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Ethnic Identity and Well-being: A Meta-Analytic Review

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ABSTRACT

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This meta-analysis provided a synthesis of the research examining the relationship between the construct of ethnic identity and global well-being, variously measured. The aims of this systematic review were to ascertain the overall magnitude of the association between ethnic identity and well-being, as well as to explore the impact of moderating variables on the association. A total of 184 studies were analyzed, resulting in an omnibus effect size of $r = .17$, suggesting a modest but statistically significant relationship between these two constructs. Younger participants demonstrated a stronger relationship between ethnic identity and well-being. Participants in the low acculturation category demonstrated a markedly weaker relationship. Self-esteem and other well-being measures were correlated with ethnic identity, while measures of mental health symptoms were not. Therapists may benefit by recognizing the salience of ethnic identity for some clients, especially those in the adolescent age range where identity development is a critical task. However, therapists might also consider that ethnic identity is but one component of both identity and well-being; many other factors also contribute to these characteristics.

Keywords: ethnic identity, well-being

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Introduction

Over the past several decades research on the association of the strength of one's own identity with perceptions of well-being has received sustained attention. The concept of identity or ego identity is defined as "one's idea of who one is [and] how one defines oneself" (Marcia, Waterman, Matteson, Archer, & Orlofsky, 1993, p. 3). Identity formation has long been considered a crucial aspect of an individual's development and psychological well-being (Erikson, 1959/1980; May & Yalom, 2005; Rogers, 1961). Healthy identity development is often seen to include both socialized understandings shared with others and individual perceptions that differentiate the self from others.

Historically much of the psychological literature focused on the unique/individualistic aspects of differentiating oneself from other individuals (Erikson, 1959/1980), but in recent years increasing attention has been paid to the shared/social aspects of identity (Adams & Marshall, 1996; Amiot, de la Sablonniere, Terry, & Smith, 2007; Berman, Schwartz, Kurtines, & Berman, 2001; Berzonsky, 1989; Grotevant, 1987). The construct of ethnic identity has received particular attention due to the increasing influence of multicultural perspectives within psychology (Sue & Sue, 2008).

Ethnic identity is the degree to which one perceives oneself included and aligned with an ethnic group and "is a central defining characteristic of many individuals, particularly those who are members of minority … groups" (Phinney, 2000, p. 256). The salience of ethnic identity among ethnic minority groups can be attributed to discrimination and differentiation often experienced by these groups (Tajfel & Turner, 1986). In the face of such opposition, a strong ethnic identity facilitates recognition of positive virtues about one's own ethnic group and minimizes the internalization of harmful denigrating beliefs about one's own ethnic group that

are perpetuated in societies where intergroup discrimination exists (Ruiz, 1990). “Ethnic identity is seen 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, Phinney, & Dennis, 2006, p. 963). It is a complex construct, but most approaches include one or more of these elements in the definition of ethnic identity: ethnic self-identification; affective components, such as a sense of belonging, pride, affirmation; cognitive components such as knowledge of history and traditions; value orientations such as individualism or collectivism; changes in components of ethnic identity related to increasing age and context (Phinney, 2000).

Several authors have developed models which depict the process of ethnic identity formation. Virtually all ethnic identity models depict a progression that ultimately results in resolution (acceptance and deep understanding of one’s own ethnicity) once the final stage of development is reached. A growing number of studies have established a relationship between a strong ethnic identity and well-being, as demonstrated by positive mental health characteristics, the absence of psychopathology, and/or successful adjustment (Ong et al., 2006; Phinney, 1989; Phinney, Cantu, & Kurtz, 1997; Roberts et al., 1999). In investigating this relationship, researchers have defined and measured well-being in a variety of ways. For example, Phinney (1989) demonstrated that among adolescents from four ethnic groups, those who had achieved a strong ethnic identity scored the highest on psychological adjustment, measures of self-evaluation, sense of mastery, social and peer interactions, and family relations. Similarly, an international study of immigrants in four countries (Phinney, Horenczyk, Liebkind, & Vedder, 2001) reported that a combination of a strong ethnic identity and a strong national identity promoted the best adaptation and the highest psychological well-being. A study involving adolescents from diverse ethnocultural groups living in the United States (Roberts et al., 1999)

demonstrated that ethnic identity was related positively to measures of psychological well-being and negatively to measures of loneliness and depression. Studies such as these demonstrate that ethnic identity can be a significant factor in well-being and adjustment, variously measured, particularly for members of ethnic minority groups. However, this association may be moderated by participant variables (e.g., socioeconomic status, age and level of acculturation, etc.), as well as by study characteristics (e.g., type of well-being measured, design type, and publication status). Issues such as these were explored through a synthesis of existing research.

Over the past two decades a sizable corpus of research has been generated concerning the relationship of the construct of ethnic identity to well-being. However, the overall magnitude of the association between ethnic identity and well-being has been uncertain, and the impact of possible moderating variables has been unclear. The aims of this systematic review were to ascertain the overall magnitude of the association between ethnic identity and well-being, as well as to explore the impact of moderating variables on the association.

Review of the Literature

Identity Development Models

Despite a common view of identity as an exclusively intra-individual trait, the psychological literature emphasizes that the concept of identity is necessarily multi-faceted and based on contextual factors. For example, rather than being strictly individualistic, Erik Erikson's model of identity development actually suggests that ego identity includes "a persistent sharing of some kind of essential character with others" (1980, p. 101). Similarly, Victor Frankl's model includes the characteristics of one's family heritage and collective understandings that contribute to a sense of meaning in life (Frankl, 1963).

Until recently most identity theories of the previous century were highly influenced by (or reactions against) the work of Sigmund Freud. Freud theorized about processes of development in childhood, with the concept of the self (ego) as an independent entity within the larger representation of the social organization into which a child is born (Erikson, 1959/1980). For example, Erik Erikson elaborated upon Freud's concepts to create the construct of the ego identity: "Identity formation . . . can be said to have a self-aspect, and an ego aspect. It is part of the ego in the sense that it represents the ego's synthesizing function on …the actual social structure of the environment and the image of reality as transmitted to the child during successive childhood crises" (Erikson, 1980, p. 161). These childhood crises are conceptualized by Erikson as the psychosocial stages of trust vs. mistrust; autonomy vs. shame and doubt; initiative vs. guilt; industry vs. inferiority; identity vs. identity diffusion (Erikson, 1980). After navigating through the previous crises, it is then the task or crisis of adolescence to achieve a healthy ego identity and avoid the confusion created by the lack of definition in a diffused identity. Erikson felt, however, that although adolescence is the stage of the identity crisis, the

formation of identity neither begins nor ends with adolescence. He considered identity formation to be a lifelong process (Erikson, 1980).

Marcia and colleagues (1993) further operationalized Erikson's theory of ego identity development by describing four identity statuses, characterized by the presence or absence of exploration and commitment. Exploration "pertains to the examination of alternatives with the intention of establishing a firm commitment in the near future (Marcia et al., 1993, p. 178). "Commitment refers to a stable investment in one's goals, values, and beliefs evidenced in supportive activity" (Marcia et al., 1993, p. 181). The first status is identity diffusion. An individual in this status may or may not engage in an exploration of alternatives, but commitment is definitely absent. In the second status of foreclosure, an individual has made a commitment in the absence of any exploration. The third transitional stage of moratorium is characterized by an ongoing exploration of alternatives, but no firm commitment. Identity achievement is the highest, most sophisticated status. The individuals in this stage have made a firm commitment following a period of exploration. The achievement of a strong ego identity based on sufficient previous exploration provides a solid foundation of self knowledge from which life decisions can confidently be made (Marcia et al., 1993).

Additional identity development models have been developed as extensions of Marcia's original operationalization of Erikson's theory (Schwartz, 2001). For example, Grotevant (1987) proposed a model of identity formation that focuses on process. The model framework consists of four major components: individual characteristics (e.g., personality, cognitive ability, and current identity); contexts of development (e.g., culture/society, family, peers and school/work; the identity process in specific domains (e.g., occupation, ideology, values, and relationships); interdependencies among the identity domains. Grotevant (1987) proposes that these components

interact across the developmental life-span of an individual, influencing the life-long process of identity formation.

Berzonsky (1989; Berzonsky, Macek, & Nurmi, 2003) added a processing style component to identity development. He proposes that personal identity is formulated through social interactions, particularly those interactions dealing with identity issues. Berzonsky suggests three processing styles: normative, informational, and diffuse/avoidant. Those with a normative style tend to conform to the expectations, values, and beliefs of referent groups without much self-evaluation. Marcia's foreclosure status would be the likely stage for these individuals. Those who make personal decisions and solve problems with an informational style actively seek out, process, and evaluate pertinent information before making a decision. Individuals in Marcia's moratorium or achievement stages would likely use this style. The diffuse/avoidant style is typified by those who procrastinate and avoid decisions as long as possible, typically until external circumstances finally dictate some action. The identity diffusion status would correspond with this style. Berzonsky's model adds a processing dimension and also a social interaction dimension to Marcia's identity development.

Kurtines proposes adding a competence component to this social-cognitive approach to identity exploration (Berman et al., 2001). His co-constructivist approach emphasizing problem-solving competence is complementary with Berzonsky's critical constructivist approach (1989; Berzonsky et al., 2003) emphasizing processing style. The Kurtines approach is termed co-constructivist because identity formation is seen as a shared process between individuals and their social and cultural environments. Kurtines postulates three abilities, acquired during the developmental process, which can facilitate exploration during identity formation. Creativity is the degree to which individuals are innovative in exploring alternative life choices. Suspension

of judgment represents the degree to which a person is able to explore alternatives from multiple perspectives. Critical evaluation refers to the degree to which individuals have the capability to challenge original choices and adopt alternative choices when they seem more viable. Kurtines suggests that social institutions bear the responsibility to teach these competencies to individuals. Those individuals are then expected to exhibit integrity of character, which involves taking responsibility for one's choices in such a way that those choices will contribute to a healthy society (Schwartz, 2001). Research has provided support for both the critical constructivist approach and this co-constructivist approach in the multi-dimensional process of exploration in identity formation (Berman et al., 2001).

Adams and Marshall (1996; Serafini & Adams, 2002) suggest that Marcia's identity statuses (Marcia, et al., 1993) can be further categorized in terms of the dimensions of active and passive construction. A passively constructed identity is characterized by the avoidance of decision-making and unquestioning conformity to external social norms. It is based on imitation and identification. This style corresponds to the statuses of identity diffusion and foreclosure. An active, self-constructed identity on the other hand is based on exploration and experience. It is characterized by a strong internal locus of control. The statuses of moratorium and identity achievement represent this type of identity construction. Adams and Marshall (1996) developed an identity development model with a strong focus on the influence of social context in identity formation (Schwartz, 2001). They refer to the micro and macro contexts in which identity is embedded. The micro context includes personal interactions and other forms of direct contact which influence identity development. The macro context consists of cultural norms, practices and beliefs which help to shape identity on a larger scale. The two contexts are related in that features of the macro context are transmitted to the individual largely through micro systems

such as families (Adams & Marshall, 1996; Schwartz, 2001). Adams and Marshall propose that identity development results from the balancing of two opposing but complementary processes: the differentiation of oneself as a unique individual and the integration of the individual into a larger social group. They suggest that a healthy balance between these two processes, providing individualization along with social connection, produces the most healthy identity development (Adams & Marshall, 1996; Schwartz, 2001).

Adams and Marshall (1996) emphasize the relationship of healthy identity development to well-being by suggesting five functions of identity:

> Function 1: to provide the structure for understanding who one is.
> Function 2: to provide meaning and direction through commitments, values, and goals.
> Function 3: to provide a sense of personal control and free will.
> Function 4: to provide consistency, coherence, and harmony between values, beliefs, and commitments.
> Function 5: to provide the ability to recognize potential in the form of future possibilities and alternative choices. (p. 433)

Active identity construction is positively correlated with these functions of identity, whereas passive identity is not positively associated with the identity functions (Serafini & Adams, 2002). An active identity, characterized by these five functions, tends to provide individuals with lower levels of anxiety about the self, higher goal orientation, healthier defense mechanisms, and a sense of personal control and free will (Serafini & Adams, 2002).

By way of summary, a variety of identity development models have been developed as further refinements of Marcia's (1993) original operationalization of Erikson's (1980) theory of ego identity. Additional dimensions included in these models, such as processing style, competence, and context, have added greater clarity to the factors involved in the process of identity development. A notable refinement in the literature is the inclusion of cultural contexts,

which were largely ignored in previous models; models of ethnic identity development are reviewed in the next section.

Ethnic Identity Models

Several identity development models recognize the importance of group membership and the influence of social factors in the process of identity formation (Adams & Marshall, 1996; Amiot et al., 2007; Berman et al., 2001; Berzonsky, 1989; Grotevant, 1987). Based largely upon existing general theories of personal identity development yet also recognizing that ethnic membership and socialization are essential components of personal identity development, a number of models of ethnic/racial identity have been created in recent years (Atkinson, Morten & Sue, 1998; Helms, 1984; Phinney, 1989; Ruiz, 1990; Sue & Sue, 1999).

Early work in ethnic/racial identity formation is represented by the Cross model (Cross, 1971 as cited in Sue & Sue, 1999). The four-stage model describes the process by which African American individuals "move from a stage of racial consciousness characterized by self-abasement and denial of their Blackness to a stage characterized by self-esteem and acceptance of their Blackness" (Helms, 1984. p. 154). The four stages in this process proposed by Cross are: pre-encounter, encounter, immersion/emersion, and internalization. This early work establishing the relationship between race and identity development for African Americans was followed by a growing body of research demonstrating a similar connection between ethnicity and identity development for a variety of ethnic groups (Atkinson et al., 1998; Phinney, 1989; Ruiz, 1990).

In contrast to the specific model of African American racial identity development articulated by Cross, Jean Phinney (1989; 1996) proposed that the broader term of *ethnicity* could encompass the term *race*, such that the notion of ethnic identity could be used to refer to groupings of Americans distinguished by a combination of race and culture of origin. In the

Encyclopedia of Psychology, the term *racial identity* is used to refer to the unique experience of a specific racial group, such as African Americans, while *ethnic identity* is used to identify a broader range of multicultural experience (Burlew, 2000). The debate over definitive definitions of these two terms is ongoing (Cokley, 2007), but the present study and review of literature will focus on research dealing with the construct of ethnic identity, rather than racial identity.

Phinney's conceptualization of ethnic identity drew from the work of Marcia (1993) and Erikson (1959/1980) to develop a stage model of ethnic identity formation that can be used for any minority group (Phinney, 1989). The stages are summarized by Phinney (1989) as follows:

> 1. Diffuse: Little or no exploration of one's ethnicity and no clear understanding of the issues.
> 2. Foreclosed: Little or no exploration of ethnicity, but apparent clarity about one's own ethnicity. Feelings about one's ethnicity may be either positive or negative, depending on one's socialization experiences.
> 3. Moratorium: Evidence of exploration, accompanied by some confusion about the meaning of one's own ethnicity.
> 4. Achieved: Evidence of exploration, accompanied by a clear, secure understanding and acceptance of one's own ethnicity. (p. 38)

Phinney's model has become one of the most influential in the field. Many scholars have attempted to refine her formulations, but her active research team has accumulated years of data supportive of her postulations. For example, research with Black, Mexican American, and Asian American adolescents (Phinney, 1989) indicates that ethnic identity development is a key factor in self-esteem and adjustment. Compared to those in the diffuse and foreclosed stages, minority adolescents who had reached the ethnic identity achieved stage scored higher on a variety of well-being indicators: self-evaluation, sense of mastery, social and peer interactions, and family relations. Additional research with college students (Phinney & Alipuria, 1990) obtained similar results. These and dozens of similar studies conducted by Phinney's team indicate that it is the

stage of ethnic identity development the individual has achieved rather than minority group membership alone that is an influential factor in well-being.

However, Phinney's work is not without critics. Some scholars have argued that the concept of ethnic identity is less useful than the concept of racial identity, although their conceptualization differs slightly from that originally proposed by Bill Cross (1971). Specifically, Janet Helms, Robert Carter, Tina Richardson, Chalmer Thompson, and others contend that study of racial identity is preferable to study of ethnic identity because racial identity incorporates the influence of societal oppression, White supremacy, and other concepts associated with an anti-racist agenda (e.g., Carter, 2005a, 2005b; Helms & Talleyrand, 1997). Phinney's model only indirectly alludes to these macro societal issues impacting individual identity development. Hence, the concept of ethnic identity is not only more generic than the concept of racial identity, but it is also more congruent with a European American worldview than models of racial identity which may better reflect the experiences of historically oppressed peoples.

Other authors in the field have generated alternative and/or complementary models to that proposed by Jean Phinney. For example, Ruiz (1990) created a model of ethnic identity development based on interviews with Latino college students. It is grounded on four premises: (a) that marginality correlates highly with the concept of maladjustment; (b) that both marginality and the pressure to assimilate can be destructive to an individual; (c) that pride in one's own ethnic identity is conducive to mental health; and (d) that during the acculturation process, pride in one's own ethnic identity affords the Hispanic more freedom to choose. The model describes five stages in relationship to ethnic identity conflicts, interventions, and resolution. The first three stages deal with the development of ethnic identity conflicts. Stage

one, causal, focuses on experiences and emotions related to negative messages from the environment regarding ethnic heritage. These causal factors for identity conflicts may arise from a variety of sources such as parental injunctions denigrating one's ethnicity, experiences with discrimination, or a lack of knowledge about one's culture. Stage two, cognitive, stresses thoughts. Ruiz (1990) identified three erroneous beliefs related to ethnic identity conflicts: (1) Ethnic group membership is associated with poverty and prejudice; (2) Escape from poverty and prejudice is possible only through assimilation; and (3) Success is possible only through assimilation. The third stage, consequence, focuses on the combined results of the first two stages. The outcomes of identity conflicts may include shame, a lack of ethnic identification, and estrangement from one's ethnic group. In the fourth stage, working through, treatment is the emphasis. Treatment may include an ethnocultural assessment and interventions designed to help the client reconnect with his or her ethnic group. In the final stage five, successful resolution, ethnic identity is perceived as a strength rather than a limitation. This perception leads to "a greater acceptance of self, culture, and ethnicity" (Ruiz, 1990, p. 35).

The Atkinson, Morten, & Sue model, the Racial/Cultural Identity Development Model (R/CID) (1998; Sue & Sue, 1999) suggests five stages: conformity, dissonance, resistance and immersion, introspection, and integrative awareness. Each stage is characterized by differing attitudes toward self, toward others of the same minority, toward others of a different minority, and toward the dominant group. The conformity stage is similar to the pre-encounter stage of the Cross model (Helms, 1984; Sue & Sue, 1999). Minority group individuals in this stage exhibit a preference for the dominant culture and demonstrate depreciating attitudes toward themselves and their own ethnic group. In the dissonance stage, the individual has encountered information or experiences which challenge conformity stage beliefs. The new information may leave the

person feeling confused and in conflict regarding his or her self-concept. The resistance and Immersion stage is characterized by a rejection of the dominant culture and a complete endorsement of the minority culture. During this stage, the most common feelings are those of guilt, shame, and anger, similar to the immersion/emersion stage of the Cross model (Helms, 1984; Sue & Sue, 1999). During the fourth stage of introspection, the minority group individual experiences a softening of the extreme attitudes of the resistance and immersion stage. The individual may begin to modify negative attitudes toward the dominant group and question the uncritical acceptance of minority group views. Those who achieve the final stage of integrative awareness gain an appreciation of themselves and their own ethnic group as well as other minority groups. They have resolved the conflicts from the previous stages and can appreciate selective aspects of the dominant group, as well. These attitudes foster an inner sense of security regarding self-identity and promote the development of resilient characteristics (Atkinson et al., 1998; Sue & Sue, 1999).

In summary, ethnic identity development theories acknowledge the importance of ethnic membership and socialization in the process of personal identity development. They describe ethnic identity development as a dynamic process influenced over time by experiences with an individual's own and other ethnic groups. Each model describes stages which indicate an evolution of attitudes and feelings regarding one's ethnic identity, culminating in a final stage characterized by an increased appreciation of not only one's own but also others' ethnic groups. A necessary part of the ongoing research concerning ethnic identity development has been the construction of tools designed to measure the development process in individuals.

Ethnic Identity Measurement

Numerous instruments have been developed to measure various aspects of the construct of ethnic identity, but only four instruments are widely used in the literature (Cokley, 2007). The most frequently used assessment is the Multigroup Ethnic Identity Measure (MEIM) (Phinney, 1992). It was designed to assess and compare ethnic identity across ethnic groups. It measures three aspects of ethnic identity: (a) affirmation, (b) achievement, and (c) behaviors. The MEIM (Phinney, 1992) has a reported overall reliability, assessed by Cronbach's alpha, of .81 with high school students and .90 with college students from the initial norm groups, using the original 14-item scale. Using those same high school and college samples, the reported reliabilities were .75 and .86, respectively, for the 5-item Affirmation/Belonging subscale and .69 and .80, respectively, for the 7-item Ethnic Identity Achievement subscale. The third subscale, Ethnic Behaviors, has only two items; reliability coefficients could not be calculated with two items. However, including those items in analyses increased the overall reliability of the measure. A structural analysis of the MEIM (Roberts et al., 1999) with data from an ethnically diverse group of young adolescents yielded a two-factor structure. The two factors, affirmation/belonging and exploration, are statistically distinct but highly correlated. They appear to represent distinct but related aspects of ethnic identity. This same study (Roberts et al., 1999) also examined the construct validity of ethnic identity as measured by the MEIM. The correlation between the MEIM scores and a single item which assessed the salience of ethnicity averaged .40 across all ethnic groups, providing strong evidence for the validity of the MEIM scale. The validity of the measure was also supported by moderate positive correlations with measures of psychological well-being.

A newer but promising (Cokley, 2007) measure of ethnic identity is the Ethnic Identity Scale (EIS) (Umana-Taylor, Yazedjian, & Bamaca-Gomez, 2004). This instrument uses categories that are closely related to Marcia's (1993) four identity statuses of identity diffusion, foreclosure, moratorium, and identity achievement. The EIS assesses three components of ethnic identity formation: (a) exploration, (b) resolution, and (c) affirmation.

Well-being as a Psychological Construct

Traditionally, science has defined mental health as the absence of psychopathology, in which individuals who are not mentally ill are presumed to be mentally healthy (Keyes, 2005). In recent years, however, a growing body of research has demonstrated that the absence of mental illness does not necessarily equate to the presence of mental health or well-being (Keyes, 2005; Bech, Olsen, Kjoller, & Rasmussen, 2003). A study comparing the results of the mental health subscale of the Medical Outcome Studies Short-Form 36 (SF-36), a health status questionnaire, and the WHO-Five, a well-being scale (Bech et al., 2003), suggests that mental health is not simply the absence of depressive symptoms. Rather, mental health was shown to also include a relatively high degree of psychological well-being. Further support for that finding was obtained in a series of confirmatory factor analyses conducted with study data from the Midlife in the United States study (Keyes, 2005). The analyses confirmed empirically that mental health and mental illness are not opposite ends of a single continuum. Consequently, the absence of mental health symptoms did not equate with the presence of mental health. Individuals that were classified as free of mental illness functioned at varying levels of mental health, with the lower levels of mental health being associated with work problems, health limitations, and impaired psychosocial functioning. Relatively few of the adults who were considered to be free of mental illness (i.e., about 2 in 10) were classified as completely mentally healthy. Mental health, then, is

suggested to be a positive and complete state in which individuals are free of psychopathology and also demonstrate high levels of emotional, psychological, and social well-being.

Well-being has been defined as "an individual's quality of functioning, both emotionally in terms of subjective states experienced and behaviorally in term of experiences of success in the activities one chooses to undertake" (Waterman, 2007). The study of well-being is typically organized into two broad traditions: subjective well-being (SWB) and psychological well-being (PWB) (Durkin & Joseph, 2009; Keyes, Ryff, & Shmotkin, 2002). Some researchers (Waterman, 2007) have suggested a third conceptualization of well-being: eudaimonic well-being.

SWB focuses on individuals' own evaluations of their lives—both affective and cognitive (Diener, 2000; Durkin & Joseph, 2009; Keyes et al., 2002; Waterman, 2007). The components of SWB include global life satisfaction, satisfaction with important life domains (e.g., work satisfaction), and balance between positive affect and negative affect (Diener, 2000; Keyes et al., 2002; Waterman, 2007). PWB refers to engagement with the existential challenges of life (Durkin & Joseph, 2009; Keyes et al., 2002; Waterman, 2007). The construct of PWB focuses on six aspects of psychological functioning: autonomy, environmental mastery, personal growth, positive relationships with others, purpose in life, and self-acceptance (Ryff, 1989; Keyes et al., 2002; Waterman, 2007). Some researchers also include a eudaimonic or self-fulfilling component to PWB (Keyes et al., 2002; Ryan & Deci, 2001; Waterman, 2007). Waterman (2007) however, maintains that eudaimonic well-being, which is derived from Aristotle's ethical theory calling for individuals to "live in a manner consistent with their daimon, or 'true self,'" (Waterman, 2007, p.291) should be considered a third type of well-being separate from either SWB or PWB.

The Role of Well-being in Ethnic Identity Models

Ethnic identity development models, created to describe the process of personal identity development within the context of membership in an ethnic group, typically indicate that the final stage of development is associated with well-being (e.g., self-acceptance, abilities to successfully negotiate complex environmental contingencies with personal values, etc.). Numerous studies have, in fact, indicated a positive relationship between a strong ethnic identity and indicators of good mental health and/or adjustment. Researchers have defined well-being in various ways for the purposes of their studies. Some have used instruments that assessed for an absence of psychopathology, some focused on SWB, some on PWB and/or eudaimonic well-being. Many research studies used multiple outcome measures that assessed for a variety of indicators of well-being. For example, a large study (N = 5,423) of young adolescents (Roberts, et al., 1999) demonstrated significant correlations between ethnic identity as measured by the MEIM (Phinney, 1992) and measures of such characteristics of well-being as coping ability, mastery, self-esteem and optimism. Furthermore, in that same study ethnic identity was negatively correlated with loneliness and depression.

Similar findings have appeared across several studies. A study of 669 American-born high school students (Phinney et al., 1997) indicated that ethnic identity was a significant predictor of self-esteem for Latino, African American, and White adolescents. The strength of ethnic identification in among adolescents from Mexican, Chinese, and European backgrounds was found to be relevant to their adjustment and academic success in school (Fuligni, Witkow, & Garcia, 2005). Similar results have been found with Latino college students (Ong et al., 2006). Overall, the findings appear to consistently point to the positive association between ethnic identity and multiple aspects of personal well-being.

Some research has begun to explore which aspects of ethnic identity are most relevant to well-being. Investigating the relative contributions of different aspects of ethnic identity to well-being Lee and Yoo (2004) found that ethnic identity pride and clarity contributed to psychological well-being, whereas ethnic identity engagement did not. This study demonstrates that ethnic identity is not a homogenous construct. However, the vast majority of the studies conducted involve broad assessments of ethnic identity (Fuligni et al., 2005; Roberts, et al., 1999), with accompanying limits on our ability to detect nuanced differences across the type of measurement used.

Clearly the manner in which ethnic identity is defined and measured, as well as the particular indicator of well-being which is selected, may substantially influence the results of a study. A systematic review of the literature that accounted for variation in measurement would facilitate a more accurate understanding of the association.

Due to the popularity of the topic, the body of research examining the relationship between ethnic identity and well-being is growing. The number of studies in this area has, in fact, increased exponentially during the past two decades without the benefits of a research synthesis. The overall strength of the association between ethnic identity and well-being is currently uncertain, as is the impact of moderating variables upon that association. The aims of this systematic review of the research are (1) to ascertain the overall magnitude of the association between ethnic identity and well-being, (2) to determine if that association may be moderated by participant characteristics (such as ethnicity, age, level of acculturation, etc.), and (3) to determine if the association may be moderated by the characteristics of the studies (type of well-being measured, research design, publication status, etc.).

Method

Both published and unpublished studies examining the relationship between ethnic identity and one or more aspects of 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. Each study included at least one measure of ethnic identity and at least one measure of a factor that indicated well-being (e.g., self-esteem, coping ability, etc.). Because of these requirements, certain types of research were not appropriate for selection. For example, case studies, single-subject designs, qualitative research articles, and conceptual/theoretical papers were excluded.

Three methods were utilized to identify suitable published and unpublished studies. First, searches were conducted using the following electronic databases: PsychINFO, PsycArticles, Science Citation Index (SCI), Social Sciences Abstracts, Social Sciences Citation Index (SSCI), and Digital Dissertations. The databases containing the largest number of citations were searched one to three additional times in order to reduce the possibility of overlooking suitable studies. Second, the reference sections of identified studies were reviewed in order to seek 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

A coding list of pertinent study characteristics was created in order to prepare the data in the selected studies for analysis. These characteristics included: (a) the source of the study (journal article, dissertation, etc.); (b) the number of participants and their age, gender, and

ethnicity; (c) the location of data collection if reported (public school, university class, etc.); (d) the design type (cross-sectional and longitudinal); and (e) the measures of ethnic identity and well-being utilized within the study. Coding teams of two members each then examined each document with the purpose of determining the appropriate code for each characteristic in that document. Coders were undergraduate and graduate students who received extensive training so as to promote greater reliability in their work. Coders received training in meta-analysis, in statistical procedures, and in the use of the coding software during weekly research team meetings and during individual training sessions. Two-member coding teams rather than individual coders were used in order to corroborate the accuracy of each coding decision and each data entry. To provide further verification, each article was coded twice by separate teams of coders. When coding inconsistencies occurred across the teams, the disparities were resolved through further examination of the manuscript by at least one member of each team. In the event that a consensus could not be reached through consultations among team members, the dissertation chair made final decisions.

The inter-rater agreement of coding decisions for categorical variables was calculated using Cohen's Kappa and calculated for continuous variables using intraclass correlations utilizing one-way random effects models for single measures. 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). The inter-rater agreement was high due to the training the coders received and due to the fact that the majority of information obtained from the studies was extracted verbatim from the documents, reducing the likelihood of coding error.

Computation of Effect Size Estimates

The studies included in this meta-analysis used a variety of statistics to report their results. These included correlations, analyses of variance, *t*-tests, odds ratios, chi squares, means and standard deviations, and *p*-values. In order to compare them with each other a uniform statistic was used to represent their results. Each of the varied statistics reported were transformed to the metric of a bivariate correlation (Pearson's *r*) using the Meta-analysis Calculator software (Lyons, 1996). If an analysis was reported to be "statistically significant" but no statistic was provided, the *r* value was determined by the corresponding *alpha* level (assuming two-tailed *alpha* = .05 unless reported otherwise). Analyses that report results as "non-significant" but gave no additional information were set to effect size *r* = .00. These procedures helped to avoid inflated effect size estimates. The directions of all effect sizes were coded so that positive values indicated a comparatively stronger association between ethnic identity and well-being.

Many studies used in the meta-analysis reported data on multiple well-being measures. For example, a study may have assessed the effect of ethnic identity on several characteristics of well-being such as self-esteem, coping ability, and academic achievement. Likewise, several different ethnic groups may have been independently assessed for ethnic identity and attributes of well-being in a single study. If each of these data points had been included individually in the omnibus analysis, they would have biased the results in favor of those studies that had contributed multiple effect sizes. Each of those multiple values shared a common method, experimental design, population, etc., making them statistically dependent. The omnibus analysis assumes statistically independent samples; therefore each study must contribute only a single value (Cooper, 1998; Cooper & Hedges, 1994; Hedges & Olkin, 1985). To overcome this issue,

the effect sizes within each study were averaged (weighted by the number of participants included in the analysis) to compute an aggregate effect size for that particular study (Mullen, 1989). In this way, the multiple effect sizes were accounted for, but each individual study still contributed only one data point to the calculation of the omnibus effect size. Whenever information was sought regarding a particular characteristic of well-being, the specific effect size representing that characteristic was used rather than the aggregate effect size for the study as a whole (Cooper, 1998; Cooper & Hedges, 1994).

Data Analyses

There are clearly many factors that contribute to well-being in individuals. Ethnic identity, as examined in the studies reviewed, is only one of those factors. Because factors other than ethnic identity provided additional variability in the effect sizes of the reviewed studies and because the magnitude of the association was expected to differ across individual participants and across individual studies, a random effects model was used in aggregating and analyzing the data. By way of contrast, a fixed effects model would assume that ethnic identity consistently contributes to well-being across participants, and that therefore the only source of variability in effect sizes would be from chance factors associated with sampling the subjects in each study. A random effects model accounts for subject-level variability and adds a random component to the statistical procedure to account for the other factors that may influence well-being as well as accounting for variations among the studies in procedures, settings, etc. (Lipsey & Wilson, 2001). The use of a random effects model also allows for greater generalization beyond the studies included in the analyses (Hedges & Vevea, 1998). Moreover, use of random effects models is consistent with current recommendations in the field (Field, 2005).

After the omnibus effect size was calculated, random-effects weighted regression models and analyses of variance (ANOVAs) were conducted using SPSS macros developed by Lipsey and Wilson (2001) in order to examine the influence of potential moderating variables. These analyses were able to help determine the degree of association of the participant and study characteristics with the effect sizes within the studies reviewed. Such information provided a more complete picture of the relationship between ethnic identity and well-being as it varied due to the presence or absence of other factors.

Publication Bias

Both unpublished and published manuscripts dealing with the relationship between ethnic identity and well-being were located. Unpublished studies or dissertations eventually accounted for 59% of included reports. As is typical, the published studies had larger effect sizes than the unpublished studies. In order to evaluate and correct for possible inflated effect size estimates, several analyses were conducted. First, an analysis of variance (ANOVA) was conducted, comparing the mean average effect sizes of published and unpublished studies to determine if the difference was statistically significant, which would suggest that publication status was in fact a significant moderator. Then, a fail-safe *N* (Begg, 1994) was calculated. This value is the theoretical number of unpublished or missing studies with effect sizes averaging zero (no effect) that would reduce the overall magnitude of the results obtained to a trivial number using Cohen's (1988) guidelines for interpreting effect sizes.

As another check for publication bias, random effects weighted correlations were conducted to analyze the relationship between the number of participants in a study and the corresponding average effect size. Studies with smaller numbers of participants are less likely to be published than studies with larger numbers of participants. This could possibly impact the

overall results of the meta-analysis if the number of participants in a study was found to be a significant moderator.

A scatterplot was also used to assess the possibility of publication bias. This scatterplot compared sample size (y-axis) and effect size (x-axis). This is often called a funnel-plot because the expected shape of the scatter will resemble an inverse funnel or elongated pyramid. In general there will be greater variability among the effect sizes from studies with small sample sizes than among those with large sample sizes (Lipsey & Wilson, 2001). This difference produces the characteristic funnel shape in the scatterplot. However, fewer numbers of small sample studies than larger sample studies tend to be published because the lower statistical power of small studies more often produces nonsignificant results. If present, this publication bias will result in fewer studies with small samples being included in the meta-analysis, reducing the number of effect sizes represented in one lower corner of the graph. When studies appear across the full range of the bottom of the plot, without "missing" corners of the pyramid, a lack of publication bias is indicated.

Lastly, the "trim and fill" method of Duvall and Tweedie (2000a, 2000b) was used to compensate for possible publication bias by estimating the number of "missing" studies. This method involved removing ("trimming") outlying studies that have no corresponding values on the opposite side of the distribution and then re-calculating the mean effect size. This process was repeated until the distribution was symmetrical with respect to the mean. Following the recommendations of Duval and Tweedie (2000b), L_0+ was used to estimate the number of missing studies, using formulae provided by Jennions and Moller (2002). The final step in the procedure was to replace the trimmed studies along with filled estimated values of the missing studies on the other side of the distribution. The filled studies corresponded with the opposite

values of those trimmed. The resulting data set including the filled missing studies was then used to calculate a new omnibus effect size.

Results

Descriptive Characteristics

Statistically non-redundant effect sizes were extracted from 184 studies (see Table 3) examining the relationship between ethnic identity and one or more aspects of well-being. The total number of participants represented in the analyzed studies was 41,626. Of the 184 studies, 181 (97%) reported the gender of the participants, with 62% of the total being female. All 184 studies reported the ethnicity of participants, resulting in a breakdown of 33% African Americans, 35% Asian Americans, 21% Hispanic/Latino/a Americans, 5% Native Americans, 1% Pacific Islander, 5% from "other" racial groups. Data from White/European-American participants were not included.

Omnibus Analysis

The meta-analysis included only one data point from each of the 184 studies for the calculation of the omnibus effect size. 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 ($Q_{(183)} = 579.5$, $p < .0001$). 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.

Moderation by Continuous Level Variables of Study and Participant Characteristics

Data were extracted on the following continuous variables: age, gender, and ethnicity (see Table 1). In order to discover whether these variables may have moderated the overall

results, random effects weighted correlations were conducted between the values obtained for those variables and the effect sizes obtained within each study.

The 176 studies that reported the age of the participants were correlated with the corresponding average effect size in order to establish whether differences in age of the sample accounted for a significant portion of the between-studies variance. The weighted correlation was statistically significant at -.20 (p = .007). This suggests that studies with participants who were younger in age tended to yield effect sizes of a higher magnitude than those in which participants were older, indicating that ethnic identity was associated with well-being to a higher degree in younger individuals.

The possible moderating effect of gender was also explored. The effect sizes from the 181 studies that reported the gender of the participants were correlated with percentage of female participants in the study. The resulting random effects weighted correlation was -.12 (p = .10), indicating no significant association between the gender of participants and study outcome.

The variable of ethnicity was examined to determine if the race of study participants exerted a moderating effect on the study outcome. The percentage of participants from each racial group was correlated separately with the corresponding study effect size in order to determine whether differences in the ethnic composition of the sample accounted for a significant proportion of the between-studies variance. A variety of groups were represented among the 184 studies analyzed: 83 studies had at least some African American participants; 61 had Hispanic/Latino/a American participants; 82 had Asian American participants; 16 had Native American participants; 3 had Pacific Islander participants; and 22 had participants with other, unidentified racial backgrounds.

The weighted correlation between the percentage of African American participants within each study and the corresponding effect size was -.11 (p = .31), indicating no significant association between the results obtained and the proportion of African American participants. Likewise, the correlation between the percentage of Hispanic/Latino/a American participants and corresponding effect sizes was not significant at -.20 (p = .10), again indicating a lack of a significant relationship. Within the 82 studies having Asian American participants, however, the weighted correlation was -.27 (p = .008), indicating a significant negative association between the results obtained and the percentage of Asian American participants. Similarly, the correlation between the percentage of Native American participants and study effect size was also significant in the negative direction at -.53 (p = .03). Only 3 studies included Pacific Islander participants. The weighted correlation between the percentage of Pacific Islanders within each study and the corresponding effect size was not significant at -.96 (p = .24). However, these results may be unreliable estimates of the relationship due to the limited number of studies included. The correlation between the percentage of other participants (ethnicities not included in previously designated groups) within each study and the corresponding effect size was not significant at r = -.18 (p = .54).

Table 1

Random Effects Weighted Correlations of Study Effect Sizes With Participant and Study Characteristics

Variable	*r*	*p*-value	*k*
Mean Age	-.20	.007	174
% Female	-.12	.10	180
% African American	-.11	.31	83
% Hispanic American	-.20	.10	61
% Asian American	-.27	.008	80
% Native American	-.53	.03	16
%Pacific Islander	-.96	.24	3
% Other	-.18	.54	22
Number of participants	-.03	.71	184

Moderation by Categorical Level Variables of Study and Participant Characteristics

Categorical variables were analyzed using random effects weighted analyses of variance (ANOVA's) (see Table 2). These variables included the participant characteristics of sample-type, education, socioeconomic status, and acculturation. Study characteristics including the research design-type, the type of outcome measure, and the type of measure of ethnic identity were also analyzed as categorical variables. A series of one-way ANOVA's of these variables coded from the studies were performed to determine the sum of between-studies variance. The results were expressed using the *Q* statistic which indexes the sum of between-studies variance accounted for by an individual moderator variable. The categorical variables with statistically significant *Q* values have mean effect sizes that differ across various levels of the variable.

An analysis of the variable of sample-type was conducted. Comparisons were made between the three groups of participants used in the studies: normal community members, students, and at-risk groups. The resulting Q value of 3.5 ($p = .17$) was non-significant, indicating that the type of participants used in the studies included in the meta-analysis did not moderate results. In other words, the degree of the relationship between ethnic identity and well-being was not significantly influenced by the type of participant surveyed. Similarly, the categorical variables of level of education ($Q = .61$, $p = .74$) and socioeconomic status ($Q = 1.6$, $p = .46$) did not significantly moderate the results.

The level of acculturation of the participants, however, was a significant moderator ($Q = 10.8$, $p = .01$). These results indicated that the mean average effect sizes differed significantly across the variable of acculturation, suggesting that the level of participants' acculturation did significantly influence the degree of the relationship between ethnic identity

and well-being. In particular, effect sizes were lower among participants with lower levels of acculturation, indicating that ethnic identity was less salient for them.

The racial composition of the research sample was also a significant moderator ($Q = 6.5$, $p = .01$). Studies with participants from a variety of races (i.e., racially heterogeneous samples) yielded a stronger association between ethnic identity and well-being than studies of participants who were predominantly one race or all the same race (i.e., racially homogeneous samples).

The type of research design used in the studies was also found to moderate the overall results. The Q value of 3.9 ($p = .05$) reached a statistically significant level, indicating that the design type, whether cross-sectional or longitudinal, had some influence on the results. The studies using a cross-sectional research design averaged significantly higher effect sizes.

A variety of outcome measures were used in the 184 studies included in the meta-analysis. For the ANOVA, these outcome instruments were grouped into measures of mental health (e.g., symptoms of psychopathology), self-esteem, well-being, or into an aggregate group for studies in which several types of outcome measures were given. The type of outcome measure used significantly moderated the results; the Q_b value of 48.8 ($p < .0001$) reached statistical significance. The analysis demonstrated that the level of ethnic identity was related to outcomes when self-esteem or other types of well-being measures were used. On the other hand, the level of ethnic identity was not related to outcomes when measures of mental health symptoms were used.

Likewise, a variety of instruments were also used among the studies to measure the level of ethnic identity. These instruments were grouped into variations of the Multigroup Ethnic Identity Measure (MEIM), other ethnic identity measures, and measures constructed by

researchers for a particular study (homemade). The type of ethnic identity measure did not significantly moderate the results ($Q = 1.0$, $p = .62$).

Assessment of Publication Bias

Several methods were employed to evaluate the possible influence of publication bias on the overall effect size of the meta-analysis. The publication status of research studies used in a meta-analysis can potentially moderate the results because of the tendency for meta-analyses to include larger numbers of published studies, which are typically easier to obtain, and because published studies tend to have larger effect sizes. This meta-analysis was unusual in that the number of unpublished studies ($k = 108$) was actually greater than the number of published studies ($k = 76$). The mean average effect size for the unpublished studies was $r = .16$, whereas the mean average effect size for the published studies was ($r = .19$; $Q = 3.1$, $p = .05$). Although the effect size for the published studies was higher, the larger number of unpublished studies in the meta-analysis indicates that the publication status of studies did not influence the findings.

A fail-safe *N* (Begg, 1994) was calculated to determine the theoretical number of unpublished, "missing" studies with effect sizes averaging zero (no effect) that would reduce the overall magnitude of the results obtained to a trivial number using Cohen's (1988) guidelines for interpreting effect sizes. Based on this calculation, the theoretical number of studies was found to be 1,896. It seems extremely improbable that 1,896 studies could have been conducted but not unaccounted for; it is even more improbable that those studies could have all resulted in an effect size of zero. Therefore, this calculation was another indicator that publication bias did not significantly influence the overall results.

As another check for publication bias, random effects weighted correlations were conducted to analyze the relationship between the number of participants in a study and the

corresponding average effect size. Studies with smaller numbers of participants are less likely to be published than studies with larger numbers of participants. This could possibly impact the overall results of the meta-analysis if the number of participants in a study was found to be a significant moderator. However, the weighted correlation of the number of participants to the effect size was just -.04 (p =.59), indicating that the number of participants in a study did not significantly influence the effect size of that study.

The relationship of sample size to effect size was illustrated in a scatterplot. All 184 studies were plotted on a graph consisting of an x-axis of effect sizes and a y-axis of the number of participants per study (see Figure 1). The expected pattern of meta-analytic data in a scatterplot is a shape resembling an inverse funnel or an elongated pyramid. This shape demonstrates that the studies with the largest number of research participants also have the largest effect sizes and the least variability in the magnitude of effect sizes (narrow peak at the top of the graph). The broader part of the shape at the bottom of the scatterplot visually demonstrates that studies with fewer participants tend to have lower effect sizes but greater variability in the magnitude of the effect sizes due to greater sampling error (Lipsey & Wilson, 2001). The more symmetrical the shape, the closer it fits the pattern of a normal distribution. Evidence against publication bias is indicated when the data are dispersed completely across the bottom of the graph with no missing "corners." Missing corners in the graph would suggest a probability that the meta-analysis is missing some studies with small sample sizes—those least likely to be published. The scatterplot of data for this analysis did in fact resemble a symmetrical pyramid shape, suggesting a normal distribution of studies. The data points were widely dispersed across the bottom of the graph with no missing corners, providing further evidence that publication bias did not significantly moderate the overall results.

Finally, Duvall and Tweedie's (2000a, 2000b) "trim and fill" analysis was performed to estimate the possible number of studies "missing" due to publication bias. L_0+ was used to estimate the number of "missing" studies. This statistical procedure, which involves removing ("trimming") outlying studies that have no corresponding values on the opposite side of the distribution and then re-calculating the mean effect size, suggested that 25 studies should be trimmed. After replacing the trimmed studies along with the estimated values of the missing studies on the other side of the distribution, a revised omnibus effect size was calculated. This recalculated random effects weighted mean effect size was $r = .15$ ($p < .001$), with a lower limit of .12 and an upper limit of .16. This revised omnibus effect size was still statistically significant, suggesting that publication bias does not appear likely to be a threat to the results obtained in this meta-analysis.

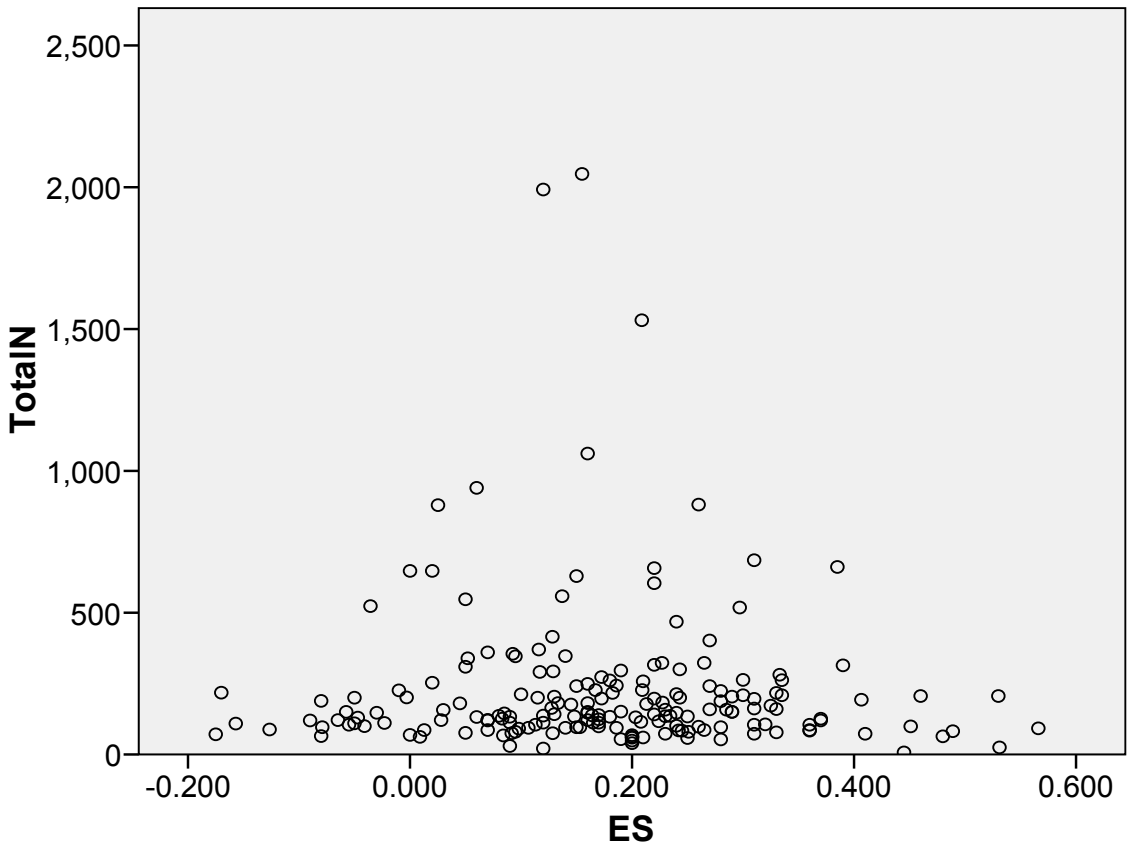

Figure 1. Scatterplot of effect sizes (x-axis) by the number of participants per study (y-axis).

Table 2

Differences Across Study and Participant Characteristics

Variable	*Q*	*p*	*r*	95% CI	*k*
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			
8th Grade or Less			.17	[.11, .22]	20
9th Through 12th 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 2 (continued)

Variable	*Q*	*p*	*r*	95% CI	*k*
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
Sample Racial Composition	6.5	.01			
Heterogeneous			.21	[.18, .25]	50
Homogeneous			.16	[.14, .18]	134
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	1.0	.62			
MEIM			.18	[.16, .20]	128
Other Researched Measure			.16	[.12, .21]	30
Other Measure (Homemade)			.16	[.11, .21]	24

Table 2 (continued)

Variable	*Q*	*p*	*r*	95% CI	*k*
Outcome Measures	48.8	< .001			
Mental Health Symptoms [a]			.04	[-.01, .10]	17
Self-esteem			.23	[.20, .26]	59
Well-being			.24	[.17, .31]	11
Multiple (>1 of above)			.15	[.13, .17]	97

Note. k = number of studies.

[a]Scaling was inversed, such that positive correlations denote less pathology.

Discussion

Overall Findings

This meta-analysis provided a synthesis of the research examining the relationship between the construct of ethnic identity (i.e., the degree to which one perceives oneself included and aligned with an ethnic group) and global well-being, variously measured. The aims of this systematic review were to ascertain the overall magnitude of the association between ethnic identity and well-being, as well as to explore the impact of moderating variables on the association. The omnibus effect size of $r = .17$ suggests a modest but statistically significant relationship between these two constructs. This result is consistent with trends indentified in previous research literature which have indicated a consistent relationship between group identity and well-being, while also demonstrating that ethnic identity accounts for a relatively small proportion of variance in outcome measures (Phinney, 1992; Phinney & Alipuria, 1990; Phinney et al., 1997; Roberts et al., 1999). Such results suggest that although ethnic identity is a significant predictor of well-being, there are clearly many other factors that contribute to well-being.

Review of Moderating Variables

Several participant characteristics significantly moderated the overall results. Differences in age accounted for a significant portion of the between-studies variance. The studies with younger participants tended to have effect sizes of greater magnitude than studies with adult participants, indicating that the relationship between ethnic identity and well-being was stronger in younger participants. This appears to qualify much of the research literature emphasizing that the formation of ethnic identity is a developmental process (Phinney, 1989, 1992; Phinney & Alipuria, 1990). One possible explanation may be that even though ethnic identity formation is

developmental in nature, its relationship to well-being may not increase across time. With greater maturity, the many other factors that contribute to well-being may begin to take precedence over ethnic identity as a predictor of well-being. An additional perspective on the larger effect sizes for younger participants may involve the differing levels of importance attached to identity development by those in differing stages of development. Despite the suggestion by Erikson (1980) and other identity theorists (Berzonsky, 1989; Grotevant, 1987) that identity formation is a life-long process, it is nonetheless widely understood to be a critical developmental task for adolescents (Erikson, 1959/1980; Marcia, et al., 1993; Schwartz, 2001). As such, ethnic identity, which recognizes ethnic socialization as an important component for personal identity development, would likely be highly salient to well-being for an adolescent population. It may not be as central a focus for those in older age groups. Developmental theorist, Robert Kegan, in fact, suggests that adolescents are developmentally embedded in a "culture of mutuality" (Kegan, 1982). As such, individuals in that stage of development cannot *know* themselves separate from the interpersonal context. They do not *have* relationships; rather they *are* their relationships. Consequently, for those at this developmental stage, being included in and aligned with an ethnic group would be particularly central to the concept of self and crucial to the perception of well-being.

Effect sizes of greater magnitude were observed in studies with racially heterogeneous research samples as compared with studies with racially homogeneous samples. When the studies included participants from a variety of races, the percentage of participants from a given ethnicity was a significant moderator for two groups: Asian American and Native American participants. In racially heterogeneous study samples, the higher the percentage of participants of those ethnicities, the lower the effect size for the study. This finding may suggest that in mixed

group settings, ethnic identity may be less salient to well-being for Asian Americans and Native American participants. Consistent with the acknowledgement that many factors contribute to well-being, it may be that for Asian American and Native American participants in mixed race settings, factors other than ethnic identity take precedence in the experience of well-being.

Level of acculturation was another participant characteristic that significantly moderated the results of the meta-analysis. Effect sizes differed across the various levels of participant acculturation. The relationship between ethnic identity and well-being was markedly lower in those participants for whom there was strong evidence of low acculturation. As part of their social identity theory, Tajfel and Turner (1986) suggest that ethnic identity becomes salient for individuals as a function of intergroup differentiation and discrimination. Without that contrast of cultures, ethnic identity becomes less salient for the individual. The significantly lower effect sizes for participants described as exhibiting low acculturation may be a consequence of their presumed insulation from contacts with other cultures, the dominant culture in particular. Low acculturation suggests a lifestyle of largely same-group contacts, providing little opportunity for experiences that would develop a sense of cultural differentiation. Without that awareness of ethnic distinctiveness, ethnic identity does not become a relevant attribute for an individual.

The identity development model of Adams and Marshall (1996) suggest further evidence for this interpretation. Their model, which emphasizes the influence of social context in identity formation, describes an actively constructed identity as one that is based upon exploration and experience, two activities that may be lacking in lower acculturated individuals. An identity formed by this active process tends to be positively correlated with the primary functions of identity and with characteristics of well-being (Serafini & Adams, 2002). An active identity achievement also corresponds with Marcia's higher status levels of moratorium and identity

achievement (Marcia, et al., 1993) and Phinney's ethnic identity statuses of moratorium and achieved. Empirical evidence has shown (Phinney, 1989; Phinney et al., 1997) that it is the stage of ethnic development rather than group membership alone that influences well-being.

The other participant characteristics of gender, educational level, and socioeconomic status were not significant moderators of the relationship between ethnic identity and well-being. Undoubtedly, however, these factors exert a powerful influence on the life experiences of individuals. Research (Phinney et al., 1997) has demonstrated that gender and academic competence may directly influence well-being in adolescents of color as factors distinct from ethnic identity. Additionally, Ruiz (1990) suggests that attitudes toward socioeconomic status may play a role in ethnic identity development. In his identity development model, based on interviews with Latino college students, he suggests that attitudes toward poverty may play a crucial role in the progression through ethnic identity stages. An early developmental task in his model is to recognize the erroneous nature of the beliefs that ethnic group membership is associated with poverty and that success and escape from poverty is only possible through assimilation. In this way, attitudes about socioeconomic status may contribute to the developmental process, while not significantly affecting the correlation between ethnic identity and well-being. Clearly all of these participant characteristics may affect the well-being of individuals even though they were not shown to significantly moderate the overall results of this study.

Two study characteristics were found to significantly moderate the overall results. The type of research design, whether cross-sectional or longitudinal, was a significant moderator, with cross-sectional studies averaging higher effect sizes. This difference could be related to the finding that the age of participants significantly moderated results. In longitudinal studies the

results of the initial assessments would be moderated by the results of the reassessment of participants at an older age. Consistent with the findings that studies with older participants produced lower effect sizes, the reassessments in longitudinal studies would likely show a weaker relationship between ethnic identity and well-being, lowering the overall study results. Older participants have likely experienced a changing understanding of their ethnicity over time, through a complex interaction of attitude, experience, and social context (Phinney, 2000). This broadening of understanding may eventually moderate the association of ethnic identity with well-being the participant may have felt as a youth.

The type of outcome measure used was the second study variable that was shown to be a significant moderator of the overall results. Ethnic identity was related to outcomes when self-esteem or other well-being measures were used to assess outcome. It was not related to outcome when mental health measures, assessing such conditions as depression or anxiety, were used. These results suggest that ethnic identity may frequently have a significant relationship to characteristics of well-being, but that it is less likely to demonstrate a comparable relationship to psychopathology.

Identity development models have from their inception been designed to describe a process leading to greater well-being. Erikson's ego identity model (Erikson, 1959/1980) involving a progression through psychosocial stages and the successful navigation of successive childhood crises leads ultimately to a healthy sense of self. The operationalization of Erikson's theory by Marcia and colleagues (1993) conceptualized movement through four statuses leading to a solid foundation of self-knowledge that would facilitate confidence in making life decisions. Other developmental models have incorporated such factors as processing style (Berzonsky, 1989), problem-solving competence (Berman et al., 2001), and social context (Adams &

Marshall, 1996), all with the goal of achieving a healthy identity that will contribute to the development of characteristics of well-being.

The creation of ethnic identity development models (Atkinson, et al., 1998; Phinney, 1989; Ruiz, 1990; Sue & Sue, 1999) continued the focus on achieving a stage of development conducive to well-being. These models emphasize in particular the role of ethnic group membership and socialization as important components of personal identity development. Virtually all ethnic identity development models propose a progression through stages that ultimately lead to a secure understanding and acceptance of one's ethnicity, a state that promotes a strong sense of well-being.

Because of these historic ties to well-being, it is not surprising that stages of ethnic identity development would be significantly correlated with measures of well-being. In an attempt to gain a greater understanding of the influence of ethnic identity on healthy functioning, some researchers have looked at its effect on psychopathology as well, by including measures of such mental health symptoms as depression, anxiety, eating attitudes, and suicidal ideation. This current synthesis of research indicated that the relationship of ethnic identity to psychopathology was significantly less robust than its relationship to well-being indicators. It may be that mental health disorders are influenced so strongly by biological and other contextual factors, that the relative effect of ethnic identity is small. Therefore, according to the results of this meta-analysis of research, ethnic identity does not appear to be an important factor in the resilience to or the development of mental health symptomology.

The other study characteristics describing the type of ethnic identity measure, publication status, and number of participants were all non-significant as moderators. Studies included in this meta-analysis used a variety of general and ethnicity-specific identity measures such as the

Multigroup Ethnic Identity Measure (MEIM), the Ethnic Identity Scale (EIS), the Multidimensional Inventory of Black Identity (MIBI), and the Asian American Ethnic Identity Questionnaire (AAEIQ). The particular measure used in a study did not significantly moderate the results. Although the conceptualization of ethnic identity in each of the measures was likely slightly different, the general relationship between stage of identity achieved and levels of well-being was significant across the 184 studies. The publication status of a study was likewise a non-significant moderator. This meta-analysis was unusual in that it included more unpublished than published studies. Because of that ratio and because the results of procedures designed to check for publication bias were negative, it appears that publication status did not affect the results. The sample-size of the studies was also analyzed to determine a possible effect on results, but that relationship was also non-significant.

Implications for Future Research

Ethnic identity is a complex concept. There are many questions that remain to be answered regarding ethnic identity and its influence in the lives of individuals. One area of future research could involve the impact of age on the experience of ethnic identity. This meta-analysis demonstrated the moderating effect of age on the relationship between ethnic identity and well-being. Questions to be answered regarding that relationship could include: How does ethnic identity develop and change over the lifespan? In what way does age affect the salience of ethnic identity for individuals? This would be a particularly profitable area of study using adult populations because a large percentage of the existing research utilizes younger-aged students as participants. Longitudinal studies demonstrating changes across the lifespan and qualitative research exploring the meaning of ethnic identity for individuals at different ages may help to illuminate some of these issues.

In addition to exploring the changes in ethnic identity over the lifespan, research into short-term situations in which ethnic identity varies would be valuable. On an individual level, does a person feel varying levels of ethnic identity depending on the context or is it a stable trait? What types of situations increase one's level of ethnic identity? Is it stronger in a setting in which one is part of small minority or is it stronger when one has the support of a large group (Phinney, 2000)? Self-determination may also be a factor to be considered in research regarding this individual experience of ethnic identity. How important is it for individuals to feel that they are congruent with who they believe themselves to be? Is this more meaningful to them than their technically accurate ethnic identity?

The relationship of ethnic identity to well-being could also benefit from additional exploration. This meta-analysis indicated a statistically significant but moderate relationship between the two. There are clearly many other factors that contribute to the experience of well-being. An investigation to discover more about the components of well-being would be an important area of research. Additionally, exploring which components of ethnic identity have the greatest relationship to well-being would also be a useful focus for future research.

One of the interesting results of this research related to the acculturation level of participants. Participants in the low acculturation category demonstrated significantly lower effect sizes than those with higher acculturation levels. Exploring the reasons behind the weak relationship between ethnic identity and well-being for this population could foster a greater understanding of that relationship for immigrant populations and other groups that may be struggling to find their place in societies in which the dominant culture is different from their own. Many ethnic groups may wrestle with issues regarding the degree of assimilation they should seek in order to adjust to the dominant culture while still retaining their own ethnic

identities. Future research into these dilemmas could help provide insight regarding these types of multicultural issues.

The overall results of this meta-analysis also indicated a weak relationship between ethnic identity and well-being when mental health assessments were used as outcome measures. More research into this issue is needed. Are there situations in which a strong ethnic identity can serve as a buffer against mental health conditions such as depression and anxiety?

The effect of societal factors on the relationship between ethnic identity and well-being would be another useful area for future research. When does ethnic identity contribute to well-being and when, if ever, does it have a negative effect? Are community attitudes toward one's ethnic group a factor in the relationship between ethnic identity and well-being? Tajfel and Turner (1986) suggested that ethnic identity is more salient in individuals from groups that face discrimination as a way to preserve self-esteem. Are there situations in which those societal attitudes are instead internalized? Do discrimination and a negative societal evaluation of one's group ever lead to negative self-evaluation? Is there a way to promote resilience to those types of negative evaluations?

In order to address the complexities of ethnic identity and its association with well-being, future research studies of high rigor will be needed. Studies characterized by such factors as large sample sizes, participants representing a variety of age groups, within study comparisons, and random selection procedures could make important contributions to the field and help to answer questions relating to ethnic identity issues. Because the data in this meta-analysis is correlational in nature, this type of additional research will be necessary to fully interpret the results. The present analysis can demonstrate relationships but it cannot explain those relationships. It would be enlightening, for example, to compare groups with extreme values

(e.g., high and low ethnic identity) in order to explore their characteristics. Issues relating to ethnic identity and its relationship to well-being are important to explore in our multicultural society in order to work toward a society that provides a healthy environment for all groups.

Implications for Practice

This systematic review of the research provides information that can be helpful to the clinical practice of therapists. Ethnic identity is frequently a "central defining characteristic" (Phinney, 2000, p.255) for many individuals, especially for people of color. As such, therapists should be aware of the salience of this characteristic for many of their clients. The research demonstrated that there was a significant but modest relationship between the level of ethnic identity and indicators of well-being. As a result, it would be useful for therapists to recognize the contribution a client's ethnic identity may make to his or her functioning, while also being aware that it is only one component of the client's identity and well-being. Additionally, there was a significantly weaker relationship between ethnic identity and mental health symptomology, suggesting that ethnic identity may not be an important concern in the treatment of psychopathology.

Identity development models typically suggest that identity formation is a key task for adolescents. This research demonstrated that in fact ethnic identity has a stronger relationship to well-being in younger participants. Awareness of this could enhance therapists' work with adolescent populations.

While being cognizant of the salience of ethnic identity for many clients, it would be well for therapists to be aware of the context of the client regarding the expression of his or her ethnicity. For example, in what ways does ethnic identity enhance the client's well-being and coping? On the other hand, in what ways does ethnic identity expose the client to greater distress

through prejudice and discrimination? These may be important therapeutic issues to explore with clients.

Strengths and Limitations of the Meta-Analysis

Meta-analysis is a useful method by which a body of empirical research can be summarized and analyzed. The aggregation of the results of numerous individual studies essentially increases the sample size of observations and decreases the standard error of the estimates. For example, this particular meta-analysis included 184 studies, providing a sample size of 41,626 participants. By pooling effect sizes across studies, greater statistical power is produced which may illuminate meaningful effects and relationships that may have been obscured by the lower statistical power of individual studies (Lipsey & Wilson, 2001). The aggregation of study results also produces effect size estimates that are potentially less systematically biased than the majority of individual studies taken alone, increasing the generalizability of the results (Cook & Leviton, 1982; Matt & Cook, 1994). In addition to providing the advantages of aggregating study results, meta-analysis also provides the ability to analyze the impact of specific variables in the individual studies with considerable precision (Lipsey & Wilson, 2001). Each potentially moderating variable in the studies can be coded for and then analyzed to determine the effect it may have had on the results. This type of specific variable analysis can yield important information that may not be available otherwise. In this meta-analysis, numerous study and participant characteristics were analyzed, providing valuable insights into the nature of the relationship between ethnic identity and well-being.

As with any research method, meta-analysis has limitations. First of all, it is limited in the types of studies that can be included in the analysis; only empirical studies with quantitative findings can be included (Lipsey & Wilson, 2001). Case studies, interviews, and other types of

qualitative research had to be excluded from this study due to the nature of the analysis, even though this type of research could potentially provide valuable knowledge regarding the meaning of ethnic identity for individuals. Secondly, the overall results of the meta-analysis are dependant upon the individual studies it includes. These studies may vary in quality, methodology, and research design; all of these factors will influence the results of the meta-analysis (Cooper, 1998; Cooper & Hedges, 1994; Matt & Navarro, 1997). This issue could potentially be a limitation for the current study in particular because this meta-analysis included greater numbers of unpublished than published studies (unpublished: $N = 108$; published: $N = 76$). Unpublished studies may be more likely to exhibit problems in the quality of the research due to less oversight and/or more limited critical evaluation. However, the total number of studies included in the meta-analysis is so large that the probability of systematic sources of error negatively impacting the overall results is minimal.

Related to quality concerns is the issue of internal validity. Another limitation of meta-analyses is that there is no way to control for threats to the internal validity in the individual studies included in the analyses. Experimenter bias in particular could potentially result in an inadvertent inflation of the magnitude of results obtained if the researchers had a special interest in finding a strong relationship between ethnic identity and well-being. Awareness of the issue and utilizing critical observers and other cautionary methodological steps throughout the research process could help reduce the threats to internal validity. For this concern as well as for the other concerns regarding research quality, in all likelihood, the large number of studies included in the analysis reduces to an acceptable level the probability of serious problems with systematic error.

Another potential limitation of this meta-analysis is a difficulty in the interpretation of results due to the correlational nature of the data. With this type of data the direction of effect cannot be demonstrated. In other words, it is impossible to determine whether a strong ethnic identity produces characteristics of well-being in an individual or if a healthy sense of well-being leads to a strong ethnic identity. Future research exploring the development of ethnic identity and investigating the various components of well-being may assist in the interpretation of the data involving these two constructs.

Conclusion

The construct of ethnic identity has received particular attention in recent years due to the increasing influence of multicultural perspectives within psychology. Ethnic identity is the degree to which one perceives oneself included and aligned with an ethnic group. This meta-analysis provided a synthesis of the research examining the relationship between the construct of ethnic identity and global well-being, variously measured. The aims of this systematic review were to ascertain the overall magnitude of the association between ethnic identity and well-being, as well as to explore the impact of moderating variables on the association. A total of 184 studies were analyzed, resulting in an omnibus effect size of $r = .17$, suggesting a modest but statistically significant relationship between these two constructs. Participant characteristics of age and acculturation status were significant moderators of the overall results. Younger participants demonstrated a stronger relationship between ethnic identity and well-being. Participants in the low acculturation category demonstrated a markedly weaker relationship. Studies with participants from a variety of racial groups yielded a stronger association between ethnic identity and well-being than those with more homogeneous study samples. In racially heterogeneous study samples, the higher the percentage of Asian American and Native American

ethnicities, the lower the effect size for the study. Cross-sectional studies produced significantly higher effect sizes. Self-esteem and other well-being measures were correlated with ethnic identity, while measures of mental health symptoms were not. Therapists could benefit by recognizing the salience of ethnic identity for some clients, especially those in the adolescent age range where identity development is a critical task. However, therapists might also consider that ethnic identity is but one component of both identity and well-being; many other factors also contribute to these characteristics. Moreover, the direction of effect is in question: Does ethnic identity lead to well-being or vice versa? Future research into the development and composition of ethnic identity and well-being could further illuminate the relationship.

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Table 3

Descriptions of the 184 Studies Included in the Meta-Analysis

Study	*N*	Effect Size (*r*)	95% CI Lower	95% CI 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

Table 3 (continued)

Study	*N*	Effect Size (*r*)	95% CI Lower	95% CI 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
Eng (1982)	138	.16	.00	.32

Table 3 (continued)

Study	*N*	Effect Size (*r*)	95% CI Lower	Upper
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
Hovey, Kim, & Seligman (2006)	133	.09	-.08	.26

Table 3 (continued)

Study	*N*	Effect Size (*r*)	95% CI Lower	Upper
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
Lamborn & Nguyen (2004)	158	.23	.08	.37
Larson (1995)	7	.45	-.46	.90

Table 3 (continued)

Study	*N*	Effect Size (*r*)	95% CI Lower	Upper
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
Newman, Sontag, & Salvato (2006)	134	.15	-.02	.31
Newsom (2004)	61	.20	-.05	.43

Table 3 (continued)

Study	*N*	Effect Size (*r*)	95% CI Lower	Upper
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 (1992)	518	.30	.22	.37
Phinney (1997)	547	.05	-.03	.13
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
Pittenger (1998)	136	.23	.07	.39
Prelow, Bowman, & Weaver (2007)	112	.17	-.02	.34
Pugh-Lilly (2000)	121	-.07	-.24	.11

Table 3 (continued)

Study	*N*	Effect Size (*r*)	95% CI Lower	Upper
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
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

Table 3 (continued)

Study	*N*	Effect Size (*r*)	95% CI Lower	Upper
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
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

Table 3 (continued)

Study	*N*	Effect Size (*r*)	95% CI Lower	95% CI Upper
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
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

Table 3 (continued)

Study	*N*	Effect Size (*r*)	95% CI Lower	95% CI Upper
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