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Evaluating the Psychometric Properties of the Multigroup Ethnic Identity Measure (MEIM) within the United Kingdom

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Abstract

In the present study, we examined the psychometric properties of the Multigroup Ethnic Identity Measure (MEIM; Phinney, 1992; Phinney & Alipuria, 1990) among an ethnically diverse sample within the United Kingdom. In initial analyses, we evaluated the goodness-of-fit of a 1-factor model (i.e., global ethnic identity) and the goodness-of-fit of a 2-factor model (i.e., correlated but distinct Exploration and Commitment components). Results of initial confirmatory factor analyses led us to reject both the 1-factor and 2-factor models. Results of subsequent exploratory and confirmatory factor analyses revealed a 3-factor structure (i.e., correlated but distinct Behavioral, Cognitive, and Affective components of ethnic identity) among the sample as a whole (*n* = 234) and among Asian Indian persons (*n* = 88) in particular, though results were mixed among White U.K./Irish persons (*n* = 54). Implications for the study of ethnicity-related concepts in the increasingly multi-cultural U.K. are discussed.

KEYWORDS: Ethnic identity; ego psychology; identity status; MEIM; United Kingdom.

Evaluating the Psychometric Properties of the Multigroup Ethnic Identity Measure (MEIM) within the United Kingdom

Within the United States, the 1990s were hailed as the "decade of ethnicity" in psychology (Shweder & Sullivan, 1993, p. 517). During the 1990s, American psychologists increasingly distinguished among ethnicity-related constructs such as minority versus majority status, culture, and identity (Phinney, 1996). In particular, the construct of ethnic identity (i.e., individuals' self-categorization in, and psychological attachment toward, the ethnic groups to which they belong; Phinney, 1990) has received considerable attention among American psychologists since the early 1990s (Verkuyten, 2005).

In contrast, the study of ethnic identity in the United Kingdom is in its relative infancy. Bhui et al. (2005) ostensibly examined cultural identity among persons of African, Asian (specifically Bangladeshi), and European (specifically British) descent; but they actually examined acculturation, rather than ethnic identity, as a predictor of health status. Berry, Phinney, Sam, and Vedder (2006) clearly examined ethnic identity as part of a battery of constructs in a 17-nation study that included the U.K.; but their U.K. sample was limited to persons of Asian (specifically Indian) descent. We do not know of any published study in which ethnic identity, as distinct from acculturation, has been measured across multiple ethnic groups within the U.K. As the U.K. increasingly has become

ethnically diverse, social scientists and students in the U.K. increasingly have begun to grapple with ethnicity-related issues such as ethnic identity (Alexander, 2006). Empirical research on ethnic identity is needed, not just within the higher education sector, but throughout U.K. society as a whole.

The Multigroup Ethnic Identity Measure (MEIM; Phinney, 1992; Phinney & Alipuria, 1990) has emerged as the most widely used measure of ethnic identity within as well as outside the U.S. (for examples within the U.S., see Avery, Tonidandel, Thomas, Johnson, & Mack, 2007; Gaines, Marelich, Bledsoe, Steers, Henderson, Granrose, et al., 1997; Ponterotto, Gretchen, Utsey, Stracuzzi, & Saya, 2003; for examples outside the U.S., see Dandy et al., 2008; Verkuyten & Yildiz, 2006). In the present study, we evaluated the psychometric properties of the 12-item version of the MEIM (Roberts et al., 1999) across multiple ethnic groups within the U.K. We sought to determine whether a 1-factor solution (i.e., a single dimension of ethnic identity; Phinney & Alipuria, 1990) or a 2-factor solution (i.e., Exploration and Commitment as two correlated yet distinct dimensions of ethnic identity; Roberts et al., 1999) provided optimal fit to the data.

Conceptual Origins of the MEIM: Erikson, Marcia, and Phinney

Erikson's theory of ego psychology. Baumeister (1997, p. 682) defined *identity* as "…the [aggregate of] definitions that are created for and superimposed on the self. . . ." According to Erikson's (1950, 1968) theory of ego psychology, the

development and maintenance of a stable identity is a major task of adolescence and adulthood. Individuals' success in striving to develop and maintain a stable identity is known as *identity achievement;* whereas individuals' failure in striving to develop and maintain a stable identity is known as *identity confusion* in Erikson's ego psychology theory.

Identity is one of three major aspects of individuals' ethnicity (along with culture and minority versus majority status; Phinney, 1996). Especially relevant to the present study have been researchers' attempts to measure individual differences in ethnic identity (e.g., Phinney & Alipuria, 1990; Umaña-Taylor, Yazedijan, & Bamaca-Gomez, 2004). Erikson's (1950, 1968) ego psychology theory suggests that within a given ethnic group, individuals vary along a continuum ranging from ethnic identity achievement at the high end to ethnic identity confusion at the low end.

Marcia's model of identity statuses. Marcia (1966, 1980) was the first identity theorist to propose a model of identity statuses on the basis of Erikson's (1950, 1968) ego psychology theory (Schwartz, 2001a, b). First, Marcia extracted the themes of *Exploration* (i.e., "the sorting though of multiple alternatives"; Schwartz, 2001b, p. 11) and *Commitment* (i.e., "the act of choosing one or more alternatives and following through with them"; Schwartz, 2001b, p. 11) from Erikson's writings. Subsequently, Marcia developed and tested a taxonomy of identity statuses reflecting individual differences in levels

of Exploration and Commitment.

Ideally, the combination of high versus low levels of Exploration and high versus low levels of Commitment should result in four identity statuses: (1) *Identity achievement* (high levels of Exploration and Commitment); (2) *identity moratorium* (high level of Exploration and low level of Commitment); (3) *identity foreclosure* (low level of Exploration and high level of Commitment); and (4) *identity diffusion* (low levels of Exploration and Commitment). Marcia (1966, 1980) argued that identity achievement is the most advanced stage of identity development; identity moratorium is the next-to-most advanced stage of identity development; identity foreclosure is the next-to-least advanced stage of identity development; and identity diffusion is the least advanced stage of identity development. Marcia and his colleagues (e.g., Marcia, 1966, 1967; Marcia & Friedman, 1970; Orlofsky, Marcia, & Lesser, 1973; Schenkel & Marcia, 1972; Toder & Marcia, 1973) consistently obtained support for the identity status model among late adolescents and young adults.

Phinney's model of stages of ethnic identity development. Drawing upon Erikson's (1950, 1968) theory of ego psychology and Marcia's (1966, 1980) taxonomy of identity statuses, Phinney (1990) developed a model of stages of ethnic identity development across the life span. Phinney distinguished among the *unexamined ethnic identity* stage, reflecting identity diffusion and identity foreclosure; the *ethnic identity search*

or Exploration stage, reflecting identity crisis and moratorium; and the *achieved ethnic identity* or Achievement stage. In Phinney's model, Achievement represents the highest level of ethnic identity development; Exploration represents an intermediate level of ethnic identity development; and unexamined ethnic identity represents the lowest level of ethnic identity development.

Various identity theorists have recommended that researchers focus on the continuous dimensions of Exploration and Commitment, rather than on the identity statuses (e.g., Bosma & Kunnen, 2001; Luyckx, Goossens, Soenens, & Beyers, 2006; Schwartz, 2007). Consistent with these recommendations, Phinney's (1992; Phinney & Alipuria, 1990) MEIM does not classify individuals according to discrete stages of ethnic identity development. Rather, in its various incarnations, the MEIM measures individuals' Exploration and Commitment regarding ethnic identity along a continuum (Phinney & Ong, 2007).

Psychometric Properties of the MEIM: Ethnic Identity as a Unidimensional versus Bidimensional Construct

The psychometric properties of the MEIM have been evaluated in several published studies within the U.S. (e.g., Avery et al., 2007; Gaines et al., 1997; Pegg & Plybon, 2005; Ponterotto et al., 2003; Reese, Vera, & Paikoff, 1998; Spencer, Icard, Harachi, Catalano, & Oxford, 2000; Yancey, Aneshensel, & Driscoll, 2001). Debates concerning the psychometric properties of the MEIM usually have focused on the factor structure of the

MEIM, especially regarding the presence of one versus two underlying dimensions. The presence of one dimension would lend support to Erikson's (1950, 1968) view that individuals vary along an axis from low to high identity development; whereas the presence of two dimensions might lend support to Marcia's (1966, 1967) view that individuals vary along the orthogonal axes from low to high Exploration and from low to high Commitment.

Ethnic identity as a unidimensional construct. Throughout most of the 1990s, Phinney and her colleagues (e.g., Phinney, 1992; Phinney & Alipuria, 1990; Phinney, Chavira, & Tate, 1993; Phinney, Ferguson, & Tate, 1997) generally described the MEIM as a valid, reliable measure of global ethnic identity. Various researchers in the U.S. (e.g., Avery et al., 2007; Gaines et al., 1997; Ponterotto et al., 2003) similarly have concluded that the MEIM measures overall (i.e., global) ethnic identity. Results concerning the unidimensionality of the MEIM are not consistent with Marcia's (1966, 1967) model, which originally served as the point of departure for Phinney's (1990) model. However, results concerning the unidimensionality of the MEIM are consistent with Erikson's (1950, 1968) earlier writings on identity development.

Ethnic identity as a bidimensional construct. More recently, since the late 1990s, Phinney and her colleagues (e.g., Phinney & Ong, 2007; Roberts et al., 1999) generally have described the MEIM as a valid, reliable measure of two related yet separate components of ethnic identity, namely Exploration

(a cognitive and developmental component) and Commitment (an affective component). Various researchers in the U.S. (e.g., Pegg & Plybon, 2005; Reese, Vera, & Paikoff, 1999; Spencer, Icard, Harachi, Catalano, & Oxford, 2000; Yancey, Aneshensel, & Driscoll, 2001) and in Australia (e.g., Dandy et al., 2008) similarly have obtained support for separate Exploration and Commitment components of the MEIM. Results concerning the bidimensionality of the MEIM are consistent with Marcia's (1966, 1967) identity status model.

Contradictions regarding the unidimensionality versus multidimensionality of the MEIM in Phinney's research. As we have noted, since the late 1990s, Phinney's research generally has supported a 2-factor model for the MEIM (Phinney & Ong, 2007; Roberts et al., 1999). However, Phinney's own results in a recent study across Australia, the U.S., the U.K., and 14 other nations (Berry, Phinney, Sam, & Vedder, 2006) support a one-factor, rather than a two-factor, structure. The discrepant findings across Phinney's own studies underscore the need for overt tests of 1- versus 2-factor models for the MEIM.

Ethnic Group Differences in Factor Structure of the MEIM Scale(s)

Results of studies by Roberts et al. (1999) and by Avery et al. (2007), administering the 12-item MEIM to ethnically diverse samples within the U.S. (i.e., European Americans, African Americans, Latinas/os, and Asian Americans), indicate that a 2-factor structure with Exploration and Commitment as correlated

yet distinct components can be applied across ethnic groups. However, in both studies, the magnitude of factor loadings was unequal across ethnic groups. Thus, these studies yielded configural invariance (i.e., same overall structure) but failed to yield metric invariance (i.e., equivalent loadings). Overall, the lack of metric invariance in the factor structure of the MEIM across ethnic groups suggests that factor equivalence cannot be taken for granted. More research appears to be needed to investigate this issue, especially in contexts outside the United States.

The issue of equivalence in factor structure across ethnic groups takes on added importance when one considers that the only published study in the U.K. using the MEIM (Berry, Phinney, Sam, & Vedder, 2006) included only one ethnic group (i.e., Asian Indians) and, thus, did not test for equivalence in factor structure. Moreover, the 1-factor structure obtained in that U.K. sample is at odds with the 2-factor structure obtained by Pegg and Plybon (2005) using a sample of African American girls, and with the aforementioned 2-factor structures obtained by Roberts et al. (1999) and by Avery et al. (2007) using multiethnic samples in the U.S. Given such contradictory findings in previous studies, we made no predictions regarding the nature of factor structure equivalence of the MEIM across ethnic groups in the U.K.

Goals of the Present Study

In the present study, we studied a multi-ethnic sample of

students from the U.K. We conducted confirmatory factor analyses on the sample as a whole, in order to evaluate the goodness-of-fit of 1-factor (i.e., global ethnic identity) and 2-factor (i.e., Search and Affirmation) structural equation models using the MEIM. In doing so, we tested the hypothesis (Phinney & Ong, 2007) that a 2-factor solution would fit the data significantly better than would a 1-factor solution. After deciding how many factors to retain, we conducted multiple-group confirmatory factor analyses to test the hypothesis (Phinney & Ong, 2007) that the factor structure of the MEIM would be invariant across ethnic groups.

Method

Participants

A total of 236 individuals (126 men, 108 women, and 2 individuals who did not report their gender) participated in the present study. Participants were recruited within and outside Brunel University, located in West London. The mean age of participants was 23.67 years (*SD* = 6.68 years). In terms of ethnicity, 55.5% of participants were of Asian descent (37.3% Indian, 9.7% Pakistani, 4.7% Bangladeshi, 1.3% Chinese, and 2.5% "Asian Other"); 7.2% were of African descent (1.3% Black Caribbean, 5.9% Black African); 32.2% were of European descent (22.9% White U.K./Irish, 6.4% White European, and 3.0% "White Other"); 3.4% were of "Mixed Race" (a generic term covering various racial heritages); and 1.7% did not report their ethnicity.[1]

Procedure

Prior to conducting the present study, the first author obtained ethics approval from a departmental research ethics subcommittee. The present study was conducted in accordance with the Code of Conduct, Ethical Principles and Guidelines of the British Psychological Society (BPS, 2005). The BPS ethics guidelines are similar to APA ethics guidelines in terms of stringency (see Kimmel, 2004).

Researchers introduced themselves, stated that they were collecting data for their respective undergraduate theses, and stated that they were seeking participants for a large-scale study of personality and personal relationship processes. Researchers emphasized that participation in the present study was strictly voluntary (i.e., participants did not receive money, course credit, or other compensation for taking part in the study). All materials were presented in English, and no translation was needed for any of the participants to understand the materials. Participants read and signed informed consent forms (which explained the purpose of the study in general), completed survey questionnaires (including demographic items, measures of ethnic identity, and additional measures of personality and social behavior that are beyond the scope of the present paper; Goossens, 2006; Heer, 2006; Lidder, 2006; Mann, 2006; Minhas, 2006), and read debriefing forms (explaining the purpose of the study in detail). In general, participants completed the survey within 30 minutes.

Materials

Participants completed the 12-item Multi-Group Ethnic Identity Measure (MEIM; Roberts et al., 1999). Each item was scored according to a 5-point, Likert scale (1 = strongly disagree, 5 = strongly agree), such that higher scores reflected greater tendencies for individuals to think of themselves in terms of their ethnicity and to feel psychologically attached to the ethnic groups to which they belong. Sample items included the following: "I have spent time trying to find out more about my ethnic group, such as its history, traditions, and customs" (Exploration); and "I have a clear sense of my ethnic background and what it means for me" (Commitment). Given that a major goal of the present study was to determine the factor structure of the MEIM, we report results of factor and reliability analyses in the Results section.

Results

The goodness of fit of confirmatory and exploratory factor analyses of the MEIM was assessed via the following indices where available: (a) Chi-square (χ^2), the only index that is accompanied by a formal statistical test of significance whereby significant values represent unacceptably fitting models and nonsignificant models represent acceptably fitting models (ideally, models whose estimated correlation matrices do not represent significant departures from actual correlation matrices yield nonsignificant chi-squares[2]); (b) chi-square/degrees-of-freedom ratio (χ^2/df), a variation on χ^2 in

which the formal significance test is replaced by a range whereby a ratio above 3.00 is considered too high, a ratio approaching but not dropping below 1.00 is considered optimal, and a ratio below 1.00 is considered "too good to be true" and thus is too low; (c) root mean square error of approximation (RMSEA), another variation on χ^2 that does not reflect a significance test but nonetheless can be interpreted such that values approaching 0 (and, preferably, below .10) are considered optimal; and comparative fit index (CFI), another variation on χ^2 in which the formal significance test is replaced by a range whereby values approaching 1.00 (and preferably, above .90) are considered optimal.

Initial Analyses

Confirmatory factor analysis, 1-factor model, all participants. The matrix of zero-order correlations among item scores for the full sample (N = 234) is available from the first author upon request. All correlations were positive and significant (all p's < .01). The correlation matrix was entered into a confirmatory factor analysis in which we evaluated the goodness-of-fit of a 1-factor model using LISREL 8.72 (Jöreskog & Sörbom, 2005a). In the 1-factor model, none of the measurement error terms were allowed to correlate; and all factor loadings were freely estimated. Results of the confirmatory factor analysis, using a maximum likelihood solution, indicated that a 1-factor model generally provided a

poor fit to the data (χ^2 (54) = 378.39, p < .001; χ^2/df = 7.01; RMSEA = .17; CFI = .93).

Confirmatory factor analysis, 2-factor model, all participants. Next, we evaluated the goodness-of-fit of a 2-factor model. In the 2-factor model, none of the measurement error terms were allowed to correlate; the Exploration items were attached to one factor, the Commitment items were attached to a second factor; and the two factors were allowed to correlate. Results of the confirmatory factor analysis, using a maximum likelihood solution, indicated that a 2-factor model generally provided a poor fit to the data χ^2 (53) = 296.92, p < .01; χ^2/df = 5.60; RMSEA = .14; CFI = .94).

Comparison of 1-factor and 2-factor models. A direct comparison of the 1-factor and 2-factor models indicates that the 2-factor model provided a significantly better fit than did the 1-factor model (reduction in χ^2 = 81.43; reduction in df = 1; p < .01). However, given that neither the 1-factor model nor the 2-factor model provided an acceptable fit, the results of this comparison are insufficient to justify accepting either model (unlike Phinney & Ong, 2007). In order to obtain a 1-factor or a 2-factor model with adequate fit to the data, we would have needed to add several unexpected instances of uncorrelated measurement error (as did Avery et al., 2007; Gaines et al., 1997; and Roberts et al., 1999). Although the addition of uncorrelated measurement error terms can be justified in some cases (Kline, 2005), we decided not to employ

this technique. Instead, we conducted an exploratory factor analysis in order to determine how many factors were measured by the MEIM (for examples of complementary uses of exploratory and confirmatory factor analyses, see Brown, 2006).

Subsequent Analyses

Exploratory factor analysis, all participants. Our decision to shift from confirmatory to exploratory factor analysis made it necessary for us to use the predecessor to LISREL (Jöreskog & Sörbom, 1996a), known as PRELIS (Jöreskog & Sörbom, 1996b). PRELIS provides SEM fit indices for the factor solution extracted. Unlike LISREL (which can be conducted using a zero-order correlation matrix), PRELIS requires raw data. Thus, we entered the raw data (available from the first author upon request) into PRELIS 2.72 (Jöreskog & Sörbom, 2005b). Results of the exploratory factor analysis, using a maximum likelihood solution, indicated that no more than six factors could be extracted from the data (i.e., iterations did not converge for seven factors). By default, PRELIS retains the solution with the highest number of factors that yields a nonsignificant chi-square. However, using this default solution would have led us to retain a 5-factor solution with Heywood cases (i.e., one or more communality estimates greater that 1.00 and, thus, inadmissible; Thompson, 2004).

We conducted the exploratory factor analysis a second time, retaining the solution with the highest number of factors yielding a root mean square error of approximation (RMSEA) lower

than .10 (following Phinney & Ong, 2007 see also Kline, 2005) – in this instance, a 3-factor solution. The 3-factor solution generally provided an acceptable fit to the data (χ^2 (33) = 81.86, $p < .01$; $\chi^2/df = 2.48$; RMSEA = .08)[3]. The resulting matrix of Promax-rotated factor loadings is shown in Table 1. Inspection of the factor loadings in Table 1 reveals that using the criterion of a maximum of 1 item with a factor loading of .30 or higher per row (Kline, 1994), Items 1, 2, 3, and 4 measure the Behavioral component of ethnic identity; Items 6, 8, and 9 measure the Cognitive component of ethnic identity; and Items 7, 10, and 12 measure the Affective component of ethnic identity (Items 5 and 11 loaded on more than one factor and, thus, are excluded in interpreting the factors).

Having determined that a three-factor solution was optimal, we conducted reliability analyses on the resulting subscales. Results of reliability analyses indicated that the three subscales were internally consistent, especially given the small number of items per subscale (Cronbach's alphas = .81 for the Behavioral component, .89 for the Cognitive component, and .89 for the Affective component; see Carmines & Zeller, 1979, regarding alpha coefficients in reliability analyses).

Confirmatory factor analyses, Asian Indian persons and White U.K./Irish persons. Given that the only ethnic groups for which *n*'s exceeded 50 were Indian (*n* = 88) and White U.K./Irish persons (*n* = 54), we estimated a multiple-group confirmatory factor analysis using LISREL, across these two groups and based

on the 3-factor solution obtained from the aforementioned exploratory factor analysis (see Jackson, 2003, for a recent commentary regarding sample size and structural equation analyses). Correlation matrices for the two groups, based on the 10 remaining MEIM items, are available from the first author upon request. In this multiple-group model, which included equality constraints on all parameters, Items 1, 2, 3, and 4 were assigned to the Behavioral component of ethnic identity; Items 6, 8, and 9 were assigned to the Cognitive component of ethnic identity; Items 7, 10, and 12 were assigned to the Affective component of ethnic identity; and the three factors were allowed to correlate. Unfortunately, the two-group confirmatory factor analysis produced a fitted covariance matrix that was not positive definite (i.e., one or more of the correlations in the fitted covariance matrix were greater than 1.00 and, hence, yielded an inadmissible solution; Schumacker & Lomax, 2004). This failure prevented us from performing tests of either metric invariance (in which factor structures are identical across groups) or scalar invariance (in which means are identical across groups; see Cheung & Rensvold, 2002; Vandenberg & Lance, 2000).

Although the problem regarding the fitted covariance matrix surfaced when we tried to enter the two correlation matrices in the same analysis, we did not encounter any problems when we ran two separate, one-group confirmatory factor analyses. For Asian Indian persons, the goodness-of-fit indices clearly supported

the 3-factor model, χ^2 (32) = 43.61, $p < .09$; $\chi^2/df = 1.36$; RMSEA = .06; CFI = .99). Inspection of factor loadings (shown in Table 2) indicated that all loadings for items on their associated factors were greater than .50. Results of reliability analyses indicated that the subscales were internally consistent (Cronbach's alphas = .83 for the Behavioral component, .90 for the Cognitive component, and .92 for the Affective component). Zero-order correlations among the three components of ethnic identity were positive and significant (for Behavioral and Cognitive components, $r = .57$, $p < .01$; for Behavioral and Affective components, $r = .53$, $p < .01$; for Cognitive and Affective components, $r = .71$, $p < .01$).

For White U.K./Irish persons, the goodness-of-fit indices provided mixed support for the 3-factor model, χ^2 (32) = 60.18, $p < .01$; $\chi^2/df = 1.88$; RMSEA = .11; CFI = .95. Inspection of the factor loadings (Table 2) indicated that all nonzero loadings were greater than .50. Results of reliability analyses indicated that the subscales were internally consistent (Cronbach's alphas = .80 for the Behavioral component, .89 for the Cognitive component, and .88 for the Affective component). Zero-order correlations among the three components of ethnic identity were positive and significant (for Behavioral and Cognitive components, $r = .65$, $p < .01$; for Behavioral and Affective components, $r = .48$, $p < .01$; for Cognitive and Affective components, $r = .75$, $p < .01$).

Discussion

Results of the present study indicated that, contrary to the 1-factor and 2-factor solutions that commonly have been reported (Phinney & Ong, 2007), a 3-factor solution provided an optimal fit to the MEIM data for our U.K. sample as a whole. The resulting factors (i.e., Behavioral, Cognitive, and Affective) bear a strong resemblance to the three dimensions (i.e., Ethnic Behaviors, Search, and Affirmation) that appeared in the earliest version of the MEIM (Phinney, 1992; Phinney & Alipuria, 1990). Although Phinney and Ong (2007) recommended keeping behavioral manifestations of ethnic identity separate from cognitive and affective components of ethnic identity, our results suggest that participants view such behavioral manifestations as part and parcel of ethnic identity.

Our results regarding Asian Indian persons in particular are at odds with the results of Berry, Phinney, Sam, and Vedder (2006). We obtained three intercorrelated factors among Asian Indians in the U.K., whereas Berry et al. obtained one factor among Asian Indians in the U.K. However, Berry et al. used a modified 8-item version of the MEIM. As a result, we believe that it would be premature to draw firm conclusions regarding the differences between our results and the results obtained by Berry et al.

Our results regarding the applicability of the 3-factor ethnic identity model to White U.K./Irish persons are novel in that, to our knowledge, no previously published study has examined the psychometric properties of the MEIM among this segment of the U.K. population. Given that approximately 90% of

persons in the U.K identify themselves as White U.K./Irish (see U.K. Office of National Statistics, 2005), it is important to assess the structure of ethnic identity in this group. Of course, the same problem exists in the U.S.; many people assume that White Americans do not "have" culture or ethnicity (Phinney, 1996)[4]. Moreover, ethnic minorities make up a much larger share of the population in the U.S. than in the U.K. (Kibria, 2007). Since the late 1990s, right-wing political groups (especially the British National Party, which ostensibly has sought mainstream acceptance but often has been viewed as sympathetic to neo-Nazi propaganda; Copsey, 2007) increasingly have invoked the need to protect the ethnic identity of the White U.K./Irish population against a presumed rising tide of ethnic minority immigrants (Runnymede Trust, 2000). Clearly, then, the issue of ethnic identity among White U.K./Irish persons is timely, both within and outside academia.

Strengths and Limitations of the Present Study

The present study is characterized by some important strengths. For example, the overall sample (which included workers as well as students) was highly diverse, in keeping with the demographic characteristics of West London (e.g., in the West London borough of Brent, approximately 38% of the population is classified as European-descent, 44% as Asian-descent, and 18% as African-descent; U.K. Office of National Statistics, 2006). In addition, after 1- and 2-factor confirmatory factor analyses did not work as expected, an

exploratory factor analysis yielded a 3-factor solution with subscales that met the most stringent criteria for reliability (Carmines & Zeller, 1979) and were highly intercorrelated yet distinct dimensions. Finally, to our knowledge, this is the first study to apply the 12-item MEIM to multiple ethnic groups in the U.K.

At the same time, the present study is characterized by some important limitations. With regard to demographic characteristics, the ethnic makeup of the present sample does not match the ethnic makeup of the United Kingdom as a whole (in which approximately 92% of the population is classified as European-descent, 4% as Asian-descent, and 2% as African descent; U.K. Office of National Statistics, 2003).[5] Also, with regard to the 3-factor solution, the fact that previous researchers have not reported such a solution with the 12-item MEIM leads one to wonder whether our results generalize beyond the present sample (although results of an exploratory factor analysis of the 14-item MEIM in a sample of Asian Americans yielded the a factor structure with the same three factors that we identified; Lee & Yoo, 2004). The most serious limitation, however, is the lack of metric invariance, which not only prevented us from making direct comparisons regarding factor structure across ethnic groups but also prevented us from obtaining scalar invariance, which in turn prevented us from testing for mean ethnic group differences on the MEIM items.

All in all, we believe that the strengths outweigh the limitations in the present study. With regard to demographic characteristics, although persons of European descent were underrepresented in the present sample, we were fortunate to collect data in London, which is home to more than 40% of the U.K. ethnic minority population (U.K. Office of National Statistics, 2004). With regard to the 3-factor solution, the model clearly could be applied to the sample as a whole. Finally, with regard to lack of metric invariance, we cannot make direct comparisons between the factor loadings across Asian Indians and White U.K./Irish persons; nevertheless, the Behavioral, Cognitive, and Affective factors all emerged in analyses for Asian Indians and for White U.K./Irish persons.

Directions for Future Research

Future researchers in the U.K. might wish to evaluate the psychometric properties of ethnic identity measures other than the MEIM. For example, the Ethnic Identity Scale (EIS; Umana-Taylor, Yazedjian, & Bamaca-Gomez, 2004) was developed as an alternative to the MEIM, measuring the dimensions of Exploration, Resolution, and Affirmation. So far, to our knowledge, use of the EIS has been limited to the U.S. As researchers begin to acknowledge the importance of ethnic identity in increasingly multiethnic societies such as the U.K. (Berry et al., 2006), comparisons of the psychometric properties of various ethnic identity scales will be needed.

In addition, future researchers in the U.K. might wish to evaluate the psychometric properties of scales that were designed to measure racial identity, rather than other aspects of ethnic identity (see Worrell & Gardner-Kitt, 2006, regarding the distinction between racial and ethnic identities). For example, the Racial Identity Attitude Scale (RIAS; Parham & Helms, 1981), designed to measure Pre-Encounter, Encounter, Immersion, and Internalization stages of Black identity development, has emerged as the most widely used measure of racial identity (Helms, 2007). However, details regarding the earliest factor analyses of the RIAS in the U.S. were never published (Cokley, 2007). Similarly, Robinson (2000) administered the RIAS to two Black samples in the U.K. but did not report results of factor analyses. As researchers begin to acknowledge the distinctive social and psychological experiences of European, African, and Asian descent groups in the U.K. (Modood et al., 1997), critical evaluation of measures of racial identity will be needed.

Conclusion

At the outset of the present paper, we mentioned that the 1990s were hailed as the "decade of ethnicity" in the U.S. (Shweder & Sullivan, 1993, p. 517). Thanks largely to the efforts of Phinney and her colleagues (e.g., Phinney, 1992; Phinney & Alipuria, 1990; Phinney, Chavira, & Tate, 1993; Phinney, Ferguson, & Tate, 1997; Roberts et al., 1999), the 1990s generated a large body of research providing valuable

insights into ethnic identity in the U.S. We hope that the present findings (as well as the results of Berry et al., 2006) will help to increase researchers' understanding and interest regarding ethnic identity – whether measured by the MEIM or by other scales – within the U.K.

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Authors' Note

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Footnotes

[1]The ethnic classification system used in the present study, including the specific wording, is identical to the ethnic classification system that the government of the United Kingdom used in the 2001 census (U.K. Office of National Statistics, 2003).

[2]As Marsh, Balla, and McDonald (1988) pointed out, chi-squares accompanying poorly fitting models are sensitive to sample size, such that (a) misleadingly low chi-squares can be generated by small data sets (*n*'s below 100); and (b) misleadingly high chi-squares can be generated by large data sets (*n*'s above 200).

[3]CFI and other incremental fit indices were not produced by PRELIS and, hence, are not reported here.

[4]The authors are indebted to Seth Schwartz for noting the similarity in arguments between White Britons' and White Americans' ethnicity.

[5]From 2001 to 2003, the percentage of the U.K.'s "non-White British" population living in London has declined from 44.7% to 42.5% (Large & Gnosh, 2006). As Action Editor Seth Schwartz observed, "I wonder… how much the demographics of London reflect what other parts of the UK will look like in 10-20 years. Traditional migration patterns are such that the descendants of immigrants often move out of the cities and into other areas."

Table 1:

Matrix of Factor Loadings for MEIM Items, All Participants (*n* = 234)

	Factor		
Item	*1 (Behavioral)*	*2 (Cognitive)*	*3(Affective)*
1	**.68**	.05	.04
2	**.61**	-.02	.01
3	**.65**	.15	-.13
4	**.95**	-.18	.03
5	.35	.11	.41
6	.28	**.48**	.13
7	-.02	.15	**.69**
8	-.10	**.98**	.05
9	.09	**.64**	.23
10	.10	-.07	**.87**
11	.19	.38	.38
12	-.04	.01	**.91**

NOTE: Within each row, the factor loading with absolute value of .30 or higher is in boldface (maximum of one loading in boldface per row).

1 = I have spent time trying to find out more about my ethnic group, such as its history, traditions, and customs. (originally Exploration item 1)

2 = I am active in organizations or social groups that include mostly members of my own ethnic group. (originally Exploration item 2)

3 = I think a lot about how my life will be affected by my ethnic group membership. (originally Exploration item 3)

4 = In order to learn more about my ethnic background, I have often talked to other people about my ethnic group. (originally Exploration item 4)

5 = I participate in cultural practices of my own group, such as special food, music, or customs. (originally Exploration item 5)

6 = I have a clear sense of my ethnic background and what it means for me. (originally Commitment item 1)

7 = I have a strong sense of belonging to my own ethnic group. (originally Commitment item 3)

8 = I understand pretty well what my ethnic group membership means to me. (originally Commitment item 4)

9 = I am happy that I am a member of the group I belong to. (originally Commitment item 2)

10 = I have a lot of pride in my ethnic group. (originally Commitment item 5)

11 = I feel a strong attachment towards my own ethnic group. (originally Commitment item 6)

12 = I feel good about my cultural or ethnic background. (originally Commitment item 7)

Table 2:

Matrix of Factor Loadings for MEIM Items

Asian Indian persons (n = 88)			
	Factor		
Item	*1 (Behavioral)*	*2 (Cognitive)*	*3(Affective)*
1	**.82**		
2	**.75**		
3	**.57**		
4	**.86**		
5			
6		**.90**	
7		**.78**	
8		**.92**	
9			**.88**
10			**.91**
11			
12			**.87**

NOTE: Within each row, the factor loading with absolute value of .30 or higher is in boldface (maximum of one loading in boldface per row).

1 = I have spent time trying to find out more about my ethnic group, such as its history, traditions, and customs. (originally Exploration item 1)

2 = I am active in organizations or social groups that include mostly members of my own ethnic group. (originally Exploration item 2)

3 = I think a lot about how my life will be affected by my ethnic group membership. (originally Exploration item 3)

4 = In order to learn more about my ethnic background, I have often talked to other people about my ethnic group. (originally Exploration item 4)

5 = I participate in cultural practices of my own group, such as special food, music, or customs. (originally Exploration item 5)

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8 = I understand pretty well what my ethnic group membership means to me. (originally Commitment item 4)

9 = I am happy that I am a member of the group I belong to. (originally Commitment item 2)

10 = I have a lot of pride in my ethnic group. (originally Commitment item 5)

11 = I feel a strong attachment towards my own ethnic group. (originally Commitment item 6)

12 = I feel good about my cultural or ethnic background. (originally Commitment item 7)

White UK/Irish persons (n = 54)

	Factor		
Item	*1 (Behavioral)*	*2 (Cognitive)*	*3(Affective)*
1	**.67**		
2	**.54**		
3	**.69**		
4	**.99**		
5			
6		**.78**	
7		**.93**	
8		**.90**	
9			**.78**
10			**.87**
11			
12			**.89**

NOTE: Within each row, the factor loading with absolute value of .30 or higher is in boldface (maximum of one loading in boldface per row).

1 = I have spent time trying to find out more about my ethnic group, such as its history, traditions, and customs. (originally Exploration item 1)

2 = I am active in organizations or social groups that include mostly members of my own ethnic group. (originally Exploration item 2)

3 = I think a lot about how my life will be affected by my ethnic group membership. (originally Exploration item 3)

4 = In order to learn more about my ethnic background, I have often talked to other people about my ethnic group. (originally Exploration item 4)

5 = I participate in cultural practices of my own group, such as special food, music, or customs. (originally Exploration item 5)

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10 = I have a lot of pride in my ethnic group. (originally Commitment item 5)

11 = I feel a strong attachment towards my own ethnic group. (originally Commitment item 6)

12 = I feel good about my cultural or ethnic background. (originally Commitment item 7)