A Two-Factor Model of Ethnic Identity Exploration: Implications for Identity Coherence and Well-Being

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The purpose of this cross-sectional study was to investigate the multidimensional nature of ethnic identity exploration and its relevance for a broader sense of identity and well-being. Participants were 3,637 ethnic minority college students who completed survey measures of ethnic identity exploration, general identity coherence, general identity confusion, and well-being. Consistent with our 3 hypotheses, the results indicated that (a) ethnic identity exploration comprised 2 dimensions, participation and search; (b) participation was positively associated with well-being, whereas search was negatively associated with well-being; and (c) identity coherence and identity confusion mediated the associations between participation and search, respectively, and well-being. These findings have important theoretical implications for conceptualization and measurement of ethnic identity exploration and its association with well-being.

Keywords: ethnic identity, identity exploration, identity coherence, well-being

Ethnic identity plays an important role in the life experiences of ethnic minorities in the United States. A recent meta-analysis of 184 studies indicated a positive association between ethnic identity and personal well-being (Smith & Silva, 2011). Smith and Silva (2011) noted that most studies examined ethnic identity as a unidimensional construct even though ethnic identity has been posited as multidimensional (e.g., Phinney & Ong, 2007; Umaña-Taylor, Yazeddian, & Bámaca-Gómez, 2004). For example, Phinney’s (1990) developmental model of ethnic identity specifies two key processes: exploration and commitment. However, there remains limited research on the relevance of different dimensions of ethnic identity for well-being. In other words, there is still space for improvement in how we conceptualize and measure ethnic identity, as well as understand its role in individuals’ lives (Cokley, 2007; Helms, 2007). Such improvements have the capacity to enhance our understanding of how aspects of ethnic identity may be related to positive and negative psychological functioning. Accordingly, the purpose of the present study was to investigate the multidimensional nature of ethnic identity exploration and its relevance to a general sense of identity and well-being. We specifically proposed and measured participation and search as two related but distinct dimensions of ethnic identity exploration. In turn, we examine how these two dimensions of ethnic identity exploration relate to a general sense of identity coherence, identity confusion, and well-being.

Exploration in the Development of Ethnic Identity

Ethnic identity broadly refers to individuals’ subjective experience of belonging to an ethnic group (Phinney, 1990). Phinney’s (1990) developmental model of ethnic identity, which builds upon the work of Erikson (1968) and Marcia (1966), emphasizes the underlying processes of exploration and commitment. Ethnic identity exploration pertains to the process of investigating and learning more about the meaning of one’s ethnic background, whereas commitment is the process of deriving a sense of membership and affective connection to ones’ ethnic group. Numerous studies on ethnic identity over the past two decades have used this model, leading to greater insights into the developmental significance of...
idea that there may be multiple forms of exploration also resonates and ruminative exploration (Crocetti, Rubini, & Meeus, 2008; activities with either the explicit goal of learning about their exploration (e.g., reading books) over others (e.g., attending construct, because individuals may engage in certain types cases these terms refer to the same measured variables. However, it is sensible to believe that exploration is a multidimensional construct, because individuals may engage in certain types of exploration (e.g., reading books) over others (e.g., attending events). Similarly, individuals may actively participate in certain activities with either the explicit goal of learning about their heritage or to affirm a sense of ethnic belonging. Other areas of identity research have begun to examine different forms of identity exploration, including exploration in depth, exploration in breadth, and ruminative exploration (Crocetti, Rubini, & Meeus, 2008; Luyckx, Goossens, & Soenens, 2006; Luyckx et al., 2008). The idea that there may be multiple forms of exploration also resonates with Grotevant’s (1987) explication of the multiple processes that constitute exploration, ranging from individuals’ expectations and beliefs to their evaluations of the choices they have considered. Despite this work in related areas of identity development, such ideas have not heretofore been brought to the study of ethnic identity.

Interestingly, two of the most commonly used measures of ethnic identity development that both draw upon Erikson’s (1968) and Marcia’s (1966) work—the Multigroup Ethnic Identity Measure (MEIM; Phinney, 1992; Phinney & Ong, 2007; Roberts et al., 1999) and the Ethnic Identity Scale (EIS; Umaña-Taylor et al., 2004)—appear to operationally define and measure exploration in different ways. That is, close inspection of the seven exploration items from the EIS and the five exploration items contained in the revised 12-item MEIM (Roberts et al., 1999) suggests that they may be capturing different types of exploration. In particular, the EIS exploration scale contains items about direct participation in events or experiences that taught respondents something about their ethnicity, such as attending social activities and participating in cultural traditions (i.e., participation). In contrast, the MEIM exploration items are less concrete, emphasizing talking to others or thinking about one’s ethnicity (i.e., search). Thus, the EIS and MEIM may be assessing distinct forms of ethnic identity exploration—participation and search, respectively.

To our knowledge, only one study has simultaneously examined responses to the MEIM and the EIS (Yoon, 2011). However, that study did not directly compare the two scales in terms of item content. Further research is needed to determine the extent to which the exploration subscales from the MEIM and EIS reflect different forms of ethnic identity exploration, both to gain greater clarity regarding the causes and consequences of exploration and to understand and contextualize research (both past and future) using different measures of ethnic identity exploration. Thus, the first goal of the present study was to test the multidimensionality of ethnic identity exploration by factor analyzing the MEIM and EIS scales together. We hypothesized that each scale would constitute its own factor. Although we hypothesized that the two scales would be distinct, the fact that they both address the construct of ethnic identity exploration strongly suggests that they would be positively correlated. Accordingly, we tested three models: (a) the hypothesized correlated two-factor model, which would indicate distinct yet related types of ethnic identity exploration; (b) an orthogonal two-factor model, which would indicate nonoverlapping types of ethnic identity exploration; and (c) a one-factor model, which would provide support for a unidimensional conceptualization of ethnic identity exploration.

Ethnic Identity Exploration and Well-Being

Although understanding the multidimensionality of ethnic identity exploration is likely of interest to the field on its own, a larger theoretical question drives our investigation: whether the dimensions of ethnic identity exploration are differentially related to well-being. A key difference between the two putative types of ethnic identity exploration (search vs. participation) is that ethnic-specific searching does not imply that anything is gained from the process (e.g., “I think a lot about how my life will be affected by my ethnic group membership”). Rather, the individual may still be in a process of questioning what it means to be a member of an ethnic group. In contrast, ethnic-specific participation implies that the individual has been taught or has learned something about what it means to be a member of an ethnic group (e.g., “I have attended events that have helped me learn more about my ethnicity”). Given this conceptual distinction, the psychological implications of these different forms of exploration may therefore be different.

Researchers have long investigated the association between ethnic identity and psychological functioning. A recent meta-analysis found an average effect size of $r = .25$ for the association between ethnic identity and aspects of positive well-being (e.g., self-esteem, global well-being; Smith & Silva, 2011). However, most research looking into the implications of ethnic identity development for well-being has not examined the independent relations of the different dimensions of ethnic identity. For example, citing the dearth of available studies, the Smith and Silva (2011) meta-analysis did not include a test for whether the association between ethnic identity and well-being differed for exploration versus commitment, despite the fact that most of the studies had used the MEIM (which assesses both dimensions).

There are a handful of exceptions that have painted a consistent picture. Lee and Yoo (2004) found that behavioral engagement (i.e., exploration) was not correlated with self-esteem in a sample of Asian American college students ($r = .05$). Moreover, when it was included as a predictor in a multiple regression analysis along with ethnic identity clarity and pride, behavioral engagement became a negative, although nonsignificant, predictor of self-esteem ($\beta = -.20$). In a sample of adopted Korean American adults, Lee, Yoo, and Roberts (2004) found a similar negative and significant association between behavioral engagement and life satisfaction, taking into account ethnic identity clarity and pride. Similarly, in a study of Mexican American adolescents, ethnic identity exploration had a positive zero-order correlation with self-esteem ($r = .15$), but after controlling for ethnic identity commitment, the association attenuated ($\beta = -.05$; Romero & Roberts, 2003). Comparable findings have been observed for satisfaction with life among ethnically diverse high school students and global self-esteem among ethnically diverse college students (Ghavami, Fin-
adolescents, Umaña-Taylor & Updegraff (2007) found that both ethni-
cally diverse high school and college students (Umaña-Taylor &
consistently positively correlated with self-esteem among ethni-
the EIS. At the zero-order level, the EIS exploration scale has been
Importantly, all of the above-referenced studies used the MEIM to
measure ethnic identity.

A different picture emerges when considering studies that used the EIS. At the zero-order level, the EIS exploration scale has been
consistently positively correlated with self-esteem among ethn-
ically diverse high school and college students (Umaña-Taylor &
Shin, 2007; Umaña-Taylor et al., 2004). In a study of Latino adolescents, Umaña-Taylor & Updegraff (2007) found that both explora-
tion (β = .18) and resolution (i.e., clarity; β = .12) were
unique predictors of self-esteem, contrary to findings obtained
using the MEIM. Moreover, in a longitudinal study of Latino adoles-
cents, Umaña-Taylor, Gonzales-Backen, and Guimond (2009) found that exploration was more consistently related to
self-esteem than were resolution and affirmation, and exploration was
the only ethnic identity dimension to predict increases in
self-esteem.

Taken together, the extant literature based on the MEIM and EIS
exploration scales suggests that these two approaches provide different impressions of the role of ethnic identity exploration for
psychological well-being. This is important, as any individual study may not provide a complete picture of the association between exploration and well-being, and cumulatively the conflicting findings may indicate that the association is unreliable or is the result of methodological issues. Thus, it is critical to bring clarity to the inconsistent findings. The previous studies using each scale vary in terms of sample properties (e.g., age, ethnicity), suggesting that any one of these variations cannot account for the disparate pattern of findings. Rather, differences in the pattern of results between the two measures may be explained, in part, by the fact that each scale assesses different forms of exploration—search versus participation—and that these different forms have different implications for well-being.

On the basis of our review of past research, our second study hypothesis was that ethnic identity participation would be posi-
tively related to well-being, whereas ethnic identity search would
be negatively associated with well-being. Importantly, this is a mul-
tivariate hypothesis. That is, because of the likely correlation between participation and search, we expected to see positive and negative associations with well-being, respectively, when both dimensions of ethnic identity exploration are entered as predictors of well-being. We derived this hypothesis on the basis of the multivariate associations of ethnic identity exploration with well-
being described above: When the overlap between exploration and commitment is accounted for, exploration has a weak or negative association with well-being using the MEIM, yet this association remains positive when using the EIS. This may be because the positive aspects of ethnic identity search are linked to the benefi-
cial aspects of commitment, whereas the positive aspects of partic-
tipation are unique. Extending this logic to the case of two forms of exploration, we expected that any positive aspects of search would be accounted for by participation, and the remainder of search—that which does not overlap with participation—would be negatively associated with well-being. We chose well-being as our outcome measure in accordance with Smith and Silva’s (2011) meta-analysis, which indicated that ethnic identity (globally) is
most strongly related to well-being, and that the effect size did not vary across different indicators of well-being (e.g., self-esteem, general well-being, self-mastery). Accordingly, consistent with Waterman’s (2008) views on the different dimensions of well-
being and the methodological desire to reduce measurement error, we conceptualized well-being as a latent factor defined by several well-being scales.

Identity Coherence and Confusion as Mediators

Given the current state of the literature, questions remain as to why different dimensions of ethnic identity exploration have differ-
ent implications for well-being. A potential answer lies with the
construct of generalized identity coherence. Identity coherence is
defined as the generalized feeling of synthesis, clarity, purpose,
authenticity, and satisfaction with the self, and is not tied to a
specific identity domain, such as ethnicity (Erikson, 1968; Schwartz, Zamboanga, Wang, & Olthuis, 2009). Recent studies have indicated that ethnic identity exploration is positively associ-
ated with general identity coherence and negatively associated with general identity confusion (Schwartz, Zamboanga, Weis-
skirch, & Rodriguez, 2009; Syed & Azmitia, 2009), and that identity coherence mediates the associations of both ethnic identity exploration and commitment to self-esteem (Kiang & Fuligni, 2010; Syed & Juang, 2012). In other words, ethnic identity explo-
ration and commitment have beneficial impacts on well-being because they can contribute to a more general sense of clarity about oneself.

Schwartz, Zamboanga, Wang, & Olthuis (2009) demonstrated that general identity coherence can be considered a separate con-
struct from its theoretical opposite, identity confusion. Just as the absence of distress is not equivalent to well-being (Keyes, 2009), lack of identity confusion does not necessarily imply identity coherence. In light of the fact that there may be unique forms of ethnic identity exploration, and given that the two scales that index these forms have been differentially linked to well-being, it is plausible that the discrepancies in the literature can be explained by the notion that unique forms of ethnic identity exploration contribute differently to general identity coherence and to confu-
sion. That is, ethnic-specific participation involves engaging in concrete experiences that teach individuals something about their ethnic background, which may contribute to identity coherence. In contrast, ethnic-specific search corresponds to the ongoing ques-
tioning about one’s ethnic identity. Searching may not indicate that anything has been learned, and it may actually contribute to identity confusion—especially if the search process raises more questions than it answers (cf. Luyckx et al., 2008). Thus, we hypothesized that general identity coherence would mediate the positive association between ethnic-specific participation and well-being, whereas general identity confusion would mediate the negative association between ethnic-specific search and well-being. To provide a more rigorous test of our hypothesis, we also tested an alternative model in which search and particip-
ipation would mediate the association between identity coherence/confusion and well-being. This approach is important given the cross-sectional nature of the current study. Although past research has provided evidence against this alternative model (Syed & Juang, 2012), we again tested such a competing
model in the current study as a more thorough test of our hypothesis.

The Present Study

The purpose of the present study was to investigate the multi-dimensional nature of ethnic identity exploration and its relevance for a broader sense of general identity and well-being. Accordingly, we advanced the following three hypotheses:

1. The EIS and MEIM will constitute separate factors, corresponding to different forms of ethnic identity exploration (participation and search, respectively).
2. Participation will be positively related to well-being, whereas search will be negatively related to well-being.
3. Generalized identity coherence will mediate the positive association between participation and well-being, whereas identity confusion will mediate the negative association between search and well-being. This hypothesized model is illustrated in Figure 1.

Method

Participants and Recruitment

Participants in this study were drawn from the Multi-Site University Study of Identity and Culture, a collaboration among multiple researchers across the United States. The full sample consists of 10,321 college students recruited from 30 colleges and universities in the United States. Only the 3637 participants who identified as being from an ethnic minority group and were between the ages of 18 and 30 years were included in the present analysis. The ethnic composition of the sample was 39% Latino, 26% East Asian, 23% Black, 8% South Asian, and 4% Middle Eastern. The sample was disproportionately female (72% women; 28% men), and respondents were primarily U.S.-born (74%). The mean age of the sample was 19.97 (SD = 2.06; range = 18–30).

Participants were recruited from their colleges and universities through flyers and e-mail announcements. They completed an online survey, which took between 1 and 2 hr, and received course credit in exchange for completing the survey. More information about the study design and procedure can be found in the work of Schwartz et al. (2011).

Measures

Ethnic identity exploration. We used two measures of ethnic identity exploration: subscales from the revised MEIM (Phinney, 1992; Roberts et al., 1999) and the EIS (Umaña-Taylor et al., 2004). The revised MEIM ethnic identity exploration subscale comprises five items rated on a 5-point scale ranging from 1 (strongly disagree) to 5 (strongly agree). All items are positively worded, and items were averaged together so that higher values reflected greater ethnic identity exploration. Cronbach’s alpha in the present study was .78, which is similar to what has been reported with other college samples (Phinney, 1992; Syed & Azmitia, 2009). Construct validity has been established through positive correlations of ethnic identity exploration with coping, self-esteem, optimism, and negative correlations with loneliness and depression (Roberts et al., 1999). Furthermore, through a series of confirmatory factor analytic models, Syed and Azmitia (2009) demonstrated that the exploration and commitment subscales of the MEIM constitute separate latent factors that are stable over time among a sample of ethnically diverse college students.

The EIS ethnic identity exploration subscale comprises seven items rated on a 4-point scale, ranging from 1 (strongly disagree) to 4 (strongly agree). The single negatively worded item was reverse-scored, and items were averaged together so that higher

Figure 1. Hypothesized mediation model. EIS = Ethnic Identity Scale; MEIM = Multigroup Ethnic Identity Measure; EPSI = Erikson Psychosocial Stage Inventory; RSE = Rosenberg Self-Esteem; EWB = Eudaimonic Well-Being; SWB = Subjective Well-Being; SWL = Satisfaction with Life.
values reflected greater ethnic identity exploration. Cronbach’s alpha in the present sample was .89. Construct validity for this scale was established through correlations of exploration with both family ethnic socialization and self-esteem in high school and college samples (Umaña-Taylor et al., 2004). Factor analyses of the EIS have indicated that the exploration subscale is distinct from the two other EIS subscales (resolution and affirmation; Umaña-Taylor et al., 2004; Yoon, 2011).

**General identity coherence and confusion.** Participants completed the 12-item identity subscale from the Erikson Psychological Inventory Scale (EPSI), which has demonstrated adequate reliability and validity with college samples (Rosenthal, Gurney, & Moore, 1981; Schwartz, 2007). The EPSI identity scale assesses global identity resolution and is not domain specific, and contains a six-item identity coherence subscale and a six-item identity confusion subscale (Schwartz, Zamoonga, Wang, & Olthuis, 2009). A sample item for identity coherence is, “I’ve got a clear idea of what I want to be,” and a sample item for identity confusion is “I change my opinion about myself a lot.” Items were measured on a five-point scale ranging from 1 (strongly disagree) to 5 (strongly agree). All items on each subscale are worded in the same direction. Items on each subscale were averaged so that higher values represent a greater degree of identity coherence or identity confusion. Cronbach’s alphas in the present study were .81 for identity coherence and .79 for identity confusion.

**Well-being.** In the current study, well-being was conceptualized as a latent factor indicated by four measures of well-being as described below. We selected these measures to serve as indicators because each measure is purposed to tap into the broad construct of well-being, but does so in different ways (Waterman, 2008). Thus, creating a latent factor from these four scales extracts the overlap among them to create a well-being factor that is less susceptible to both the error and idiosyncrasies that accompany each individual measure. The four scales were (a) the Rosenberg (1989) Self-Esteem Scale (α = .88), consisting of 10 items measured on a four-point scale ranging from 1 (strongly disagree) to 4 (strongly agree); (b) the Questionnaire for Eudaimonic Well-Being (Waterman et al., 2010; α = .86), consisting of 21 items measured on a five-point scale ranging from 1 (strongly disagree) to 5 (strongly agree); (c) the short form of the Scales of Psychological Well-Being (Ryff & Keyes, 1995; α = .81), consisting of 18 items measured on a six-point scale ranging from 1 (strongly disagree) to 6 (strongly agree); and (d) the Satisfaction with Life Scale (Diener, Emmons, Larsen, & Griffin, 1985; α = .87), a five-item self-report measure of global life satisfaction rated on a six-point scale ranging from 1 (strongly disagree) to 6 (strongly agree).

**Results**

**Analysis Plan**

All latent variable modeling was conducted using full-information maximum likelihood (FIML) and robust standard errors in Mplus 6.1 (Muthén & Muthén, 2010). The amount of missing data was moderate (less than 17%). According to best practices outlined by McCartney, Burchinal, and Bub (2006), we used FIML to estimate missing values in the analysis. Our model-based analytic strategy focused on comparing various competing models to determine the models that provided the best fit to the data in a relative sense, rather than an absolute sense (see Hu & Bentler, 1999; Rodgers, 2010; Tomarken & Waller, 2005). Thus, model fit indices were used to determine our preferred model, rather than as a threshold that an acceptable model must exceed. We used both incremental fit indices, which represent the degree to which the specified model improves upon the null model (a model with no paths or latent variables), and absolute indices, which represent deviations from perfect fit. The incremental fit indices we used were the comparative fit index (CFI) and Tucker–Lewis Index (TLI). CFI and TLI values that exceed .95 are conventionally considered to index good fit, whereas values exceeding .90 are conventionally considered to index acceptable fit. The absolute fit indices that we consulted were the root-mean-square error of approximation (RMSEA) and the standardized root-mean-square error (SRMR). Conventionally speaking, values lower than .05 index good fit and values less than .08 index acceptable fit. We did not include the commonly used chi-square statistic because it tends to be uninformative for models that have the complexity and sample size used in the present study (Kenny, 2011).

Model comparisons were conducted using the ΔCFI (> .01) and ΔTLI (> .02) criteria proposed by Cheung and Rensvold (2002), which adjust for model complexity and are less sensitive to minor changes in model fit as the chi-square difference statistic (Cheung & Rensvold, 2002; Little, 1997). All models used the sandwich estimator (Kauermann & Carroll, 2001) to adjust the standard errors for the nesting of students within 30 institutions. Descriptive statistics and bivariate correlations for all study variables are presented in Table 1.

<table>
<thead>
<tr>
<th>Measure</th>
<th>M</th>
<th>SD</th>
<th>Range</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
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<tbody>
<tr>
<td>1. MEIM exploration</td>
<td>3.34</td>
<td>0.90</td>
<td>1–5</td>
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<td>2. EIS exploration</td>
<td>2.75</td>
<td>0.74</td>
<td>1–4</td>
<td>.55</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
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<tr>
<td>3. Identity coherence</td>
<td>3.87</td>
<td>0.72</td>
<td>1–5</td>
<td>.16</td>
<td>.26</td>
<td>—</td>
<td>—</td>
<td>—</td>
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<td>4. Identity confusion</td>
<td>2.72</td>
<td>0.85</td>
<td>1–5</td>
<td>.03</td>
<td>-.15</td>
<td>-.49</td>
<td>—</td>
<td>—</td>
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<td>—</td>
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<tr>
<td>5. Self-esteem</td>
<td>3.73</td>
<td>0.73</td>
<td>1–4</td>
<td>.03</td>
<td>.29</td>
<td>.57</td>
<td>-.59</td>
<td>—</td>
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<td>—</td>
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<tr>
<td>6. Eudaimonic well-being</td>
<td>3.55</td>
<td>0.49</td>
<td>1–5</td>
<td>.12</td>
<td>.29</td>
<td>.64</td>
<td>-.53</td>
<td>.67</td>
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<tr>
<td>7. Subjective well-being</td>
<td>4.54</td>
<td>0.65</td>
<td>1–6</td>
<td>.03</td>
<td>.31</td>
<td>.53</td>
<td>-.51</td>
<td>.66</td>
<td>.68</td>
<td>—</td>
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<tr>
<td>8. Satisfaction with life</td>
<td>3.92</td>
<td>1.10</td>
<td>1–6</td>
<td>.05</td>
<td>.19</td>
<td>.47</td>
<td>-.39</td>
<td>.53</td>
<td>.47</td>
<td>.58</td>
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*Note.* MEIM = Multigroup Ethnic Identity Measure; EIS = Ethnic Identity Scale. All correlations greater than .03 are significant at *p < .05.*
Factor Structure of Ethnic Identity Exploration

We used a three-step procedure to determine the best-fitting factor structure for the 12 ethnic identity exploration items. First, we randomly divided the sample into two halves. Using the first half of the sample only, we submitted the 12 items from the two ethnic identity exploration scales to an exploratory factor analysis (EFA) with oblique rotation. Consistent with the scree plot, this analysis resulted in two factors with eigenvalues greater than 1, together explaining 50% of the variance in the original items. The factor loadings indicated that the two factors corresponded to the two ethnic identity exploration scales. Three of the seven loadings for the EIS scale exceeded .80, and four of the five MEIM items exceeded .60, all of which are indicators of a stable factor solution (Tabachnick & Fidell, 2007).

Second, we used the second half of the sample to conduct a confirmatory factor analyses (CFA), specifying the two factors extracted from the EFA. The factors were allowed to correlate, but no cross loadings or correlated error terms were specified. This model yielded an acceptable fit to the data, CFI = .92, TLI = .90, RMSEA = .07, SRMR = .05. Hereinafter, we refer to the EIS factor as ethnic identity participation and the MEIM factor as ethnic identity search.

Finally, we used the full sample to conduct three CFA models to test the correlated two-factor structure against two alternative models: an uncorrelated two-factor model and a single-factor model. Consistent with the random split-half sample, the correlated two-factor model fit the data adequately when using the full sample (see Table 2). In contrast, both the uncorrelated two-factor model and one-factor model fit the data poorly (see Table 2). We also tested whether the correlated two-factor model fit similarly for different groups in the sample by comparing a CFA that constrained the factor loadings across subgroups to a CFA that allowed the factor loadings to vary across groups. We estimated three models testing for invariance in factor loadings by gender, immigrant status (U.S.-born compared to non-U.S. born), and ethnicity (Black, East Asian, Latino, and South Asian; the Middle Eastern group was too small). Using the ∆CFI (> .01) and ∆TLI (> .02) criteria to determine invariance, in all cases model fit was worse when unconstrained versus constrained across gender (∆CFI = −.008, ∆TLI = −.014), immigrant status (∆CFI = −.042, ∆TLI = −.053), and ethnicity (∆CFI = −.009, ∆TLI = −.021). Thus, the correlated two-factor model was used for all subsequent analyses (see Figure 2).

Associations With Well-Being

We next specified an SEM model in which ethnic identity participation and ethnic identity search each had a direct path to the latent well-being factor (indicated by the four well-being scales). The model provided a good fit to the data, CFI = .93, TLI = .92, SRMR = .05, RMSEA = .06. Participation was positively associated with well-being (β = .48, p < .001), whereas search was negatively associated with well-being (β = −.22 p < .001).

General Identity Coherence and Confusion as Mediators

Finally, we specified a model in which identity coherence (indicated by six items) and confusion (also indicated by six items) mediated the paths from ethnic identity participation and ethnic identity search to well-being. The model fit the data well on the basis of the absolute fit indices (SRMR = .05, RMSEA = .06), but less so on the basis of the incremental fit indices (CFI = .89, TLI = .88). To investigate this discrepancy, we calculated the RMSEA of the null model (a model with no paths or latent variables), which was .17, a relatively low value for a null model. Kenny (2011) has suggested that low values of the null RMSEA may render incremental fit indices less useful because there is not much room for improvement. Thus, for these models we relied more heavily on absolute rather than incremental fit indices.

In the mediated model, ethnic identity participation was positively linked with general identity coherence (β = .28, p < .001), and negatively with confusion (β = −.36, p < .001). Ethnic identity search was positively associated with general identity confusion (β = .28, p < .001), but was unrelated to identity coherence (β = .03, p = .54). Identity coherence (β = .54, p < .001) and identity confusion (β = −.41, p < .001) were both strongly associated with well-being.

We next estimated the indirect paths from ethnic identity participation and ethnic identity search to well-being through identity coherence and confusion. These analyses were conducted using the MODEL INDIRECT command in Mplus, which uses the asymmetric distribution of products test (MacKinnon, 2008). Analysis of the indirect paths indicated that ethnic identity participation was indirectly associated with well-being through both general identity coherence (β = .15, p < .001) and general identity confusion (β = .14, p < .001). In contrast, ethnic identity search was negatively

Table 2

Fit Indices for All Latent Variable Models

<table>
<thead>
<tr>
<th>Measure</th>
<th>CFA models</th>
<th>SEM models</th>
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<tbody>
<tr>
<td></td>
<td>Correlated two-factor</td>
<td>Uncorrelated two-factor</td>
</tr>
<tr>
<td>CFI</td>
<td>.92</td>
<td>.86</td>
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<tr>
<td>TLI</td>
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<td>SRMR</td>
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Note. CFA = confirmatory factor analysis; SEM = structural equation model; CFI = comparative fit index; TLI = Tucker–Lewis Index; RMSEA = root-mean-square error of approximation; SRMR = standardized root mean residuals.
linked with well-being through identity confusion ($\beta = -0.10, p < .001$), but not through identity coherence ($\beta = 0.02, p = .58$).

We next compared the full mediation model to two alternative models to rule out alternative explanations for the data. First, we compared the full mediation model reported above to a partial mediation model that also included direct paths from ethnic identity search and participation to well-being. The fit of this model was very similar to the mediation model ($\text{CFI} = .9004, \text{TLI} = .9004, \text{RMSEA} = .002, \text{SRMR} = .001$), indicating that adding the two direct paths did not improve model fit.

The second alternative model that we tested was one in which we switched the order of the independent variables and the mediators. That is, we specified a model wherein ethnic identity coherence and participation mediated the associations of identity coherence/confusion with well-being. The absolute fit of this model was poor ($\text{CFI} = .84, \text{TLI} = .84, \text{RMSEA} = .07, \text{SRMR} = .12$). Because this model is not nested within the hypothesized mediation model, we used the Bayesian Information Criterion (BIC) to compare the relative fit of the two models, where a lower BIC value is indicative of better fit (Burnham & Anderson, 2004). The BIC for the alternative mediation model was 218084.71, 2013.10 points greater than the BIC for the hypothesized mediation model (216071.61). These data provide support for the hypothesized mediation model over the alternative mediation model. Thus, the hypothesized mediation model was retained as the final model (see Figure 3), and we concluded that general identity coherence and

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confusion fully mediated the links between ethnic identity exploration and well-being.

Discussion

The purpose of the present study was to investigate the multidimensional nature of ethnic identity exploration and its relevance to a general sense of identity and well-being. The three hypotheses tested in this study were largely supported: (a) The EIS and MEIM exploration scales constituted separate factors, corresponding to different forms of ethnic identity exploration (participation and search, respectively); (b) ethnic identity participation was positively related to well-being, whereas ethnic identity search was negatively related to well-being; and (c) identity coherence mediated the positive association between ethnic identity participation and well-being, and identity confusion mediated the negative association between ethnic identity search and well-being. We discuss each of these findings below.

Dimensionality of Ethnic Identity Exploration

Our findings suggest that the two survey instruments most commonly used to assess ethnic identity exploration measure different forms of exploration. The EIS (Umaña-Taylor et al., 2004) primarily measures active, concrete participation through activities that contribute to individuals’ identities (“participation”). Many of the items included words such as taught and learned, suggesting that there were identity benefits as a result of the behavior. In contrast, the MEIM (Phinney, 1992; Roberts et al., 1999) appears to assess more ambivalent forms of exploration. Several of the items refer to behaviors on the part of individuals that may or may not have led to any identity benefits, but rather could signal unsuccessful or ongoing attempts to learn more about one’s ethnic background (“search”).

Factor analytic results indicated that these two forms of exploration, as measured by the EIS and the MEIM, are distinct yet correlated. Indeed, these two types of exploration are not orthogonal, neither theoretically nor in how they are measured, and we do not believe that engagement in participation and search is an either/or scenario. Most individuals who are actively exploring their ethnicities are likely engaging in both. Neither the EIS nor the MEIM are “pure” measures of the types of exploration that they seem to primarily index. It is critical to note that our analyses were carried out in multivariate space. That is, by using the MEIM and EIS exploration scales as simultaneous predictors of well-being and identity coherence/confusion, we controlled for the overlap in the two constructs and isolated the unique predictive power of each type of exploration. The differential associations with well-being and general identity coherence/confusion highlighted how the two types of exploration—when considered in tandem—are distinct, despite the fact that they are correlated with one another.

The correlation between participation and search is to be expected, given both how they are measured and the likelihood of a general tendency to engage in exploratory behaviors. Indeed, there could be a cyclical relation between the two types of exploration, where engaging in activities related to searching could lead to active participation in ethnic behaviors, and vice versa. Unfortunately, given the cross-sectional nature of the current study, we were not able to test these possibilities. Such an analysis would be important for researchers to conduct given the recent surge in longitudinal studies detailing the developmental course of ethnic identity (French, Seidman, Allen, & Aber, 2006; Pahl & Way, 2006; Syed & Azmitia, 2009). Despite increased knowledge about what the developmental course of ethnic identity looks like, there is minimal evidence for the mechanisms that account for this developmental course (Quintana, 2007). Examining the dynamic relations of participation and search could be useful to this end.

Different Implications for Well-Being

Our hypothesis that ethnic identity participation would be positively associated with well-being, and ethnic identity search negatively associated with well-being, was supported. The extant literature appears to contain two classes of findings pertaining to the association between exploration and well-being: those that find a moderate positive association (e.g., Umaña-Taylor et al., 2009; Umaña-Taylor & Updegraff, 2007) and those that find a null or negative association (e.g., Ghavami et al., 2011; Lee & Yoo, 2004). Rather than reflecting inconsistencies, the results from the present study suggest the possibility that these different classes of findings are a result of the different ethnic identity instruments used. Thus, although no previous study of which we are aware has simultaneously examined the associations between the two exploration subscales and psychological well-being, our results are quite consistent with the pattern of findings observed in prior literature.

As described above, it is important to remain mindful that the effects of the two forms of exploration on well-being are best understood when considering them both simultaneously. The zero-order correlations between exploration and well-being were not identical to the multivariate relation. The positive benefits of ethnic identity participation are evident at both the zero-order and multivariate level, but at the zero-order level ethnic identity search appears to have no relation to well-being. This association changes in the multivariate context because the coefficient for ethnic identity search reflects search that does not share overlap with ethnic identity participation. In other words, it is not search, per se, that is a negative process, but rather, search that is conducted outside of participation. In this way, the potentially negative effects of ethnic identity search on well-being are suppressed until the positive effects of ethnic identity participation are removed. These findings, however, must be interpreted with caution, because the cross-sectional nature of the study precludes strong conclusions about the direction of the associations. Furthermore, developmentally speaking, search could have positive benefits if it is occurring.
in the very early phases of ethnic identity development, when youth are just beginning to consider this domain of identity. In other words, search could have different implications for well-being depending on where individuals are in their development of ethnic identity.

**Different Identity Pathways to Well-Being**

For our third and final hypothesis, we predicted that the reason why ethnic identity participation was positively related to well-being, and ethnic identity search negatively related to well-being, was because participation contributes to general identity coherence and search contributes to general identity confusion. This hypothesis was largely supported. The mediating roles of coherence and confusion provide support for our conceptualization of participation and search, namely that they are associated with different identity pathways. Again, the direction of the associations could not be firmly established in our cross-sectional study. However, we tested an alternative model, wherein participation and search mediated the associations between identity coherence/confusion and well-being, and found that it fit significantly worse than our proposed mediation model, providing evidence for the hypothesized temporal sequencing (see also Syed & Juang, 2012).

Linking ethnic identity processes to a larger sense of identity is consistent with a recent movement to understand ethnic identity within the broader context of identity development (Schwartz, Zamboanga, Weisskirch, & Rodriguez, 2009; Syed, 2010). The effect sizes for the association between the ethnic identity exploration dimensions and general identity coherence and confusion were moderate at best. This is to be expected, however, because identity coherence and confusion index individuals' overall sense of identity, of which ethnic identity is only a part. Indeed, identity processes in a number of specific domains—ethnic, gender, academic, relational, and so forth—each contribute to an overall sense of identity (Erikson, 1968; Marcia, 1980; Schwartz, 2001). As the concept of integration is a hallmark of the developmental approach to identity (Erikson, 1968), future research could examine how the interactions between ethnic identity and other identity domains contribute to overall identity coherence and identity confusion.

Our findings on the mediating roles of general identity coherence and confusion have implications for how ethnic identity is conceptualized. Ethnic identity is typically viewed as a positive aspect of development, linked to higher well-being, lower distress, and greater academic motivation (e.g., Chavous et al., 2003; Smith & Silva, 2011). Some research has demonstrated that ethnic identity serves as a buffer against the negative impact of experiencing discrimination (e.g., Greene, Way, & Pahl, 2006). Other research, however, has shown that ethnic identity can exacerbate the negative effects of perceived discrimination (e.g., Yoo & Lee, 2008). This inconsistency reveals an often overlooked truth: that ethnic identity can have negative, as well as positive, implications. Indeed, stronger ethnic identities have been linked to greater alcohol use among Mexican American men and higher sexual risk-taking among Cuban American women (Raffaelli, Zamboanga, & Carlo, 2005; Zamboanga, Raffaelli, & Horton, 2006). The present study represents a step in the direction of understanding how and why some aspects of ethnic identity may lead to negative outcomes, and suggests that future research should adopt a broader perspective of ethnic identity and its role in development.

**Implications for Theory and Measurement**

The present study was situated within the developmental model of ethnic identity (Phinney, 1990). There are, however, other models of ethnic identity that frequently appear in the literature: Nigrescence theory (Cross, 1971; Cross & Vandiver, 2001), the multidimensional models of racial identity (MMRI; Sellers, Smith, Shelton, Rowley, & Chavous, 1998), and social identity theory (Tajfel & Turner, 1986). All of these models refer to the degree of belongingness that individuals feel toward their group (e.g., commitment, affirmation, centrality, internalization commitment), but only the developmental model includes a dimension that involves an active and sustained pattern of seeking identity possibilities (i.e., exploration). Thus, from a developmental perspective, exploration is critical to understand and is in need of deeper examination.

Phinney and Ong (2007) recently developed a new six-item version of the MEIM. In doing so, they attempted to refine the construct of exploration by excising and discarding “behaviors” from how exploration is conceptualized and measured. However, it is hard to imagine how one would accomplish information-seeking about one’s ethnicity without some corresponding behavior. In fact, the three items that were retained in the MEIM exploration subscale all suggest specific behaviors in which individuals might engage as part of exploring their ethnic identities. Indeed, exploration is inherently behavioral, and thus it is a contradiction to suggest that “behaviors” are wholly separate. The present findings support our argument by demonstrating that there are different behaviors that index exploration—both the concrete, active, and participatory behaviors that Phinney and Ong (2007) argued against as well as the more solitary, dyadic, and information-gathering behaviors for which they argued in favor. Both are behaviors, albeit different manifestations. Thus, rather than removing behaviors from the construct of exploration, we should consider what other behaviors need to be included to properly understand the construct.

Although we found support for two dimensions of ethnic identity exploration in the study, our ability to fully understand the complexity of exploration was hampered by having only two scales—12 items total—that measure the construct. An important next step would be to generate a large pool of potential ethnic identity exploration items to develop a new exploration scale that contains all of the relevant dimensions and relatively clear subscales to measure them. Future work to this end would benefit from consulting recent advances in the broader identity literature such as the separation of exploration in depth from exploration in breadth, and the examination of ruminative exploration (e.g., Crockett et al., 2008; Luyckx et al., 2006, 2008). Just how many different dimensions of exploration there might be is an open question, but one that is important for future research to consider.

Finally, the present study has implications for how the developmental course of ethnic identity is conceptualized. Existing research on trajectories of ethnic identity have all conceptualized ethnic identity exploration as a unidimensional construct following a single, normative path (e.g., French et al., 2006; Pahl & Way, 2006; Syed & Azmitia, 2009; Umaña-Taylor et al., 2009). The potential heterogeneity of trajectories within the broader construct of exploration, however, has yet to be explored. Our findings suggest that this may be an important direction for future research,
particularly given our findings noting that certain types of exploration were linked to general identity confusion and, in turn, to poorer well-being, whereas other types of exploration were linked to general identity coherence and, in turn, to greater well-being. The present study was, of course, cross-sectional, but certainly provides fodder for future longitudinal work.

Limitations and Future Directions

The present results should be considered in light of some important limitations. First, the models we tested were all cross-sectional, limiting our ability to make any firm claims about causal ordering. The order specified was informed by theory and past research on ethnic identity development—including longitudinal studies—but until the model proposed in the current study is tested longitudinally, the inferences we draw with respect to direction of effects must be interpreted with caution. It is also important to acknowledge the limitations inherent in the measures of exploration that we used. The items are ethnic-general, as they do not assess specific forms of exploration that may be unique depending on the individuals’ ethnic heritage. The relative merits of ethnic-general and ethnic-specific conceptualization and measurement of ethnic identity is an ongoing debate in the literature (Syed, in press). Additionally, the two exploration measures used different response scales—4-point for the EIS and 5-point for the MEIM. That the two exploration scales constituted separate factors could be interpreted as a method effect, but this interpretation is weakened by the different directions of the paths to general identity coherence, general identity confusion, and well-being observed in the SEM models. Nevertheless, future research that includes both the EIS and MEIM would benefit from using the same response options for both scales.

Additionally, the study was based on a large sample of college students, which may limit generalizability. Developmentally, we know from past research that growth in ethnic identity is different during the college years as compared with the high school years (Pahl & Way, 2006; Smith & Silva, 2011; Syed & Azmitia, 2009). Contextually, we do not know the degree to which the findings in the present study might be similar or different for young adults in the same age group who are not attending college. Furthermore, the sample was nearly three-quarters female. Although some prior work has noted significant gender differences in ethnic identity processes (e.g., Umaña-Taylor & Guimond, 2010), other studies have noted no gender differences in rating-scales measures of ethnic identity (either mean levels or correlates; e.g., see Smith & Silva’s, 2011, meta-analysis). Thus, it would be optimal to have a gender-balanced sample in future research and examine whether the current findings replicate.

Conclusions

In the present study, we aimed to develop a deeper understanding of ethnic identity exploration by testing three hypotheses on the nature and implications of exploration. Our findings have theoretical implications for understanding how individuals explore their ethnic identities, and for understanding what aspects of exploration are captured by different measurement instruments. Our findings also provide insights into how these aspects of exploration are differentially related to well-being. We encourage future researchers to strive to understand these frequently used constructs in different ways, and to consider that the developmental processes of ethnic identity can potentially lead to positive outcomes, but may also have negative consequences.

References


