Available online at www.sciencedirect.com

ScienceDirect

Behavior Therapy 47 (2016) 993–1014

Behavior Therapy

www.elsevier.com/locate/bt

A Meta-Analysis of Cultural Adaptations of Psychological Interventions

Gordon C. Nagayama Hall
Alicia Yee Ibaraki
Ellen R. Huang
University of Oregon

C. Nathan Marti
Eric Stice
Oregon Research Institute

Forehand and Kotchick (1996) issued a wake-up call to the field to develop culturally responsive interventions. Since that time, 11 meta-analyses on culturally adapted interventions have been conducted. To reconcile the differences of the previous meta-analyses, a new meta-analysis was conducted that included 13,998 participants, 95% of whom were non–European American, in 78 studies evaluating culturally adapted interventions with psychopathology outcomes. Using a random effects multilevel regression model, the overall effect size (g = 0.67, p < .001) favored the effectiveness of culturally adapted interventions over other conditions (no intervention, other interventions). There was a medium effect size favoring the effectiveness of culturally adapted interventions over unadapted versions of the same intervention (g = .52). The overall effect size was moderated by whether the study involved treatment (g = .76) vs. prevention (g = .25, p = .03) and whether the study involved specific measures of mood or anxiety symptoms (g = .76) vs. general measures of psychopathology (g = .48, p = .02). Culturally adapted interventions had 4.68 times greater odds than other conditions to produce remission from psychopathology (p < .001) in 16 studies that reported remission. There were greater effects in no intervention control designs (marginal odds ratio = 9.80) than in manualized intervention (marginal odds ratio = 3.47, p = .03) or another active, nonmanualized intervention (marginal odds ratio = 3.38, p = .04) comparison designs in remission studies. Research has yet to adequately investigate whether culturally adapted or unadapted interventions impact culture-specific psychopathology. These findings indicate a continuing need for rigor in the conceptualization and measurement of culture-specific psychopathology and in developing culturally responsive interventions.

Keywords: cultural adaptations; meta-analysis; ethnic minorities; psychotherapy; psychopathology

TWENTY YEARS AGO, Forehand and Kotchick (1996), in a landmark *Behavior Therapy* article, called for parent training to become more culturally responsive. They contended that all parenting occurs within a cultural context and that associations between parent behaviors and child behaviors observed in European American contexts do not necessarily apply in other cultural contexts. Forehand and Kotchick recommended a three-step process of identifying cultural contexts of behaviors, measuring cultural constructs, and then considering how such knowledge can guide research. Cultural adaptation is warranted when there are community-specific cultural contexts of risk and resilience that influence disorders (Forehand & Kotchick, 1996; Lau, 2006).

We thank Nasina Ellis, Eileen Guo, Chi-Wing Ng, Andrea Schnee, Valerie Tsai for their coding on this project and Nolan Zane for his feedback.

Address correspondence to Gordon C. Nagayama Hall, Ph.D., Department of Psychology, 1227 University of Oregon, Eugene, OR 97403; e-mail: gnhall@uoregon.edu.

Concomitantly, Bernal and colleagues (1995) proposed a conceptual model to enhance the ecological validity of psychological interventions via cultural adaptations. Eight dimensions along which interventions could be culturally adapted were identified: language, people, metaphors, content, concepts, goals, methods, and context. This conceptual model was successfully implemented to culturally adapt evidence-based interventions for depression to enhance their effectiveness with Puerto Rican adolescents (Rossello & Bernal, 1999; Rossello, Bernal, & Rivera-Medina, 2008). Bernal and colleagues' initial efforts spawned the development and evaluation of multiple cultural adaptation models (Bernal & Rodriguez, 2012).

The cultural adaptation of an existing evidence-based intervention is "top-down," in which an intervention developed for one group is modified for application to other groups. However, this is not the only approach to developing culturally responsive interventions. Critics of this approach contend that top-down approaches to psychological interventions do not comprehensively address important components of specific cultural contexts of psychopathology, such as cultural identity or group-based discrimination (Hwang, 2006). Such critics might advocate "bottom-up" approaches that are developed within a particular cultural context and address culture-specific concerns, rather than being imported. Unlike the top-down approach, the reference group is not another group on which an intervention was previously developed, but the particular cultural group being studied (Hall, Yip, & Zárate, 2016).

Cultural adaptations are not without their drawbacks, however. Although there is evidence that culturally adapted interventions are superior to unadapted interventions when used with diverse ethnic groups (Benish et al., 2011; Cabral & Smith, 2011; Chowdhary et al., 2014; Griner & Smith, 2006; Hodge et al., 2010; Hodge et al., 2012; Jackson, Hodge, & Vaughn, 2010; Smith, Rodrıguez, & Bernal, 2011; Smith & Trimble, 2016; van Loon et al., 2013), there is not evidence that nonadapted interventions are ineffective with diverse ethnic groups. It has been contended that the inclusion of members of diverse ethnic groups in clinical trials is sufficient evidence that the evidence-based interventions are as effective, if not more effective, for these persons than they are for European Americans (Ortiz & Del Vecchio, 2013). However, simply including diverse ethnic groups in clinical trials without testing possible group differences in response to an intervention is inadequate. For instance, a selective obesity prevention program was found to produce significantly greater reductions in body mass index versus a control condition for the full sample, but moderation analyses revealed that the prevention program only produced significant weight loss effects for Latina Americans; it was ineffective for European American and African American participants (Spieker, Herbozo, Cheng, & Stice, 2016).

A related argument is that if generic interventions are sufficiently effective among people of color, then adapting interventions to boost cultural fit for individual groups comes at an unnecessary cost. Adapted interventions risk losing their connection to the evidence base that was originally established for the intervention (Castro et al., 2004). Modifications can decrease intervention fidelity and hence intervention effectiveness (Elliott & Mihalic, 2004). Balancing fit with fidelity is a key challenge for cultural adaptation development. The most useful intervention manuals should be grounded empirically, and still allow for flexibility to fit the client's context (Kendall & Beidas, 2007). Over the past 20 years an empirical base has accumulated to allow the evaluation of the benefits of cultural adaptations relative to unadapted interventions.

Eleven meta-analyses have examined the effectiveness of culturally adapted vs. unadapted psychological interventions on clinical outcomes (Benish et al., 2011; Cabral & Smith, 2011; Chowdhary et al., 2014; Griner & Smith, 2006; Hodge et al., 2010; Hodge et al., 2012; Huey & Polo, 2008; Jackson et al., 2010; Smith et al., 2011; Smith & Trimble, 2016; van Loon et al., 2013). Effect sizes in these studies vary widely from near zero (Huey & Polo, 2008) to large effect sizes favoring culturally adapted psychological interventions (Chowdhary et al., 2014; van Loon et al., 2013). Effect sizes from previous meta-analyses of culturally adapted interventions have been found to be heterogeneous and moderated by variables including client age, client/therapist ethnic match, language of intervention (i.e., English vs. non- English), client acculturation, psychopathology outcome, and study design (e.g., culturally adapted intervention vs. no intervention, culturally adapted intervention vs. another intervention) but support for these moderators has been inconsistent, because of the different sets of studies sampled and because the effect sizes of some of the moderators have been small.

In addition to inconsistent findings, study design limitations of previous meta-analyses include consideration of post-intervention psychopathology without controlling for pre-intervention psychopathology and the use of a single effect size per study without considering all study psychopathology outcomes or aggregating study effect sizes which may attenuate outlier effects. Another design limitation is that previous meta-analyses have not isolated the effects of cultural adaptation by comparing culturally adapted interventions with unadapted versions of