities were sensitive to urban African American adolescents' interests. For instance, the videos selected for the program included multiethnic actors talking about AIDS, such as Ruben Blades, a Latino actor, demonstrating how to put on a condom using a banana as a prop (Jemmott et al., 1999, p. 168). Participants in the general health promotion intervention groups were taught about nutrition, exercises and diseases. Local African Americans were hired to deliver the program. Posttest data collection occurred immediately after the intervention, and follow-up tests were conducted 3 and 6 months post-intervention. Results from the immediate post-intervention test revealed more positive beliefs about condom uses, stronger condom-use intentions, and higher self-efficacy among the

participants in the intervention groups compared to those assigned to the control condition. However, no group differences on targeted behaviors were observed at three-month follow-up. Finally, the six-month follow-up tests found decreased HIV-related unprotected sexual behaviors and fewer sexual partners compared with the youths in the general health promotion intervention groups.

*The Children's Health and Responsible Mothering – Project CHARM.* Project CHARM is another adaptation of Be Proud! Be Responsible! specifically designed to reduce repeated pregnancy among Hispanic and African American adolescent mothers. CHARM is based on the core elements of Be Proud! Be Responsible! Project, which aims to reduce the number of episodes of unprotected sexual intercourse and number of sexual partners, as well as facilitated increase willingness and intentions to use condoms in order to prevent repeated pregnancies (Koniak-Griffin et al., 2003). A total of 572 adolescents, age 16.7 on average, who were mothers or pregnant were recruited, with a total of 497 retained for all the data collection cycles. The evaluation sample was primarily Hispanic (78%), with a smaller representation of African American females (18%). Youths were grades 7 through 12 from four school districts in Los Angeles County, California. Schools were randomly assigned to treatment (HIV program) or control conditions (general health program). Each program consisted of four 2-hour sessions.

Compared to the original curriculum, Project Charm focused more on the impact of STDs and HIV on the lives of pregnant girls and their babies, including STI prevention during pregnancy and the importance of avoiding risky sexual practices postpartum. Similar to the original program, supplemental materials included culturally and developmentally relevant videos, skill-building activities, and role-playing. In addition, an HIV-infected adolescent mother was invited to speak in the second intervention session to motivate participants to make healthy sexual decisions, encourage them take be sexually responsible and accountable, as well as politically aware of the effects of HIV/AIDS on inner-city communities and their children ( Koniak-Griffin et al., 2003). Assessment occurred immediately after the intervention sessions ended, followed by three months-, six month-, and one year post-intervention. Findings revealed that at 6-month follow-up, compared to females in the control group, those assigned to the HIV program demonstrated greater change in AIDS knowledge,

scored higher in behavioral intentions to use condoms, and reported greater reduction in number of sexual partners.

Following several demonstrations of positive program effects with varying subpopulations in the context of efficacy trials, Jemmott et al (2010) launched an implementation effectiveness trial of Be Proud! Be Responsible! wherein members of community-based organizations (CBOs) were randomly assigned to different training conditions to test the role of different program implementation training strategies on intervention effectiveness. The Be Proud! Be Responsible! effectiveness trial was a implemented through community-based organizations (CBOs) with 1,707 youths ages 13 to 18 residing in Philadelphia and Trenton. There were three training conditions: (a) in the first condition, CBOs received the two project manuals (HIV prevention and health and wellness curricula) and no face-to-face training, (b) a second condition received the project manual and attended a two-day face-to-face training session, and (c) the third condition received the project manual, two days of training on the manual, followed by a practice intervention-implementation session, and two days of additional training in which program implementers were videotaped and received feedback on their intervention implementation practice sessions. Similar to their other program designs, Jemmott et al., randomly assigned youths to one of two conditions: youth in intervention group received the HIV/AIDS prevention program) and those in the control group received general health promotion intervention sessions. Subsequently, trained CBOs in each site were randomly assigned to each youth group.

Pre-intervention data were collected and follow-up tests were administered at three, six, and twelve months post-intervention exposure. However, results revealed no statistically significant program impacts on frequency of sexual intercourse in the past three months or condom use at last intercourse, and there were no effects of training condition on intervention effectiveness. The researchers concluded that there was no evidence that the amount of time training community members improved facilitators' efficacy in program delivery. Further, they offered several explanations for lack of significant program effects. First, they surmised that there may have been a selection bias among CBOs, as many who declined to participate held strong values about teaching abstinence that conflicted with the program's philosophy. Further, they speculated that the

community-based delivery site may have affected study findings as prior school-based evaluations consistently showed expected benefits on risk behaviors for youth that received the intervention compared to those in the control group.

*Respeto/Proteger*. The Project Respecting and Protecting Our Relationships (Respeto/Proteger) is an adapted version of Be Proud! Be Responsible! designed to prevent HIV/AIDS among Latino adolescent couples who are new parents. The program focuses specifically on enhancing parental protectiveness as a mechanism to foster resiliency and motivate youth to reduce risky sexual practices (Lesser et al., 2009). *Respeto* /Proteger was informed by results from the CHARM Program, which revealed that young Latino mothers felt less empowered to negotiate condom use, compared to their male partners. Lesser et al. (2009) concluded from these findings that there is a need to include young fathers in pregnancy and sexual risk reduction program to increase sexual protection among young mothers.

Adolescent mothers and their partners were recruited from 28 Women, Infants, and Children (WIC) sites, eight alternative schools, two community-based organizations, and one community-based clinic in Los Angeles (Lesser et al., 2009, p. 92). Through randomization, 84 couples were assigned to the treatment condition and 86 couples assigned to the control condition. The mean age was 20 years for males and 18 years for females; 78% of the male parents and 86% of the female parents were Latino. Young parents in the intervention group received a 12-hour curriculum (six 2-hour sessions) while their counterparts in the control group received a 1.5 hour didactic HIV prevention education program. A total of 41 program series were held in local settings, such as community-based organizations and health clinics. Evaluative surveys were conducted at pre-intervention, immediately after the intervention, and follow-up periods.

Respeto/Proteger program design and development were informed by qualitative data received from Latino mothers attending health promotion projects for young mothers, and intervention approaches and strategies adopted from Project CHARM, Project EL Joven Noble and Project Con los Padres. The Project EL Joven Noble and Project Con los Padres were programs designed to influence Latino youths' understanding of romantic relationships, the "macho" man stereotype, and strategies to deal with daily challenges. Prior to

implementing Respeto/ Proteger, the program was pilot-tested with groups similar to the targeted audience. Programmatic changes were made based on pilot test results. Findings revealed that the couples, both adolescent mothers and their partners in the intervention arm of the study, reported less unprotected sexual behaviors six months after the intervention sessions. Further analysis indicated that, compared to the adolescent mothers in the control group, those in the intervention group whose male partner scored higher on protectiveness at the baseline reported even less unprotected sexual behaviors. Interestingly, female protectiveness did not show significant influences on males' unprotected sexual behaviors.

*¡Cuídate!* ¡Cuídate! is a program to increase parent-child communication about sex in Mexican heritage families (Villarruel, Cherry, Cabriales, Ronis, & Zhou, 2008). The theory of planned behavior was combined with a focus on Mexican cultural values, including familism and religiosity, in the design of the program. Familism was utilized as a motivational impetus to frame the importance of talking with children about sex. Religiosity was considered for its influence on decision making about sexual behavior, for example, whether to address condom use or abstinence. The 6-hour program was conducted with separate sessions for parents and adolescents on two consecutive Saturdays. The intervention group (n = 404) was provided with information about the prevention of HIV and pregnancy as well as support for general and sexual communication with children. The control group (n = 317) received a 6-hour general health intervention, which also emphasized the principal role of parents in determining adolescents' health, but did not discuss parent-child communication. Both groups were assigned homework to complete with their adolescents. Participants in the intervention group reported more communication, communication about sex, and comfort in communication than parents in the control group. Moreover, this effect was mediated by the perceived utility of communication about sex; attitudes of the adolescent, family, and church related to communication about sex; and parents' comfort in discussing sex with adolescents. Effects were not moderated by familism, religiosity, or the gender of parents or children.

*Discussion*

As this section review captured a majority of relevant studies yet published, it underscores the relative absence of culturally tailored alcohol and substance use programs for youth of color. However, several noteworthy patterns emerged. While the majority of programs were school-based, a significant portion was community-and family-based and included multiple intervention components. Our review also revealed that the majority of programs targeting African Americans and Hispanics were designed to prevent risky sexual behavior, and it consequences (e.g., STIs and HIV/AIDS). The program targeting Native American youth focused solely on substance and drug use prevention. Findings are generally positive in showing these programs fostered significant reductions in risky sexual practices, increased sexual and HIV/AIDS knowledge, and reduced youths' intentions to participate in risk behaviors, including reduced intent to use drugs/substances. Evidence of condom use, and positive attitudes about condoms as a means for protecting against unintended pregnancies, STIs, and HIV was also noted. We also can conclude these programs foster sustained effects, extending from 12 months to 6 years after the intervention on outcomes such as sexual debut, substance and drug use, number of sexual partners, and diagnosed substance use disorder. Thus, our review offers support for the usefulness of culturally tailored programs to prevent the consequences of early sexual activity onset and substance and drug use among youth of color.

*Content of Adaptations – Beyond Surface Structure*

In contrast to adaptations of PT interventions that have augmented well-established EBIs previously validated with White samples, the majority of programs reviewed here were originally designed and developed for targeted youth of color. Only two programs, Life Skills Training (Botvin et al., 1990, 1994, 2001) and the Strengthening Families Program (Spoth, Redmond & Shin, 2001) were first evaluated with White youth prior to being adapted for other ethnocultural groups (African American and Hispanic). In addition, our review determined that ten of the 16 programs emerged from culturally grounded strategies involving extensive, in-depth community involvement and input on program design, measures, and various aspects of the program's deep structure. The integration of cultural values, beliefs, norms, and information about legacy and ancestry were apparent in most of the adapted and culturally grounded program. In addition, role-playing, role-models,

the use of storytelling, and the inclusion of culturally relevant materials, videos with images familiar to targeted audiences, and games were incorporated in the cultural adaptations. A noteworthy observation, however, is that none of the studies in this review, with the exception of SAAF program developers (Berkel, Murry, et al., 2009; Murry, McNair, et al., 2012; , included measures to assess cultural dimensions in summative assessments of program effects or to assess as mediators to determine whether they contributed to program benefits.

*Subgroup Differences*

Our review also revealed evidence of subgroups differences in program responsiveness. For example, the Aban Aya Youth program demonstrated greater improvements in sexual risk and drug reduction among males than females. Projects that involved both teen mothers and fathers indicated that the intervention is more effective on the young fathers for condom use. In the one study that examined within-group variability based on culture, Puentes/ Bridges showed differences in levels of engagement and program effects between low acculturated (primarily immigrant Spanish speaking) and high acculturated (English speaking) families. However, it was noteworthy that similar long term effects on targeted mental health, substance use outcomes, and school dropout were found across levels of acculturation, suggesting that diverse families may benefit in different ways, depending on their unique needs when participating in comprehensive, multicomponent interventions. This finding underscores the need for greater attention to within group variability in tests of efficacy and effectiveness in order to determine whether and how EBIs can address subgroup differences for racial/ethnic groups that are neither monolithic nor static on cultural dimensions.

*Remaining Gaps and Questions*

To further advance this area of research, there is a need to address several gaps and unresolved questions. Several groups are not visible in preventive intervention research—namely Alaska Native, Asian Americans, and Asian Pacific Island (API) adolescents. No programs targeting these youths emerged in our comprehensive literature search, and very few have been evaluated with American Indian youths. American Indians and Alaska Natives are disproportionately affected by all major youth risk behaviors, including alcohol, tobacco, drug use, risky sex, and suicidal behaviors. Further, available studies have shown that while API youth

are less likely to engage in risky sexual practices than any other group of adolescents (Grunbaum et al., 2000), those who are sexually active have higher prevalence rates of engaging in other risk behaviors, such as using alcohol or drugs at last intercourse and/or reporting having used a condom at last intercourse were comparable to other ethnic groups. That there is a major void in targeting these subgroups in preventive interventions is of great concern. That the majority of risk prevention programs have been developed and tested on urban youth suggests the need to determine the translatability of these programs in rural contexts. This information can further our understanding of the utility of developing programs to specifically address the needs of rural youth. The paucity of studies in our review that targeted rural youth is of concern, given that rural youth are at increased risk for using a variety of substances including tobacco (Zollinger et al., 2006), alcohol (Hutchison & Blakely, 2003), and methamphetamines (Johnston et al., 2009). Several researchers have noted that rural Whites, especially those living in the Appalachian region, appear to be at greater risk for early onset of substance use than their more frequently studied urban counterparts (Johnston et al., 2009; Pruitt, 2009; Spoth et al., 2001; Zollinger, Saywell, Overgaard, Przybylski, & Dutta-Bergman, 2006). Not only are these youth infrequently included in epidemiological studies but, to our knowledge, few programs specifically target White youth residing in southern rural communities.

Finally, only one study included in the current review directly compared whether a culturally-adapted program is more effective than a generic or multicultural program (Keeping it Real), and the findings did not support the cultural adaptation with Hispanic youth. Notwithstanding these limitations, our review offers support that it is possible to provide effective programming for youth from a variety of cultural backgrounds with proven, culturally generic, evidence based programs. However, it remains unknown *when*, *how*, for *whom*, and under *what* circumstances culturally tailored youth risk prevention program will foster targeted programmatic effects.

## PREVENTION OF ANXIETY AND MOOD DISORDERS

Anxiety and mood disorders are prevalent among children and adolescents, causing significant impairment at home, with peers, and at school (e.g., Kessler, Avenevoli, and Merikangas, 2001; Piña, Zerr,

Gonzales, & Ortiz, 2009). Data from the National Comorbidity Survey Adolescent Supplement showed that among youth 13 to 17 years old, anxiety disorders were the most prevalent class of disorders (24.9%) with mood being the third most prevalent class of disorders (10%) (Kessler, Avenevoli, Costello, et al., 2012). In addition, Kessler, Avenevoli, and Merikangas' (2001) seminal review of epidemiological and large scale prospective longitudinal studies (e.g., Costello et al 1999; Kovacs et al., 1989) revealed that anxiety disorders were not only the conditions most commonly comorbid with depression, but that about three-fourths of depressed youth had a history of at least one anxiety disorder. There also are data suggesting some variations in the prevalence and co-occurrence of anxiety and mood problems (e.g., age, sex), albeit epidemiological or large scale studies focusing on ethnicity-race are scant.

In the adult literature, for example, Karno, Golding, Burnam, Hough, Escobar, Wells, and Boyer (1989) found that the lifetime prevalence for any anxiety disorder was higher among U.S. born Mexican Americans compared to Mexican Americans born in Mexico (22.6 vs. 13.7), based on the Los Angeles Site of the NIMH Epidemiologic Catchment Area study. In another study using data from the National Epidemiologic Survey on Alcohol and Related Conditions, Grant, Stinson, Hasin, Daeson, Chou, and Anderson (2004), found that the lifetime prevalence of any anxiety disorder was higher for US born Mexican Americans (16.3%) than for foreign-born Mexican Americans (9.1%). In addition, for any mood disorder, the lifetime prevalence was higher for US born Mexican Americans (19.3%) than for foreign-born Mexican Americans (10.2%). Turning to the National Health and Nutrition Examination Survey-III, Riolo, Nguyen, Greden and King (2005) found that Mexican Americans and Caucasians had a significantly earlier onset of Major Depressive Disorder compared to African Americans. In addition, education (less than 8 years of school) was associated with Major Depressive Disorder for Mexican Americans only. Also, Dysthymic disorder was greater among Mexican Americans and African Americans, even after controlling for the effects of poverty and education (no age by ethnicity data were presented albeit the youngest responders were 15 to 19 years old.). No comparable research focusing on Native Americans and Asian Americans has examined variations in the prevalence and co-occurrence of anxiety and mood problems.

When it comes to ethnic minority children and adolescents, there also is a scarcity of anxiety and depression disparities research from large scale and methodologically robust studies with the little work that has been conducted focusing on African American and Hispanic/Latino youth. Bird (1996), for example, reported prevalence rates of psychiatric disorders in children and adolescents (ages 4 to 16 years) in Puerto Rico and findings showed that depression was the second most common diagnosis (5.9%) with only Separation Anxiety Disorder and Specific Phobias emerging from the anxiety disorder modules at 4.7% and 2.6%, respectively. More recently, Alegria, Lin, Greif Green, Sampson, Gruber, and Kessler (2012) reported data from the National Comorbidity Survey Adolescent Supplement. Findings showed that for non-Latino Black youth, the lifetime prevalence of Separation Anxiety Disorder was significantly higher (10.8%) compared to non-Latino Whites (6.8%) or Latinos (7.9%). No additional differences relevant to ethnicity and anxiety-depression were found.

The high prevalence of anxiety and depressive disorders in children and adolescents (Costello, Egger, & Angold, 2005), coupled with the fact that these conditions also are typically chronic and lead to significant impairment (including early initiation of the use of alcohol, tobacco, and other illicit drugs; Conger & Rueter, 1996; Glantz & Leshner, 2000) has prompted much interest in developing EBIs (Beidel & Turner, 2007; Silverman, Piña, & Viswesvaran, 2008). In addition, data showing some ethnic variations in the prevalence of these disorders prompted some research focused on culturally-adapted interventions focused on reducing and preventing disparities in these psychiatric conditions among youth (Cardemil, Reivich, & Seligman, 2002; Cooley-Strickland, Griffin, Darney, Otte, & Ko, 2011).

In the clinical child and adolescent area, several randomized controlled prevention trials have been published at the universal, selective, and indicated levels focusing on anxiety and/or depression. In the anxiety area, most anxiety prevention studies have been conducted at the universal level and only a handful of studies have tested selective or indicated protocols. Indicated programs have been directed at children due to a family history of anxiety (Ginsburg, 2009), a known predisposition (e.g., behavioral inhibition, Rapee, Kennedy, Ingram, Edwards & Sweeney, 2005), or some anxiety symptoms (Piña et al. 2012). Selective or indicated depression prevention programs have been directed to youth at risk for depression due to a family history or

diagnosis of depression (Beardslee, Gladstone, Wright, & Cooper, 2003), or exposure to stressors that place them at high risk, such as urban poverty (Cardemil, Reivich, & Seligman, 2002) or the loss of a parent (Sandler et al., 2003). Anxiety prevention strategies show content overlap with prevention protocols, typically focusing on negative cognitions, social skill training, and problem solving skills (Barrett & Turner, 2001; Clarke et al., 1992; Dadds, Spence, Holland, Barrett, & Laurens, 1997; Essau, Conradt, Sasagawa, & Ollendick, 2012; Hankin, Abramson, & Siler, 2001; Lewinsohn et al., 1994; Lock & Barrett, 2003; Lowry-Webster, Barrett, & Dadds, 2001; Simon, Bogels, & Voncken, 2011; Piña, Zerr, Villalta, & Gonzales, 2012; Warner, Weissman, Fendrich, Wickramaratne, & Moreau, 1992).

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In a nutshell, research shows that pathological levels of childhood and adolescent anxiety and depression may be preventable. Using meta-analyses, Fisak, Richard, and Mann (2011) found a significant overall mean weighted effect size of about .18 as well as a slightly greater effect for targeted (that is, selective or indicated) anxiety prevention over universal protocols. In another meta-analyses, Teubert and Pinquart (2011) found significant effect sizes on anxiety at posttest (about .22 for symptoms and .23 for diagnoses) and follow-up (about .19 for symptoms and .32 for diagnoses) as well as significant variations of program effects giving targeted programs an advantage over universal programs. When it comes to the prevention of depression, targeted (selective/indicated) programs also appear to be more effective than universal programs. In Horowitz and Garber's (2006) meta-analyses the pretest to posttest effect size for targeted programs ranged from about .23 to .30 compared to only .12 for universal programs. At follow-up, the effect size for targeted programs ranged from about .31 to .34 compared to .02 for universal programs. Similarly, Stice, Shaw, Bohon, Marti, and Rohde's (2009) meta-analyses found an average effect size ranging from .14 to .23 for targeted programs compared to .06 to .04 for universal programs. It is important to note, however, that there was some overlap in the trials included in the anxiety and depression meta-analyses, making these effect size evaluations non-independent. For example, the FRIENDS for Life program was included in both anxiety and depression meta-analyses (e.g., Barrett et al. 2006). Nonetheless, based on these findings, preventing anxiety and depressive

disorders appears to be both an effective and efficient way to reduce the incidence of these psychiatric conditions, especially when the protocols are targeted.

## Cultural Adaptation and the Prevention of Anxiety and Depression

Despite the promising overall effects of childhood anxiety and depression prevention programs, evidence seems to suggest that prevention efforts need to be strengthened, particularly for ethnic minority or culturally diverse child populations (e.g., Barrett, Sonderegger, & Xenos, 2003; Cardemil, Reivich, & Seligman, 2002; Cooley-Strickland, Griffin, Darney, Otte, & Ko, 2011; Miller, Laye-Gindhu, Bennett, Liu, Gold, March, Olson, & Weachtler, 2011). Studies testing cultural adaptations of anxiety and depression prevention programs are far less common than for substance use, externalizing problems or other youth risk behaviors. In this section we highlight the few prominent exemplars that have been evaluated to date.

*The Penn Resiliency Program (PRP)***.** PRP is a school-based depression prevention program that teaches cognitive and social problem-solving skills to groups of middle-school students who might be at-risk for developing depressive symptoms by virtue of their low-income status. The program is an adaptation of an EBI established with predominately middle-income Caucasian children (Gillman, Reivich, Jaycox, & Seligman, 1995) that Cardemil, Reivich, and Seligman (2002) applied to low income African American and Latino children. In their study, the original structure of the program was maintained but cultural modifications were made. In particular, the characters and examples used in the program were made culturally and contextually relevant by illustrating the skills in the context of challenges associated with growing up in a single-parent home and managing peer conflict in urban settings. For Latino youth, fewer depression symptoms, negative automatic thoughts, and hopeless thoughts were found from pretest to posttest and at 6-month follow-up. In addition, at the follow-up only, Latino youth also evidenced higher self-esteem over time compared to no-treatment controls. For African American youth, however, findings were not encouraging. There were no differences between the intervention and the control conditions on any of the measures or at any measurement point. At the 2-year follow-up (Cardemil, Reivich, Beevers, Seligman, & James, 2007) Latino youth continued to show program related gains but African American youth did not. The finding with African American children

was interpreted as possibly being related to six potential factors, two of which seem especially plausible: cross-ethnic differential reporting of depressive symptoms and/or differential expression of depression symptoms. However, with no data about the measurement equivalence of the assessment tools used in the study, it is difficult ascertain the viability of these possibilities (Piña, Gonzales, Holly, Zerr, & Wynne, 2013).

*FRIENDS for Life (African American youth)***.** In another study focusing African American youth, Cooley, Boyd, and Grados (2004) and Cooley-Strickland, Griffin, Darney, Otte, and Ko (2011) described their adaptation of the FRIENDS for Life childhood anxiety prevention program developed in Australia to prevent anxiety and depression (Barrett et al. 2006) . The original EBI is a school-based intervention shown to reduce risk of anxiety disorders by teaching cognitive and emotional skills to cope with feelings of fear, worry and depression. In the cultural adaptation work of Cooley and colleagues, modifications focused on replacing references specific to Australian culture and including examples relevant to the contexts of inner city African American youth. In terms of language, for example, vegemite was replaced with peanut butter, sugar glider possum was replaced with bat, and tucker was explained as food. Also, relaxation exercises were modified and references to animals indigenous to Australia (e.g., koalas, cattle dogs, crocodiles) were replace with those found in urban America (e.g., pigeons, mice, dogs, kittens). As far as incorporating the contexts of inner city African American youth into the intervention, children drew pictures of real-life violence that had occurred in their communities and examples of incidents relevant to living in violent and chaotic environments (e.g., fights, gangs, drugs, low resources) were integrated into the sessions. In their trial, Cooley-Strickland et al. found no statistically significant program differences relevant waitlist on any of the primary outcome variables including anxiety symptom levels (not even for those children with higher levels of pretest community violence exposure or as a function of child's sex).

*FRIENDS for Life (Aboriginal children in Canada).* Focusing on aboriginal children in the West Coast Nations of Canada, Miller, Laye-Gindhu, Bennett, Liu, Gold, March, Olson, Weachtler (2011) implemented and tested a culturally adapted FRIENDS for Life protocol. This adaptation focused primarily on cultural

enrichments such as adding a new character (Rusty the Raven) and narrative to facilitate the use of storytelling as part of the protocol. The adaptation also entailed introducing the craft and use of a medicine pouch decorated with Aboriginal symbols, replacing a support team activity with a circle of support activity that focused on family, community, culture, and natural and spiritual world resources, and adding a ‘‘FRIENDS Wheel’’ modeled after the Medicine wheel. In this study, the FRIENDS program was delivered to elementary school students in Canada (including many Aboriginal children). Findings showed that no statistically significant reductions in anxiety levels could be attributed to the intervention. This was the case for Aboriginal and non-Aboriginal children.

*Acercamiento.* Piña, Zerr, Villalta, and Gonzales (2012) reported on an indicated prevention and early intervention for childhood anxiety trial (about 48% of Latinos Spanish speaking and requiring services in Spanish) that included a significant proportion of Mexican-origin families. As such, services were made available in Spanish and interventionists were trained in a culturally prescriptive protocol (Piña, Villalta, & Zerr, 2009). The culturally prescriptive protocol calls for personalizing or tailoring program implementation strategies to the unique cultural characteristics of the client. This is achieved by including in the protocol references to norms and values (e.g., *familismo*, *respeto*) that can help the client engage in the use of core program components such as gradual exposures via motivational procedures. In terms of culture, a focus was on developing cultural enrichments and implementing them prescriptively with high fidelity in the application of standard cognitive and behavioral procedures. The cultural adaptation was conceptualized in terms of program materials and program implementation strategies. In terms of program materials, for example, child and parent handouts were available in Spanish and cultural enrichments focused on incorporating *dichos* (sayings), proverbs, and refrains that could assist content delivery. In terms of strategies, interventionists were trained to (a) be attuned to various terminology used by children and families and to use such terminology during the sessions; (b) identify “windows of opportunities” to use key cultural values (e.g., *Familismo*: family support, family referent, family obligations) potentially relevant to promoting program engagement and practice of program skills, as necessary. Two conditions were compared (“child-only” or a “child plus parent”) in Piña et

al. (2012) based on knowledge gained from parent focus groups and in-depth interviews showing that Mexican-origin caregivers prefer parental involvement in child-focused interventions (similar findings have been reported by others; Dumka, Gonzales, Wood, & Formoso, 1998) perhaps because Hispanic/Latinos place great emphasis on caregiving and family). Significant program effects were found in terms of child anxiety symptoms based on a diagnostic interview schedule, parent and child rating scales, and clinically significant change; although the "child plus parent" condition showed slightly greater gains in terms of child self-reported anxiety and depression levels as well as parent reported anxiety symptoms about the child. No program moderation effects were found for ethnicity or language (Spanish vs. English).

*Discussion - Limited Evidence*

Despite efforts made to develop culturally robust anxiety and depression prevention programs, overall findings have been somewhat unsuccessful. This appears to be true when it comes of African American children in particular (Cardemil et al., 2002; Cooley-Strickland et al., 2011). In contrast, the evidence for Latino youth seems to be more encouraging (Cardemil et al., 2002; Piña et al., 2012). It is important to highlight, however, that the literature is limited to two studies focusing on African American youth and two studies focusing on Latino youth, both exploratory in nature and lacking statistical power for the analyses conducted. For African American youth, deep-level adaptations might be necessary as current findings are not very encouraging. For example, given the importance African Americans place on the family and the caregiving roles grandparents often play, it might be important to enhance anxiety and depression prevention efforts by providing caregivers with substantial parent training sessions that focus on evidence-based mediators of child outcomes (e.g., parenting, family functioning variables). Turning to other groups, there was little to no representation in the literature of programs focusing on Asian and/or Pacific Islander children (Barrett et al., 2003; Yu & Seligman, 2002). Barrett et al. (2003), for instance, implemented the FRIENDS program (original non-modified version) to former Yugoslavian, Chinese, and multi-ethnic children residing in Australia. At posttest, former Yugoslavian youth in FRIENDS showed grater gains than their Chinese counterparts on self-reported anxiety and self-esteem compared to waitlist (along secondary outcomes measures, FRIENDS showed

similar cross-ethnic gains including at the 6-month follow-up). Also, there are no anxiety or depression prevention studies focusing on Native American youth, although there is some encouraging research focusing on the prevention of posttraumatic stress reactions in this population (Goodkind, LaNoue, & Milford, 2010).

As we move forward to advance prevention methods focusing on anxiety and depression among ethnic minority children, it would be important to identify program adaptation parameters beyond language and contextually relevant examples. For example, when it comes to Latino children, it would be important to test the extent to which cultural values such as *familismo* are likely to enhance program effects. Emerging tailoring work by Beardslee and colleagues in the area of depression suggests there might be a need to focus on immigration history, adaptation to the host culture, and consideration of key cultural values (trust, respect) during the intervention. However, substantial data about the impact of these types of modifications has not been published to date (D'Angelo, Llerena-Quinn, Shapiro, Colon, Rodriguez, Gallagher, & Beardslee, 2009; Feinberg, Stein, Diaz-Linhart, Egbert, Beardslee, Hegel, & Silverstein, 2012). For Asian American children, focusing on cultural values also might hold promise. For instance, Huey and Pan (2006) reported on a small randomized demonstration trial with clinically anxious/phobic Asian American adults. Findings from their trial revealed that Asian Americans benefited slightly more from a culturally adapted protocol that considered traditional Asian values compared to a standard protocol. This was true in terms of catastrophic thinking and behavioral approach, two core features of pathological anxiety. Building on these data, it appears that "culture" might definitely need to be considered when targeting anxiety and depression in ethnically and/or culturally diverse children and adolescents. We caution, however, that it might be possible to saturate a program and distract away from critical change processes by infusing too much culture into an intervention (Piña et al., 2009).

## HEALTH SUBSECTION

Health disparities for subcultural group children and adolescents are well-documented (Flores, 2010; Flores & Tomany-Korman, 2008). In the most extensive analysis of childhood health disparities, Flores (2010) reviewed 111 articles published between 1950 and March 2007. Consistent with the definition provided by the

US Department of Health and Health Services, disparities covered by that review included subcultural group differences in disease prevalence, health outcomes, and access to healthcare. African American, Asian/Pacific Islander, Latino, and Native American children showed disparities relative to non-Hispanic White children in one or more categories of mortality, injuries and illnesses, obesity, physical activity, proper nutrition, and medical care. Culturally-adapted interventions often are initiated with the primary intention of reducing disparities by promoting cultural elements that are healthful or modifying those that are associated with health risks. Culture influences health through a variety of mechanisms such as food preferences, traditional methods of food preparation, celebrations involving food and beverage consumption, perceived desirability of certain body shapes, consumption of alcohol, and norms for physical activity (MacLachlan, 2006). Understanding how culture influences the health of children informs the development of interventions that incorporate cultural beliefs and practices. By focusing on children's health, cultural adaptations of childhood interventions can affect not only proximal child health outcomes, but also can change the trajectory of health outcomes into adulthood. There is a developmental component to some health behaviors and illnesses (such as type 2 diabetes and cardiovascular disease) that justifies early intervention efforts (Berenson, 2002; Guo, & Chumlea, 1999; Magarey, Daniels, Boulton, & Cockington, 2003; Must, Jacques, Dallal, Bajema, & Dietz, 1992; Serdula, Ivery, Coates, Freedman, Williamson, & Byers, 1992). Thus, it is worthwhile to develop culturally informed health interventions for children and adolescents that reduce health disparities, incorporate an understanding of culture's influence on health, and disrupt risky health behaviors that threaten to extend from childhood into adulthood.

*The Cases of Obesity and Physical Activity*

Research on the interrelated topics of obesity and physical activity illustrates the need for culturally-adapted interventions and their thorough evaluation. Obesity is a prominent preventable risk factor in the major illness categories of heart disease, cancer, and type 2 diabetes (Eyre et al., 2004). Unfortunately, across various national studies, there are consistent ethnic group disparities on the prevalence of obesity. For adults, the combined prevalence of overweight and obesity was 64.2 percent, 76.1 percent, and 75.8 percent for non-

Hispanic Whites, Blacks, and Mexican Americans, respectively (Wang & Beydoun, 2007). For children, African American, Latino, Native American, and some Pacific Islander subgroups (e.g., Filipinos) show elevated rates of obesity when compared with non-Hispanic Whites (Flores, 2010; Wang & Beydoun, 2007). Wang and Beydoun (2007) reported that the combined prevalence rates for overweight and obesity were 28.2%, 35.4%, and 39.9% for non-Hispanic White, African American, and Mexican American children and adolescents. Disparities were particularly apparent for girls. For instance, in their justification for a targeted preventive intervention, Robinson et al. (2010) noted that since the 1960s, obesity among African American girls has tripled, they differ from non-Hispanic White girls on body mass index (BMI) as young as age 6, and obesity disparities increase as girls mature into adolescence and young adulthood.

There is a suggestion in the literature that disparities on obesity for African American girls cannot be explained readily by socioeconomic status differences (Gordon-Larsen, Adair, & Popkin, 2003). Utilizing data from a nationally representative sample of U.S. adolescents, one report focused on a subsample of over 13,000 that included non-Hispanic White, Hispanic, African American and Asian American males and females who were 12 to 20 years of age. Ethnic-racial disparities were evident in the prevalence of overweight girls: Asian-American-10.37%, non-Hispanic White-22.24%, Hispanic-29.59%, and African American-37.94%. It was particularly interesting that there was a negative relation between overweight status and SES for non-Hispanic White and Hispanic girls, but not for African American girls whose prevalence of being overweight was relatively elevated at higher levels of SES. For African-American girls, it appears that factors such as income and education might increase risk rather than lessen risk as they do for other subcultural groups. Subcultural group differences in risk and protective factors are intriguing because they suggest possible differences in modifiable variables that could be included in culturally-adapted interventions for childhood obesity (Barrera et al., 2013).

One chronic illness associated with obesity, type 2 diabetes, disproportionately affects African Americans, Latinos, and Native Americans (Cowie et al., 2006; Fagot-Campagna et al., 2000; Gahagan & Silverstein, 2003), and is a leading cause of death, blindness, heart disease and amputations (Wong, Tagawa,

Hsieh, Shapiro, Boscardin, & Ettner, 2005). Particularly disturbing are the estimates of diabetes' prevalence for the next generation, an anticipated development largely attributable to the rise in obesity. Forecasts suggest that for those born in the year 2000, 45.4% of Latino men, 52.5% of Latino women, 40.2% of Black men, and 49% of Black women will be diagnosed with diabetes within their lifetimes (Narayan, Boyle, Thompson, Sorensen, & Williamson, 2003). Those projections are substantially higher than projections for White men (26.7%) and women (31.2%) that are, nevertheless, still disturbing in their magnitude.

*Physical activity*

Comparative research on the physical activity of ethnic minority children is less developed than research on obesity (Flores, 2010). When compared with non-Hispanic White youth, African American and Hispanic youth had lower aerobic fitness, less vigorous physical activity among girls, and more television viewing during weekdays (Flores, 2010). Those conclusions were based primarily on findings from the well-known Monitoring the Future annual surveys (Delva, O'Malley, & Johnston, 2006). The report by Delva et al. (2006) used surveys from 1993-94 to 2001-03 for 8$^{th}$ and 10$^{th}$ graders and surveys from 1986-88 to 2001-03 for 12$^{th}$ graders. Results indicated that for boys, only one of 14 grade-by-survey year comparisons on frequency of vigorous physical activity showed ethnic/racial differences. For girls, the results were drastically different. African American and Hispanic girls reported less vigorous physical activity than non-Hispanic White girls on all annual surveys and for all grade levels. For hours of TV viewing, African American and Hispanic boys and girls reported more TV viewing than non-Hispanic White boys and girls on all annual surveys and for all grade levels. These findings indicate the clear need for interventions that are designed to increase physical activity and decrease sedentary behavior of African American and Hispanic children and adolescents.

## Exemplary Research Programs Integrating Culture and Children's Health

There are several model health interventions that illustrated extensive and systematic cultural adaptation efforts. In this section we highlight three that are exemplary in the procedures they implemented to become informed about relevant cultural considerations, integrate those considerations into intervention designs, and then evaluate adapted interventions' engagement and efficacy. Other important controlled studies on

interventions designed to improve the diet and physical activity of ethnocultural group children have been conducted, but published reports lack detailed descriptions of cultural adaptation procedures (Crespo et al., 2012; Davis et al., 2012; de Heer et al., 2011; Kleges et al., 2010; Nadar et al., 1999; Resnicow et al., 2005; Trevino et al., 2004; Wilson et al., 2011).

*Stanford GEMS*. The Stanford GEMS (Girls health Enrichment Multi-site Studies) was a culturally adapted after-school dance program and an in-home sedentary behavior (television and other screen viewing) reduction intervention for African American girls (Robinson et al., 2010). Stanford GEMS emphasized physical activity as a means for body weight reduction. The research team described their programmatic research in key articles that contained literature reviews, theoretical considerations, pilot research, and a randomized controlled trial efficacy study (Kumanyika et al., 2003; Robinson et al., 2003; Robinson et al., 2008; Robinson et al., 2010). Many features of exemplary cultural adaptation procedures (Barrera et al., 2013) were illustrated in the development of Stanford GEMS.

An initial report described a literature review that identified special considerations for obesity interventions directed at African American youth (Robinson et al., 2003). The authors noted that because African American girls, family members, and men might be less concerned about thinness than White counterparts, African American girls and women might be less motivated to achieve distal goals of weight loss and fitness. They surmised that intervention activities might need to be intrinsically and immediately appealing to sustain engagement of African American girls. The authors explained the considerations they made in identifying dance as a gratifying, culturally appropriate after-school physical activity. They conducted other extensive formative research that they summarized as follows:

> The treatment and control interventions were developed through extensive formative research, including focus groups with girls; focus groups with parents/guardians; written questionnaires; interviews of community youth workers and community leaders; and testing the feasibility of the dance classes and TV reduction lessons with small groups of girls and individual families. (Robinson et al., 2003, S1-67).

Cultural adaptations included surface structure elements such as culturally-matched participants and staff, and participant selected music and dance as the featured physical activity. The intervention developers indicated that deep structure: elements associated with African-American culture (e.g., collectivism, importance of family, present orientation, religiosity, sense of historical racism and prejudice, and use of social support) were infused into the intervention. The early cultural adaptation phases of Stanford GEMS contained a 12-week pilot study (Robinson et al., 2003), another feature of high quality adaptation efforts (Barrera et al., 2013). Goals of the pilot were to evaluate the recruitment strategy, participants' satisfaction with intervention activities, and the intervention's effects on BMI, physical activity, screen (TV, video) viewing, and other outcomes. Sixty-one African-American girls ages eight through 10 were recruited through community centers and afterschool programs in low income neighborhoods of Oakland and East Palo Alto California. To be eligible, girls had to have a BMI that was greater or equal to the 50th percentile for their age group and/or one overweight parent or guardian with a BMI of greater or equal to 25. Girls who were randomly assigned to the active intervention could attend dance classes that were offered five days per week at neighborhood community centers. They could attend dance classes as often as they liked for the 12 weeks of intervention. In addition, intervention participants received five in-home lessons that were designed to reduce TV and video viewing. Participants assigned to the control condition received a health education program that emphasized healthful eating and physical activity. They also received newsletters containing information about health risks that might lead to obesity, heart disease and diabetes.

The pilot showed that the researchers were successful in enrolling more than their targeted number of participants and participants met eligibility criteria. They also retained all but one of the participants over the 12 weeks of the pilot. Satisfaction with the intervention and participation in it were very good with one exception. The lack of affordable transportation in one community resulted in less than half the dance class participation that was achieved in the other community. Due to a lack of power, the intention was to estimate effect sizes rather than to show statistically significant intervention effects.

Encouraging effect sizes were found for BMI, waist circumference, physical activity, and TV viewing that favored the intervention condition. Overall, the pilot study demonstrated the feasibility, appeal, and potential efficacy of the combined dance and TV viewing reduction intervention.

Ultimately, the Stanford GEMS team conducted a 2-year randomized controlled trial with 261 African American girls and their parents or guardians (Robinson et al., 2010). As in the pilot, participating girls were between the ages of 8 and 10, and were either overweight or had at least one parent/guardian who was overweight. Participants randomly assigned to the active intervention had access to after-school dance classes five days each week for two years and received up to 24 in-home sessions for reducing screen viewing. Over the 2-year period, the control condition included health education, monthly newsletters, and quarterly lectures at community centers. Despite the exemplary methods for creating a culturally adapted intervention, extending the intervention period to 2 years, and attracting an adequate number of participants, there was not a statistically significant treatment effect on the primary outcome measure, BMI. However, there were statistically significant intervention effects on total cholesterol, low-density lipoprotein cholesterol, and depression. In tests of moderation when BMI was the outcome variable, the intervention was more effective when parents or guardians were unmarried and when baseline television viewing was high. The research team suspected that treatment effects were not stronger because of barriers participants encountered in attending dance classes due to transportation difficulties and episodes of violent crime near the sites where dance classes were held.

*Hip-Hop to Health Jr.* A second exemplary program of research, Hip-Hop to Health Jr., was a community-based obesity prevention program that was culturally adapted for African American and Latino Head Start pre-school children (Fitzgibbon et al., 2002). It was an adaptation of Hip-Hop to Health, an intervention for African American 6- to 10-year-old children (Fitzgibbon et al., 1998). In an article that described the rationale and design of Hip-Hop to Health Jr., the research team reviewed the literature on diet and exercise of African America and Latino children to identify specific characteristics (e.g., fat and fiber consumption) that might account for disparities in childhood and adult obesity. They also explained that the

theoretical framework guiding intervention development was an integration of social learning theory (Bandura, 1986), self-determination theory (Deci, 1992; Deci, Driver, Hotchkiss, Robbins, Wilson, 1993) and the transtheoretical model (Prochaska & DiClemente, 1992). Consistent with the guidelines for cultural adaptation phases (Barrera et al., 2013), this first phase of information gathering included a literature review.

Also consistent with adaptation guidelines, the Hip-Hop to Health Jr. research team conducted a 3-week pilot study to test the feasibility and appeal of both the parent and child intervention components. The child portion of the pilot intervention contained three 40-minute sessions per week. The first half of each session was devoted to nutrition and the second half was devoted to physical activity. In the nutrition lessons, “go and grow” foods (healthful) were contrasted with "slow" foods (unhealthful). In the parent component, parents attended one 30-minute nutrition class and two 30-minute aerobics classes each week.

Several changes were made to the intervention following the pilot study. The distinction between "go and grow foods" and "slow foods" was difficult for preschool children to understand. For the revised intervention, researchers created puppets to represent the food groups (Ms. Grain, Ms. Fruit, Mr. Vegetable, Mr. Fat, Ms. Sugar) in nutrition lessons. They also recognized the need for greater emphasis on the importance of physical activity. In the pilot parent component, nutrition lessons were attended poorly. Based on focus group recommendations that followed the pilot study, weekly newsletters and homework assignments replaced the in-person nutrition lessons in the revised parent intervention component.

A revised intervention was evaluated in two randomized controlled trials, one conducted with primarily African American families (Fitzgibbon et al., 2005) and one conducted with primarily Latino families (Fitzgibbon et al., 2006). The intervention was provided for 14 weeks. Children received 20 minutes of nutrition instruction (utilizing puppets) and 20 minutes of physical activity three times each week. Parents received weekly newsletters that were coordinated with the contents of their children’s instruction. In addition, parents could participate in 30-minute aerobic classes twice each week at their children’s Head Start facilities.

The authors summarized the special considerations they made in developing the intervention for African-American and Latino preschoolers and their parents: (a) offer the sessions in locations that are safe and

that can be reached easily, (b) establish personal relationships between participants and intervention staff, (c) reduce barriers (e.g., negative attitudes, competing responsibilities) that interfere with improvements in nutrition and exercise, (d) provide behavioral demonstrations of strategies for lifestyle change, and (e) make intervention accessible for participants at all levels of literacy.

The randomized controlled trials found significant intervention effects in predominantly African American Head Start centers (Fitzgibbon et al., 2005), but not in predominantly Latino centers (Fitzgibbon et al., 2006). In African-American centers, children in the intervention condition showed smaller BMI increases than children in the control condition one year and two years after the end of the intervention, and less saturated fat consumption at one-year follow-up. In contrast, there were no significant intervention effects for children and parents who attended primarily Latino Head Start centers. The researchers noted that children in the Latino centers had higher BMI levels at baseline than children in the African-American centers. They speculated that relatively high initial levels of overweight and obesity might have made it difficult for children in the Latino centers to modify their eating and weight. Overall, they recognized that additional changes were needed to assist unacculturated Latino parents in making changes to diet and physical activity. On a positive note, retention of participants was quite high and did not differ between intervention and control groups. The retention rates were 97%, 86%, and 85%, at post-test, Year 1, and Year 2 follow-ups, respectively.

*Pathways*. Pathways was a multifaceted, multisite obesity prevention program for American Indian schoolchildren, which started in grade three and continued through grade five. It was developed and evaluated in two three-year phases. The first three-year phase was used to systematically develop culturally appropriate intervention and assessment methods. An entire supplemental issue of the *American Journal of Clinical Nutrition* (1999) was devoted to detailed descriptions of the formative research (e.g., Davis et al., 1999; Gittelsohn et al., 1999; Teufel et al., 1999). An additional three years was required to conduct a randomized controlled trial to assess intervention effects on body fat, dietary fat intake, physical activity, knowledge of the diet and physical activity curriculum, and self-efficacy for physical activity and healthful food choices (Caballero et al., 2003). Articles in a special supplemental issue of *Preventive Medicine* (2003) reported

detailed results of the massive project.

The intervention consisted of four components: a classroom curriculum, school food services, physical activity during and after school, and family support and involvement. Formative research groups were created to develop each of the components. Unusually thorough input from many constituencies was obtained throughout intervention development. Each section of the intervention was reviewed by" tribal representatives, American Indian members of the Pathways study, intervention committee members, and the Pathways steering committee, composed of the principal investigators from all five participating institutions, the National Heart, Lung, and Blood Institute project scientist, and two American Indian representatives" (Davis et al., 1999; p. S798).

They instituted an information gathering phase when information relevant for understanding the communities, risk factors, and potential intervention strategies were obtained from school staff members, students and their caregivers in detailed interviews, focus groups, and direct observation. That information informed a culturally adapted intervention that incorporated American Indian concepts and traditions pertinent to nutrition and physical activity. For example, the classroom component integrated "stories, games, music, artwork, foods, family activities, videos, and events contributed by members of the seven tribes" (Davis et al., 2003, p. S26). An initial version of the intervention was pilot tested in six American Indian communities. Observers made notes of the intervention's implementation and researchers interviewed intervention staff members (e.g., teachers, food service workers) to ascertain strengths, weaknesses, and recommendations for changes. A revised intervention was evaluated in a randomized controlled trial of 1704 children in 41 schools in 7 American Indian communities in Arizona, New Mexico, and South Dakota (Caballero et al., 2003). The intervention began in third grade and extended to fifth grade. Retention from baseline to follow-up assessment was 83% in both the intervention and control conditions.

Despite rigorous cultural adaptation methods, the comprehensive intervention was not more successful than the control condition in reducing body fat, the primary outcome measure. Motion sensor measurement of physical activity also did not show significant intervention effects. Significant intervention effects were found

for self-reported and observed dietary fat intake, and self-reported physical activity. In discussing their results, the researchers noted that several other comprehensive interventions used diet and physical activity outcomes, but did not treat children's body weight and adiposity as endpoints (e.g., Luepker et al., 1996; Simons-Morton, Parcel, Baranowski, Forthofer, O'Hara, 1991).

Stanford GEMS, Hip-Hop to Health Jr., and Pathways were exemplary in their illustration of cultural adaptation procedures. As noted previously, there have been several other studies on the nutrition and/or physical activity of ethnocultural group children that did not provide substantive descriptions of cultural adaptation considerations and procedures. For instance, *Bienestar* was a large-scale study that involved 13 intervention elementary schools and 14 control schools in which 713 fourth grade students participated in the intervention and 706 students participated in the control condition (Treviño, Pugh, Hernandez, Menchaca, Ramirez, & Mendoza,1998; Treviño, Yin, Hernandez, Hale, Garcia, & Mobley, 2004; Treviño, Hernandez, Yin, Garcia, & Hernandez, 2005). Eighty percent of the participants were of Mexican heritage (Trevino et al., 2004). Its comprehensive intervention involved four social systems: parents, school classrooms, school cafeterias, and after-school programs, much like Pathways' comprehensive intervention. However, unlike Pathways, it is not certain if formative research was funded to conduct systematically a cultural adaptation of the intervention. The other studies of nutrition and/or physical activity interventions that were directed at subcultural group children (Crespo et al., 2012; Davis et al., 2012; de Heer et al., 2011; Kleges et al., 2010; Nadar et al., 1999; Resnicow et al., 2005; Wilson et al., 2011) might have included cultural adaptation phases, but detailed descriptions of adaptation methods did not appear in the literature we were able to locate and review. Many of these studies showed significant intervention effects on physical activity and healthful nutrition measures (Crespo et al., 2012; de Heer et al., 2011; Nadar et al., 1999; Trevino et al., 2004).

*Discussion*

The three exemplary studies we highlighted—Stanford GEMS, Hip Hop to Health Jr., and Pathways--were pioneers in using intervention development procedures that we now recognize as high quality features of cultural adaptation stages: information gathering with literature searches to document health disparities and to

identify subcultural risk and protective factors that should be considered in intervention development, formative studies that include focus groups as well as quantitative surveys, pilot studies to test the feasibility and effects of a draft intervention, satisfaction surveys to gauge the appeal of recruitment and intervention procedures, and formal randomized controlled trials of adapted interventions. The exemplary projects benefitted from funded, multi-year developmental stages that permitted thorough cultural adaptation efforts.

Despite those systematic efforts, culturally adapted interventions were not always successful in changing primary endpoints of BMI or adiposity (see Fitzgibbon et al., 2005 for an exception). Those outcomes are notoriously resistant to change, particularly in primary prevention interventions with non-clinical populations (Caballero et al., 2003). In a meta-analysis of school-based obesity interventions in the US and UK, Kanekar and Sharma (2009) found that the interventions were not successful in reducing BMI. Similarly, a review of 20 after-school obesity prevention interventions concluded that the results were generally unfavorable when obesity-related variables were the outcomes (Branscum & Sharma, 2012). Nevertheless, culturally-adapted interventions were often successful in improving secondary (yet important) outcomes such as dietary fat consumption, fiber consumption, and physical activity. Childhood obesity and its subcultural group disparities will persist for some time. They have such critical importance for the nation's health that research must continue to seek solutions that will reach children in all segments of communities.

One of the lessons from the Stanford GEMS project (Robinson et al, 2010) is that well-conceived interventions must include effective methods for overcoming barriers to participation in intervention components. The GEMS' goal for attendance at after-school dance classes in community centers was three of five school days, but by the end of the intervention, participants averaged only one of five school days. Of 24 in-home TV reduction visits, participating families received an average of 12.4 lessons over a 2-year period. In-school interventions avoid the participation slippage that occurs when children are required to travel to intervention venues or when family participation is required. However, true lifestyle change occurs during school hours and after school hours when the family has a key role in influencing food consumption and

physical activity. Cultural adaptation efforts should continue to address both engagement methods and intervention content (Barrera & Castro, 2006).

## General Discussion

The cultural adaptation of interventions for youth is a maturing and still vibrant topic in developmental psychopathology. There is a persistent need for interventions to reach and engage ethnic/racial minority youth just as there are persistent disparities in youth problem behavior and health risk. The current chapter has highlighted the most influential work on cultural adaptations that has been done to date, leading to several conclusions about what we have learned, limitations to our knowledge, and ways we might advance our understanding in the near future. Basic conclusions and future research directions are integrated in the following sections.

*Adaptation Effectiveness.*

In this chapter, as well as other reviews (Benish, Quintana, & Wampold, 2011; Griner & Smith, 2006; Huey & Polo, 2008; Ortiz & Del Vecchio, 2013; Smith, Domenech Rodriguez, & Bernal, 2011), the emphasis was on evaluating intervention efficacy. Are cultural adaptations effective? That question should be qualified by another question that has been raised repeatedly: compared to what? Not only is there interest in the question of cultural adaptations' efficacy relative to benign control conditions, but also relative to unadapted, recognized interventions such as the original versions of interventions. For some, demonstrating the value added by modifications to original EBIs is of critical importance (Ortiz & Del Viccio, 2013). Yet calls for research that compares the effectiveness of culturally adapted EBIs to their original versions are qualified by skepticism: (a) it is hard to imagine providing unaltered original EBIs to ethnocultural groups without making basic adaptations such as language translations or delivery by bilingual staff, and (b) it would be costly to launch an adequately powered study comparing an original EBI, a culturally adapted intervention, and a control condition, particularly if differences between the original and adaptation are expected to be modest (Barrera et al., 2013). Lau et al. (in press) questioned the value of original EBI-adaptation comparisons, also citing the substantial statistical power required for such comparisons, the need for at least some cultural adaptations to effectively

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engage ethnocultural participants into comparative research, and potential ethical concerns about withholding culturally sensitive care from participants who receive unadapted EBIs. Given the onerousness, methodological challenges, and ethical quandaries of conducting adequately powered relative efficacy trials of adapted EBIs (Cardemil et al., 2010), Rodriguez and Bernal (2012) note that researchers are subject to a catch-22 when expected to demonstrate relative efficacy prior to pursuing questions about mediators and moderators of change within the clinical trials tradition. From our qualitative review of culturally adapted interventions for internalizing disorders, externalizing and high risk youth behaviors, health, and parent training, there was good evidence of absolute intervention effects when compared to control conditions. However, substantial heterogeneity was observed in the efficacy of culturally-adapted EBIs across the diverse outcomes that have been studied. Though some outcomes (e.g., obesity) have been notoriously intractable to remediation or prevention even for majority group youth, it was still disappointing when well-conceived, systematic, and community-informed adaptation efforts were unsuccessful in achieving goals.

Our analysis of the literature was qualitative and not intended to be exhaustive or capable of supplying quantitative answers to questions of relative efficacy. Fortunately, four meta-analyses of culturally-adapted interventions (Benish, Quintana, & Wampold, 2011; Griner & Smith, 2006; Huey & Polo, 2008; Smith, Domenech Rodriguez, & Bernal, 2011) and a formal review of parent training interventions (Ortiz & Del Vecchio, 2013) have been published. There was some overlap in the studies that were analyzed in these reviews, but the reviews differed in their inclusion and exclusion criteria. Using relatively broad inclusion criteria, Griner and Smith (2006) evaluated 76 published and unpublished studies that made at least some reference to adaptation because of culture, ethnicity or race. Only studies of EBIs with children were reviewed by Huey and Polo (2008). Psychotherapy studies conducted with children or adults (excluding preventive interventions) were the foci of the meta-analysis by Benish et al. (2011). That review also contrasted effect sizes that were obtained when culturally adapted interventions were compared to some other treatments or benign control conditions, and when cultural adaptations were compared to just other bona fide psychotherapies. Bona fide psychotherapies were defined by "a relationship with a therapist tailored to the client and is evidenced by

the inclusion of two or more of the following conditions: use of an established psychotherapy approach, incorporation of the use of psychological processes, use of a manual or training as a guide for therapists, and/or identification of the active ingredients of the therapy" (Benish et al., 2011, p. 280). Smith et al. (2011) conducted a meta-analysis of studies concerned with mental health outcomes. That review excluded research on health, substance abuse and educational outcomes. Ortiz and Del Viccho's review dealt exclusively with parent training interventions. Because of differences in scope and reference groups used in comparisons, it is understandable that there were differences in conclusions regarding adaptation efficacy.

The most basic findings from these reviews can be summarized as follows:

1. Overall, culturally-adapted interventions were moderately effective (average effect size was d = .45), but were less effective for children than they were for adults (Griner & Smith, 2006).
2. For interventions conducted with ethnic minority children, culturally-adapted treatments and unadapted treatments showed comparable effect sizes (Huey & Polo, 2008).
3. On mental health outcomes, culturally-adapted therapies showed a moderate effect size (average effect size d = .46) (Smith et al., 2011). Similar to the age effect found by Griner and Smith (2006), participants older than 35 appeared to benefit more from adapted therapies compared with benefits for children, adolescents and young adults. The number of cultural adaptations made in interventions was positively correlated (.28) with intervention efficacy.
4. Analyses comparing culturally-adapted psychotherapies to other bona fide (unadapted) psychotherapies showed an average effect size of .32. In contrast to other reviews (Griner & Smith, 2006; Smith et al., 2011), the average effect size was comparable for adults and children (Benish et al., 2011).
5. In studies of parent training, the reviewers concluded that "treatment outcomes from adapted PT interventions are not superior to those unadapted interventions typically achieve" (Ortiz & Del Vecchio, 2013, p. 452).

In general, cultural adaptations show moderate effect sizes when compared with control conditions, but there was some evidence that effects might be attenuated for research conducted with children and adolescents. Age might moderate effects if cultural adaptations are most beneficial for the least acculturated participants who are often older adults rather than children (Griner & Smith, 2006). It was notable, however, that no age effects were observed in what was arguably the most rigorous comparison, that is, when adapted interventions were found to be moderately more effective than unadapted bona fide therapies (Benish et al., 2011).

Two additional observations provide important context for interpreting these findings. First, there was considerable heterogeneity in treatment effects, which calls for caution in making broad generalizations about efficacy. Second, some analyses were based on a small number of studies. We agree with Smith et al.'s (2011) conclusion that because the full assessment of efficacy "depends on the consistent replication of supportive findings, the single greatest need of the research on culturally adapted interventions is for more evidence to accumulate" (p. 171). They noted that a consistent rate of about two studies each year was produced since 1981 that met the inclusion criteria for their meta-analytic review. Even Ortiz and Del Veccio (2013) who questioned the evidence supporting the value of cultural adaptations acknowledged that ethnic minority children and families (particularly Hispanics) were underrepresented in controlled, peer-reviewed studies of parent-training.

*Cultural Adaptation Process*

Researchers and program developers turn to the literature to inform decisions about pursuing cultural adaptations and to learn strategies for conducting them. That literature shows large variability in the thoroughness of adaptation descriptions--descriptions ranging from cryptic accounts of seemingly modest tailoring efforts to extensive efforts that required several years to craft interventions that subsequently were evaluated in controlled trials. Multi-year projects to culturally-adapt children's health interventions (e.g., Robinson et al., 2003) were innovative during their time, implementing sequential steps that are now reflected in the stage models listed in Table 1 for developing culturally-adapted versions of EBIs. We have learned that when EBIs are identified for modifications, there are generally accepted procedures for conducting them. An alternative approach to tailoring EBIs was exemplified with approaches that began with basic developmental

psychopathology research to identify the risk factors that appear to contribute to psychopathology or youth problem behaviors (e.g., Murry et al., 2007; Gonzales et al., 2007). In the future, greater structure in the procedures used to culturally adapt interventions might decrease the heterogeneity in effects that were found in our review and recent meta-analyses. Many of the studies included in reviews were conducted prior to published conceptual models of adaptation procedures.

*Reach and Engagement.*

Lau (2006) made the distinction between interventions' ability to change outcomes such as disability and distress, and interventions' ability to draw participants into interventions, engage them in intervention activities, and retain them throughout treatment and maintenance phases. As shown in this review, the effects of cultural adaptations on reach and engagement have not been studied and reported as systematically as intervention efficacy, yet there are examples of how tailoring can improve engagement. Kumpfer and Alvarado (1995) found that original versions of Strengthening Families had slightly better outcomes than adapted versions. However, recruitment and retention of participants receiving culturally adapted versions were 41% better, instantiating the potential of cultural adaptations to substantially improve involvement in interventions for ethnic minority families. Unfortunately, there are countervailing examples of well-conceived efforts to boost the intervention engagement of ethnic minority youth and parents that were not successful (e.g., McCabe et al., 2012; Robinson et al., 2010). The exigencies of living in stressful, low resource environments will continue to present barriers to ethnic minority participants in intervention research. Developing and evaluating methods for improving reach, engagement, and sustained participation in interventions is among the most important topics for future research.

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*Understanding Cultural Components Added to Culturally-Adapted Interventions*

Several reviewers were critical of cultural adaptations that lacked theoretical frameworks for specifying why cultural concepts could be added to interventions to improve reach, engagement or efficacy (Castro et al., 2010; Mier et al., 2010; Ortiz & Del Vecchio, 2013; Wilson & Miller, 2003). Little progress has been made on this front. When cultural adaptations are explicitly designed to influence a cultural construct that could operate

as a mediator of change (e.g., enhancing cultural identity), studies could inform culturally relevant theory by evaluating whether the intervention succeeded in changing that construct and whether that change affected the outcome (e.g., Murry et al., 2007). Toward this important aim, the designers of culturally relevant interventions should be explicit about the hypothesized roles of specific cultural variables and should design evaluation research that tests theoretical assertions. This approach was illustrated in the study by Lau et al. (2011) that included special therapy procedures to reduce negative parenting strategies of immigrant Chinese parents. Problematic parenting practices identified in preliminary research (Lau, 2010) were improved in a culturally adapted version of an EBI, and those improvements mediated the intervention's beneficial effects on children's externalizing problems (Lau et al., 2011). Murry et al. (2007) provided a mediation analysis of the Strong African American Families Program that could serve as another model for future research on the cultural mechanisms that mediate the effects of cultural adaptations.

*Accommodating Within-Group Diversity*

A major impetus for conducting cultural adaptations is to address special needs and characteristics of ethnocultural groups that were not addressed adequately by the original versions of the interventions. However, ethnocultural groups are not homogeneous. Within-group diversity is derived from differences in acculturation, nativity, language use, immigration experiences, skin color, religion, and a host of other factors that might be related to adversity exposure and responsiveness to interventions. For example, Gonzales and colleagues reported differential program effects on the basis of family linguistic acculturation (Gonzales et al., 2011), yet program benefits were nonetheless shown over time for both low and high acculturated families (Jensen et al., in press). A complexity in designing culturally adapted interventions is to accommodate within-group diversity. It is not feasible to create fixed interventions that are relevant and effective for narrow segments of an ethnocultural group. Instead, there is promise in creating assessment and intervention procedures that guide individualized tailoring within the context of a standardized intervention. Standardized decision rules for varying the content and dosage of treatment, depending on the characteristics of participants is the essence of adaptive intervention designs (Collins et al., 2004). In the same spirit of adaptive interventions, Piña et al.

(2009) described a culturally prescriptive intervention framework that guides the tailoring of childhood anxiety interventions depending on the cultural features of the individual child or family. Rather than applying a fixed set of adaptation activities, their treatment manual describes a uniform set of *guidelines* to assist interventionists in determining how to attend to language and other cultural considerations (e.g., familism) in tailoring the intervention. McCabe et al.'s (2005) use of an initial assessment of participants' attitudes and preferences to guide the individualized application of treatment elements was innovative and merits additional research and development as a strategy for addressing within-group diversity.

*International Application and Dissemination*

It could be said that the strongest test of the need for cultural adaptation may come from international dissemination of interventions to non-Western and developing nations. The need for linguistic adaptations and other cultural considerations are likely to be magnified in international applications with non-Western developing countries in Africa, Asia, and the Middle East. Earlier in the chapter we noted the emerging trend for international dissemination of EBI, including several parent training interventions that have been adapted for international dissemination. The same has been true of programs to prevent HIV/AIDS (Wingood & DiClemente, 2008). Undoubtedly, the best examples of international adaptations were concerned with the Strengthening Families Program (SFP), a family skills intervention for the prevention of substance abuse (Kumpfer et al., 2008). SFP was initially developed and tested in the United States, and subsequently evaluated in non-RCT studies in about 17 countries and RCTs in nine countries (United States, Canada, Australia, UK, Sweden, Netherlands, Spain, Italy, and Thailand). Kumpfer and her colleagues (2008, 2012) detailed 10 steps shown in Table 1 that should be followed in creating international adaptations of SFP and perhaps other evidence-based programs. In Kumpfer et al. (2008), the steps were illustrated with examples from their extensive experience in many countries. That informative paper is filled with general guidance and best practices for those who are planning international adaptations of EBIs.

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International adaptation of interventions is a prime topic for future research and practice. However, in their recent review of PT interventions that have been implemented and evaluated internationally, Knerr,

Gardner and Cluver (2012) noted that the four PT interventions with the strongest evidence base have been replicated in RCTs in many developed Western countries, but these major programs have not been implemented in low-income or developing countries. On the contrary, many PT interventions transported to these contexts lacked strong efficacy data in the countries in which they originated. Thus, it is unclear whether international efforts to deploy PT or other types of interventions will be informed by domestic efforts in cultural adaptation. This highlights a variety of issues for implementation science and knowledge transfer.

It is important to note that although some EBIs are gaining traction in usual care settings, and the recent federal emphasis on prevention services as outlined in the Affordable Care Act (U.S. Department of Health and Human Services, 2010) has potential to accelerate this pattern, there is little evidence that their culturally adapted counterparts have been adopted outside the original efficacy trials and the occasional dissemination trials (Jemmot et al., 2010). Zayas et al. (2012) argue that one of the shortcomings in the cultural adaptation literature is the inattention to the multiple service contexts that influence the implementation of interventions, and the critical features that enhance the uptake of interventions and services. Larger contextual factors, in addition to sociocultural factors, must be considered in the adaptation process such as the different service sectors (e.g., child welfare, education, juvenile justice, medical) and the organizational contexts (e.g., agencies, hospitals, clinics, health care) in which interventions are implemented, and the types of modifications required at different levels of the service delivery and implementation chain. It is possible that, in each context, cultural adaptations must be differently conceptualized and operationalized (Schoenwald et al., 2008). An integrated approach to cultural adaptation, which includes the careful consideration of both the service contexts as well as the cultural diversity represented among the families and children within these contexts, may be necessary (Wolchik et al., 2009; Zayas et al., 2012). As the field of child, youth, and family prevention services pushes forward to solve the problem that EBIs have not been adopted broadly and are not accessible, scalable, replicable, and sustainable, intervention adaptation will be a major thrust in the next generation of efforts to design and diffuse EBIs (Rotheram-Borus, Swendeman & Chorpita, 2012). The role that culture and the cultural adaptation processes described in this review will play in this agenda has yet to be determined.

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Table 1: MODELS OF CULTURAL ADAPTATION BY DATE OF FIRST PUBLICATION

| | | **Content of Adaptation** | **Steps/ Phases of Adaptation** | **Stage of Research** | **Cultural Groups Targeted*** | **Generic vs. Specific Application** |
|---|---|---|---|---|---|---|
| Ecological Validity Model (EVM) | Bernal et al. (1995) | language, persons, metaphors, content, concepts, goals, methods, context | None specified | General use in research and practice contexts | Broadly applicable (domestic, internationa) | Generic |
| Cultural Sensitivity Model | Resnicow et al. (1999) (2000) | Distinguished 2 adaptation types:<br>- Surface structure<br>- Deep structure | None specified. Recommended use of both qualitative and quantitative data sources. | Broadly focused on preparing for implementation | Broadly applicable (domestic) | Substance use and public health programs |
| Cultural Adaptation Process Model | Domenech-Rodríguez & Wieling (2004) | Emphasized EVM dimensions (Bernal et al., 1995) | 1. Set the stage<br>2. Initial adaptation<br>3. Adaptation iterations | General use in research and practice contexts | Broadly applicable (domestic) | Generic |
| Selective and Directed Treatment Adaptation Framework | Lau (2006) | Identified 2 goals:<br>- Enhance engagement<br>- Enhance program effects | None specified. Decisions about whether to adapt and what to adapt should be guided by evidence | Not specified | Broadly applicable (domestic) | Generic |
| Heuristic Framework for the Cultural Adaptation of Interventions | Barrera & Castro (2006); Castro et al. (2010) | Adaptations address:<br>- Ineffective engagement<br>- Unique risk or resilience factors<br>- Unique symptoms<br>- Lack of efficacy | 1. Gather information<br>2. Preliminary adaptations<br>3. Pilot test adaptations<br>4. Refine adaptations | Adaptation of EBI for efficacy trial with distinct group | Broadly applicable (domestic) | Generic |
| Culturally Specific Prevention Model | Whitbeck (2006) | Culture-specific risk and protective factors must be considered. Target group knowledge equally important as scientific evidence. | 1. Review existing evidence<br>2. Target group reviews existing evidence<br>3. Cultural translation of risk and protective factors<br>4. Identify unique risk and protective factors<br>5. Conduct efficacy trial | Model starts with local community defining the problem and extends to efficacy trial | American Indian Communities | Generic |
| Adaptation for International Transport of SFP | Kumpfer et al. (2008) | Fidelity requires cultural adaptation but not modification of program components, timings, or overall structure | 1. Needs assessment<br>2. Select EBI to adapt<br>3. Implement original EBI with minor modifications<br>4. Select and train staff<br>5. Implement with fidelity<br>6. Adapt continuously through | Dissemination | International | Strengthening Families Program |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | pilot tests<br>7. Revise to enhance engagement<br>8. Conduct evaluation<br>9. Disseminate results | | | |
| International Implementation of MST | Schoenwald et al (2008) | Adaptations relevant to: implementation processes, clinical staff, training materials and procedures, clinical service delivery | 1. Pre-implementation (assess needs and stakeholders; understand legal and social standards; determine staffing and consultants)<br>2. Implementation (translate and "tweak" intervention; adapt training protocols)<br>3. Service Delivery (consider service duration; time and caseload standards; on-call systems; cultural advisors) | Dissemination | International | Multisystemic Therapy |
| ADAPT-ITT | Wingood & DiClemente (2008); Latham et al. (2010) | Adapt program to maintain fidelity to core components | 1. Assess needs of target group and agency capacity to implement<br>2. Decide on EBI<br>3. Target group input<br>4. Adapt program<br>5. Topical experts review first draft<br>6. Integrate feedback in second draft<br>7. Train implementation staff<br>8. Pilot test, revise, evaluate | Dissemination | Broadly applicable (domestic, internationa) | HIV interventions |
| Planned Intervention Adaptation Protocol (PIA) | Ferrer-Wreder et al (2011) | Use formative research to evaluate relevance of risk and protective processes and the need for surface and deep adaptations | 1. Formative research<br>2. Effectiveness trial<br>3. Dissemination | Effectiveness and dissemination | International | Generic |

* Indicates cultural groups targeted and whether the model has been applied domestically, internationally, or both.