



# Language as Ethnicity: Evaluating the Psychometric Properties of the MEIM-R in a Multi-ethnic Population in India

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**Abstract** The study of ethnic identity has received considerable attention in the field of psychology. However, the literature draws primarily from WEIRD populations and conflates race and ethnicity. Ethnic identity remains understudied in multi-ethnic and diverse contexts like India, where language is often used as a marker of ethnicity. This study conceptualised ethnicity on the basis of language and assessed the psychometric properties of the Multigroup Ethnic Identity Measure-Revised, in a multi-ethnic sample of young adults in Karnataka, India. The reliability, convergent validity (self-esteem, optimism, familial ethnic socialisation, national identity), concurrent validity (EIS-B) and factor structure of the measure were assessed. Additionally, differences in ethnic identity were examined between the majority and minority ethnic groups. The study provides support for the convergent and concurrent validity of the measure and confirms the correlated two-factor structure of exploration and commitment. Our results also showed that ethnic identity was more significant among majority group members, contradicting previous literature and highlighting the cultural significance of language as ethnicity. The study adds to the literature on the MEIM-R highlighting the

applicability of this measure to multicultural settings with multiple definitions of ethnicity.

**Keywords** Ethnic identity · Ethnicity · Factor structure · Multigroup ethnic identity measure-revised · Psychometric properties

## Abbreviations

MEIM-R	Multigroup ethnic identity measure-revised
WEIRD	Western, educated, industrialised, rich and democratic
MEIM	Multigroup ethnic identity measure
RSES	Rosenberg self-esteem scale
LOT-R	Revised life orientation test
FESM	Familial ethnic socialisation measure
ICSEY	International comparative study of ethnocultural youth
EIS-B	Ethnic identity scale-brief
CFI	Comparative fit index
TLI	Tucker–Lewis fit index
RMSEA	Root mean square error of approximation

## Introduction

Psychological research has grown to emphasise the importance of multiculturalism and cultural sensitivity (APA, 2003). The study of ethnic identity, in particular, has received a vast amount of attention. Ethnic identity is positively associated with self-esteem, optimism, coping, sense of mastery, academic achievement (Roberts et al., 1999; Umaña-Taylor et al., 2008; Yasui et al., 2004) and can serve as a protection against discrimination (Litam & Oh, 2020). It is negatively associated with loneliness and depression (Roberts et al., 1999). Yet, most of this work has

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been conducted in the west, in countries like the USA where race and ethnicity are conflated (Hall et al., 2016). There is less work with non-American populations (Webber et al., 2013) and in new contexts such as India, where ethnicity is defined differently (Punekar, 1974). It is important to expand psychological research beyond WEIRD (Western, Educated, Industrialised, Rich and Democratic) populations (Henrich et al., 2010). A preliminary step towards this is to evaluate widely used measures of ethnic identity, especially one that is not group or culture-specific. This study measured the psychometric properties of the Multigroup Ethnic Identity Measure—Revised (MEIM-R) in a sample of young adult residents in Karnataka, India, by conceptualising ethnicity on the basis of language.

### Defining Ethnicity and Ethnic Identity

Definitions of ethnicity can be broad, intermediate or narrow (Cokley, 2007). In broad definitions, biophysical and cultural traits are included, and race and ethnicity are used interchangeably. Intermediate definitions look at national origin and cultural attributes. Narrow definitions of ethnicity classify groups on the basis of shared cultural characteristics like language and customs (Cokley, 2007). This study adopts the definition—“ethnicity refers to the cultural practices (e.g. customs, language, values) of a group of people, but the group need not be the same ascribed racial group” (Helms, 2007, p. 236). Ethnic identity is the degree to which an individual affiliates with their ethnic group and the quality of that affiliation. It involves self-labelling, sense of belonging and a positive evaluation of one’s ethnic group. Essentially, it is the quality of an individual’s affiliation with their ethnic group (Phinney & Ong, 2007). It is a multifaceted concept and includes self-categorization, exploration, commitment and in-group evaluation (Phinney & Ong, 2007). The aspect of self-categorization is especially important because one’s ethnic label or ascribed ethnicity is different from whether they actually identify with the group. Thus, measuring ethnic identity first begins with knowing whether individuals, in fact, self-identify with their ethnic group (Phinney, 1992).

### Multigroup Ethnic Identity Measure—Revised (MEIM-R)

The Multigroup Ethnic Identity Measure (MEIM) was created as a measure that is not culture or group-specific but can be used across all ethnic groups (Phinney, 1992). This original measure showed varying results with its factor structure, was criticised for some of the items, and was ultimately revised, resulting in the Multigroup Ethnic Identity Measure—Revised (MEIM-R). Essentially, there are two processes in identity development which also apply

to ethnic identity development—exploration and commitment. Exploration is “seeking information and experiences relevant to one’s ethnicity” (Phinney & Ong, 2007, p.272). Commitment refers to a sense of belonging, attachment and personal investment in one’s ethnic group (Phinney & Ong, 2007). Phinney and Ong (2007) developed the MEIM-R as a 6-item measure with three items, each measuring exploration and commitment.

The MEIM-R scale showed a Cronbach’s alpha of 0.81, with 0.76 and 0.78 for the exploration and commitment subscale, respectively. The scale measures ethnic identity, with higher scores indicating a more achieved ethnic identity (Phinney & Ong, 2007). Studies in the USA (Brown et al., 2014; Burrow-Sanchez, 2014; Chakawa et al., 2015; Yoon, 2011) as well as Canada, Italy and Bulgaria (Homma et al., 2014; Musso et al., 2017; Phinney & Ganeva, 2011) have supported the correlated two-factor structure. Other studies have used the MEIM-R beyond replication, such as in Tanzania with various tribes such as Chagga, Masai and Nyakyusa (Drescher et al., 2017), in New Zealand with New Zealand Pākehā (those of British or European ancestry), Chinese, Samoan and Māori (indigenous) groups (Webber et al., 2013). Yet, the literature suggests that there is not enough work assessing the psychometric properties of this measure with non-American populations (Webber et al., 2013), especially in contexts like India and South Asia, where definitions of ethnicity can be narrow (Cokley, 2007), a gap we aimed to bridge.

Next, and very importantly, the best practices and guidelines state that a scale should be cross-culturally validated even if it is used in a different country and the language is the same because this is critical to ensure that content validity of the scale is maintained across cultures (Beaton et al., 2000). Thus, the psychometric properties of the MEIM-R should be tested in different countries and with different populations within the countries in order to ensure content validity of the scale is maintained, the best practices for cross-cultural adaptation are followed, and more literature is produced to understand and determine the validity of the scale.

### Background and Context of the Present Study: Ethnicity in India

India is a diverse and pluralistic country with a population of around 1.2 billion people ( ). During colonial rule, ethnicity was often viewed in terms of racial categories like Indo-Aryan, Dravidian, Mongoloid, etc. (Sharma, 2019). However, those categories are less used now, and presently, there are four factors that contribute to ethnicity within India—language, region, caste and religion (Punekar, 1974). Language specifically has had a complex history

in post-independent India. States in India are organised along linguistic lines. Major language groups are also concentrated in one geographical state, and language is a significant source of conflict (Mawdsley, 2002; Priya, 2016). Apart from a small set of data on ethnicity amongst scheduled tribes, language data are the only collected marker of ethnicity (Census of India, 2011a, 2011b). The Census (2011) records 121 languages, and India's linguistic diversity is reflected in its high linguistic fractionalisation index of 0.81 (Alesina et al., 2003). Liebkind (as cited in Jelić et al., 2020) discusses ethnolinguistic theory, underscoring the importance of language to an ethnic group. Noels (2014) has highlighted the widespread study of language and ethnicity in social psychology and social linguistics while also discussing arguments on how language supports and creates ethnicity. Stevens and Swicegood (as cited in Siegel, 2018) have underscored the importance of language to an ethnic group, the group's heritage, and the role language plays in building solidarity within a group. Hence, this study conceptualises ethnicity on the basis of language. Moreover, while language is a strong basis for asserting ethnicity, these groups also share socio-cultural characteristics, cultural heritage, traditions and customs, thereby making them ethnic groups (Priya, 2016). For these reasons, we chose to conceptualise ethnicity and classify ethnic groups on the basis of language.

To our knowledge, the MEIM-R (Phinney & Ong, 2007) has been used in three unpublished dissertations in India so far (Khangte, 2016; Laltanpuii, 2018; Sharma, 2019), all of which focus on the geographically isolated and racially distinct north-eastern India. Two of the three studies focus on one particular ethnic group, namely Indian Gorkhas and Mizo people (Khangte, 2016; Laltanpuii, 2018). One study ran confirmatory factor analyses, which supported the two-factor structure (Sharma, 2019), and all the studies supported high reliability of the measure (0.68 to 0.81).

The three previous unpublished dissertations in India focus only on the northeast region, conceptualise ethnicity on the basis of ethnic origins, mostly do not look at multiple ethnic groups, and did not test the psychometric properties of the MEIM-R extensively. Our study goes a step beyond the previous work in India since our sample is more heterogeneous and composed of multiple ethnic groups; it goes beyond the northeast region, it conceptualises ethnicity on the basis of language, and it has evaluated the psychometric properties of the scale more rigorously by looking at factor structure, convergent validity, concurrent validity and reliability. Thus, our study has gone on to fill further gaps in the literature.

We moved beyond the northeast region and recruited a sample from one state in India, namely Karnataka. The People's Linguistic Survey of India (as cited in Sebastian, 2017) notes more than fifty languages are spoken in Karnataka.

The official language of the state is Kannada, but the state recognizes several linguistic minorities and languages like Telugu, Tamil, Marathi and Tulu. Languages spoken are categorised as official or major, minor, and other (Ministry of Minority Affairs, 2007a, 2007b). In terms of ethnic groups based on language, Kannadigas make up the dominant ethnic group, and others include Telugu, Tamilians, Marathi, Tuluvas, Konkani, Malayalis, Gujaratis and so on (World Heritage Encyclopedia, n.d.).

## The Present Study

In the present study, we employed a narrow definition (Cokley, 2007) by conceptualising ethnicity on the basis of language and examined the reliability, validity and factor structure of the MEIM-R and differences in ethnic identity scores between majority and minority groups. Our aim was to confirm the widely used MEIM-R as a suitable measure of ethnic identity with ethnicity defined in terms of language in a culturally diverse context. We hoped to validate this as a multicultural measure as well as examine established relationships between ethnic identity and relevant psychosocial variables from this novel lens.

### Reliability

For reliability, we looked at internal consistency as measured by Cronbach's alpha. Other forms of reliability have not been deemed appropriate for the MEIM-R (Herrington et al., 2016).

### Convergent Validity

For convergent validity, we chose variables that are associated with ethnic identity theoretically, in addition to having empirically supported relationships as established by previous studies. We chose variables across three levels and discussed how previous research had established the validity of the MEIM-R using these variables. On an individual level, we looked at variables related to well-being, namely self-esteem and optimism. On an intermediate or familial level, we looked at familial ethnic socialisation. Lastly, at a larger collective level, we considered national identity. We discuss the rationale and support for each as follows.

Research indicates that ethnic identity is associated with psychological well-being (Phinney & Ganey, 2011; Roberts et al., 1999), which can be explained by both social and developmental theory; Social Identity Theory (Tajfel & Turner, 1986) suggests that when individuals are part of a group, they feel a need to differentiate their in-group from other groups and evaluate their own group more favourably, enhancing their self-concept. Thus, group identity is linked to self-esteem (Tajfel & Turner, 1986).

The developmental perspective states that individuals who have an achieved identity show various psychological strengths (Marcia, 1980). Self-esteem generally refers to a person's sense of their worthiness as a person and how much value they place on themselves (Baumeister, 1993). Optimism implies people generally expect good things to happen to them (Scheier et al., 1994). Prior research has confirmed that ethnic identity is positively correlated with self-esteem (Phinney, 1989; Phinney & Ganeva, 2011; Phinney et al., 1997; Roberts et al., 1999; Smith & Silva, 2011), including among Asian Americans and Asian Indians in the USA (Lee, 2003; Tummala-Narra et al., 2011); and ethnic identity is positively correlated with optimism (Phinney & Ganeva, 2011; Roberts et al., 1999). Hence, we hypothesised that participant-reported ethnic identity would be positively correlated with self-esteem (H1) and participant-reported ethnic identity would be positively correlated with optimism (H2).

The next variable we looked at to establish convergent validity was familial ethnic socialisation which is defined as the extent to which individuals “perceived that their families socialised them with respect to their ethnicity” (Umaña-Taylor et al., 2004, p.17). Research indicates that socialising individuals is linked to their ethnic identity development (Phinney, 1996; Umaña-Taylor et al., 2004). Erikson (1968) extensively spoke about how identity development is influenced by social context and contextual factors, and the role of family in socialising individuals into their ethnic identity is critical (Phinney, 1996). This has been found across studies with diverse groups like Latinos (Supple et al., 2006; Umaña-Taylor & Fine, 2001; Umaña-Taylor et al., 2004), Asian Indians, Chinese, Salvadoran, Filipino and Vietnamese adolescents (Umaña-Taylor et al., 2006) and among Indians in Malaysia (Ganaprakasam et al., 2017). Based on this evidence, we hypothesised that participant-reported ethnic identity would be positively correlated with familial ethnic socialisation (H3).

Our last variable to test convergent validity was national identity, which is based on one's attachment, knowledge and significance one attaches to their nation (Tajfel, 1982). The relationship between ethnic and national identity is especially pertinent in multi-ethnic countries, where the likelihood of conflict is higher. Masella (2011) highlights that with high levels of ethnic diversity, minority groups show lesser national sentiment, and in contexts with lower diversity, minority communities show higher national sentiment. The nature of the relationship between ethnic and national identity, however, varies. In some cases, ethnic and national identity are positively associated (Phinney et al., 2001), while in others, the relationship is negative (Martiny et al., 2017, 2019; Phinney et al., 2001; Verkuyten & Yildiz, 2007). Given that the literature on ethnic identity and national identity shows a significant association, but the direction varies per study, we proposed a non-directional hypothesis. We hypothesised that participants' reported ethnic identity and national identity would be significantly correlated (H4). To summarise, to examine the convergent validity of the MEIM-R, we looked at the correlation

of ethnic identity with self-esteem, optimism, familial ethnic socialisation, and national identity.

### Concurrent Validity

Apart from convergent validity, we also looked at the concurrent validity of the MEIM-R by examining its correlation with another measure of ethnic identity: the Ethnic Identity Scale—Brief (EIS-B). The EIS and EIS-B were also designed to assess ethnic identity. Similar to the MEIM-R, it is rooted in Marcia's work and Social Identity Theory (Umaña-Taylor et al., 2004). It looks at three components of ethnic identity—exploration, resolution and affirmation. Exploration is “the degree to which individuals have explored their ethnic identity;” resolution is the “degree to which they have resolved what their ethnic identity means to them;” and affirmation is the positive or negative affect, “they associate with that resolution” (Umaña-Taylor et al., 2004, p.14). The main difference between the MEIM and EIS is that the EIS includes the affirmation component to do with ethnic-racial identity content. Though not many studies have looked at these two measures together, some have found that the exploration subscales of the two measures and the resolution subscale of the EIS and the commitment subscale of the MEIM-R are similar (Yoon, 2011). A study in India also found parallels between the exploration subscales and resolution and commitment subscales of the EIS and MEIM (Lalchhanhimi, 2013). Syed et al. (2013) found that with the exploration component of ethnic identity, there are two dimensions—participation and search. The EIS exploration scale measures participation, while the MEIM exploration subscale measures search, and the scales were positively related (Syed et al., 2013). We used the brief version of the EIS (Douglass & Umaña-Taylor, 2015) and hypothesised that scores on the exploration subscale of the MEIM-R would be positively correlated with scores on the exploration subscale of the EIS-B (H5A) and scores on the commitment subscale of the MEIM-R would be positively correlated with scores on the resolution subscale of the EIS-B (H5B).

### Factor Structure

We also examined the factor structure of the MEIM-R (H6) to reconfirm that it is best explained by a correlated two-factor structure (Brown et al., 2014; Burrow-Sanchez, 2014; Chakawa et al., 2015; Homma et al., 2014; Musso et al., 2017; Phinney & Ganeva, 2011; Yoon, 2011). This has also been supported in India (Sharma, 2019).

### Differences between Ethnic Majority and Minority Groups

Lastly, we borrowed from Phinney and Ganeva's (2011) study and, beyond the psychometric properties, explored an additional question regarding the differences in scores of

ethnic identity between the majority and minority group. Studies indicate that ethnic identity is more important to ethnic minorities (Phinney & Ganeyva, 2011). With majority groups, such as European Americans in the USA, ethnic identity tends to be less important (Phinney, 1989). We hypothesised that participants of the minority ethnic groups in Karnataka would score higher on ethnic identity than participants of the majority ethnic group in Karnataka (H7). As per demographic data, Kannadigas are the ethnic majority group in Karnataka, and other linguistic groups are classified as the ethnic minority (Ministry of Minority Affairs, 2007a, 2007b).

## Method

### Participants

For the main study, we recruited participants who are young adults, domiciles of Karnataka and fluent in English and at least one other language as listed in the Census of India (2011a, 2011b) schedule. Young adults or emerging adults are defined as individuals between the ages of 18 and 25 (Arnett, 2000). A domicile of Karnataka is someone who permanently resides in the state of Karnataka (What is Domicile?—Meaning in India, n.d.). Additionally, we included the requirement that participants should have resided in Karnataka for the majority of their lives, which we defined as a minimum of 75% of their lives. English is largely spoken in private schools, but using English as the medium of instruction across India is a trend that has been actively rising, as noted by the National Statistical Office (Sharma, 2020). We chose to stick to English as the language for the study to maintain parity and as the researchers were fluent in the language. Additionally, the MEIM-R has a question where participants engage in spontaneous self-categorisation and mention the ethnic group they feel connected to and are a part of (Phinney & Ong, 2007). Thus, participants may categorise themselves into the group they feel a part of, irrespective of ethnic group by birth, linguistic proficiency, adherence to group traditions, etc. Further, regional language proficiency is not relevant to the psychometric properties of the scale for this study; hence, we did not translate the measure. However, we do believe that future research should look into translating the measure to other languages and then evaluating the psychometric properties of the scale.

The study was approved by the university's Institutional Review Board. All participants were asked to read an informed consent page, and only those who provided their consent were directed to the rest of the survey. The survey form collected a total of 417 responses, of which 262 responses met the criteria for this study. All 262 participants

were between the ages of 18 and 25 ( $M=21.7$ ,  $SD=2.05$ ). For gender, 3 participants (1.1%) did not respond. Of the 259 respondents, 189 (73%) indicated they are female, 68 (26.3%) said they are male, and 2 (0.8%) said they are of another gender. Other demographic details collected included religion, caste, and employment status (Appendix C). The sample was composed of participants from various language-based ethnic groups, which is reported in Table 1 (Appendix A). For the purposes of our last research question, based on participants' self-reported and self-identified ethnic group, we classified them as Kannadiga or ethnic majority and ethnic minority. The distinction between the two was made as per demographic data and classifications as determined by the government of India (Ministry of Minority Affairs, 2007a, 2007b).

### Measures

#### *Multigroup Ethnic Identity Measure—Revised (MEIM-R)*

Ethnic identity was measured using the Multigroup Ethnic Identity Measure—Revised, a 6-item measure developed by Phinney and Ong (2007). Of the given items, three items measure exploration and three measure commitment. Cronbach's alpha for the MEIM-R is 0.81, and for the exploration subscale it is 0.76 and 0.78 for the commitment subscale. The MEIM-R has good construct validity (Brown et al., 2014; Burrow-Sanchez, 2014) and has been used in India (Khangte, 2016; Laltanpuui, 2018; Sharma, 2019). Firstly, we asked participants the open-ended question of which ethnic group they feel they belong to, following the guidelines by Phinney and Ong (2007). This was done since the open-ended question elicits a spontaneous response and self-categorisation by participants into which ethnic group they feel they belong to, irrespective of other factors. Participants read a script of the instructions of the MEIM-R, which were modified to cater to the population of Karnataka, and the examples given were of language-based ethnic groups. After this, participants responded to each of the items on a 5-point scale ranging from *strongly disagree* (1) to *strongly agree* (5). Participants were also given a list of language-based ethnic groups in Karnataka to indicate their own. We checked the responses to see if the answer to the open-ended question matched the responses to where the options were given to participants. In cases where the responses did not match, we eliminated the responses and did not proceed to analyse them.

#### *Rosenberg Self-Esteem Scale (RSES)*

The RSES (1986) is a ten-item measure, and participants indicate their responses on a 4-point scale ranging from *strongly*



*disagree* (1) to *strongly agree* (4). Higher scores indicate higher levels of self-esteem. The scale has shown good convergent and discriminant validity (Blascovich & Tomaka, 1991). It has been used and validated in India (Nehra et al., 2012; Sivasubramanian et al., 2011). In the present study, the internal consistency of the scale is strong ( $\alpha = 0.876$ ).

#### *Revised Life Orientation Test (LOT-R)*

The LOT-R has ten items, wherein four are fillers and six measure optimism. Participants indicate the extent to which they agree with a statement on a 5-point scale which ranges from *strongly disagree* (1) to *strongly agree* (5). For this study, the filler items were not used, and only the 6 items measuring optimism were used. The measure has been widely used in India and demonstrated construct validity (Mishra as cited in Chang et al., 2019; Sharma & Subramanyam, 2020) and has also been used in Karnataka (Chang et al., 2019). The scale showed a moderate internal consistency in the present study ( $\alpha = 0.705$ ).

#### *Familial Ethnic Socialisation Measure (FESM)*

It is a 12-item measure wherein participants indicate their responses on a 5-point scale ranging from *not at all* (1) to *very much* (5). Five items measure overt familial ethnic socialisation, and seven items measure covert familial ethnic socialisation. To our knowledge, the measure has not been used in a study in India. However, it has been used with Indians in Malaysia and Asian Indians in the USA (Ganaprakasam et al., 2017; Umaña-Taylor et al., 2004). Hence, we believed it could be used with an Indian population in India. The internal consistency of the FESM in our study was strong ( $\alpha = 0.929$ ).

#### *National Identity*

National identity was measured using a 4-item scale used in the International Comparative Study of Ethnocultural Youth (ICSEY), a large study conducted across 13 countries with immigrants from 26 different backgrounds (Berry et al., 2006). This scale was created by borrowing three items from Phinney and Devich-Navarro (1997) but includes one added item, making it a 4-item measure. For three items, participants indicate their responses on a five-point Likert scale ranging from *strongly disagree* (1) to *strongly agree* (5), and one item is rated on a scale from *not at all* (1) to *very well* (5). Since this measure has been used in various countries such as Israel, Netherlands, Portugal, etc., with various ethnic groups, we chose to use it in this study as well. As with the use of the scale in other countries, the name of the national group was the only term that was changed. The scale showed a strong internal consistency in the study ( $\alpha = 0.882$ ).

#### *Ethnic Identity Scale—Brief (EIS-B)*

The other scale used to measure ethnic identity was the Ethnic Identity Scale-Brief (Douglass & Umaña-Taylor, 2015). It is a 9-item measure wherein three items each measure exploration, resolution and affirmation. Participants read the instructions and respond to the items on a 4-point scale ranging from *does not describe me at all* (1) to *describes me very well* (4). The scale has shown construct validity (Douglass & Umaña-Taylor, 2015; Umaña-Taylor et al., 2004). To our knowledge, this measure has not been used in India. However, its original 17-item version has been used in India (Lalchhanhimi, 2013); hence, we felt that the brief version could also be employed here since it has also shown psychometric properties similar to the older version (Douglass & Umaña-Taylor, 2015). Internal consistency of the EIS-B was strong in the present study ( $\alpha = 0.839$ ). The internal consistency was strong for the exploration ( $\alpha = 0.763$ ), resolution ( $\alpha = 0.886$ ) and affirmation subscale ( $\alpha = 0.769$ ).

We also asked participants how well they speak the language of their language-based ethnic group. This was a single-item question wherein participants indicated their response on a 5-point scale ranging from *not at all* (1) to *very well* (5).

#### **Procedure**

Prior to our main study, we conducted a pilot study in order to ensure that the survey, especially the instructions script for the MEIM-R, was clear. The pilot ensured that all measures were reliable. For the main study, participants were recruited through emails, Instagram, and Whatsapp and via networks across universities. The survey was in English and included an informed consent page, the measures, demographic questions and details about a raffle contest. Participants were told that the aim of the study was to understand identity in Karnataka. After we collected all the responses from all mediums, we conducted the raffle contest. A random number generator was used to select ten individuals as winners, and these participants were emailed gift vouchers. We used Jamovi version 1.2.27 and Jasp version 0.14.1 to conduct our statistical analyses.

#### **Results**

Our first objective was to assess the reliability of the MEIM-R, for which we looked at the internal consistency as measured by Cronbach's alpha. See Table 2 (Appendix A) for the Cronbach's alpha, mean and standard deviation of the measures used in this study. The MEIM-R showed a strong internal consistency ( $\alpha = 0.887$ ), as did the exploration subscale ( $\alpha = 0.832$ ) and commitment subscale of the measure ( $\alpha = 0.870$ ).

We ran bivariate correlations to test our hypotheses concerning convergent validity. See Table 3 (Appendix A) for the correlation matrix. Supporting our hypothesis, ethnic identity, as measured by the MEIM-R, was positively associated with self-esteem ( $r=0.128$ ,  $p=0.039$ ) and optimism ( $r=0.155$ ,  $p=0.013$ ). Our third hypothesis was that ethnic identity would be positively associated with familial ethnic socialisation, and our results supported this ( $r=0.434$ ,  $p<0.001$ ). Ethnic identity was also positively correlated with national identity, confirming our fourth hypothesis ( $r=0.364$ ,  $p<0.001$ ).

We examined the associations between the MEIM-R and the EIS-B. See Table 4 (Appendix A) for the correlation matrix. Our hypothesis that the exploration subscale of the MEIM-R and exploration scale of the EIS-B would be positively associated was supported ( $r=0.541$ ,  $p<0.001$ ). Additionally, our results also supported our hypothesis that the commitment subscale of the MEIM-R and the resolution subscale of the EIS-B would be positively associated ( $r=0.598$ ,  $p<0.001$ ). The MEIM-R as a whole was also positively associated with the EIS-B ( $r=0.660$ ,  $p<0.001$ ). We did not propose any hypotheses concerning the affirmation subscale of the EIS-B. However, results found that both the exploration and commitment subscales of the MEIM-R were positively associated with the affirmation subscale of the EIS-B ( $r=0.263$ ,  $p<0.001$ ), ( $r=0.390$ ,  $p<0.001$ ).

We ran a confirmatory factor analysis to test the hypothesised two-factor structure of the MEIM-R. We first looked at the Chi-square goodness of fit test, but given that it is sensitive to sample size, we also looked at other fit indices (Davey and Salva, as cited in Homma et al., 2014) such as the comparative fit index (CFI), Tucker–Lewis fit index (TLI), and root mean square error of approximation (RMSEA). Results indicate the model showed a good fit,  $\chi^2(8)=14.7$ , CFI=0.992, TLI=0.985, RMSEA=0.0564, with the Chi-square being non-significant (Davey and Salva, as cited in Homma et al., 2014) CFI $\geq$ 0.95, RMSEA $<$ 0.08, and TLI $\geq$ 0.95 (Browne & Cudeck, 1992; Hu & Bentler, 1999). The exploration and commitment subscales were also significantly positively correlated ( $r=0.658$ ,  $p<0.001$ ). See Fig. 1 (Appendix A) for the path diagram and Table 5 (Appendix A) for the fit indices.

Since our study conceptualised ethnicity on the basis of language, we included a single-item question on how fluently participants can speak the language of their language-based ethnic group. We found that fluency in the language of one's ethnic group is positively associated with ethnic identity as measured by the MEIM-R ( $r=0.405$ ,  $p<0.001$ ). Additionally, fluency in the language of one's group was positively associated with ethnic identity exploration ( $r=0.308$ ,  $p<0.001$ ) and ethnic identity commitment ( $r=0.423$ ,  $p<0.001$ ).

Lastly, we conducted a t-test to examine the differences in scores of ethnic identity between the majority group in Karnataka (Kannadigas) and minority groups (all groups except Kannadigas). Minority ethnic groups included the other groups of the sample—Bengali, Kodava, Konkani, Malayali, Marathi, Marwari, Sindhi, Tamilian, Telugu, Tulu or Tuluva, etc. We hypothesised that minorities would score higher than Kannadigas. Our hypothesis was not supported since we found that Kannadigas or the dominant group scored significantly higher on ethnic identity ( $M=3.75$ ,  $SD=0.858$ ) than members from minority ethnic groups ( $M=3.47$ ,  $SD=0.836$ );  $t(260)=2.70$ ,  $p=0.004$ .

## Discussion

This study evaluated the psychometric properties of the MEIM-R in a multi-ethnic population of young adult residents in Karnataka, India, and conceptualised ethnicity on the basis of language. We looked at the reliability, convergent validity, concurrent validity and factor structure of the measure. An additional research question examined the differences in the scores of ethnic identity between the majority and minority groups. In terms of reliability, the measure as a whole and both its subscales demonstrated strong internal consistency. With respect to convergent validity, all our hypotheses were supported. Ethnic identity was found to be positively associated with self-esteem and optimism, both markers of psychological well-being. With both self-esteem and optimism, we note that the correlations are weak yet significant. This also lends support to the convergent validity of the MEIM-R and corroborates previous findings (Phinney & Ganewa, 2011; Roberts et al., 1999).

Our next finding was that individuals who reported that their families had socialised them more into their ethnic identity reported higher scores on ethnic identity, corroborating previous findings (Supple et al., 2006; Umaña-Taylor & Fine, 2001; Umaña-Taylor et al., 2004, 2006) and confirming the convergent validity of the MEIM-R in this study. Individuals who report that their families have socialised them in overt and covert ways into their ethnic background also report higher levels of exploration and commitment to their ethnic identity.

Lastly, we found a significant and positive association between ethnic and national identity. The association between the two draws from two previous theoretical perspectives and related empirical findings. The two-dimensional model states that national and ethnic identities are independent, and individuals can be high or low on both identities. The second, or unidimensional model, claims that the two are negatively correlated. Most research has supported the two-dimensional model (Phinney et al., 2001). However, the nature of the relationship between the two

identities has been different across contexts. Our results indicated a positive relation, thereby providing support for the two-dimensional model. Additionally, the common in-group identity model (Gaertner et al., 1993) can also help explain the results, according to which a person may have a strong sense of their superordinate group identity (for instance, national) as well as a strong sense of their subordinate group identity (ethnic group). Since the majority of our sample consisted of the dominant ethnic group (Kannadigas), it could also be a reflection of their strong affiliation with both ethnic and national identities, as shown in previous studies with Mexicans in California (Phinney et al., 2001).

In continuation with the other results, our study found that the MEIM-R and EIS-B were positively related, solidifying the concurrent validity of the MEIM-R. The exploration subscales of the MEIM-R and EIS-B were positively associated and supported previous work (Syed et al., 2013), and the commitment subscale of the MEIM-R and resolution subscale of the EIS-B were positively associated. Syed et al. (2013) found that the MEIM-R exploration subscale is concerned with search, while the EIS-B exploration subscale is concerned with participation. Although different aspects of exploration, they are both still concerned with exploration. Additionally, Yoon (2011) suggested with respect to content, the commitment subscale of the MEIM-R and the resolution subscale of the EIS are similar. Our results of a positive association between the two support this. We also found that the exploration and commitment subscales of the MEIM-R were positively related to the affirmation subscale of the EIS-B, which can be an area of future research.

Next, our study found that the correlated two-factor structure was a good fit for the MEIM-R, consistent with previous findings in the west (Brown et al., 2014; Burrow-Sanchez, 2014; Chakawa et al., 2015; Homma et al., 2014; Musso et al., 2017; Phinney & Ganeva, 2011; Yoon, 2011) as well as India (Sharma, 2019). Our research expands on this since it was conducted in a new context, with diverse groups, and employed a narrow definition of ethnicity. This lends support to the main claim of the MEIM-R, which is that it is not group or culture-specific (Phinney & Ong, 2007). It underscores the importance and potential suitability of using the MEIM-R across different cultures and definitions of ethnicity. Additionally, we found that fluency in the language of one's ethnic group is positively related to one's ethnic identity. Apart from ethnic identity as a whole, this item was found to be positively associated with ethnic identity exploration and ethnic identity commitment. As discussed earlier, one could perhaps look at ethnolinguistic theory, which underscores how language is an important symbol to groups and marks their heritage (Liebkind as cited in Jelić et al., 2020). Thus, fluency in language also forms an area of focus for future research.

## Group-Based Differences in Ethnic Identification

While the main objective of this study was to evaluate the psychometric properties of the MEIM-R, we also looked at the differences in the scores of ethnic identity between the majority ethnic group in Karnataka and minority groups. Based on past research, we hypothesised that minorities would show a stronger sense of ethnic identity (Phinney & Ganeva, 2011). However, our results found that Kannadigas, who are the majority group, scored significantly higher on ethnic identity as compared to the minority groups. This could perhaps be because of the context of India and the conceptualisation of ethnicity on the basis of language. Language as a basis of ethnicity is potentially very different from broad definitions like race. Waters (as cited in Molina et al., 2015) has argued that race is not salient for whites in the USA, and they may not always be cognizant of their race, given their privileges, which may explain why they do not score as high on racial-ethnic identity. However, language as a marker of identity functions quite differently in a context like India. Unlike racial majorities in countries like the US, where in most situations, race may not be salient at all due to the segregation in private and public life, privilege and advantage of being White, in India, each region is defined by language and the dissimilarity between all the language-based ethnic groups ensure that linguistic identity is always salient and parallel to the larger national identity. For example, in India, most citizens would identify as Kannadiga (language) and Indian or Bengali (language) and Indian.

According to Liebkind (as cited in Jelić et al., 2020) and discussions in ethnolinguistic theory, language is underscored as a source of pride, a group's cultural heritage, and plays a part in how ethnic identity is constructed. Additionally, language in India has been one of the roots of conflict between several ethnic identities in the preceding decades (Priya, 2016). This perhaps explains why linguistic identity is salient among majority group members within their linguistically dominant territories. Possible confounds here could have been the clubbing of all ethnic groups apart from Kannadigas as members of the minority ethnic group. This did not allow for an analysis of each individual ethnic group and their varying experiences depending on socio-historical and territorial relations with the majority language group. Nonetheless, the use of narrow definitions of ethnicity brings up new and interesting findings and is an area where further work is required.

Finally, we would like to acknowledge a number of limitations of our study. The sample did not adequately represent various groups in terms of language, gender and sub-region. Fluency in English, which is concentrated in urban and elite groups to an extent (Bansal, 2019), restricted the sample to more advantaged socio-economic groups. However, we also underscore that English is widely spoken in India, and the



trend is rising among various groups (Sharma, 2020). Findings highlight several aspects of language-based ethnic identity and could potentially be replicated in similar contexts where ethnic identity groups coexist along linguistic divisions. Yet this study focussed on a specific location (Karnataka) and age range (emerging adults) which could restrict generalisability beyond these demographics. Future research with more inclusive and diverse socio-demographic representation will be essential to understanding ethnic identity within and beyond India. Additionally, since we were faced with certain constraints, we could not translate the MEIM-R, but future research could look into translating the measure into other languages and then validating it. Our study also conceptualised ethnicity on the basis of language. While we did ask participants how they personally defined their ethnicity, we could not account for intersectionality, which is relevant to questions on ethnicity (Malcolm & Mendoza, 2014). Future qualitative work could look into understanding more about a person's subjective experience of their ethnicity.

## Conclusion

To our knowledge, this is the first study to extensively evaluate the psychometric properties of the MEIM-R in India and, therefore, contribute to solidifying the cross-cultural validation of this scale. This study looked at the reliability, convergent validity, concurrent validity and factor structure of the MEIM-R and also looked at differences in ethnic identification between ethnic majority and minority groups in Karnataka, India. Overall, we found that the MEIM-R is a robust measure with good psychometric properties and can therefore be used more in the Indian and South Asian context. Furthermore, this study employs a narrow definition of ethnicity on the basis of language, which is an addition to multicultural work and extends the literature on ethnic identity beyond WEIRD regions. We hope that this study opens new avenues for further research assessing the MEIM-R and similar measures of ethnic identity amongst diverse and understudied ethnic groups.

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**Author contributions** Krishna Kishore Lal conceived the idea for this study, designed the method, collected the data, conducted the analysis and wrote the manuscript. Krishna Kishore Lal is now an alumna of Ashoka University. This manuscript is a completion of her capstone thesis. Sramana Majumdar served as Krishna Kishore Lal's thesis advisor throughout the study and contributed to data collection, data analysis and editing the manuscript. Dr. Sramana Majumdar is affiliated with Ashoka University.

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## Declarations

**Conflict of interest** Both authors have no conflict of interest to disclose.

**Data Availability Statement** We collected participants' contact details for the raffle contest and assured them confidentiality. For these ethical reasons, we cannot make the data for this study available. We do have a preprint of the manuscript available on Psyarxiv with the preprint <https://doi.org/10.31234/osf.io/yyc5m>

**Ethics approval** This study was approved by Ashoka University's Institutional Review Board.

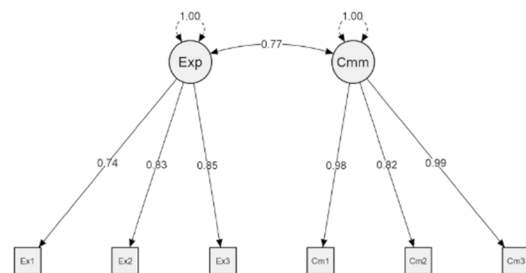
**Consent to participate** All participants provided their informed consent. We informed them of all their rights and asked if they consented to participate. Those who consented were directed to complete the survey.

**Consent for publication** We assured participants complete anonymity and confidentiality. We assured them that this would be the case even when submitting the study for publication.

## Appendix A

See Fig. 1.

Path Diagram for Confirmatory Factor Analysis



*Note.* Estimates of the CFA model of ethnic identity with two correlated factors. Item numbers refer to the items from the MEIM-R scale shown in Appendix B.

All values are significant at  $p < 0.001$ .

**Fig. 1** Path Diagram for Confirmatory Factor Analysis. *Note.* Estimates of the CFA model of ethnic identity with two correlated factors. Item numbers refer to the items from the MEIM-R scale shown in Appendix B. All values are significant at  $p < 0.001$

See Tables 1, 2, 3, 4 and 5.

**Table 1** Ethnicity of participants

Ethnicity		
	N (262)	%
Kannadiga	123	46.9
Bengali	2	0.8
Kodava	10	3.8
Konkani	18	6.9
Malayali	21	8
Marathi	4	1.5
Marwari	10	3.8
Sindhi	1	0.4
Tamilian	8	3.1
Telugu	13	5
Tulu/Tuluva	16	6.1
Mixed	20	7.6
Other (e.g.: Punjabi, Odia)	16	6.1

**Table 2** Means, standard deviations, range and Cronbach's alpha for used measures

Variable	Scale	M	SD	Range	Cronbach's $\alpha$
Ethnic identity	MEIM-R	3.60	0.857	1–5	0.887
Ethnic identity exploration	MEIM-R (exploration subscale)	3.56	0.885	1–5	0.832
Ethnic identity commitment	MEIM-R (commitment subscale)	3.64	0.995	1–5	0.870
Ethnic identity	EIS-B	3.03	0.559	1–4	0.839
Ethnic identity exploration	EIS-B (exploration subscale)	2.39	0.823	1–4	0.763
Ethnic identity resolution	EIS-B (resolution subscale)	2.87	0.810	1–4	0.886
Ethnic identity affirmation	EIS-B (affirmation subscale)	3.81	0.481	1–4	0.769
Familial ethnic socialisation	FESM	3.68	0.898	1–5	0.929
Self-esteem	RSES	2.94	0.558	1–4	0.876
Optimism	LOT-R	3.21	0.672	1–5	0.705
National identity	National identity (ICSEY)	4.45	0.828	1–5	0.882

**Table 3** Correlation matrix 1

	1	2	3	4	5
1.MEIMR	–				
2.FESM	0.434***	–			
3.RSES	0.128*	0.037	–		
4.LOT-R	0.155*	0.071	0.624***	–	
5.NI	0.364***	0.226***	0.226***	0.266***	–

*p* values less than 0.05 are denoted by \*, *p* values less than 0.01 are denoted by \*\*, and *p* values less than 0.001 are denoted by \*\*\*.

**Table 4** Correlation matrix 2

	1	2	3	4	5	6	7
1.MEIMR	–						
2.MEIMR-exp	0.899***	–					
3.MEIMR-comm	0.921***	0.658***	–				
4.EISB	0.660***	0.570***	0.630***	–			
5.EISBexp	0.556***	0.541***	0.476***	0.884***	–		
6.EISBreso	0.588***	0.467***	0.598***	0.878***	0.678***	–	
7.EISBaffi	0.362***	0.263***	0.390***	0.486***	0.210***	0.202**	–

$p$  values less than 0.05 are denoted by \*,  $p$  values less than 0.01 are denoted by \*\*, and  $p$  values less than 0.001 are denoted by \*\*\*.

**Table 5** Fit indices for confirmatory factor analysis

	$\chi^2$ (df)	CFI	TLI	RMSEA
Correlated two-factor structure	14.7(8), $p=0.066$	0.992	0.985	0.0564

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