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Ethnic Identity and Personal Well-being
of People of Color: A Meta-analysis

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Abstract

This meta-analysis summarized research examining the relationship between the constructs of ethnic identity and personal well-being among people of color in North America. Data from 184 studies analyzed using random effects models yielded an omnibus effect size of $r = .17$, suggesting a modest relationship between the two constructs. The relationship was somewhat stronger among adolescents and young adults than among adults over age 40. No differences were observed across participant race, gender, or socioeconomic status, which findings support the general relevance of ethnic identity across people of color. Studies correlating ethnic identity with self-esteem and positive well-being yielded average effect sizes twice as large as those from studies correlating ethnic identity with personal distress or mental health symptoms. Thus ethnic identity was more strongly related to positive well-being than to compromised well-being. Overall, the corpus of research located in this review consisted of correlational designs; limited scholarship has addressed causal mechanisms, mediating factors, or psychological functions of ethnic identity across different social contexts.

Keywords: ethnic identity, mental health, well-being, meta-analysis

Ethnic Identity and Personal Well-being
of People of Color: A Meta-analysis

Identity formation has long been considered a crucial aspect of individuals' development and psychological well-being (Erikson, 1959/1980; May & Yalom, 2005; Rogers, 1961). Historically much of the psychological literature focused on idiosyncratic characteristics that differentiate oneself from other individuals (Erikson, 1959/1980), but in recent years scholars have considered collective/social aspects of identity (Adams & Marshall, 1996; Amiot, de la Sablonnière, Terry, & Smith, 2007; Berman, Schwartz, Kurtines, & Berman, 2001; Berzonsky, 1989; Grotevant, 1987). In particular, the construct of ethnic identity has received sustained attention (Atkinson, Morten & Sue, 1998; Ong, Phinney, & Dennis, 2006; Phinney, 1989, 2000; Ruiz, 1990), including a recent special section of the *Journal of Counseling Psychology* (Ponterotto & Mallinckrodt, 2007).

Ethnic identity is the degree to which individuals perceive themselves included and aligned with an ethnic group. Ethnic identity "is a central defining characteristic of many individuals, particularly those who are members of minority . . . groups" (Phinney, 2000, p. 256). The psychological importance of ethnic identity among ethnic minority groups can be attributed to discrimination and differentiation experienced by these groups (Tajfel & Turner, 1986). In the face of opposition and marginalization, a strong ethnic identity helps individuals recognize positive virtues about their own ethnic group, minimizing effects of denigrating beliefs perpetuated in society (e.g., Outten, Schmitt, Garcia, & Branscombe, 2009; Ruiz, 1990). More than a mere cognitive heuristic or coping strategy, ethnic identity pervades both worldview and behavior; it is a complex construct articulated as "a process of exploring the implications of one's ethnicity and coming to understand and affirm one's membership in an ethnic group" (Ong et al.,

2006, p. 963). Descriptions of ethnic identity include elements such as ethnic self-identification; affective components such as a sense of belonging, pride, and affirmation; cognitive components such as knowledge of history and traditions; value orientations such as individualism or collectivism; and differences in components of ethnic identity related to age, phenotype, and context (Phinney, 2000).

Theoretical Conceptualizations of Ethnic Identity

Ethnic identity has been conceptualized differently by different scholars (e.g., Cross & Cross, 2008; Trimble, 2007). Most researchers have based their conceptualizations on the tenets of social identity theory (Tajfel & Turner, 1986) and Erik Erikson's model of ego identity development, which had suggested that one's personal identity includes "a persistent sharing of some kind of essential character with others" (1959/1980, p.101). In this same tradition, the elaboration of Erikson's model by Marcia and colleagues (1993) has been used to identify different ethnic identity statuses, characterized by the presence or absence of exploration and commitment (Phinney, 1989; Umaña-Taylor, Yazedjian, & Bamaca-Gomez, 2004).

Conceptualizations based on these theoretical underpinnings have generally been associated with the work of Jean Phinney (1990), although subsequent refinement has been provided by many others.

An alternative conceptualization of ethnic identity has been provided by Bill Cross, whose groundbreaking description of self-identification among African Americans (1971) was informed by the writings of W. E. B. Du Bois (1903) and, more particularly, Franz Fanon (1963; 1967). This line of scholarship considers dynamics associated with inter-group oppression, marginalization, and internalized racism. Cross has recently developed a holistic model of racial, ethnic, and cultural identity (Cross & Cross, 2008), but his early work proved most influential to

the construct of racial identity (Helms, 1984), which has become distinct from ethnic identity in the psychological literature. Because the distinction between racial identity and ethnic identity is not intuitive, it warrants attention here.

In the *Encyclopedia of Psychology*, the term *racial identity* refers to the unique experience of a specific racial group, such as African American, while *ethnic identity* characterizes one's sense of self in broader terms including culture, race, language, or kinship (Burlew, 2000). Models of racial identity tend to be specific to a particular race (i.e., Cross, 1971; Helms, 1990), but the principle of ethnic identity applies across multiple racial and ethnic groups (Phinney, 1989, 1996). Moreover, descriptions of racial identity explicitly account for intergroup relations, social structures, and internalized stereotypes (Helms, 1990), whereas ethnic identity models do not emphasize those considerations over others (Phinney, 1996). Ethnic identity focuses on the notion of self-identification, whereas racial identity incorporates the influence of societal oppression illuminated through the paradigm of anti-racism (e.g., Helms, 1990; Helms & Talleyrand, 1997). In sum, "racial and ethnic identities differ widely in the ways that they have been defined and studied...the literature dealing with these two types of identity is quite divergent" (Phinney & Ong, 2007, p. 274).

Against the prevailing practice to distinguish ethnic identity from racial identity Bill Cross has cogently argued that "racial, ethnic, and cultural identity overlap at the level of *lived experience* to the point that there is little reason to associate each construct with a distinct identity constellation" (Cross & Cross, 2008, p. 156). Notwithstanding this rationale, confusion and disorder have resulted when researchers have used these terms interchangeably (Trimble, 2007). The terms are overlapping but not synonymous (Phinney & Ong, 2007). Because conceptual blurring has occurred between ethnic identity and racial identity, it is essential that researchers

clarify their intended focus (Helms, 2007). “If race and ethnicity should be treated as separate yet related constructs, so too should racial identity and ethnic identity” (Cokely, 2007, p. 518).

Given the differences in how researchers have conceptualized racial identity and ethnic identity, it is not surprising that the measures commonly used to quantify the two constructs do not share a compatible dimension. Statistical aggregation across measures of racial identity and ethnic identity would therefore be inappropriate. Moreover, subscales of commonly used measures of racial identity cannot be meaningfully combined to yield an overall score (Helms, 1990). Thus the present study follows recommendations to specify the variables involved (Ponterotto & Park-Taylor, 2007) and restricts its focus to the construct of ethnic identity.

Association of Ethnic Identity with Well-being

The psychology literature affirms ethnic identity as a positive personal disposition; accurate self-evaluation should optimally incorporate one’s ethnic heritage. Similar to the achievement of a strong ego identity (Marcia et al., 1993), a strong ethnic identity that is based on sufficient exploration and experience should provide a foundation of self-knowledge from which life decisions can be made with confidence. Identification with a larger collective can also provide a sense of belonging and social support. Thus ethnic identity can provide a sense of strength, competence, and self-acceptance when negotiating complex environmental contingencies (e.g., Outten et al., 2009; Ruiz, 1990). By definition, high levels of ethnic identity should be positively associated with personal well-being.

Numerous research studies have found a positive relationship between a strong ethnic identity and indicators of self-esteem and personal adjustment. For example, a large study ($N = 5,423$) of young adolescents documented significant positive correlations between ethnic identity and a variety of positive attributes such as coping ability, mastery, self-esteem, and optimism

(Roberts et al., 1999). Overall research findings appear to consistently point to the positive association between ethnic identity and multiple aspects of personal well-being across ethnic groups (e.g., Phinney, Cantu, & Kurtz, 1997). Many in the field have interpreted these consistent correlations to indicate causal mediation, with positive ethnic identity assumed to buffer against distress experienced by ethnic minority groups (e.g., Ponterotto & Park-Taylor, 2007).

Although the buffering role of ethnic identity against distress has been widely cited in the literature, a few scholars have observed that in some cases stronger ethnic identity may actually exacerbate susceptibility to distress (e.g., Yip, Gee, & Takeuchi, 2008; Yoo & Lee, 2008). According to self-categorization theory (Turner, Hogg, Oakes, Reicher, & Wetherell, 1987), individuals attune to environmental cues relevant to their own identity. Research has confirmed that individuals with strong ethnic identity attend to inter-ethnic dynamics (Syed & Azmitia, 2008; 2010) and are more likely to report experiences of discrimination (e.g., Sellers & Shelton, 2003) and experience distress because of discrimination (McCoy & Major, 2003). Threat to a group with which one identifies strongly can be experienced as a threat to the self. Hence, the present emphasis in the literature on the positive buffering role of ethnic identity against distress should be tempered with the recognition that strong ethnic identity may exacerbate distress among individuals who experience ethnic discrimination.

Contextual Factors Relevant to the Association between Ethnic Identity and Well-being

Although the construct of ethnic identity should generalize across populations (Phinney, 1989; 2000), recent scholarship has increasingly sought to delineate the circumstances under which ethnic identity is most salient to well-being. The most consistent delineation has involved ethnicity itself. The research literature has largely focused on the experiences of people of color, rather than Whites, for several reasons. Studies have consistently documented that Whites in

North America tend to feel more ambivalent about their ethnic identity than people of color, for whom ethnic identification is more salient (e.g., Bracey, Bamaca, & Umaña-Taylor, 2004; Phinney, 1990).

The view of ethnic identity as the link between ethnicity and psychological outcomes is based on the assumption that ethnicity is a meaningful psychological variable to the extent that it has salience and centrality for the individuals involved. For most Americans of European background, ethnicity is not a salient or important part of their identity, and they can choose what role, if any, it will have for them (Phinney, 1996, p. 922).

Presumably because of this lower valuation of ethnic identity, the positive correlation observed between ethnic identity and well-being in people of color does not occur with consistency among White populations (e.g., Carter et al., 2005). Moreover, because of social dynamics relevant to majority vs. minority status (Tajfel & Turner, 1986), there are reasons to suspect that ethnic identity may serve different psychological functions for White people compared to other groups in North America. Both the subjective experience of ethnic identity and the factors that likely mediate its association with well-being may differ between Whites and people of color. For instance, many researchers have been interested in how ethnic identity may buffer against ethnic prejudice (e.g., McCoy & Major, 2003), which mediational pathway would be much less relevant for Whites than for historically oppressed groups in North America. Based on these several considerations, we delimited our focus in this manuscript to the experiences of people of color, with the understanding that specifying target populations is appropriate and even desirable in psychological research (Sue, 1999).

Recent scholarship has also examined other contextual factors besides ethnicity that may moderate the association between well-being and ethnic identity, including age, gender, level of acculturation, and socioeconomic status, each highlighted briefly here. Given the relevance of identity development processes for adolescents and young adults (Erikson, 1959/1980), most of

the research on ethnic identity has focused on the experiences of high school students (e.g., Fuligni, Witkow, & Garcia, 2005) and college students (e.g., Ong et al., 2006). Although research generally supports the developmental significance of ethnic identity for adolescents and young adults, other age groups have been investigated infrequently (Tsai, Chentsova-Dutton, & Wong, 2002). With respect to the possible influence of gender, studies investigating gender identity have concluded that it is positively associated with ethnic identity (e.g., Hoffman, 2006) and that ethnic identity development may differ across males and females (Hughes, Hagelskamp, Way, & Foust, 2009). However, data contrasted across gender yield either minimal differences or mixed findings (e.g., Phinney & Alipuria, 1990; Phinney et al., 1997; Tatman, 1996). Other studies have found that acculturation to Western society is associated with both ethnic identity and well-being for immigrants and refugees in North America (Barry, 2000; Tsai et al., 2002). Similarly, socioeconomic status has been found to be associated with both ethnic identity and well-being, with stressors associated with ethnic discrimination being compounded by poverty (Myers, 2009). Thus the relevance of ethnic identity to well-being appears to be moderated by personal and social characteristics. Scholars should therefore attend to contextual factors when studying ethnic identity (Syed & Azmitia, 2008; 2010).

Need for Synthesis of Existing Research

Scholars have consistently concluded that a strong ethnic identity is positively associated with personal well-being and successful life adjustment for people of color (e.g., Ong et al., 2006; Phinney, 1989; Phinney et al., 1997; Roberts et al., 1999). However, the overall magnitude of the association between ethnic identity and well-being has remained uncertain, and the impact of possible moderating variables has been unclear (Fuligni et al., 2005; Ong et al., 2006; Phinney, 1990; Phinney et al., 1997). Large numbers of manuscripts on the topic have appeared during the

past two decades, with the body of research examining the relationship between ethnic identity and well-being growing exponentially. The literature has been described as unwieldy and in need of synthesis (Ponterotto & Mallinckrodt, 2007). A synthesis of this research would help to clarify current findings and guide future research efforts. We therefore undertook a systematic review of the research to ascertain the overall magnitude of the association between ethnic identity and well-being and to determine if that association may be moderated by study and participant characteristics.

Method

Published and unpublished studies examining the relationship between ethnic identity of people of color and one or more aspects of their personal well-being were included in this meta-analysis. Basic criteria for inclusion were that the study was written in English and that it provided quantitative data regarding this relationship for individuals identifying themselves as African American, Asian American, Hispanic/Latino(a) American, Native American, and/or Pacific Islander American. When studies also involved White participants, we analyzed only the disaggregated data for the groups just listed. Included studies had a quantitative measure of ethnic identity (explicitly using the term *ethnic* or *ethnicity*) that was statistically associated with at least one quantitative measure of an aspect of personal well-being (e.g., self-esteem, coping ability, symptoms of depression). Studies frequently reported data on other variables (e.g., gender identity), but only data specific to the two constructs of ethnic identity and well-being were extracted. We recognized that wording and conceptual differences would occur across distinct scales measuring these two global constructs, so our initial analyses that combined measures of ethnic identity and well-being were followed by analyses disaggregating the different

measures used across studies. All quantitative research designs except single-case studies were eligible for inclusion. Studies of populations outside the U.S. or Canada were excluded.

Three strategies helped to identify suitable published and unpublished studies. First, research team members searched abstracts retrieved from the following electronic databases: PsychINFO, PsycArticles, Science Citation Index (SCI), Social Sciences Abstracts, Social Sciences Citation Index (SSCI), and Digital Dissertations. In these searches, the phrase *ethnic identity(ies)* was crossed with a list of dozens of descriptors of well-being, including *mental health, self-esteem, happiness, depression, etc.* Second, the reference sections of identified studies were reviewed in order to locate additional articles that fit the inclusion criteria but were not initially found through the database searches. Third, attempts were made to contact authors who had published two or more articles on this topic, asking for information regarding other (unpublished) studies that could possibly be included in the meta-analysis.

Data Coding

Variables coded across all studies included (a) the source of the study (journal article, dissertation, etc.); (b) the number of participants and their age, education, gender, race, and socioeconomic status; (c) the location of data collection if reported (public school, clinical setting, etc.); (d) the research design; and (e) the measures of ethnic identity and well-being used in the study. Four graduate and six undergraduate students were trained in meta-analytic coding, and these team members coded manuscripts in pairs to enhance the accuracy of coding decisions and data entry. Each article was coded by two separate pairs of coders. The inter-rater agreement of coding decisions across coding pairs was acceptably high for categorical variables (average Cohen's Kappa = .86) and for continuous variables (average intraclass correlation coefficient = .93 utilizing one-way random effects models for single measures). Inter-rater agreement was high

because (1) coders had worked together on similar projects previously, and (2) the majority of information obtained from the studies was extracted verbatim from the documents, which reduced the likelihood of coding error. When a manuscript did not contain certain information, the study was excluded from the analysis of that particular variable but not from other analyses. When coding inconsistencies occurred across the teams, the disparities were resolved through further examination of the manuscript.

Computation and Analysis of Effect Size Estimates

The studies included in this meta-analysis frequently (90%) reported data in terms of bivariate correlations (Pearson's r). Reports including other statistics (e.g., analyses of variance, t -tests, p -values) were transformed to the metric of r using statistical software. Coders assigned a positive value to effect sizes indicating a stronger ethnic identity co-occurring with greater well-being (or weaker ethnic identity co-occurring with symptoms of mental illness, distress, etc.), with a negative value indicating an inverse association between ethnic identity and personal well-being. In two cases when an analysis was reported to be "statistically significant" but no statistic was provided, the r value was determined by the corresponding α level (assuming two-tailed $\alpha = .05$ unless reported otherwise). In six cases analyses described as "non-significant" without any additional information were set to $r = .00$.

Many studies used in the meta-analysis reported data on multiple measures of well-being, such as self-esteem and coping ability. Similarly, some studies reported data on multiple groups (i.e., across races or genders). If each of these data points had been included in the omnibus analysis, the results would be biased in favor of those studies that had contributed multiple effect sizes. Moreover, inclusion of multiple effect sizes within studies would violate the assumption of independent samples; even though the particular sub-samples may have differed on a

characteristic such as race, the data shared a common method, experimental design, location and setting, etc. To overcome this issue, all effect sizes within each study were averaged (weighted by the number of participants included in each analysis) to compute an aggregate effect size for that particular study (Mullen, 1989). Thus each study contributed only one data point to the calculation of the omnibus effect size. However, in one instance where a grouping variable that was found to moderate the omnibus results required subsequent detailed exploration to better interpret the finding (the type of dependent measure used within studies), we conducted an additional analysis by shifting the unit of analysis (Cooper, 1998). In that analysis, we included multiple effect sizes within studies if they were based on distinct measures of well-being (i.e., self-esteem and symptoms of depression). Thus this approach disaggregated results across conceptually distinct measures used within studies.

Because factors other than ethnic identity influence well-being and because the magnitude of the association between ethnic identity and well-being was expected to differ across individual participants and across individual studies, random effects models were used in analyzing the data using macros for SPSS provided by Lipsey and Wilson (2001). The use of a random effects model also allows for generalization beyond the studies included in the analyses (Hedges & Vevea, 1998).

Results

Descriptive Characteristics

Statistically non-redundant effect sizes were extracted from 184 studies examining the relationship between ethnic identity and one or more aspects of personal well-being (Table 1). The number of participants represented across all studies was 41,626, 62 percent of whom were female, and the average age of participants was 22.9 years. Average ethnic/racial composition of

participants across all studies was 33% African Americans, 35% Asian Americans, 21% Hispanic/Latino(a) Americans, 5% Native Americans, 1% Pacific Islander Americans, 5% from “other” non-White groups.

Omnibus Analysis

Across all 184 studies, the random effects weighted average effect size was $r = .173$ ($SE = .01$, $p < .0001$), with a 95% confidence interval of $r = .15$ to $r = .19$. Effect size estimates ranged from $r = -.18$ to $r = .57$. The effect size estimates demonstrated considerable variability with the index of heterogeneity reaching statistical significance ($Q_{(183)} = 579.5$, $p < .0001$; $I^2 = 71.5\%$). This suggests that the systematic effect size variability was greater than expected from sampling error alone. Additional analyses were conducted in order to determine the degree to which different variables moderated the variability in effect size estimates.

Assessment of Possible Publication Bias

The publication status of research studies used in a meta-analysis can potentially impact its findings because of the tendency for meta-analyses to include predominantly published studies, which are typically easier to obtain than unpublished studies and which tend to have effect sizes of larger magnitude than unpublished studies. In the present meta-analysis, the average effect size of the published studies was higher ($r = .19$) than that of the unpublished studies ($r = .16$; $Q = 3.1$, $p = .05$). However, the number of unpublished studies included in this meta-analysis ($k = 108$, all unpublished doctoral dissertations) actually exceeded the number of published studies ($k = 76$). Analysis of a funnel plot (effect sizes by standard errors) indicated that the data were evenly dispersed with no missing corners, which would have suggested missing studies with small numbers of participants—those least likely to be published (Begg, 1994; Lipsey & Wilson, 2001). Analyses using Duvall and Tweedie’s (2000a, 2000b) “trim and fill”

method also led us to conclude that publication bias did not adversely impact the results of this meta-analysis.

Moderation by Participant Characteristics

Because person level factors influence both ethnic identity and well-being, it was essential to ascertain whether the association between those two constructs may have differed as a function of participant characteristics (e.g., age, gender, race). To detect whether or not participant characteristics had any systematic influence on effect size magnitude we conducted random effects weighted correlations and analyses of variance.

Previous scholarship has emphasized the developmental value of ethnic identity to well-being (e.g., Phinney, 2006), so we first sought to establish whether the average age of the research samples accounted for a significant portion of the between-studies variance of effect sizes. The resulting correlation of $-.20$ ($p = .007$) suggested that studies with participants who were younger tended to yield effect sizes of a higher magnitude than those in which participants were older. Inspection of the associated scatterplot indicated that none of the studies with participants averaging at least 40 years of age had effect sizes that were greater than $.25$, whereas studies with participants younger than 40 years had effect sizes across a broader range of positive values. When the nine studies with participants averaging 40 years of age or older were temporarily excluded, the correlation between participant age and effect size magnitude was no longer statistically significant ($r = -.07$).

Because the relevance of ethnic identity to well-being may interact with gender (e.g., Hughes et al., 2009), the possible influence of participant gender was explored by correlating the percentage of females in each study with its effect size. The resulting random effects weighted

correlation was small ($r = -.12$, $p = .10$), indicating that participant gender composition did not moderate the overall results.

Previous research has found racial differences in the absolute magnitude of the association between ethnic identity and well-being among people of color (e.g., Yoo & Lee, 2008), so we compared the results of studies of African Americans, Asian Americans, Hispanic/Latino(a) Americans, and Native Americans (Table 2). The magnitude of the averaged correlations was similar across studies of these distinct groups, indicating no consistent differences ($Q = 4.5$, $p = .21$).

Both ethnic identity and well-being are associated with acculturation processes (Berry, 2003). In the present meta-analysis, coders sought information regarding participants' level of acculturation but when not directly reported they evaluated several indicators of acculturation: immigration status of the participants (i.e., years/generations of residence in North America), English language proficiency and language spoken at home, level of education, location of residence (i.e., urban ethnic enclave, American Indian reservation), and data collection procedures (i.e., targeting populations likely to be low in acculturation). Studies that contained at least three indicators of low acculturation were coded as having participants with low levels of acculturation; studies describing one to two indicators of low acculturation were coded as having participants with moderate levels of acculturation; studies with at least two indicators of high acculturation were coded as having participants with high levels of acculturation; and studies failing to report pertinent information were not coded with respect to this variable. Analysis of the resulting data indicated that participants' level of acculturation did moderate the results ($Q = 10.8$, $p = .01$). Studies using participants with low levels of acculturation to Western society had

average effect sizes of smaller magnitude compared to those using participants with moderate and high levels of acculturation.

Because poverty may exacerbate stressors experienced by people of color (Myers, 2009), it was important to investigate whether socioeconomic status moderated the association between ethnic identity and well-being. Analyses with two variables highly associated with socioeconomic status, level of education and participants identified as at-risk for social problems (i.e., delinquency, criminal activity), were also conducted. However, no differences were observed across participant socioeconomic status ($Q = 1.6, p = .46$), level of education ($Q = 0.6, p = .74$), or at-risk status ($Q = 3.5, p = .17$), indicating that the relationship between ethnic identity and well-being did not vary across those conditions.

Moderation by Study Characteristics

As expected based on previous observations (Ponterotto & Park-Taylor, 2007), the vast majority of studies used the Multigroup Ethnic Identity Measure (MEIM; Phinney, 1992) to measure ethnic identity (Table 2). However, the magnitude of the overall results remained consistent across studies using different measures of ethnic identity ($Q = 1.0, p = .62$). Insufficient data were available to conduct more refined analyses contrasting specific measures of ethnic identity. The MEIM was the only measure of ethnic identity used in more than six studies.

Because well-being is necessarily multi-faceted, we investigated differences in the results of studies evaluating distinct components of well-being. The type of dependent variable used within studies did significantly moderate the results ($Q = 48.8, p < .0001$). Participants' ethnic identity was clearly related to their scores on positive aspects of well-being, such as self-esteem. However, participants' ethnic identity was minimally related to their scores on measures of mental health symptoms. Because this finding was noteworthy, we subsequently disaggregated

the data of studies using more than one type of measurement, such that effect sizes for each measurement type were included in the analysis (shifting units of analysis, as described previously; see Cooper, 1998). The resulting comparison across measurement type also reached statistical significance ($Q = 232.9, p < .0001$). Measures of self-esteem, self-mastery, and general well-being yielded the largest average effect sizes, and measures of mental health symptoms yielded the smallest average effect sizes.

Recognizing that the type of research design used by researchers may yield differences in effect size estimates, we evaluated whether the magnitude of effect sizes obtained in cross-sectional studies differed from those of longitudinal studies. Cross-sectional research yielded larger average effect sizes than longitudinal designs ($Q = 3.9, p = .05$).

Regression Model Predicting Effect Sizes from Moderator Variables

To determine the degree of redundancy among the several statistically significant predictors of effect size magnitude identified in the analyses reported above, we performed a random intercept, fixed slopes multiple regression model. Specifically, effect sizes were regressed on participants' mean age and level of acculturation, design type (cross-sectional vs. longitudinal), and the type of well-being measured. Values were centered on the between-study means. Thus a value of zero, for example, for mean age, actually represented the typical mean age across the population of studies included in the meta-analysis. To include all cases in the analysis, estimated levels of participant acculturation were contrasted with studies not reporting that information; categories of measures of well-being were similarly dummy coded to contrast with multidimensional measures.

The set of moderator variables accounted for 24% of the variance in effect sizes, which result was statistically significant ($Q_8 = 56.3, p < .0001$); between-studies variance was accounted

for ($Q_{165} = 179.1, p = .21$). Table 3 shows the regression coefficients and associated levels of statistical significance for each variable. The parameter labeled "Constant" is the effect size ($r = .172, p < .0001$) that would be expected in a study in which all moderator variables took the value of zero. Interpretation of the B weights reveals the extent to which each study characteristic would be expected to influence the observed overall effect size when controlling for the presence of the other variables. Thus when studies use measures of mental health the expected effect size would be $r = .079$ (.172 less the B weight of -.093), when studies use measures of self-esteem the expected effect size would be $r = .247$ (.172 + .075), and when studies use measures of well-being the expected effect size would be $r = .252$ (.172 + .08). In the presence of the other variables, study design (cross-sectional vs. longitudinal) no longer predicted effect size magnitude, and low levels of participant acculturation (but not medium or high levels) explained differences in effect size magnitude.

Discussion

This meta-analysis synthesized contemporary research examining the relationship between the construct of ethnic identity (the degree to which individuals perceive themselves included and aligned with an ethnic group) and personal well-being among people of color residing in North America. The overall findings demonstrated a modest positive relationship between the two constructs ($r = .17$). This result is consistent with previous conclusions that although ethnic identity is consistently positively related to measures of well-being, it accounts for a small proportion of variance (Phinney, 1992; Phinney & Alipuria, 1990; Phinney et al., 1997; Roberts et al., 1999). Even after considering possible qualifications of the statistics (e.g., Ozer, 1985), 97% of the variance remains unexplained (coefficient of non-determination). Ethnic

identity may be highly salient for many people of color, but many other factors influence their well-being.

Several contributions of the present meta-analysis came to light from the analyses of possible moderating variables. First, the association between ethnic identity and well-being did not differ as a function of several participant characteristics: race, gender, education level, and socioeconomic status. The association of ethnic identity with well-being remains consistent but modest across those conditions.

Second, because the vast majority of research studies in the field (and 69% of the studies in this meta-analysis) measured ethnic identity with the MEIM (Phinney, 1992), it was essential to confirm that the results of studies using that instrument were similar to those of studies using other measures. The data supported that conclusion: The results obtained with the MEIM did not differ from those obtained with other instruments. The results of this meta-analysis may therefore represent the broad construct of ethnic identity, not merely the MEIM's operationalization of that construct.

Third, studies with younger participants tended to have average effect sizes of slightly greater magnitude than studies with participants over the age of 40 years. This finding could indicate that a strong ethnic identity benefits adolescents and young adults more than older adults (e.g., Yip et al., 2008). Middle-aged and older adults may base their well-being on factors besides ethnic identity, or their ethnic identity may be better established, such that it is taken for granted in the broad context of well-being. Although Erikson (1959/1980) and other identity theorists (Berzonsky, 1989; Grotevant, 1987) emphasize that identity formation is a lifelong process, it is nonetheless most critical for adolescents and young adults (Berman et al., 2001; Erikson, 1959/1980; Marcia et al., 1993). Nevertheless, because relatively few studies examined

middle-aged and older adults, the lower magnitude of the results observed in this meta-analysis among research participants over 40 years of age will require subsequent confirmation through future studies of those populations (Tsai et al., 2002).

Fourth, the level of participant acculturation moderated the results of the meta-analysis. The relationship between ethnic identity and well-being was minimal in five studies with participants for whom there was strong evidence of low acculturation to Western society (i.e., recent immigrants/refugees). Because individuals with low levels of acculturation tend to have ethnically homogeneous social networks (Phinney, Horenczyk, Liebkind, & Vedder, 2001) their ethnic identity may be taken for granted and remain a psychologically passive construct, despite high absolute levels of in-group identification (Phinney, 2006). Social identity theory (Tajfel & Turner, 1986) would posit that a group would need to experience contrast (opposition/oppression) for ethnic identity to be activated as a coping strategy, but recent immigrants who reside in ethnic enclaves or, oppositely, who actively seek assimilation (i.e., try to fit in to mainstream society and minimize their differences) may not initially activate ethnic identity as a coping strategy. Nevertheless, theories of acculturation (Berry, 2003) emphasize that multiple processes influence the affirmation of one's own ethnicity and its relevance to well-being, such that an accurate interpretation of our finding would require a more detailed understanding of the participants' contexts than is possible in a meta-analysis. Future research will be needed to clarify the relationship between ethnic identity and well-being as a function of acculturation. In any case, the fact that only five studies investigated low acculturated samples limits confidence in the finding, which could be attributable to sampling error.

Finally, this meta-analysis revealed large differences across the results of studies based on the aspect of well-being evaluated. Ethnic identity was consistently associated with measures of

self-esteem and well-being, but it was not as strongly related to measures of mental health symptoms, such as depression or anxiety. It is possible that ethnic identity is related to positive personal attributes and perceptions but does not directly buffer against distress or mental illness. It may be that mental health disorders are influenced so strongly by other factors (i.e., coping skills, neurological functioning, socialization) that the contribution of ethnic identity is meager by comparison. Although some have hoped that a strong ethnic identity would protect against psychopathology (Suzuki, Alexander, Lin, & Duffy, 2006), the data seem to indicate that ethnic identity is largely independent of mental health symptoms and subjective feelings of distress.

Implications for Future Research

Ethnic identity is a complex concept (Phinney & Ong, 2007). Hundreds of studies have been conducted on the topic, but this meta-analysis demonstrates that many questions remain regarding the influence of ethnic identity in the lives of people of color. For instance, over many years the consistent positive associations observed between ethnic identity and well-being have led many scholars in the field to assume that a strong ethnic identity contributes to personal well-being. While this remains a plausible explanation, we cannot currently provide evidence of causality; all but 2 of the 184 studies in this meta-analysis reported correlational data, but none involved experimental designs. The finding that ethnic identity may not buffer against mental illness, although it has been widely expected to do so, indicates a need for greater clarity regarding its exact influence. For instance, does strength of ethnic identity primarily reflect positive socialization within one's social network and family of origin (Hughes et al, 2008), such that it is actually positive socialization (e.g., close family ties and strong social networks) rather than strength of ethnic identity that is primarily responsible for increased well-being? Future studies that control for socialization factors (i.e., social skills, quality of familial and peer

relations, institutional/organizational involvement) could begin to isolate the independent contribution of ethnic identity affirmation (e.g., Supple, Ghazarian, Frabutt, Plunkett, & Sands, 2006).

Much of the research on ethnic identity has already focused on adolescence (Fuligni et al., 2005; Phinney, 1989; Phinney et al., 1997; Roberts et al., 1999). However, as has been pointed out by developmental theorists (e.g., Quintana, 2007), little research has explicitly evaluated relevant developmental processes over time. How does the psychological relevance of ethnic identity change over the lifespan--and for what reasons? Longitudinal studies tracking changes across the lifespan and qualitative research exploring the meaning of ethnic identity for different age cohorts may help to illuminate some of these issues (Phinney & Ong, 2007; Ponterotto & Park-Taylor, 2007). Future research can also verify whether the contribution of ethnic identity to well-being differs as a function of individuals' stage of identity development by using direct measures rather than merely using participant age. It would also be useful to simultaneously evaluate conceptually related variables such as (1) ego strength, (2) cognitive complexity, (3) racial forgiveness (Quintana, 2007), and (4) worldview inclusiveness. Understanding which specific components of development mediate the association of ethnic identity with well-being should have direct implications for improving the efficacy of initiatives designed to promote well-being.

In addition to exploring changes in ethnic identity over the lifespan, research might profitably involve explicit contrasts between different situations (i.e., low vs. high racial discrimination, low vs. high inter-racial cooperation) in which the psychological functions of ethnic identity may differ. Because ethnic identity may exacerbate the distress of ethnic discrimination (Yoo & Lee, 2008), it seems essential to give greater research attention to the

functions of ethnic identity. What motives do individuals' ascribe to their ethnic self-identification and how do those motives change across settings? Are the functions of ethnic identity conditional upon stable interaction patterns? How do local vs. macro inter-group dynamics influence ethnic identity (Phinney, 2000; Tsai et al., 2002)? Qualitative research studies have documented interactions between ethnic identity and context (e.g., Inman, Howard, Beaumont, & Walker, 2007), but quantitative research should now more explicitly evaluate differences across settings (e.g., Umaña-Taylor, 2004).

Previous research clearly indicates that ethnic identity is multidimensional (Atkinson, Morten & Sue, 1998; Phinney & Ong, 2007; Ruiz, 1990; Umaña-Taylor, 2004). However, the present meta-analysis included data that most often operationalized the construct unidimensionally (i.e., total MEIM scores). Although some evidence questions the underlying assumptions for different theoretical stages/statuses (Quintana, 2007), it would be important for future research to ascertain to what degree the linear relationships with well-being varies across qualitatively different statuses (e.g., exploration, moratorium) and components of identity (e.g., attitudinal, behavioral). "Various components of ethnic identity relate differently to psychological outcomes" (Phinney, 1996, p. 923). Future quantitative research could parse differences in individuals' experiences of ethnic identity that are explicit in only a few contemporary research studies (e.g., Yoo & Lee, 2008).

One of the most pressing areas for future inquiry concerns the association between ethnic identity and mental health symptoms, including subjective distress. The meta-analytic data showed this association to be of low magnitude. However, the vast majority of studies included in the meta-analysis involved normal members of communities; hence a restriction of range in measures of psychopathology may have artificially attenuated the magnitude of the observed

correlations. Even though the results of the few studies including at-risk or clinical samples did not differ from those using normal community members, the small number of clinical studies does limit our certainty about the interpretation of the data. Research might productively focus on identifying the situations in which a strong ethnic identity protects against depression and anxiety.

Implications for Practice

This systematic review of research provides information that can be helpful to psychotherapy and to primary (preventative) interventions. Ethnic identity is frequently a “central defining characteristic” (Phinney, 2000, p. 255) for people of color. Nevertheless, the association of ethnic identity with well-being was found to be highly variable (ranging from $r = -.18$ to $r = .57$). Rather than assume anything about the relevance of ethnic identity, therapists can explore the clients’ perceptions of their well-being and ethnic identity. To minimize possible misinterpretations of their clients’ perceptions, therapists can also explore their own ethnic identity and encourage similar exploration among students and supervisees (Ponterotto & Park-Taylor, 2007).

How clients express their ethnic identity could reflect acquired self-affirmation skills and coping strategies. Knowing these skills and strategies would help a therapist to match interventions to existing client strengths. Alternatively, how individuals manifest their ethnic identity can also reveal circumstantial constraints impacting clients’ attitudes and behaviors. Awareness of when clients’ ethnicity becomes most salient for them can shed light on important contextual considerations (e.g., Tsai et al., 2002). For example, in what ways does openly affirming one’s ethnic identity result in objectification or distress? How does ethnic-specific socialization foster a sense of control in response to a local climate of marginalization? Viewing ethnic identity qualitatively, explicitly accounting for the range of ecological contexts (Neville &

Mobley, 2001), should not only help therapists to better understand their clients (Trimble, 2007) but also enhance the therapeutic alliance and improve client outcomes (Atkinson, Bui, & Mori, 2001). Mental health interventions are most effective when they reflect the specific cultural experiences of the client (Griner & Smith, 2006; Smith, 2010).

Strengths and Limitations of the Meta-Analysis

Meta-analysis is a useful method by which a body of empirical research can be evaluated. The aggregation of the results of numerous studies increases the sample size of observations and decreases the standard error of the estimates. Meta-analytic results provide statistical estimates that are less biased than individual studies or narrative literature reviews (Cook & Leviton, 1982; Cooper, 1998). Meta-analysis also enables the researcher to analyze the impact of specific variables across studies with considerable precision (Lipsey & Wilson, 2001). In this meta-analysis, 184 studies with a total of 41,626 participants were evaluated, providing greater breadth of coverage than any previous review of the relationship between ethnic identity and well-being.

Of course, meta-analysis has several limitations. First, only studies with quantitative findings can be included (Lipsey & Wilson, 2001). Case studies and qualitative research that provide indispensable insights on the topic require a separate systematic review. Second, the overall results of the meta-analysis depend on the methodological rigor and the philosophical/theoretical assumptions of the studies included in the meta-analysis (Cooper, 1998; Cooper & Hedges, 1994; Matt & Navarro, 1997). Our meta-analytic results have exposed a need for studies that go beyond reporting bi-variate correlations, so future results may differ as methodology becomes more refined. Our results cannot speak to theoretical issues, but the field is currently attending to that arena (Ponterotto & Park-Taylor, 2007), albeit with a heavy emphasis on measurement rather than clinical considerations. Third, meta-analyses cannot adequately

control for systematic threats to internal or external validity already present in the literature. For instance, systematic selection of easily accessible participants (i.e., students) could potentially misrepresent the nature of the relationship between ethnic identity and well-being for other populations. Because much of the research reviewed here consisted of unpublished doctoral dissertations, other systematic sources of bias may be present (i.e., inadequate conceptualization or inconsistent procedures). A fourth limitation of meta-analysis is that it is essentially descriptive; causal relationships cannot be demonstrated. For instance, our analyses did not address whether ethnic identity buffers against ethnic discrimination. Future comparative, multi-level, and intervention studies can refine interpretation of the specific psychological functions of ethnic identity.

Conclusion

Over the past two decades the construct of ethnic identity has received sustained attention in the psychological research literature. The aggregate results of 184 studies conclusively demonstrate that ethnic identity is modestly salient to the self-esteem and well-being of people of color. Nevertheless, (1) the magnitude of the association is highly variable, and (2) positive ethnic identity does not appear to diminish personal distress or reduce symptoms of psychopathology at the aggregate level. This latter finding may be due to increased susceptibility to distress under conditions of ethnic discrimination (Yip et al., 2008; Yoo & Lee, 2008), but a larger perspective is that mental illness is influenced by multiple factors, of which strength of ethnic self-identification is only one.

In any event, the findings of this review raise questions about possible multiple paths of causal influence. For instance, does ethnic identity enhance self-esteem, or do people of color with high self-esteem value their ethnicity? Until now the field has focused primarily on ethnic

identity itself, without detailed consideration of how related factors that facilitate well-being (i.e., ego strength, social skills, strength of interpersonal networks, family cohesion, community/organizational involvement) may simultaneously promote ethnic identity development. Studies of this nature may shed additional light on causal considerations, as well as optimal forms of mental health intervention more deeply congruent with client ethnic identity (Trimble, 2007). We anticipate research that addresses these considerations to better promote well-being and mental health among historically oppressed peoples.

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Table 1

Descriptions of the 184 Studies Included in the Meta-Analysis.

Study	N	Effect Size (<i>r</i>)	95% CI	
			Lower	Upper
Adams (1997)	73	.31	.09	.50
Adelabu (2008)	661	.39	.32	.45
Ali (2006)	300	.24	.13	.35
Asner (1999)	86	.01	-.20	.22
Bacho (1997)	120	-.10	-.26	.09
Barry (2000)	150	-.10	-.22	.10
Basurto (1995)	99	.17	-.03	.36
Beiser & Hour (2006)	647	.02	-.06	.10
Bhadha (2001)	360	.07	-.03	.17
Bhargava (2007)	147	-.03	-.19	.13
Biggs (1998)	213	.24	.11	.36
Blash & Unger (1995)	68	.20	-.04	.42
Bosarge (2007)	105	-.10	-.24	.14
Bracey, Bamaca, & Umana-Taylor (2004)	1531	.21	.16	.26
Bruner (2004)	281	.33	.22	.43
Byers (2005)	197	.17	.03	.31
Canabal (1995)	101	.24	.05	.42
Carlson, Uppal, & Prosser (2000)	685	.31	.24	.38
Carter, Sbrocco, Lewis, & Friedman (2001)	59	.20	-.06	.43

(continued)

Table 1 (continued)

Study	<i>N</i>	Effect Size (<i>r</i>)	95% CI	
			Lower	Upper
Carter et al. (2005)	191	.13	-.01	.27
Chang (1999)	120	.37	.20	.52
Chapell (1999)	314	.39	.29	.48
Charlot-Swilley (1997)	99	.45	.28	.60
Chatman (2006)	172	.33	.18	.45
Chow (2003)	178	.21	.07	.35
Christensen (1999)	96	-.10	-.28	.60
Cislo (2008)	291	.12	.00	.23
Creagh-Kaiser (2003)	86	.27	.06	.45
Daniels (2004)	88	-.13	-.33	.08
Dejud (2007)	131	.20	.03	.36
Delva (2005)	75	.13	-.10	.35
Des Jardins (1996)	62	.20	-.05	.43
Diwan, Jonnalagadda, & Balaswamy (2004)	226	-.01	-.14	.12
Dixon (2002)	176	.15	.00	.29
Do (2006)	262	.34	.22	.44
Douglas (2004)	111	-.02	-.21	.16
Edwards (2003)	293	.13	.01	.24
Elek-Fisk (1998)	258	.21	.09	.32

(continued)

Table 1 (continued)

Study	<i>N</i>	Effect Size (<i>r</i>)	95% CI	
			Lower	Upper
Eng (1982)	138	.16	.00	.32
Farver, Narang, & Bhada (2002)	180	.05	-.10	.19
Foster (2004)	142	.13	-.04	.29
French (2002)	558	.14	.05	.22
Gamst et al. (2002)	204	.13	-.01	.26
Gamst et al. (2006)	355	.09	-.01	.20
Gaudet, Clement, & Deuzeman (2005)	96	.28	.08	.45
Gaylord-Harden, Ragsdale, Mandara, Richards, & Peterson (2007)	227	.17	.04	.29
Gilmore (2000)	49	.20	-.09	.46
Gloria & Hird (1999)	98	.26	.06	.44
Gong (2007)	206	.53	.42	.62
Gonzalez (2003)	141	.22	.06	.37
Goodstein & Ponterotto (1997)	126	.37	.21	.51
Gotowiec (1999)	162	.31	.16	.44
Graham (2001)	54	.19	-.08	.44
Greene (1997)	189	-.08	-.22	.06
Harrison (1997)	53	.28	.01	.51
Hazen (1994)	80	.10	-.13	.31
Holmes (2007)	157	.03	-.13	.19

(continued)

Table 1 (continued)

Study	<i>N</i>	Effect Size (<i>r</i>)	95% CI	
			Lower	Upper
Hovey, Kim, & Seligman (2006)	133	.09	-.08	.26
Inoue (1997)	69	.00	-.24	.24
Iwamoto (2007)	402	.27	.18	.36
Iyer (2000)	122	.07	-.11	.24
Jo (1998)	150	.16	.00	.31
Jones, J. E. (1999)	135	.23	.01	.30
Jones, M. D., & Galliher (2007)	181	.16	.06	.38
Joseph (1994)	92	.57	.41	.69
Juang, Nguyen, & Lin (2006)	261	.18	.06	.29
Kamins (2003)	110	-.05	-.24	.14
Kaneshiro (1996)	339	.05	-.05	.16
Kaslow et al. (2004)	200	.24	.11	.37
Kauh (2005)	120	.07	-.11	.25
Kekwaletswe (2007)	94	.11	-.10	.30
Kiang, Yip, Gonzalez-Backen, Witkow, & Fuligni (2006)	415	.13	.03	.22
Kim (2006)	112	.09	-.10	.27
Kim & Rew (1994)	76	.05	-.18	.27
Kim-Bae (1999)	121	.03	-.15	.21
Kwan (1996)	224	.28	.15	.40

(continued)

Table 1 (continued)

Study	<i>N</i>	Effect Size (<i>r</i>)	95% CI	
			Lower	Upper
Lamborn & Nguyen (2004)	158	.23	.08	.37
Larson (1995)	7	.45	-.46	.90
Laurent (1997)	193	.41	.28	.52
Lavish (2007)	151	.19	.03	.34
Lee, R. M. (2005)	84	.36	.21	.44
Lee, R. M. & Yoo (2004)	323	.23	.12	.33
Lee, S. (2001)	217	.33	.16	.53
Lewis, C. (1997)	85	.24	.03	.43
Lewis, D. (1998)	100	-.04	-.24	.16
Lopez (2005)	73	.41	.20	.58
Lorenzo-Hernandez & Ouellette (1998)	206	.46	.34	.56
McCubbin (2003)	243	.19	.06	.30
McDuffie (1997)	188	.28	.14	.41
McKnight (2003)	105	.11	-.08	.30
McMahon & Watts (2002)	117	.22	.04	.39
Mohanty, Keokse, & Sales (2006)	78	.33	.12	.51
Mukoyama (1998)	86	.36	.16	.53
Nagara (2005)	253	.02	-.10	.14
Negy, Shreve, Jensen, & Uddin (2003)	124	.17	-.01	.34

(continued)

Table 1 (continued)

Study	<i>N</i>	Effect Size (<i>r</i>)	95% CI	
			Lower	Upper
Newman, Sontag, & Salvato (2006)	134	.15	-.02	.31
Newsom (2004)	61	.20	-.05	.43
Northwood (1996)	40	.20	-.12	.48
O'Donnell, O'Donnell, Wardlaw, & Stueve (2004)	879	.03	-.04	.09
Orellana (2004)	201	.00	-.14	.14
Pallock (2003)	159	.29	.13	.42
Parisi (1997)	91	.10	-.11	.30
Park-Adams (1997)	75	.09	-.14	.31
Paschall & Flewelling (1997)	263	.30	.19	.41
Perez (1998)	130	-.05	-.22	.13
Petersons, Rojhani, Steinhaus, & Larkin (2000)	218	-.17	-.30	-.04
Phan & Tylka (2006)	200	.12	-.02	.25
Phillips (1994)	309	.05	-.06	.16
Phinney (1997)	547	.05	-.03	.13
Phinney (1992)	518	.30	.22	.37
Phinney & Alipuria (1990)	150	.29	.14	.43
Phinney, Cantu, & Kurtz (1997)	604	.22	.14	.29
Phinney & Chavira (1992)	64	.48	.27	.65
Phinney, Madden, & Santos (1998)	164	.13	-.03	.28

(continued)

Table 1 (continued)

Study	<i>N</i>	Effect Size (<i>r</i>)	95% CI	
			Lower	Upper
Pittenger (1998)	136	.23	.07	.39
Prelow, Bowman, & Weaver (2007)	112	.17	-.02	.34
Pugh-Lilly (2000)	121	-.07	-.24	.11
Quinones (1996)	147	.16	.00	.31
Ramirez (1997)	150	.29	.14	.43
Reddy (2002)	132	.06	-.11	.23
Resnicow, Soler, Braithwaite, Selassie, & Smith (1999)	346	.10	-.01	.20
Rivas-Drake, Hughes, & Way (2008)	84	.25	.03	.44
Roberts, D. (1997)	150	.29	.09	.36
Roberts, R. E., et al. (1999)	1992	.12	.08	.16
Romero & Roberts (2003)	881	.26	.20	.32
Rosario (1999)	80	.25	.03	.45
Rosen (2004)	71	-.18	-.39	.06
Ryu (2004)	25	.53	.17	.77
Saavedra (1994)	212	.10	-.04	.23
Santana (1994)	204	.29	.16	.41
Sasson (2001)	21	.12	-.33	.52
Schmidt (2006)	121	.16	-.02	.33
Schneider (1995)	94	.14	-.06	.33

(continued)

Table 1 (continued)

Study	<i>N</i>	Effect Size (<i>r</i>)	95% CI	
			Lower	Upper
Schwartz, Zamboanga, & Jarvis (2007)	347	.14	.04	.24
Setty (2006)	65	-.08	-.32	.17
Shibazaki (1999)	136	.08	-.09	.25
Shrake & Rhee (2004)	217	.18	.05	.31
Siegel, Yancey, & McCarthy (2000)	370	.12	.01	.22
Sieger & Renk (2007)	134	.25	.08	.40
Smith & Brookins (1997)	159	.27	.12	.41
Smith, E. P. (2003)	60	.21	-.05	.44
Smith, F. D. (2006)	126	.08	-.09	.25
Sobansky (2003)	58	.25	-.01	.48
Susberry (2004)	94	.19	-.02	.37
Swenson & Prelow (2005)	133	.18	.01	.34
Tatman (1996)	139	.17	.00	.33
Terrell (2005)	115	.21	.03	.38
To (1999)	106	.32	.14	.48
Tovar-Murray (2004)	196	.31	.18	.43
Tremayne (1997)	30	.09	-.28	.44
Tsoi-Pullar (1994)	209	.34	.21	.45
Turnage (1998)	105	.31	.13	.47

(continued)

Table 1 (continued)

Study	<i>N</i>	Effect Size (<i>r</i>)	95% CI	
			Lower	Upper
Turnage (2004)	105	.36	.18	.52
Umaña-Taylor (2004)	1061	.16	.10	.22
Umaña-Taylor & Shin (2007)	657	.22	.15	.29
Umaña-Taylor & Updegraff (2007)	273	.17	.06	.27
Umaña-Taylor, Vargas-Chanes, Garcia, & Gonzales-Backen (2008)	323	.27	.16	.36
Umaña-Taylor, Yazedjian, & Bamaca-Gomez (2004)	468	.24	.15	.32
Utsey, Chae, Brown, & Kelly (2002)	160	.33	.18	.46
Van Buren (2004)	523	-.04	-.12	.05
Vuong (2004)	109	-.16	-.34	.03
Walker (2002)	112	.17	-.02	.34
Walker, Wingate, Obasi, & Joiner (2008)	296	.19	.08	.30
Wallen (2001)	145	.09	-.08	.24
Ware (2006)	200	-.05	-.19	.09
Weathersby (2007)	316	.22	.11	.32
Webb-Msemaji (1996)	112	.12	-.07	.30
West (2004)	86	.07	-.14	.28
White & Burke (1987)	73	.23	.00	.44
Wong, Eccles, & Sameroff (2003)	629	.15	.07	.23
Worrell (2007)	227	.21	.08	.33

(continued)

Table 1 (continued)

Study	<i>N</i>	Effect Size (<i>r</i>)	95% CI	
			Lower	Upper
Yang (2006)	137	.12	-.05	.28
Yasui, Dorham, & Dishion (2004)	82	.49	.30	.64
Ying & Lee (2006)	197	.22	.08	.35
Yip (2005)	62	.01	-.24	.26
Yip & Cross (2004)	96	.15	-.05	.34
Yip & Fuligni (2002)	96	.15	-.05	.34
Yip, Gee, & Takeuchi (2008)	2047	.16	.11	.20
Yip, Seaton, & Sellers (2006)	940	.06	.00	.12
Yoo (2006)	249	.16	.08	.39
Yoo & Lee (2005)	147	.24	.04	.28
Yoon (2001)	241	.15	.02	.27
Yuh (2005)	209	.30	.17	.42
Zaff, Blount, Phillips, & Cohen (2002)	67	.08	-.16	.32

Table 2

Differences across Study and Participant Characteristics.

Variable	<i>Q</i>	<i>p</i>	<i>r</i>	95% CI	<i>k</i>
Population Sampled	3.5	.17			
Normal Community Members			.14	[.10, .18]	48
Students			.18	[.16, .21]	121
At-risk Groups			.17	[.11, .24]	15
Race	4.5	.21			
African American			.19	[.15, .23]	48
Asian American			.14	[.11, .18]	51
Hispanic/Latino(a) American			.13	[.08, .18]	27
Native American			.16	[.07, .26]	8
Years of Education	0.6	.74			
8 th Grade or Less			.17	[.11, .22]	20
9 th through 12 th Grade			.18	[.14, .22]	44
High School Graduate or Greater			.19	[.15, .23]	41
Socioeconomic Status	1.6	.46			
Lower			.13	[.08, .19]	23
Lower-Middle			.18	[.12, .23]	25
Middle or above			.18	[.14, .21]	59

(Table continues)

Variable	<i>Q</i>	<i>p</i>	<i>r</i>	95% CI	<i>k</i>
Acculturation Level	10.8	.01			
Low			.02	[-.09, .13]	5
Moderate			.14	[.09, .19]	26
High			.18	[.14, .23]	35
No Information Provided			.18	[.16, .21]	118
Design-type	3.9	.05			
Cross-sectional			.18	[.16, .20]	172
Longitudinal			.11	[.04, .18]	12
Publication Status	3.09	.05			
Unpublished			.16	[.13, .18]	108
Published			.19	[.17, .22]	76
Ethnic Identity Measure ^a	1.0	.62			
MEIM			.18	[.16, .20]	128
Other Researched Measure			.16	[.12, .21]	30
Other Measure (Homemade)			.16	[.11, .21]	24
Collapsed Dependent Measures	48.8	< .001			
Mental Health Symptoms ^b			.04	[-.01, .10]	17
Self-esteem			.23	[.20, .26]	59
Well-being			.24	[.17, .31]	11
Multiple (>1 of above)			.15	[.13, .17]	97

(Table continues)

Variable	<i>Q</i>	<i>p</i>	<i>r</i>	95% CI	<i>k</i>
Disaggregated Dependent Measures ^c	232.9	< .001			
Anxiety/distress ^b			.06	[.04, .08]	33
Depression/hopelessness ^b			.10	[.08, .12]	51
Other Mental Health Symptoms ^b			.08	[.05, .11]	35
Behavior Problems ^b			.12	[.09, .16]	11
General Well-being			.19	[.16, .21]	32
Self-esteem			.21	[.20, .22]	117
Self-mastery			.19	[.17, .21]	35
Social Support			.14	[.12, .16]	26
Multiple (>1 of above)			.12	[.06, .19]	7

Note. *k* = number of studies. ^a = Two studies that used both the MEIM and another measure of ethnic identity were excluded from this analysis because of shared method variance. ^b = Scaling was inversed, such that positive correlations denote less pathology. ^c = This analysis disaggregated differed types of measures within studies, such that many studies with multiple measurement types had more than one effect size included in the analysis. All other analyses used only one effect size per study.

Table 3

Random Effects Regression Weights for Study Characteristics Associated with Effect Sizes

Variable	B	SE	<i>p</i>	β
Constant	.172	.009	<.0001	.00
Participants' Average Age	-.002	.001	.03	-.15
Participant Acculturation Level ^a				
Low	-.107	.055	.05	-.14
Medium	-.006	.026	.82	-.02
High	.007	.023	.76	.02
Longitudinal Design	-.014	.039	.72	-.03
Measures of Well-being ^b				
Mental Health Symptoms	-.093	.030	.002	-.22
Self-esteem	.075	.019	.0001	.27
Global Well-being	.081	.037	.03	.15

Note. a = Contrasted with studies not reporting information on participant acculturation level.
b = Contrasted with multi-dimensional measures of well-being.