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Effects of Mental Health Interventions With Asian Americans: A Review and Meta-Analysis

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Objective: Evidence demonstrating treatment efficacy for ethnic minorities has grown in recent years; however, Asian Americans (i.e., of East Asian or Southeast Asian heritage) are mostly excluded from recent reviews. In this review we (a) synthesize the literature on mental health treatment effects for Asian Americans and (b) evaluate support for competing theoretical perspectives on cultural tailoring. ***Method:*** A literature search supplemented with other search strategies identified 21 randomized trials of mental health interventions for Asian Americans (n = 6,377 total participants). The meta-analysis was based on random-effects models. ***Results:*** Overall, results show that posttreatment effects were relatively large and significant (d = .75, SE = .14, p = .000). However, there was substantial heterogeneity across studies (ES range = −.04 to 2.61), with moderator analyses indicating that effects differed significantly by target problem, diagnostic status, and comparison group. Also, *specificity* of cultural tailoring was significantly associated with treatment outcomes, with treatments tailored specifically for Asian subgroups (e.g., Chinese Americans) showing the largest effects (d = 1.10), and those with no cultural tailoring or non-Asian tailoring (d = .25) showing the smallest effects. ***Conclusions:*** Findings suggest that mental health treatments are efficacious for Asian Americans and that cultural tailoring can enhance treatment outcomes. In general, these findings lend support to the cultural responsiveness hypothesis, although caveats are noted. Implications for psychotherapy research with Asian Americans are discussed, as well as methodological and conceptual challenges.

What is the public health significance of this article?
This meta-analysis suggests that existing mental health treatments are efficacious for Asian Americans and that culturally tailored interventions can enhance effects. Such adaptations appear most beneficial when tailored for specific cultural contexts.

Keywords: Asian Americans, cultural tailoring, ethnic minority, meta-analysis, therapy

Over the past two decades, significant progress has been made in identifying and disseminating evidence-based therapies (Chambless & Ollendick, 2001; McHugh & Barlow, 2010; Weisz & Kazdin, 2010). Much of this work has been motivated by the belief that evidence-based treatments (EBTs) can provide greater uniformity of care and, therefore, lead to improved patient outcomes (APA Presidential Task Force on Evidence-Based Practice, 2006; Chambless & Ollendick, 2001; Kazdin, 2008). Although these arguments are compelling, one critique is that the use of such "generic" treatments may not adequately address the needs of culturally diverse groups (Bernal, Jiménez-Chafey, & Domenech Rodríguez, 2009; Bernal & Scharró-del-Río, 2001). Such concerns may be justified given (a) the traditional underrepresentation of non-Whites in clinical trials (Chambless et al., 1996; Task Force on Promotion and Dissemination of Psychological Procedures, 1995; U.S. Department of Health & Human Services, 2001), and (b) the absence of cultural considerations in many popular treatment protocols (e.g., Beck, Rush, Shaw, & Emery, 1979; Foa, Hembree, & Rothbaum, 2007; Linehan, 1993).

This question about the validity of EBTs for ethnic minorities also reflects a theoretical divide in the literature (Huey, Tilley, Jones, & Smith, 2014; Tharp, 1991). *Cultural responsiveness* proponents argue that treatments are more effective when consistent with the client's cultural norms, values, and expectations (Bernal et al., 2009; Sue, Fujino, Hu, Takeuchi, & Zane, 1991). Thus, clients may not benefit as much when EBTs are nonresponsive to culture-specific needs. In contrast, the *cultural invariance* perspective posits that conventional EBTs will show cross-cultural equivalence because (a) mental health problems share similar psychosocial features across different ethnic groups, and (b) principles of therapeutic change are essentially universal (Hayes & Toarmino, 1995; O'Donohue & Benuto, 2010). Until recently, the availability of systematic evidence addressing these questions has been limited.

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Emerging research finds robust treatment effects for ethnic minorities with a broad array of mental health problems (Carter, Mitchell, & Sbrocco, 2012; Huey & Polo, 2008; Huey et al., 2014; Miranda et al., 2005). For example, Huey and Polo (2008) reviewed the literature on psychotherapy effects with ethnic minority youth and found that treatment effects were of medium magnitude, and outcomes were mostly similar for ethnic minority and White youth. However, these findings are based primarily on African American and Latino samples, and there is less understanding of what constitutes efficacious treatment for Asian Americans (Sue, Cheng, Saad, & Chu, 2012).

The purpose of this article is to synthesize the treatment outcome literature relating to Asian Americans with mental health problems. A focus on Asian Americans is important for several reasons. First, Asian Americans are now the fastest growing racial group in the United States (Lopez, Ruiz, & Patten, 2017), yet their mental health needs continue to be unmet (Hall & Yee, 2012; Le Meyer, Zane, Cho, & Takeuchi, 2009). Moreover, some Asian subgroups show elevated rates of mental health problems compared with the general population (Sue et al., 2012; Takeuchi et al., 2007). Thus, the treatment needs of this underrepresented group require greater attention.

Second, although enormous diversity exists among Asian Americans (Lopez et al., 2017), they share cultural worldviews that might warrant special attention in the treatment context (Hall, 2001). In particular, many Americans of East and Southeast Asian heritage are influenced by Confucian values and ideals that emphasize interpersonal harmony, attention to mutual obligations, and respect for authority and hierarchy in social relations (Kim, Atkinson, & Umemoto, 2001; Nisbett, 2003; Reid, 2000). This, in turn, may lead to cultural differences in cognitive and emotional processing in interpersonal contexts. For example, compared with European Americans, Asian Americans are less committed to personal choice in decision-making, more persistent in the face of failure, more socially attuned to others, more likely to conform to social norms, and less dependent on positive emotions for well-being (Heine, 2010; Heine & Norenzayan, 2006; Kitayama & Cohen, 2010; Nisbett, 2003). Such differences in social orientation might have implications for optimizing treatment structure, treatment content, and therapeutic style when counseling Asian American clients (e.g., Kim et al., 2001).

Third, some research suggests that conventional EBTs may not be entirely appropriate for some Asian American subgroups, particularly for less acculturated immigrants (Hwang, Myers, Abe-Kim, & Ting, 2008; Leong & Lee, 2006). Studies consistently find that Asian Americans face extensive cultural barriers to treatment (e.g., Kim, 2007; Kung, 2004; Leong & Lau, 2001; Sue et al., 1991) that are associated with low treatment utilization and retention rates (e.g., Abe-Kim et al., 2007; Lee, Martins, Keyes, & Lee, 2011; Le Meyer et al., 2009; Matsuoka, Breaux, & Ryujin, 1997; Sue et al., 1991). These findings suggest poor acceptability or viability of existing treatment that could negatively impact treatment outcomes for Asian Americans.

To address these concerns, scholars have argued for culturally responsive interventions tailored to optimize compatibility with Asian cultural beliefs and practices (Hall, Hong, Zane, & Meyer, 2011; Hwang, 2006; Leong & Lee, 2006; Sue, 1998; Sue & Zane, 1987). Tailoring treatments for cultural sensitivity makes intuitive sense, and the positive effects of culturally adapted treatments have been suggested by several meta-analyses of diverse cultural groups (Benish, Quintana, & Wampold, 2011; Griner & Smith, 2006; Smith, Rodríguez, & Bernal, 2011). Nonetheless, advocating for culturally adapted interventions may be somewhat premature given the scant evidence that conventional EBTs are *less efficacious* for Asian Americans, and limited research suggesting that cultural adaptation of psychosocial interventions can sometimes be iatrogenic (e.g., Kliewer et al., 2011; Yuen, 2004). After all, if Asian Americans are found to benefit from nonadapted EBTs, then it may be unnecessary and inefficient to focus limited resources on cultural tailoring efforts.

In this article, we provide a review and meta-analysis of randomized, mental health intervention trials for Asian Americans. First, we briefly summarize the existing literature. Second, we assess the overall magnitude of treatment effects for Asian Americans. Third, we test whether key participant and treatment factors moderate treatment effects. Of particular theoretical interest is the role of cultural tailoring as a treatment moderator. If the *cultural responsiveness* view is correct, we expect that effect sizes will be greater when treatments are specifically tailored for Asian Americans; however, if the *cultural invariance* view is correct, then no significant cultural tailoring effects should emerge.

Method

Literature Search

As an initial step, we conducted an electronic literature search using the following databases: Applied Social Sciences Index and Abstracts (1987–2015), MEDLINE (1960–2015), ProQuest Dissertations and Theses, PsycINFO (1960–2015), and Social Services Abstracts (1979–2015). Terms representing Asian ethnicity (e.g., *Asian*, *Chinese*, and *Korean*), intervention (e.g., *psychotherapy*, *treatment*), and evaluation (e.g., *efficacy*, *impact*) were utilized.

Because many ethnic minority trials are "hidden" in the literature, with no indication in titles or abstracts of participant ethnicity, our electronic search was supplemented with a manual search of reference lists from meta-analyses and reviews focused on ethnic minorities (e.g., Carter et al., 2012; Huey et al., 2014),[1] as well as unpublished, in press, and published studies recommended by treatment outcome researchers. Moreover, references for all eligible papers were scanned for additional studies. Unpublished studies were included to address potential concerns about publication bias (Hopewell, McDonald, Clarke, & Egger, 2007).

Inclusion Criteria

Studies were eligible if (a) the majority of participants presented with mental health problems before intervention, (b) participants were randomized to conditions, including at least one psychosocial intervention, (c) mental health outcomes were assessed at post-treatment or follow-up, (d) the study was published or written in English, and (e) outcomes focused on participants who were predominantly of East Asian or Southeast Asian descent, and residing in the United States. Our emphasis on East and Southeast Asian

[1] Contact Stanley J. Huey, Jr. for a full list of these studies.

Americans reflects the dominant focus in mental health disparities research, as well as the absence of other Asian groups in the treatment outcome literature. Studies were included in the meta-analysis only when they reported data necessary to calculate effect sizes (e.g., outcome means and *SD*s, or proportions). Excluded were intervention studies that focused primarily on the prevention of mental health problems, included no control/comparison conditions, or did not assign participants to conditions randomly.

Coding of Studies

The following demographic variables were coded for each study: age, predominant gender, and ethnicity. We also coded for other participant characteristics (e.g., target problem), treatment characteristics (e.g., treatment orientation), and specificity of cultural tailoring.[2] For the latter, we coded whether the intervention was tailored specifically for Asian subgroups (e.g., inclusion of Vietnamese-specific fears when engaging in cognitive restructuring), tailored broadly for Asians (e.g., use of Asian cultural values such as the importance of familial support), tailored broadly for ethnic/cultural minorities (e.g., reframed Western concepts of depression into more culturally resonant forms), or not culturally tailored at all. Each study was coded by the first author, and the second author independently coded a random selection of seven studies (33% of the total). Excluding cultural tailoring, interrater reliability ranged from $\kappa = .68$ to $\kappa = 1.00$, which is in the good to excellent range (Cicchetti, 1994). Because reliability for cultural tailoring was only fair, $\kappa = .55$, the first and second authors coded all 21 trials for this variable, and discrepant codes were discussed until 100% agreement was reached.

Outcomes

For each study, outcomes directly relevant to the referral problems were included for effect size estimation. For example, if participants were referred and treated for depression, then effect size estimates were based on depressive symptoms and functional impairment but not anxiety symptoms. However, when participants were referred for unspecified problems or a diverse array of problems (e.g., Lau, Fung, Ho, Liu, & Gudiño, 2011), all reported mental health outcomes were included.

Effect Size Estimation

For this meta-analysis, the effect size statistic represents the standardized difference in outcomes between treatment and comparison at posttreatment or follow-up. For continuous variables, comparisons were calculated using the standardized mean difference statistic (*d*), with the pooled *SD* as the denominator. For dichotomous variables (e.g., abstinence, depression remission), the log odds ratio was calculated then converted to *d* to create a common effect size index. When means and *SD*s (or proportions) were not available, effect sizes were estimated from other statistics when possible (Lipsey & Wilson, 2001), or efforts were made to contact authors for missing information.

A positive effect size indicates that the intervention is more beneficial than control, whereas a negative effect size indicates that control is more beneficial. Effect size coefficients of .20 or lower represent "small" effects, coefficients around .50 "medium" effects, and coefficients of .80 or higher "large" effects (Cohen, 1988).

To avoid violating assumptions of statistical independence, only one effect size per study was included in any particular analysis (Lipsey & Wilson, 2001). When multiple indices were used to assess a particular outcome within a study, effects were calculated for each measure then combined to form a single effect size coefficient.

Analysis

Because studies varied in terms of participant demographics, treatment characteristics, and tailoring features, heterogeneity of effects was expected. A random effects model was chosen for effect size analysis since this approach assumes that true effects vary systematically across studies (Borenstein, Hedges, Higgins, & Rothstein, 2009).

The Q statistic (Hedges & Olkin, 1985) was calculated to test for homogeneity of effects across studies. A significant Q statistic indicates a heterogeneous distribution and suggests that study characteristics, rather than sampling error, explain differences between studies. However, given that Q is often poor at detecting true heterogeneity when sample sizes are small, the I^2 index was also reported (Borenstein et al., 2009; Higgins, Thompson, Deeks, & Altman, 2003). I^2 is the percentage of total variation across studies due to heterogeneity (vs. chance) and is considered an index of *inconsistency* across study results. An I^2 value of 25% represents low heterogeneity, 50% moderate heterogeneity, and 75% high heterogeneity (Higgins et al., 2003).

Results

Search Results

Overall, 21 randomized trials across 23 papers met inclusion criteria for our narrative review (see Figure 1). Huey and Pan (2006) and Pan, Huey, and Hernandez (2011) published posttreatment and follow-up outcomes for the same trial, respectively. Similarly, Kim, Kim, and Ziedonis (2012) and Kim et al. (2015) published posttreatment and follow-up effects for a single trial, respectively. Only one study was an unpublished dissertation, with the remainder (95%) being peer-reviewed journal articles. Eighteen studies met criteria for our meta-analysis (see Figure 1).

Study Characteristics

Table 1 provides summary information for each of the 21 trials, including demographic and treatment characteristics. The studies varied considerably by sample size, ranging from a low of 10 participants (Otto et al., 2003) to a high of 2,277 participants (Zhu et al., 2012), with a total of 6,377 subjects across all

[2] To assess "quality" of cultural tailoring, we also coded for deep- versus surface-structure cultural adaptations (Resnicow, Baranowski, Ahluwalia, & Braithwaite, 1999) and explicit versus implicit cultural adaptations (Huey, 2013). However, because there was minimal variation across studies (i.e., virtually all culturally tailored interventions included deep-structure and implicit adaptations), no analyses were included for these codes.

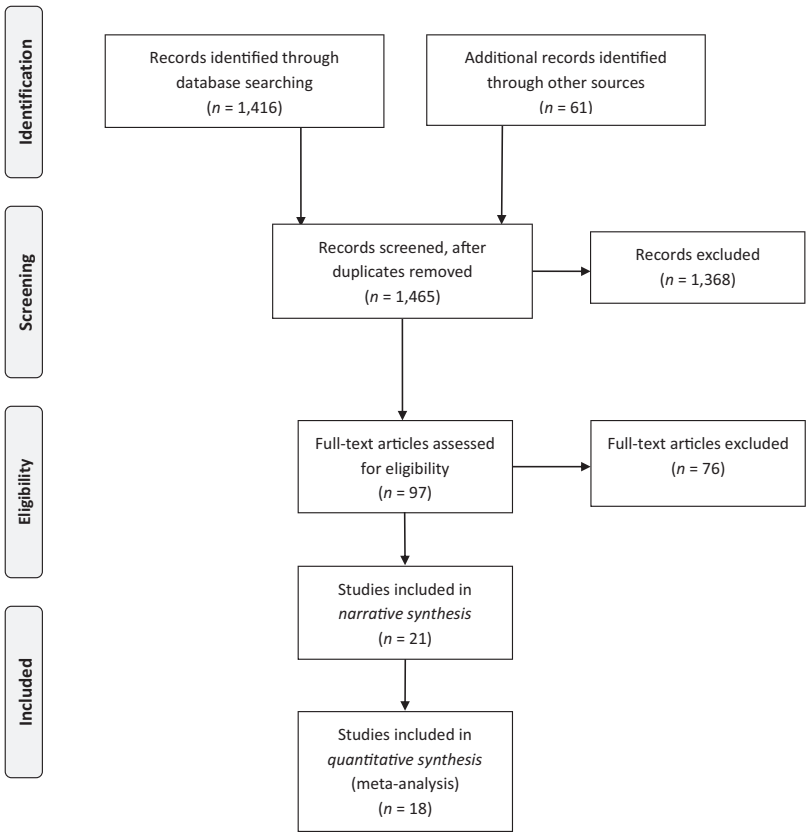

Figure 1. Study selection flowchart.

studies. Samples included mostly adults (71%) and college students (24%), with only one study focused on children and their parents. Females (62%) and immigrants (76%) predominated in most studies, although 24% did not indicate the immigrant status of participants. Most trials (76%) reported some form of linguistic matching, but the remainder (24%) did not report how language was considered in the context of treatment. In terms of ethnicity, Chinese Americans predominated in 38% of studies, Cambodian Americans in 19%, Korean Americans in 14%, and Vietnamese Americans in 5%; the remaining studies included mixed Asians (10%) or unspecified Asians (14%).

Studies targeted participants with problems related to depression (33%), posttraumatic stress disorder (PTSD; 24%), smoking (24%), and a mix of other mental health concerns (19%). Having a *Diagnostic and Statistical Manual of Mental Disorders* (*DSM*) psychiatric diagnosis was an inclusion criterion for only 38% of studies. The primary treatment orientation of most interventions was cognitive–behavioral (CBT; 52%), and the overwhelming majority of treatments were culturally tailored in some fashion (91%). Table 2 briefly summarizes the cultural tailoring approaches adopted in each study, with 62% of interventions tailored specifically for Asian subgroups, 23% tailored for Asians broadly, 5% tailored for minorities broadly, and 10% not culturally tailored at all.

Narrative Summary

Depression. Although seven trials assessed treatment outcomes for depressed Asian Americans, significant intervention effects were found for only a few. In a secondary analysis of a larger clinical trial, Marchand, Ng, Rohde, and Stice (2010) evaluated ethnic differences in treatment effects (Group CBT vs. waitlist) for adolescents and young adults with elevated levels of depression. Overall, CBT was superior to control in reducing depressive symptoms, and ethnicity (Asian vs. European American vs. Latino) did not moderate treatment effects. Similarly, Geisner, Neighbors, and Larimer (2006) found that personalized coping feedback (delivered by mail) was effective at reducing symptoms among moderately depressed young adults, and ethnicity (Asian vs. Caucasian) did not moderate treatment effects.

Other studies report disappointing findings regarding depression treatment for Asian Americans. Kwong, Chung, Cheal, Chou, and Chen (2013) found that care management plus physician care was no more effective than physician care alone at reducing symptoms among depressed, immigrant Chinese Americans in primary care. Similarly, in two separate trials, Yeung and colleagues tested the effects of collaborative depression treatment (Yeung et al., 2010) and Tai Chi (Yeung et al., 2012) among immigrant Chinese Americans with major depression; compared with control, neither intervention was effective at remediating depressive symptoms.

Table 1
Summary of Randomized Controlled Trials of Mental Health Treatments for Asian Americans

Author	*N*	Participant characteristics	Target problem	Intervention	Intervention characteristics	Control group	Treatment effects
Depression							
Geisner, Neighbors, and Larimer (2006)	177	Mean age of 19.3 years; 30% male; 49% Caucasian, 48% Asian, 3% Other; immigrant status unspecified.	Depressive symptoms (>14 on BDI)	Personalized feedback letter (PF)	*O*: Non-CBT *M*: Individual *D*: N/A *TF*: None	Placebo (attention control letter)	PF > placebo for DDS depression at 1 month follow-up. However, no treatment effects for BDI depression Ethnicity (Caucasian vs. Asian) did not moderate treatment effects
Hwang et al. (2015)	50	Mean age of 45.2 years; 28% male; 100% Chinese Americans; 96% Foreign born.	*DSM* criteria for major depression	Culturally adapted CBT (CA-CBT)	*O*: CBT *M*: Individual *D*: 12 weekly sessions *TF*: Subgroup	"Standard" CBT	CA-CBT > CBT for depressive symptoms over the course of treatment (however, groups showed similar rates of depression at posttreatment)
Kwong, Chung, Cheal, Chou, and Chen (2013)	57	Mean age 47.4 years; 32% male; 100% Chinese; described as "low-income, immigrant."	Primary care patients with depressive symptoms (>8 on PHQ-9)	Care management plus physician care	*O*: Non-CBT *M*: Individual *D*: 12 weeks of treatment *TF*: Broad cultural	Enhanced physician care	No treatment effects for depressive symptoms or mental health functioning at 4 month follow-up
Marchand, Ng, Rohde, and Stice (2010)	167	Mean age of 18.6 years; 25% male; 59% European American, 22% Asian-American/Pacific Islander, 19% Latino; immigrant status unspecified.	Elevated depressive symptoms	Cognitive-behavioral group (CBT)	*O*: CBT *M*: Group *D*: 4 sessions, 1 h each *TF*: None	Waitlist	CBT > waitlist at posttreatment Ethnicity (Asian vs. European American vs. Latino) did not moderate treatment effects
Pan et al. (2017)	120	Mean age of 21.2 years; 22% male; 50% Asian American, 50% European American; immigrant status unspecified, but 78% of Asian Americans were bilingual.	Subsyndromal depression	Directive (DI) and nondirective (NI) personalized feedback intervention	*O*: Non-CBT *M*: Individual *D*: One, 20 min session *TF*: Asian	Placebo (discussion about cultural values)	For full sample, DI > NI for BDI depression at 6 month follow-up. No BDI depression effects at post-treatment. No DDS depression effects at post-treatment or follow-up. DI and NI did not differ from placebo Ethnicity moderated treatment effects. For Asian Americans, but not European Americans, DI > placebo at follow-up for BDI depression.
Yeung et al. (2010)	100	Mean age of 49 years; 32% male; 100% Chinese Americans; 100% from clinic serving predominantly immigrants.	Major depressive disorder	Culturally sensitive collaborative treatment	*O*: Non-CBT (care management) *M*: Individual *D*: 8 sessions (1 in-person and 7 by phone) *TF*: Broad Cultural	Usual care	No treatment effects for depression over 6 months

(*table continues*)

Table 1 (*continued*)

Author	*N*	Participant characteristics	Target problem	Intervention	Intervention characteristics	Control group	Treatment effects
Yeung et al. (2012)	39	Mean age of 55 years; 33% male; 100% Chinese Americans; immigrant status unstated, but clinic served Chinese immigrants and sessions conducted in Chinese.	Major depressive disorder	Tai Chi	*O*: Non-CBT (Tai Chi) *M*: Group *D*: Sessions twice weekly for 12 weeks (1 h each) *TF*: Subgroup	Waitlist	No group differences in depression symptoms, remission, or response rates at posttreatment
PTSD							
Hinton et al. (2004)	12	Mean age of 52.3 years; 50% male; 100% Vietnamese refugees.	Outpatients with treatment-resistant PTSD	Culturally adapted CBT (CA-CBT)	*O:* CBT *M:* Individual *D:* 11 sessions *TF:* Subgroup	Waitlist	CA-CBT > waitlist for PTSD symptoms and most related symptoms at posttreatment
Hinton et al. (2005)	40	Mean age of 51.8 years; 40% male; 100% Cambodian refugees.	Outpatients with treatment-resistant PTSD	Culturally adapted CBT (CA-CBT)	*O:* CBT *M:* Individual *D:* 12 weekly sessions *TF:* Subgroup	Waitlist	CA-CBT > waitlist for PTSD and panic symptoms, and most related symptoms at posttreatment
Hinton, Hofmann, Pollack, and Otto (2009)	24	Mean age of 49.5 years; 40% male; 100% Cambodian refugees.	Outpatients with treatment-resistant PTSD	Culturally adapted CBT (CA-CBT)	*O:* CBT *M:* Individual *D:* 12 weekly sessions *TF:* Subgroup	Waitlist	CA-CBT > waitlist for PTSD and panic symptoms, blood pressure, and most related symptoms at posttreatment
Otto et al. (2003)	10	Mean age of 47.2 years; 0% male; 100% Cambodian refugees.	Patients with treatment-resistant PTSD	CBT plus Sertraline (CBT)	*O:* CBT *M:* Group *D:* 10 sessions *TF:* Subgroup	Partial treatment (Sertraline only)	CBT > control for PTSD symptoms, anxiety, and somatization at posttreatment
White-Baughan (1990)	83	Mean age of 42 years; 33% male; 100% Cambodian refugees.	PTSD symptoms (meeting 3 of 4 *DSM* criteria)	Problem-solving plus educational video, problem-solving alone, and educational video alone[a]	*O:* CBT *M:* Individual *D:* 9 weeks *TF:* Subgroup	Waitlist	No treatment effects for PTSD symptoms or SCL-90R psychiatric symptoms at posttreatment
Smoking							
Fang et al. (2006)	66	Mean age of 46.1 years; 96% male; 46% Korean, 55% Chinese. Probably immigrant because (a) all procedures conducted in Cantonese, Korean, or Mandarin, and (b) intervention addressed immigration-related stress.	Smokers who smoked at least one puff in prior 7 days	"Theory-based" smoking cessation intervention plus NRT (SCI)	*O*: Non-CBT *M*: Individual *D*: One session (90–120 min) *TF*: Asian	Placebo (health counseling plus NRT)	SCI > placebo for smoking abstinence 1 month later, but no treatment effects 3 months later No ethnic group difference in cessation rates at any time point
Kim et al. (2015) (also Kim, Kim, & Ziedonis, 2012)	109	Mean age of 49.7 years; 84% male; 100% Korean American immigrants.	Smokers who smoked at least 10 cigarettes per day	Culturally tailored CBT plus NRT (CBT)	*O*: CBT *M*: Individual *D*: 8 weekly sessions (40 min each) *TF*: Subgroup	Usual care	CBT > usual care for 7-day abstinence and continuous abstinence at 6 month follow-up (Kim et al., 2012) and 12 month follow-up (Kim et al., 2015)

Table 1 (*continued*)

Author	*N*	Participant characteristics	Target problem	Intervention	Intervention characteristics	Control group	Treatment effects
McDonnell, Kazinets, Lee, and Moskowitz (2011)	1,112	Mean age of 35 years; 88% male; 100% Korean American; 95% born in Korea.	Smokers (Mean of 14 cigarettes/day)	Internet-based CBT smoking cessation intervention	*O*: CBT *M*: Internet *D*: Not specified *TF*: Subgroup	Partial treatment (mailed booklet version of same program)	No treatment differences in smoking cessation at 50 weeks
Wu et al. (2009)	139	Mean age of 44.4 years; 88% male; 100% Chinese. Probably mostly immigrant because materials developed in Chinese and study stated that NYC Chinese community is largely immigrant.	Smokers (51% regular smokers)	Adapted MI counseling plus smoking cessation materials (A-MI)	*O*: Non-CBT (MI) *M*: Individual *D*: 4 sessions (60 min each) *TF*: Subgroup	Placebo (health education sessions)	No treatment effects at immediate posttreatment (1 month). However, A-MI > placebo for smoking cessation at 3 and 6 months.
Zhu et al. (2012)	2,277	Ages 18–75 years; 90% male; 32% Chinese, 37% Korean, & 31% Vietnamese; described as Asian *immigrant* smokers.	Smokers (Mean of 15.6 cigarettes per day)	Telephone counseling plus self-help (TC)	*O*: CBT *M*: Individual *D*: Up to 6 sessions (1 initial and 5 follow-up) *TF*: Subgroup	Partial treatment (self-help only)	For ITT analyses, TC > control for 7-day point abstinence at 4 months and 7 months. Also, TC > self-help for 6 month prolonged abstinence at 7 months. Similar results found in separate analyses for Chinese-, Korean-, and Vietnamese-speaking participants
Other problems							
LaBrie et al. (2013)	1,663	Mean age of 19.9 years; 43% male; 76% Caucasian, 24% Asian; immigrant status unspecified.	Undergraduates with a heavy drinking episode	Personalized normative feedback (PNF)[b]	*O*: Non-CBT *M*: Internet *D*: 1 session *TF*: Asian	Placebo (normative feedback about typical student)	PNF > placebo for average total drinks, peak drinking, drinking days, and drinking consequences over the 12-month follow-up period Ethnicity (Caucasian vs. Asian) did not moderate treatment effects
Lau, Fung, Ho, Liu, and Gudiño (2011)	54	Mean age of 8.4 years; 62% male; 100% Chinese American families; parents were immigrants.	Self-identified as having difficulties with child behavior problems or parenting	Culturally adapted parent training (PT) based on the Incredible Years	*O*: CBT *M*: Group *D*: 14 sessions *TF*: Subgroup	Waitlist	PT > waitlist for internalizing and externalizing behavior problems at posttreatment

(*table continues*)

Table 1 (*continued*)

Author	*N*	Participant characteristics	Target problem	Intervention	Intervention characteristics	Control group	Treatment effects
Pan, Huey, and Hernandez (2011; also Huey & Pan, 2006)	30	Mean age of 22.1 years; 33% male; 100% East Asian American; immigrant status unclear; 100% fluent in English.	Phobia symptoms–high levels of phobic fear and avoidance	Culturally adapted one-session treatment (OST-CA) and standard OST (OST-S)	*O*: CBT *M*: Individual *D*: 1 session (up to 3 h) *TF*: Asian	Partial treatment (self-help only)	Posttreatment OST-CA and OST-S > control for phobic avoidance, subjective distress, and phobia symptoms OST-CA > control for therapist-rated fear, general fear, and catastrophic thinking 6 Month Follow-Up OST-CA and OST-S > control for phobic avoidance, therapist-rated fear, general fear, and catastrophic thinking OST-CA > control for subjective distress OST-S > control for phobia symptoms
Shin and Lukens (2002)	48	Mean age of 37.1 years; 42% male; 100% Korean; immigrant status unspecified, but lived an average of 15 years in the United States, and sessions conducted in Korean.	Outpatients diagnosed with schizophrenia, schizoaffective disorder, or schizophreniform disorder	Culturally sensitive psychoeducational treatment plus supportive therapy	*O*: Other *M*: Group *D*: 10 group sessions (90 min. each) and 10 individual sessions (45 min. each) *TF*: Subgroup	Partial treatment (supportive therapy only)	Psychoeducation > control for overall psychiatric symptoms and positive symptoms at posttreatment No treatment effects for negative symptoms

Note. BDI = Beck Depression Inventory; CBT = cognitive-behavioral treatment; D = treatment duration; DDS = *DSM-IV*-based Depression Scale; ITT = intent-to-treat; M = treatment modality; MI = motivational interviewing; *N* = number randomized to conditions; NRT = nicotine replacement therapy; O = treatment orientation; PNF = Personalized Normative Feedback; PTSD = posttraumatic stress disorder; TF = tailoring focus; *DSM-IV* = *Diagnostic and Statistical Manual of Mental Disorders-Fourth Edition*.

[a] For White-Baughan (1990), participants were randomly assigned to one of four conditions: Cognitive problem-solving plus educational video, problem-solving alone, educational video alone, or wait-list control. For our meta-analysis, we focused on the most robust treatment condition, which surprisingly was educational video alone. [b] For LaBrie et al. (2013), participants were randomly assigned to 10 conditions, including 8 distinct PNF conditions that varied in the extent to which feedback was normed by race, gender, and Greek status. The omnibus analysis focused primarily on comparing PNF as a single group to placebo.

Table 2
Cultural Tailoring Approaches in Mental Health Treatments for Asian American

Study	Representative cultural tailoring approaches	Tailoring focus
Fang et al. (2006)	Intervention addressed cultural norms that support smoking in Asian men, and employed "cultural values and culturally appropriate quitting strategies, such as the importance of familial support."	Asian focus
Geisner et al. (2006)	None specified.	—
Hinton et al. (2004)	CBT included culturally appropriate visualization instructions that encode "key Asian cultural values of flexibility," such as "a lotus bloom that spins in the wind at the end of the stem" and inclusion of Vietnamese-specific fears when engaging in cognitive restructuring of fear networks.	Subgroup focus
Hinton et al. (2005)	CBT used culturally appropriate, relaxation techniques framed as a form of Buddhist-type mindfulness, and key distress patterns among Cambodian immigrants addressed.	Subgroup focus
Hinton et al. (2009)	Intervention based on a Cambodian-specific model of PTSD, and addressed distress patterns culturally relevant to Cambodian refugees (e.g., orthostatic-panic-associated sensations).	Subgroup focus
Hwang et al. (2015)	CBT adapted for Chinese by providing a comprehensive therapy orientation, reducing stigma, placing greater focus on goal setting and problem solving, and discussing somatic aspects of depression.	Subgroup focus
Kim et al. (2012, 2015)	Intervention included (1) an explanation of the effects of carbon monoxide and an analogy of gas poisoning in Korea, and (2) information on smoking-related death rates in Korea, including recent smoking-related deaths among celebrities in Korea.	Subgroup focus
Kwong et al. (2013)	"Wagner's chronic care model was adapted to provide a systematic intervention while incorporating cultural factors of the target population" and "materials . . . field tested for their cultural relevancy."	Broad cultural focus
LaBrie et al. (2013)	Personalized drinking feedback normed to Asian American referents (i.e., their drinking behavior compared with that of Asian American peers, not college students more broadly).	Asian focus
Lau et al. (2011)	Treatment addressed culturally relevant risk factors for ineffective parental discipline in immigrant Chinese families (e.g., communication training aimed at reducing acculturation conflicts).	Subgroup focus
McDonnell et al. (2011)	Intervention was selected based on factors deemed important by Korean interviewees, and materials were "adapted for Koreans."	Subgroup focus
Marchand et al. (2010)	None specified.	—
Otto et al. (2003)	Cognitive-restructuring and exposure directed at Cambodian-specific, catastrophic interpretations of anxiety; intervention clarified differences between PTSD symptoms and culturally distinct fears of death.	Subgroup focus
Pan et al. (2017)	Therapists used a directive therapeutic style (e.g., eliciting specificity, directing behavior) that paralleled the hierarchical structured relationships valued in Asian cultures.	Asian focus
Pan et al. (2011)	Exposure treatment incorporated seven cultural adaptations derived from psychological research with Asian Americans. For example, given cultural differences in emotion expression, therapist described OST as a self-control method that helps participants control their reactions to fearful situations.	Asian focus
Shin and Lukens (2011)	Psychoeducation integrated discussion of culturally relevant traditional disease concepts, such as "Korean perspectives on shamanism, distress, diseases, fortune, and misfortune, and life and death."	Subgroup focus
White-Baughan (1990)	Interventions conducted by bicultural Cambodian field trainers who were interviewed to assure cultural appropriateness. Goal-setting motifs and videos based on Cambodian-specific themes.	Subgroup focus
Wu et al. (2009)	Intervention incorporated culturally relevant social and cultural values, including Chinese values, Yin-Yang balance, male social status, and coping with separation from extended families.	Subgroup focus
Yeung et al. (2010)	Clinicians explored illness beliefs through questions that help them develop illness narratives with patients by reframing Western concept of depression into more culturally resonant forms.	Broad cultural focus
Yeung et al. (2012)	Tai chi selected as a Chinese cultural practice that originated in China.	Subgroup focus
Zhu et al. (2012)	Counselors were bilingual and bicultural Chinese, Korean, and Vietnamese; counselors responded to age/gender differences by showing deference to older male clients, and assuming a more directive style to meet cultural expectations regarding hierarchy and family roles.	Subgroup focus

Note. PTSD = posttraumatic stress disorder; CBT = cognitive-behavioral treatment; OST = one session treatment.

In addition, two studies assessed whether cultural tailoring enhanced the effects of depression treatment for Asian Americans. Hwang et al. (2015) compared a standard 12-session CBT program (CBT) with a culturally adapted version of the same protocol (CA-CBT) for Chinese American adults who met *DSM–IV* criteria for major depression. CA-CBT was significantly more effective than standard CBT at decreasing depressive symptoms over the course of treatment, although the groups showed similar rates of depression at posttreatment. Pan, Huey, and Heflin (2017) assigned Asian Americans and European Americans with subsyn-

dromal depression to directive personalized feedback (i.e., tailored for Asian Americans), nondirective feedback (i.e., *not* tailored for Asian Americans), or placebo. For the full sample, directive treatment led to greater reductions in BDI depression than nondirective treatment at 6-month follow-up, although neither was more effective than placebo. Post hoc moderator analyses showed that for Asian Americans, but not European Americans, directive treatment led to greater reductions in BDI depression at follow-up compared with placebo; however, no moderator effects were found for BDI depression at posttreatment, or DDS depression at either assessment. Thus, the limited evidence is mixed as to whether cultural tailoring reliably improves outcomes for depressed Asian Americans.

Posttraumatic stress disorder (PTSD). Five randomized trials evaluated treatment effects for Asian Americans with PTSD symptoms (Hinton et al., 2004, 2005, 2009; Otto et al., 2003; White-Baughan, 1990). Each trial included immigrants from Southeast Asia with PTSD induced by severe traumas experienced in their native countries. In three of these trials, Hinton and colleagues evaluated the effects of culturally adapted CBT for Cambodian refugees with treatment-resistant PTSD (Hinton et al., 2005; Hinton, Hofmann, Pollack, & Otto, 2009; Otto et al., 2003). Overall, CBT was significantly more effective than waitlist (or Sertraline) at reducing PTSD symptoms and related mental health problems. Similar effects were found in a CBT trial for Vietnamese refugees with treatment-resistant PTSD (Hinton et al., 2004).

However, an unpublished trial of three forms of CBT for Cambodian adults showed nonsignificant effects. White-Baughan (1990) assessed the effects of cognitive problem solving plus educational video, problem solving alone, or educational video alone compared with waitlist for Cambodian refugees with PTSD symptoms. Overall, no significant treatment effects were found for PTSD symptoms or psychiatric distress.

Smoking. Five trials focused on reducing cigarette use among Asian American adults. One trial assessed the effects of culturally adapted motivational interviewing (MI) counseling on immigrant Chinese smokers (Wu et al., 2009). Although no significant treatment effects were found at immediate posttreatment, adapted MI was more effective than placebo at 3- and 6-month follow-ups.

Two additional studies focused exclusively on smoking cessation for immigrant, Korean American smokers. In the first trial (McDonnell, Kazinets, Lee, & Moskowitz, 2011), Internet-based CBT was ineffective compared with a mailed self-help version of the same treatment. However, in another study, Kim and colleagues (Kim et al., 2012, 2015) found that culturally tailored CBT plus nicotine replacement therapy was more effective than medication management alone at promoting abstinence in Korean immigrants at 6- and 12-month follow-up.

Finally, two studies specifically targeted ethnically diverse Asian American smokers. Fang et al. (2006) evaluated a one-session cognitive-affective intervention for Chinese and Korean smokers, and found significant effects at posttreatment but no effects at 3-month follow-up. Zhu et al. (2012) assessed whether immigrant Chinese, Korean, and Vietnamese smokers benefitted from social learning-based telephone counseling plus self-help. Compared with self-help only, counseling led to higher smoking abstinence at all follow-up periods. Although neither study explicitly assessed whether ethnicity moderated treatment effects, separate analyses indicated that Chinese, Korean, and Vietnamese participants all benefited significantly from the active treatments (Fang et al., 2006; Zhu et al., 2012).

Other mental health problems. Unfortunately, evidence supporting treatment for Asian Americans with other mental health problems is quite limited, with only a handful of studies showing that therapy can be helpful for Asian Americans with schizophrenia (Shin & Lukens, 2002), specific phobias (Huey & Pan, 2006; Pan et al., 2011), substance use problems (LaBrie et al., 2013), or youth behavior problems (Lau et al., 2011). Shin and Lukens (2002) found that psychoeducation plus supportive therapy was effective at reducing psychiatric symptoms among immigrant Koreans Americans with schizophrenia. Pan et al. (2011) found that culturally adapted (OST-CA) *and* standard one-session treatment (OST-S) were effective at reducing fear and avoidance behaviors among Asian Americans with specific phobias, and that OST-CA was more effective than OST-S for several key outcomes. LaBrie et al. (2013) showed that personalized drinking feedback was equally effective at reducing alcohol use in Caucasian and Asian heavy drinkers, compared with placebo feedback. Moreover, they found that that race-specific feedback was actually *less effective* than feedback that was normed for the "typical" college student (LaBrie et al., 2013).

Only one published RCT has focused on treating Asian American *youth* with preexisting mental health problems. Lau et al. (2011) assessed the effects of culturally adapted parent training on immigrant Chinese families reporting concerns about child behavior problems or parenting. Overall, parent training was significantly more effective than control at reducing internalizing and externalizing problems in children.

In summary, findings across 21 randomized trials are mixed regarding treatment effects with Asian Americans. Although the majority show that active interventions are more effective than control at reducing mental health problems, a substantial minority show no significant treatment effects. Moreover, support for cultural tailoring is ambiguous, with three studies showing minimal to modest enhancement effects for tailored treatment (Hwang et al., 2015; Pan et al., 2011, 2017) and one showing that tailoring was less effective than a standard approach (LaBrie et al., 2013).

However, this narrative approach to summarizing the literature is limited for several reasons (Borenstein et al., 2009). First, the majority (62%) of trials included small samples with fewer than 50 participants per condition, which likely resulted in low power to detect significant treatment effects. Second, this approach reveals nothing about the magnitude of outcomes or the conditions that enhance or diminish treatment effects and, thus, the clinical and social significance of these findings are unclear. To address these limitations, the next section presents a meta-analytic synthesis of this literature.

Primary Effects From Meta-Analysis

The meta-analysis was based on 18 randomized trials with data that allowed for effect size calculation. Figure 2 shows the forest plot for the 17 eligible studies that compared treatment to control and reported posttreatment effects. The mean effect size was $d = .75$, $SE = .14$, $p = .000$, which indicates that, overall, 78% of treated Asian Americans were better off at posttreatment than the average control participant. Follow-up data was available for seven studies and indicated that treatment effects were still significant,

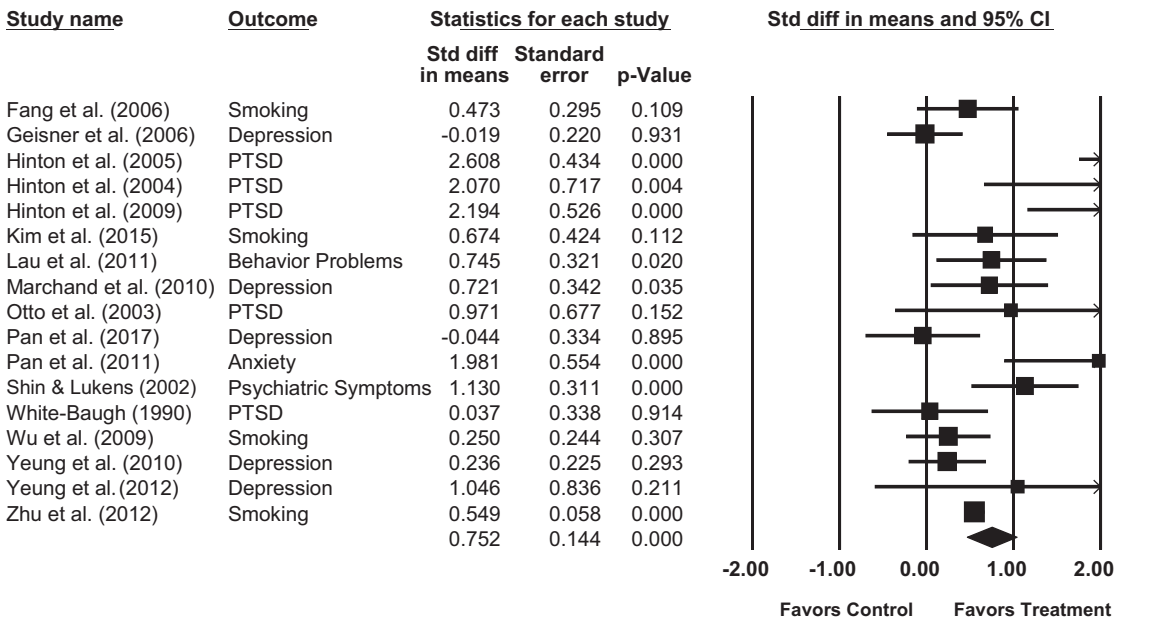

Figure 2. Forest plot of clinical outcomes for Asian Americans at posttreatment, comparing treatment and control groups. PTSD = posttraumatic stress disorder.

albeit somewhat attenuated over time, $d = .47$, $SE = .13$, $p = .000$. Using Cohen's (1988) standard, the posttreatment effect size was somewhat below the *large* threshold, whereas the follow-up effect was considered *medium*.

Next, we assessed heterogeneity of treatment effects across studies. The Q statistic was significant, $Q(16) = 64.06$, $p = .000$, suggesting that overall treatment effects may be moderated by one or more factors. Moreover, the I^2 index was 75%, indicating a high degree of heterogeneity (Higgins et al., 2003). Third, the forest plot (see Figure 2) showed scattered treatment effects and wide confidence intervals, also suggesting considerable heterogeneity. Thus, additional analyses were conducted to assess whether key demographic, clinical, and theoretical variables moderated treatment effects (see Table 3). Results from these analyses are presented in the following sections.

Demographic and Clinical Moderators

No significant moderator effects were found for gender, $Q(1) = 1.84$, $p = .175$, age, $Q(1) = .72$, $p = .395$, or ethnicity, $Q(2) = 3.30$, $p = .192$. However, significant effects were found for target problem, $Q(3) = 11.94$, $p = .008$, and diagnostic status, $Q(1) = 5.72$, $p = .017$. Table 3 shows that the largest treatment effects were found for participants with PTSD and mixed/other problems (vs. depression or smoking), and those with *DSM* diagnoses. Effects were also significant for comparison group, $Q(3) = 12.09$, $p = .007$, with the largest effects evident when interventions were compared with no treatment, partial treatment, and treatment-as-usual (vs. placebo).

Cultural Responsiveness Predictions

Given contemporary debates about the importance of cultural tailoring when treating ethnic minorities (De Anda, 1997; Hwang, Wood, Lin, & Cheung, 2006; Sue, Zane, Nagayama Hall, & Berger, 2009), in this section we test several predictions in relation to cultural tailoring for Asian Americans and treatment effects.

Treatments tailored specifically for Asians will show the largest effects. As noted earlier, many argue that treatments for Asian Americans will be optimized when tailored for compatibility with the client's cultural beliefs and practices (Hwang, 2006; Leong & Lee, 2006; Sue, 1998). Given this reasoning, treatments specifically tailored for Asian subgroups (e.g., Chinese, Cambodians) should be more effective than those tailored broadly for Asians, which in turn should be more effective than interventions that are nontailored or tailored broadly for minorities. In testing this prediction, significant moderator effects were found for cultural tailoring, $Q(2) = 6.60$, $p = .037$, with the largest effects evident for treatments tailored specifically for Asian American subgroups and the smallest effects found for treatments that were tailored broadly for minorities or not tailored at all (see Table 3).

Group-based treatments will show larger effects for Asians than individually based treatments. Some scholars argue that cultural sensitivity extends beyond specific adaptations to treatments and also includes selecting mainstream approaches that fit the norms and values of the cultural group. Specifically, they hypothesize that group-based treatments might be more efficacious for minorities than individual therapy because the former incorporates other cultural members and, thus, allows clinicians to better address the cultural context when planning and conducting therapy (Rogler, Malgady, Costantino, & Blumenthal, 1987; Tharp, 1991). To assess this possibility, treatment modality (group vs. individual treatment) was tested as a moderator of treatment effects. Results indicated that modality did not significantly affect treatment outcomes, $Q(1) = .071$, $p = .790$.

Table 3
Mean Posttreatment Effect Sizes, Confidence Intervals, and Significance Values by Moderator Variable for Mental Health Interventions With Asian Americans

Variable	*N*	*d* (*SE*)	CI	*p*
Total sample	17	.75 (.14)	[.47, 1.03]	.000
Demographic/Clinical moderators				
Gender				
Predominantly female	11	.91 (.27)	[.39, 1.43]	.001
Predominantly male	5	.54 (.054)	[.43, .65]	.000
Age				
Adults	12	.86 (.18)	[.51, 1.21]	.000
Children or young adults	5	.57 (.29)	[.00, 1.14]	.053
Asian ethnicity				
East Asian (Chinese or Korean)	10	.56 (.12)	[.32, .79]	.000
Southeast Asian (Cambodian or Vietnamese)	5	1.55 (.59)	[.39, 2.72]	.009
Mixed/Unspecified Asian American	2	.31 (.37)	[−.42, 1.02]	.407
Target problem type				
Depression	5	.21 (.15)	[−.08, .50]	.160
PTSD	5	1.55 (.59)	[.39, 2.72]	.009
Smoking	4	.53 (.06)	[.43, .64]	.000
Mixed/Other	3	1.16 (.30)	[.57, 1.74]	.000
Diagnostic status				
DSM diagnosis	7	1.44 (.40)	[.65, 2.22]	.000
No *DSM* diagnosis	10	.44 (.12)	[.19, .68]	.000
Comparison group				
No treatment	6	1.14 (.40)	[.35, 1.93]	.005
Partial treatment	4	1.03 (.31)	[.42, 1.63]	.001
Placebo control	4	.15 (.13)	[−.11, .41]	.246
Treatment as usual	3	.95 (.54)	[−.10, 2.0]	.075
Theory-relevant moderators				
Cultural tailoring				
Tailored specifically for Asian subgroups	10	1.10 (.28)	[.56, 1.64]	.000
Tailored broadly for Asians	4	.58 (.25)	[.10, 1.07]	.018
Tailored broadly for cultural differences or no cultural tailoring	3	.25 (.19)	[−.13, .62]	.197
Treatment modality				
Group	5	.89 (.18)	[.55, 1.24]	.000
Individual	11	.82 (.20)	[.44, 1.21]	.000

Note. *DSM* = *Diagnostic and Statistical Manual* (of the American Psychiatric Association); PTSD = posttraumatic stress disorder; CI = confidence intervals.

Asians will benefit less than Whites from identical treatments. A common assumption of cultural tailoring advocates is that European Americans will benefit more from conventional therapies than ethnic minorities. The key argument is that ignoring culture in the treatment context leads to ethnic disparities in treatment outcomes because "generic" treatments fit less well with the cultural assumptions and experiences that ethnic minority clients bring to the therapy context (De Anda, 1997). To test this prediction, analyses were rerun with three studies that allowed for effect size calculation separately for Asian and White participants within the same RCT (Geisner et al., 2006; Marchand et al., 2010; Pan et al., 2011). Notably, two of these studies (Geisner et al., 2006; Marchand et al., 2010), did not report efforts to tailor the interventions for Asian Americans. Results showed that the mean effect size for Asians was small and nonsignificant, $d = .18$ ($SE = .23$), $p = .436$, whereas the effect size for Whites was somewhat larger and statistically significant, $d = .38$ ($SE = .15$), $p = .012$. However, the difference in effect size between Asian and White participants in these studies was not significant, $Q(1) = .53$, $p = .465$. Thus, this limited evidence suggests that treatment effects do not differ substantially by ethnicity.

Treatment Effects for Nonaddiction Mental Health Problems

Although tobacco use problems are classified as mental health disorders in the *DSM-5* (American Psychiatric Association, 2013), scholars often differentiate between addiction-related disorders and other mental health problems when addressing prevalence and treatment efficacy (e.g., Grant et al., 2004; Lasser et al., 2000). For this reason, we conducted a supplemental analysis by removing the four smoking cessation trials and rerunning our omnibus analysis. The mean posttreatment effect for the remaining 13 studies was $d = .85$, $SE = .18$, $p = .000$. Thus, when we included only trials focused on conventional mental health problems (e.g., depression, PTSD), posttreatment intervention effects for Asian Americans were in the "large" range.

Discussion

This meta-analysis summarized treatment outcomes for Asian Americans and evaluated two competing theoretical perspectives on cultural tailoring with Asian Americans. Our findings suggest that existing psychosocial treatments are efficacious for Asian

Americans with diverse mental health problems. Overall, these interventions produced relatively "large" posttreatment effects, with follow-up effects of "medium" magnitude. Thus, despite concerns that EBTs may not work for Asian Americans, it is clear that they do benefit significantly from existing treatments. This is consistent with previous research on the efficacy of existing treatments for ethnic minority groups (Huey et al., 2014; Smith et al., 2011).

How do these findings inform our theoretical question on cultural responsiveness versus cultural invariance? While one implication might be that generic treatments work well for Asian Americans, further analyses appear to offer some support for the *cultural responsiveness* view. First, the majority of interventions reported in this meta-analysis incorporate at least one culturally responsive component in the form of provider characteristics, treatment procedures, or therapy content. In addition, clinicians often use culturally responsive strategies with ethnic minority clients (Harper & Iwamasa, 2000), but rarely describe these practices in detail. Therefore, cultural adaptations may be a vital component of many treatments targeting Asian Americans that contribute to the positive outcomes seen in our sample of studies.

Second, and perhaps most important, we found a significant moderator effect for cultural tailoring, with treatments adapted for Asian American subgroups (e.g., adapted specifically for Chinese Americans) showing the largest effects. Thus, contrary to the *cultural invariance* view (i.e., cultural tailoring is generally not helpful), the data indicates that (a) culturally tailored interventions can enhance treatment effects for Asian Americans, and (b) such adaptations appear most beneficial when they are tailored to a distinct cultural context or group.

Limitations and Future Directions

Although the gestalt of these findings seems to provide some support for the *cultural responsiveness* hypothesis, there are several notable caveats, many which reflect current challenges faced by the field. First, because of a dearth of randomized trials involving Asian Americans, the interventions described here focused on (a) a relatively narrow set of mental health problems (mostly depression, PTSD, and tobacco dependence), and (b) patients of East Asian (i.e., Chinese and Korean) and Southeast Asian (i.e., Vietnamese and Cambodian) descent. It is, therefore, unclear whether these results would necessarily apply to other Asian American subgroups (e.g., South Asians) or to a wider range of mental health problems. To bolster the current evidence base, there is a need to expand the number of clinical trials involving Asian Americans.

Second, the meta-analysis focused solely on treatment effects for mental health outcomes, which may not be the best indicator of cultural tailoring benefits. Some research suggests that the positive link between culturally tailored content and therapy outcomes may be more apparent if relevant process variables (e.g., cultural congruence, working alliance) are also included as outcome measures in treatment efficacy studies (Costantino, Malgady, & Primavera, 2009; Pan et al., 2011; Zane et al., 2005). Unfortunately, few existing studies include such culturally appropriate process variables. By taking a more comprehensive view of what constitutes therapeutic outcomes in future intervention studies, the question of whether cultural tailoring matters for Asian Americans could be answered more definitively.

Third, although the most optimal effects were seen when treatments were *specifically* tailored for Asian American subgroups (e.g., for Cambodian Americans), details concerning cultural tailoring varied dramatically across studies, with some studies lacking clear descriptions about the kinds of cultural elements incorporated into interventions. For example, some investigators included extensive descriptions of cultural adaptations along with cogent rationales (e.g., Hinton et al., 2009), whereas others offered only minimal information regarding cultural adaptation (e.g., Kwong et al., 2013). As argued elsewhere (Huey & Polo, 2008), treatment dissemination might be aided if published trials with ethnic minorities included detailed descriptions of efforts to make treatments responsive to the client's cultural background. Therefore, while some research suggests that certain forms of cultural tailoring could have less of an effect on treatment outcomes (e.g., Maramba & Nagayama Hall, 2002), this meta-analysis did not allow us to analyze whether certain kinds of cultural modifications work better than others. As such, while the results related to culturally tailored interventions appear promising, it is imperative that they are not used to justify a blanket endorsement of all types of cultural tailoring.

Finally, some of the moderator effects appear to be driven by the very large effects found in the four trials by Hinton and colleagues, $d = 2.09$, $SE = .34$, $p = .000$. When these studies are removed from analyses, many of the moderator effects (e.g., cultural tailoring, diagnostic status) disappear. However, the omnibus effect remains robust, $d = .48$, $SE = .11$, $p = .000$, even when these four studies are excluded.

Conclusion

In summary, this meta-analysis suggests that existing mental health interventions are generally efficacious for Asian Americans and that cultural tailoring can enhance treatment outcomes for this cultural group. These findings, though preliminary, provide some positive news for Asian Americans who seek treatment and their providers. Nonetheless, to ensure that the mental health needs of Asian Americans are met, more work is required. Existing research clearly suggests that Asian Americans continue to face significant challenges related to treatment utilization and engagement, which are important aspects of the broader intervention process. Therefore, rather than simply focusing on efficacy research alone, developing culturally specific strategies to facilitate access and improve acceptability of treatment, and appropriately evaluating these processes, may be one potential way in which culturally responsive treatments can make the most therapeutic impact and help mitigate mental health care disparities.

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