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Polish Adaptation of the Revised Multicultural Ideology Scale (MCI-r)

Abstract: As global migration continues to grow, its impact increasingly extends to Central and Eastern Europe, including Poland, a country that remained culturally homogeneous for decades after World War II. With this growing cultural pluralism comes the need for an adequate and reliable instrument to measure endorsement of multiculturalism. The present study addresses this gap by adapting and validating the Revised Multicultural Ideology Scale (MCI-r) for use in Poland and examining its psychometric properties. The study was conducted in 2023 in two waves, approximately three weeks apart, on a nationally representative sample of Polish adults (N = 2,132) stratified by age, gender, and municipality size. Results were most consistent with a six-factor structure (with one item removed), consistent with the theoretical specification of the construct but differing from the four-factor solutions typically found in Western European and Canadian samples. Confirmatory factor analyses supported configural, metric, and scalar invariance across the two waves of the study and across gender, and the scale demonstrated high test–retest stability. Moreover, the MCI-r showed clear predictive validity: stronger endorsement of multiculturalism was associated with more favorable attitudes toward war refugees from Ukraine and with lower social and, to a much lesser extent, economic conservatism. Overall, the MCI-r emerged as a positive and, in fact, the strongest predictor of attitudes toward Ukrainian refugees, providing a robust tool for monitoring diversity ideologies in contemporary Polish society.

Keywords: *multicultural ideology, multiculturalism, psychometric properties, attitudes towards refugees*

MULTICULTURALISM IN POLAND

As global migration continues to grow, its effects are increasingly visible in Central and Eastern Europe, where societies such as Poland are undergoing profound demographic and cultural transformation. Poland, long an outlier in Europe for its post-WWII ethnocultural homogeneity (Alesina et al., 2003), has, over recent decades, undergone a profound migration transition, emerging as one of Europe's and the world's key countries of immigration (Duszczyk & Kaczmarczyk, 2022a). Once ethnically nearly homogeneous, the country is now gradually transforming into a more multi-ethnic society (Office for Foreigners, Urząd do Spraw Cudzoziemców, 2021). Today, Poland ranks among the top European Union countries in issuing first residence permits and is a global leader in admitting seasonal workers (Duszczyk & Kaczmarczyk, 2022a). At the population level, the share of foreign-born residents, formerly negligible, increased to 2.6% of the total population as of 1 January 2024 (0.94 million people, Eurostat, 2025). Administrative data on the number of foreign nationals indicate a twentyfold increase

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compared to 2011 (Duszczyk & Kaczmarczyk, 2022b). This change is largely driven by the dynamic growth of the Polish economy and the gradual liberalization of labor migration policies targeting Poland's eastern neighbors, coinciding with the 2014 annexation of Crimea.

Recent years further accelerated these trends, turning Poland into a primary country of refuge for Ukrainians and substantially increasing the number of foreign residents. Since the Russian aggression against Ukraine in February 2022, approximately 3.5 million Ukrainian war refugees arrived in Poland between 24 February and mid-May 2022 (Duszczyk & Kaczmarczyk, 2022b). As of February 2025, Ukrainians accounted for 78% of all foreigners residing in Poland, with nearly one million under temporary protection at any given time (Office for Foreigners, 2025). Consequently, while the foreign-born population remains numerically dominated by Ukrainians, inflows from other regions, for example Latin America, are becoming increasingly noticeable (Golińska & Posmykiewicz, 2025; Golińska et al., 2025). For example, marked increases have been recorded among citizens of countries such as Colombia, the Philippines, and Turkmenistan, pointing to a broader diversification of migrant origins in Poland (Zakład Ubezpieczeń Społecznych, 2025). With the continuing aging and decline of Poland's population, as well as persistent labor market demand and the country's growing economic attractiveness (EWL Group, 2024), immigration to Poland is expected to increase in the years ahead (Anacka & Janicka, 2018). These statistics point to Poland's increasing cultural pluralism, reflecting multiculturalism as a demographic fact. However, multiculturalism is a multifaceted concept that extends beyond demographic diversity to encompass both ideologies and policies (Berry et al., 1977). While it is evident that without diversity there would be no need for multicultural policies (Berry & Ward, 2016) – governments would simply have nothing to address – the reverse does not necessarily hold true. Poland serves as an illustrative example: despite growing cultural diversity at the demographic level, the policies designed to manage this diversity remain limited and underdeveloped.

First, Poland does not have a coherent national migration policy framework (Baran & Grzymała-Moszczyńska, 2022; Florczak, 2022; Łodziński & Szonert, 2023), and its existing policies have been described by the Migrant Integration Policy Index (MIPEX, Yavçan & Gorgerino, 2025) as offering merely "equality on paper." Poland's MIPEX score remains below the European average, indicating that the country's integration policies are still halfway favorable. While migrants are granted basic rights and security, they lack equal rights and opportunities, which is creating substantial barriers to their participation in society[1], particularly in the access to healthcare, labor market, and education. These three life areas are critical because the large number of Ukrainian war refugees are women with children (Bukowski & Duszczyk, 2022). It should be noted, however, that the situation of migrants in Poland has improved slightly over the past five years, with the country's MIPEX score rising by three points, primarily due to modest progress in the area of education (MIPEX, Yavçan & Gorgerino, 2025).

As Solano and Huddleston (2020) emphasize, "A country's approach to integration matters because policies influence whether or not integration works as a two-way process. The way that governments treat immigrants strongly influences how well immigrants and the public interact and think of each other." In their 2020 assessment, the authors observed that "Poland's current policies encourage the public to see immigrants not as their equals, but instead as strangers." (MIPEX, Solano & Huddleston, 2020). Five years later, they acknowledge a modest improvement in the situation, while emphasizing that significant barriers remain (MIPEX, Yavçan & Gorgerino, 2025). Such a limiting policy framework fosters exclusion and separation, triggering a sense of threat within the receiving society. In turn, this undermines integration, lowers trust, and fuels xenophobia. Berry et al. (1977) emphasize that both cultural diversity and equitable participation are essential for successful integration and the development of multicultural societies. They argue that diversity without equitable participation leads to segregation[2], while equitable participation without diversity results in assimilationism, or a "melting pot" in which members of non-dominant groups are expected to abandon their cultural traditions and completely embrace the culture of the majority. In the absence of both diversity and equity, the outcome is exclusion, where minority groups are denied access to mainstream culture while also being prevented from preserving their heritage culture. As noted by Van de Vijver et al. (2008), integration policies typically aim to stimulate immigrants' participation in mainstream society, improve their social and economic position, establish equal rights, and prevent or eliminate discrimination (see also Van de Vijver et al., 2006).

The MIPEX evaluation underscores that the integration of migrants in Poland remains a considerable challenge. Given that policies are deeply intertwined with ideologies (Berry & Ward, 2016), it is reasonable to expect that, as the number of migrants in Poland continues to grow, the absence of significant government actions will likely lead to a deterioration in public attitudes toward migrants. This challenge is not unique to Poland. According to Verkuyten (2007), in contrast to settler societies such as Canada or Australia, most European countries are characterized by long-established majority groups, and immigration has not historically played a central role in their national self-image. Consequently,

[1] According to the *Migrant Integration Policy Index* (MIPEX; Yavçan & Gorgerino, 2025), political participation remains the weakest dimension of migrant integration in Poland.

[2] The article addresses multiculturalism as an ideology in the context of intergroup relations; therefore, our focus here is naturally on the group level. However, it is also possible to conceptualize these processes at the individual level, where group-level segregation corresponds to separation, the melting pot to assimilation, exclusion to marginalization, and multiculturalism to integration.

it is more difficult for immigrants to be included and to develop a sense of belonging.

In the Polish context, the growing presence of Ukrainian migrants and refugees has been the primary driver of the country's recent transition from an ethnically homogeneous society to a more culturally plural one (Baran et al., 2026). As the numerically dominant and most socially visible migrant group, Ukrainians therefore provide a particularly relevant reference group for examining majority members' endorsement of multicultural ideology in contemporary Poland.

In Poland, Ukrainians constitute not only the largest migrant group but also one that is often perceived as culturally relatively close to the receiving society compared to other migrant populations, reflecting relatively low perceived cultural distance (Baran et al., 2026). This perception may be rooted in longstanding historical (e.g., the Polish-Lithuanian Commonwealth, shared experience of communist rule in Eastern Europe), linguistic, and cultural ties between the two nations[3]. Such perceived low cultural distance has been associated with more favorable attitudes toward Ukrainians than toward migrants from the Middle East (Penczek et al., 2016) or Africa (CBOS, 2015; 2018). Even before Russia's full-scale invasion of Ukraine, Bulska (2022) documented a decline in prejudice between Poles and Ukrainians from 2017 to 2021, attributing this change to more frequent culture contact and a reduced perceived threat from Ukrainians.

From the perspective of Berry's acculturation framework (1974), this is important because perceived cultural distance may shape not only general intergroup evaluations, but also the orientations that majority-group members hold toward immigrants. Navas et al. (2005) emphasize that acculturation should be examined not only from the migrants' perspective, but also in terms of the receiving society's acculturation orientations (see also Golińska & Posmykiewicz, 2025). Moreover, prior work suggests that cultural distance may influence migrants' acculturation indirectly by shaping the receiving society's attitudes toward them (Baran et al., 2026). Thus, when an immigrant group is perceived as characterized by low cultural distance, majority members may be more likely to endorse integration than exclusion or assimilationism. In this sense, Ukrainians constitute a particularly relevant reference group for examining multicultural ideology in contemporary Poland.

The immediate reaction to the invasion was a surge of solidarity, with NGOs, volunteers, and ordinary citizens mobilizing to provide support, including offering their own homes to refugees. Poland was widely hailed as a "society of solidarity."[4] However, consistent with the model of social support deterioration (Kaniasty & Norris, 2009) and earlier predictions (Baran & Grzymała-Moszczyńska, 2022), this support gradually declined (CBOS, 2023), culminating in a marked downturn in favorability of public attitudes in 2024 (CBOS, 2024) and, over time, giving way to growing tensions and antagonisms (CBOS, 2025).

Stogianni et al. (2023) note that effective management of intercultural relations requires an understanding of the psychological processes that shape these dynamics within specific socio-political contexts. Thus, in light of the growing number of migrants and the absence of a coherent migration policy, it is essential to monitor and examine public attitudes toward multiculturalism.

Multiculturalism as an ideology

The concept of multiculturalism as an intergroup ideology was first introduced by Berry and colleagues (1977), who defined it as a framework that values cultural diversity, promotes the maintenance of cultural identities, and emphasizes the need for reciprocal adaptation to ensure that all groups can participate in society on equal terms (see also Berry & Ward, 2016)[5]. As a pro-diversity ideology, multiculturalism underscores the value of accepting and supporting the culturally heterogeneous composition of plural societies (Berry & Kalin, 1995). It reflects societal attitudes and expectations regarding multiculturalism as a political framework.

In acculturation research, considerable attention has been devoted to the perspective of minorities, that is, whether they wish to maintain their heritage culture and to what extent they engage and participate socially within the larger society (Berry, 2001). In this model, integration represents a "win–win" orientation in which individuals both retain their heritage culture and participate in the mainstream culture. Marginalization refers to the rejection of both cultural domains, assimilation describes the adoption of the mainstream culture at the expense of one's heritage culture. Separation denotes the opposite pattern, maintaining the heritage culture while avoiding engagement with the mainstream culture. From this perspective, multiculturalism can be viewed as the ideological counterpart of the integration strategy at the societal level. A multicultural society establishes the conditions that make integration possible and valued. Importantly, acculturation orientations can be examined not only among migrants (as their own preferences) but also among majority members, in terms of the expectations they hold for immigrants (Arends-Tóth & Van de Vijver, 2003). These orientations can also be applied to describe intergroup relations and government policies in plural societies (Berry, 2001), as it is in the current study.

Diversity ideologies endorsed by majority group members have direct implications for minorities' engagement in society and organizations. Paradoxically, approaches that emphasize minimizing group differences (e.g., color blindness) may, in practice, reinforce majority

[3] See Baran et al. (2026) for a more detailed analysis of Polish–Ukrainian cultural distance.

[4] While the Ukrainian diaspora played a vital role in organizing assistance (Fihel et al., 2025), this contribution was frequently overlooked or downplayed in accounts of Poland's solidarity response.

[5] Beyond multiculturalism, other frameworks such as interculturalism also promote diversity and participation; however, they tend to place greater emphasis on the majority culture, reflecting a more hierarchical rather than egalitarian vision of pluralism (Lefringhausen et al., 2024).

dominance and contribute to minority marginalization (Plaut et al., 2009). At the same time, research has demonstrated that multiculturalism is associated with several positive outcomes for intercultural relations, including more favorable attitudes toward immigrants and reduced perceptions of threat (Ward & Masgoret, 2008), greater acceptance (Berry, 2006), lower racial bias (Wolsko et al., 2006), and stronger support for immigration policies[6] (Ward & Masgoret, 2008). A meta-analysis by Whitley and Webster (2019) further showed that, compared to assimilation and color blindness, multiculturalism is negatively related to both explicit and implicit prejudice. Consistent with these findings, individuals with conservative orientations, who are typically less open to social change, tend to experience multiculturalism as a greater symbolic threat, which may translate into resistance toward multicultural policies (Yogeeswaran & Dasgupta, 2014). Given these patterns, we expected that, in the Polish context, stronger endorsement of multiculturalism would be negatively related to both social and economic conservatism, and positively related to favorable attitudes toward Ukrainian refugees. Further evidence indicates that multiculturalism benefits not only majority–minority relations but also migrants' psychological well-being and societal functioning. Stuart et al. (2011, as cited in Berry & Ward, 2016) found that perceiving one's society as multicultural, diverse and tolerant, predicted lower acculturative stress, fewer psychological symptoms and behavioral problems, as well as greater life satisfaction among migrants. By contrast, assimilationism, particularly when migrants desired integration, was associated with reduced life satisfaction (Ward, 2009).

Evidence also suggests that majority-group members who endorse a multicultural ideology report higher levels of self-esteem (Verkuyten, 2009) and greater life satisfaction (Breugelmans & Van de Vijver, 2004). Multiculturalism has further been positively linked to broader societal values such as democratic stability, political freedom, individualism, survival-well-being, postmaterialism, and interpersonal trust, while its strongest negative associations have been observed with power distance and uncertainty avoidance (Schalk-Soekar et al., in press, as cited in Van de Vijver et al., 2008; see also Leong & Ward, 2006). Multiculturalism has also been found to correlate with higher levels of economic development, measured as per-capita gross national income (Leong & Ward, 2006) and gross domestic product (Schalk-Soekar et al., submitted for publication, as cited in Van de Vijver et al., 2008). According to Van de Vijver et al. (2008), these economic indicators can help explain cross-national differences in support for multiculturalism. Nevertheless, as Verkuyten (2007) emphasizes, the central challenge of multiculturalism lies in reconciling the recognition of cultural differences with the pursuit of equality and a shared sense of belonging.

[6] However, such associations have not been consistently observed across all studies (Van de Vijver et al., 2008).

The Revised Multicultural Ideology Scale

The Revised Multicultural Ideology Scale (MCI-r) was developed by Stogianni et al. (2023) to assess individuals' endorsement of multiculturalism. To date, the scale has been validated in Germany and Luxembourg (Stogianni et al., 2023), the United Kingdom (Lefringhausen et al., 2024), Canada (Chahar Mahali et al., 2025), and Italy (Parisse et al., 2025). Importantly, the MCI-r captures prescriptive beliefs about what people think should be done to manage cultural diversity, rather than descriptive perceptions of how multiculturalism is currently practiced by institutions and society (Lefringhausen et al., 2024). The MCI-r is a more recent, improved version of the original Multicultural Ideology Scale (MCI), which was first developed in Canada by Berry et al. (1977) and Berry and Kalin (1995) as a self-report instrument designed to measure attitudes toward multiculturalism as an ideology. The theoretical foundations of the scale are based in Berry's bidimensional model of acculturation (1974, 1980), discussed earlier in this paper. This model posits that individuals and groups in culturally plural societies face two key issues: the extent to which they seek cultural contact with other groups and the extent to which they prefer to maintain their own ethnic distinctiveness. The original MCI was a brief 10-item instrument, with five items measuring integration and the five assessing assimilation and separation strategies. Conceptually, the classic domains are: Cultural Maintenance (support for preserving the cultural heritage of minority groups and recognition of their identities), Equity/Inclusion (ensuring equal rights and opportunities that enable full participation in society), and Social Interaction (fostering positive contact and cooperation between cultural groups to reduce prejudice and bias; Berry & Kalin, 1995). These domains reflect the integration strategy; that is, the entitlement of ethnic minorities to preserve their cultural traditions, the inclusion of all cultural groups in societal life, and opportunities for interaction between majority and minority members across various settings. Empirical studies supported a unidimensional structure of the original MCI scale (e.g., Arends-Tóth & Van de Vijver, 2003; Berry et al., 1977).

Although the original MCI has been widely used in numerous studies over the years (Breugelmans & Van de Vijver, 2004; Schalk-Soekar & Van de Vijver, 2008; Van de Vijver et al., 2008), recent work has highlighted the need to reconceptualize multicultural ideology by broadening the original framework to include additional dimensions. Grigoryev and Berry (2021) argued that multicultural ideology should extend beyond the original MCI domains to encompass attitudes toward the degree of cultural differentiation, the perceived benefits of diversity, and the rejection of essentialist group boundaries.

The Revised MCI encompasses six dimensions of multiculturalism, including the three original domains: Cultural Maintenance (CM), Equity/Inclusion (EQ), and Social Interaction (SI). The three newly introduced dimensions are Essentialistic Boundaries (EB), which reflects the rejection of rigid divisions based on ethnicity, language, or religion; Extent of Differences (DI), which captures the

recognition and acceptance of distinct cultural communities within society; and Consequences of Diversity (CD), which refers to the belief that cultural diversity enriches societies by fostering more positive norms and attitudes toward multiculturalism. Previous empirical validations typically identified Cultural Maintenance, Equity/Inclusion, Social Interaction, and Consequences of Diversity factors, whereas Essentialistic Boundaries and Extent of Differences have at times demonstrated weaker psychometric properties (Lefringhausen et al., 2024; Chahar Mahali et al., 2025; Stogianni et al., 2023). These mixed patterns highlight the need for further cross-cultural testing of the MCI-r.

This study aimed to extend the cross-cultural validation of the Revised Multicultural Ideology Scale (MCI-r) initiated by Stogianni et al. (2023) and to make the instrument applicable in diverse cultural contexts. It addressed the lack of a Polish adaptation of the scale. By providing a reliable Polish version, the study contributes to the broader cross-cultural validation of the MCI-r. It also enables policy-relevant monitoring of diversity ideologies in Poland and supports the development of evidence-based interventions to improve intergroup relations.

METHOD

Participants and Procedure

The study was a part of a bigger two-wave online study conducted in October 2023 using Computer-Assisted Web Interview (CAWI) by a certified survey research company (Ogólnopolski Panel Badawczy Ariadna). Quota sampling was applied to ensure that the sample was representative of the Polish adult population in terms of age, gender, and municipality size.

Wave 1 (1–7 October) initially included 2,132 participants. After excluding respondents who failed the attention check[7] and applying inclusion criteria (being born in and residing in Poland at the time of the study as guided by prior work; Parisse et al., 2025; Stogianni et al., 2023), the analytic Wave 1 sample comprised 1789 individuals (M_{age} = 46.05, SD_{age} = 15.36, range = 18–84) of whom 57% were women. Wave 2 (27–31 October) recontacted Wave

[7] An attention-check item was embedded in the MCI-r. The item read: 'Please tick *Totally disagree*.' Any response other than *Totally disagree* was coded as a failed attention check, and those cases were excluded from the analytic sample.

Table 1. Sample descriptive statistics for Wave 1 (N = 1,789) and Wave 2 (N = 1,452).

Variable	Wave 1		Wave 2	
	N or mean	% or SD	*N* or mean	% or SD
Gender				
Women	1020	57	838	57.7
Men	769	43	614	42.3
Age (years)	46.05	15.36	46.97	15.29
Education				
Primary/middle school	36	2.0	21	1.4
Vocational	158	8.8	123	8.5
Secondary	527	29.5	429	29.5
Post-secondary	201	11.2	164	11.3
Bachelor's degree	175	9.8	145	10
Master's degree or postgraduate education	692	38.7	570	39.3
Relationship status				
Not in a relationship	483	28.9	383	28.1
Married/in a relationship	1190	71.1	981	71.9
Size of municipality				
Village	607	33.9	487	33.5
<20,000 residents	231	12.9	183	12.6
20,000-99,000 residents	365	20.4	301	20.7
100,000-500,000 residents	334	18.7	272	18.7
>500,000 residents	252	14.1	209	14.4
Social conservatism	2.62	1.25	2.59	1.25
Economic conservatism	2.80	1.18	2.82	1.18
SES	3.04	0.72	3.05	0.72

1 participants. As is typical in panel studies, some attrition occurred, 1,709 of the original 2,132 respondents completed Wave 2. After applying the same quality control measures, the final analytic sample comprised 1,452 individuals (M_{age} = 46.97, SD_{age} = 15.29, range = 18–84), of whom 57.7% were women. Sociodemographic characteristics of the sample are reported in Table 1. All participants provided informed consent, and the study protocol was approved by the Faculty Research Ethics Committee. Panel participants received standard incentives in the form of reward points exchangeable for prizes.

Measures

Multicultural ideology, assessed in Wave 1 and Wave 2, was measured with the revised Multicultural Ideology Scale (MCI-r; Stogianni et al., 2023), translated into Polish via a back-translation procedure (Brislin, 2000)[8], a 24-item scale divided into 6 subscales: Cultural Maintenance (CM; e.g., "It is best for Poland if all ethnic groups forgot their cultural backgrounds as soon as possible."), Equity/Inclusion (EQ; e. g., "I think that immigrants in Poland should have fewer rights than those who were born here."), Social Interaction (SI; e.g., "I think that immigrants and people in Poland should seek more contact with one another."), Essentialistic Boundaries (EB; e.g., "Racial and ethnic group memberships do not matter very much to who we really are."), Extent of Differences (DI; e.g., "All groups in Poland should clearly show their own distinctive cultural features."), Consequences of Diversity (CD; e.g., "I feel at ease when I am in a city with many immigrants."). Responses were recorded on a 5-point Likert scale (1 = *strongly disagree*, 5 = *strongly agree*), with higher scores indicating more favorable attitudes toward diversity. Eight items were reversed and were recoded prior to scoring. The full Polish version of the scale is provided in Supplementary Materials (see Table S1).

Attitudes towards war refugees from Ukraine were assessed in Wave 1 by a scale developed by Kaim et al. (2024) including four items about national and personal support for refugees from Ukraine. For example, two questions asked: "Poland needs to absorb as many refugees as possible.", "I am personally willing to help refugees from Ukraine." (1 = *not at all* to 5 = *very much*). Cronbach's alpha reliability coefficient score of the scale equaled .89.

Control sociodemographic variables, assessed at Wave 1, included: gender (0 = *women*, 1 = *men*), age (in years), education (1 = *primary/middle school*, 2 = *vocational*, 3 = *secondary*, 4 = *post-secondary*, 5 = *bachelor's degree*, 6 = *master's degree or postgraduate education*), relationship status (0 = single, 1 = *married/partner*), size of municipality (1 = *village*, 2 = *town < 20k residents*, 3 = *town between 20k and 99k residents*, 4 = *city between 100k and 500k residents*, 5 = city > *500k residents*), social conservatism (1 = *definitely liberal*; 5 = *definitely conservative*), economic conservatism (1 = *free-market model*, 5 = *social (welfare-state) model*), and socioeconomic status (1 = *much lower than other Poles*, 5 = *much higher than other Poles*).

[8] First, two bilingual researchers independently translated the original English items into Polish. The two forward translations were then compared and reconciled through discussion to produce a preliminary Polish version. Next, a bilingual linguist who was blind to the original scale independently back-translated this Polish version into English. The back-translated and original English versions were subsequently compared by the research team, and minor discrepancies were discussed and resolved to ensure conceptual equivalence with the source version.

RESULTS

Statistical analyses

We first computed sample descriptive statistics. We then estimated a series of confirmatory factor analyses (CFAs) to evaluate the factorial structure of the MCI-r. Consistent with Stogianni et al. (2023), we adopted a confirmatory framework given the strong theoretical specification of multicultural ideology. Models were estimated using robust maximum likelihood (MLR), and missing data were handled via FIML. Prior to the CFA analyses, item distributions were inspected and no substantial deviations from normality were observed. Five alternative CFA models were tested, including first-order, second-order, and bifactor models. To assess model fit, the following indices were applied: CFI (comparative fit index), which contrasts the tested measurement model with a baseline model (independence model) to evaluate relative improvement in fit; RMSEA (root mean square error of approximation), which reflects the extent to which the estimated model deviates from a perfectly fitting one; and SRMR (standardized root mean square residual), which captures the average standardized difference between observed and predicted correlations (Kline, 2016). Conventionally, model fit is regarded as satisfactory when RMSEA is low (values around .05 typically interpreted as close fit, .05–.08 as reasonable, and above .10 as poor, Browne & Cudeck, 1992), CFI is higher than .90 (preferably higher than .95, Kline, 2016), and SRMR is below .08 (see Parisse et al., 2025; Stogianni et al., 2023).

Internal consistency was assessed using Cronbach's α. To evaluate reliability within the bifactor framework, we additionally computed omega total (ωtotal) for the total score, omega hierarchical (ωH) for the general factor, and omega hierarchical subscale (ωHS) for each subscale. Validity analyses (AVE and CR for convergence; HTMT for discrimination) were conducted on the CFA-identified factor solution. We also inspected zero-order intercorrelations among the six MCI-r subscales and corrected item–total correlations. From the bifactor solution, we also computed the item explained common variance (IECV; Rodriguez et al., 2016) to quantify, for each item, the proportion of common variance attributable to the general factor.

Given the two-wave design of the study, with an approximately three-week interval between measurements, Wave 2 was used both to assess test–retest reliability and to examine longitudinal measurement invariance across Wave 1 and Wave 2. Measurement invariance was examined using a series of confirmatory factor analyses. First, longitudinal measurement invariance across Wave

1 and Wave 2 was tested in the subsample of participants who completed both waves. We evaluated configural, metric, and scalar invariance, using robust scaled χ^2 difference tests for MLR (Satorra & Bentler, 2001) and changes in fit indices – particularly ΔCFI (Cheung & Rensvold, 2002) – given the sensitivity of χ^2 statistics to large sample sizes.

Subsequently, to examine the comparability of the scale across demographic groups, measurement invariance across gender was tested using multigroup CFA (MG-CFA), following the same sequence of invariance levels (configural, metric, and scalar). Although no specific gender differences in multicultural ideology were theoretically expected, testing invariance across gender allows verification that the scale functions equivalently across major demographic groups, consistent with approaches adopted in previous validations of the MCI-r (Stogianni et al., 2023; Parisse et al., 2025).

24 items to load on one latent multicultural ideology factor, as most studies employing the MCI have reported support for its unidimensional structure (Stogianni et al., 2023). The model showed a poor fit to the data. Fit indices for all tested models are presented in Table 2. Notably, item 13 (EB: *Ethnic and cultural group categories are not very important, and so should not be used for understanding about other people*) displayed a negative and negligible loading (–.10), while three items from the DI subscale (items 17, 18, and 20) had loadings below the recommended .40 threshold (ranging from .30 to .33).

Next, a six-factor CFA model with correlated factors: CM, EQ, SI, EB, DI, CD was tested, with each set of four items specified to load on its respective subscale. The fit of this model was notably better than that of the single-factor solution, though it still did not reach conventional thresholds for good fit.

Table 2. Summary of Fit Indices for the CFA Models

Model	Model fit				Model comparison	
	Robust χ^2(df)	CFI	RMSEA [90% *CI*]	SRMR	AIC	sBIC
Single-factor CFA model	5288.985*** (252) χ^2/df = 20.99	.665	.122 [.119, .124]	.098	112181.988	112348.486
Six-factor CFA model	2709.263*** (237) χ^2/df = 11.43	.840	.087 [.084, .089]	.079	108709.474	108910.659
Six-factor CFA model without item 13	2502.502*** (215) χ^2/df = 11.64	.850	.087 [.084, .091]	.072	103849.336	104043.584
Second-order CFA model without item 13	did not converge					
Bifactor CFA model without item 13	2521.853*** (207) χ^2/df = 12.18	.854	.088 [.085, .091]	.074	103768.931	103981.679

Note. *df* = Degrees of freedom; CFI = Comparative fit index; RMSEA = Root-mean-square error of approximation; SRMR = Standardized root mean square residual; AIC = Akaike information criterion; sBIC = sample-size adjusted Bayesian information criterion; ***$p < .001$.

Test–retest reliability over a three-week interval was evaluated with Pearson correlations and intraclass correlation coefficients (two-way mixed, consistency; ICC(3,1) and ICC(3,k)) for the total score and subscales.

Finally, predictive validity was examined by bivariate correlations among the key constructs and hierarchical linear regression predicting attitudes toward refugees from Ukraine, with socio-demographic covariates entered at Step 1 and the global MCI-r index at Step 2. All analyses were conducted in R (Version 4.5.1; R Core Team, 2025) using the *lavaan* package (Version 0.6-19; Rosseel, 2012) or IBM SPSS Statistics (Version 29.0, IBM Corp., 2022).

Confirmatory Factor Analyses, Reliability, Correlations, and Descriptive Statistics

Confirmatory factor analyses were carried out using the *lavaan* package (Rosseel, 2012) in R (Version 4.5.1; R Core Team, 2025). In the first step, following the approach of Stogianni et al. (2023), a single-factor (unidimensional) CFA was estimated, specifying all

Given the unsatisfactory fit of the single-factor model, and the somewhat improved fit of the six-factor solution, we further inspected the standardized factor loadings of the six-factor model (see Table 3) and examined the intercorrelations among the six subscales to assess convergent and discriminant validity (see Table 4).

Unlike the findings reported by Stogianni et al. (2023), in the present study all subscales were statistically significantly intercorrelated, although the associations involving EB and DI were relatively weaker. Inspection of loadings in the six-factor model indicated that while one item was near the conventional .40 threshold, another (item 13) showed a clearly weak loading (.14). Therefore, rather than following the approach of Stogianni et al. (2023) and removing the EB and DI subscales—thus eliminating a total of eight items, which in light of the present data would represent an arbitrary decision[9]—we

[9] For completeness, we also estimated alternative models tested by Stogianni et al. (2023), in which eight items (corresponding to the EB and DI subscales) were removed. As anticipated, all models that converged showed poor fit to the present data: the single-factor model yielded

opted to exclude only the weakest item (item 13) and re-estimate the six-factor model, followed by testing a second-order model and a bifactor solution[10]. The resulting 23-item version of the scale is hereafter referred to as the 23-item MCI-r.

After removing item 13, the six-factor CFA solution showed improved fit relative to the previous models, with some indices approaching conventional thresholds. In general, most items showed moderate to high factor loadings ranging from .60 to .86. Three items (item 2 = .45; item 3 = .40, item 9 = .50) yielded lower coefficients, all three met the conventional .40 threshold.

Corrected item–total correlations for the six-factor model (without item 13) are presented in Table 5. As shown, the EQ subscale items demonstrated the highest consistency, whereas some CM and SI items had weaker item–total correlations.

To examine whether the six dimensions could be explained by a higher-order factor, we specified a second-order model. However, this solution did not converge. Because non-convergence alone does not constitute definitive evidence against a higher-order structure, this result should be interpreted cautiously. In the present data, very high correlations between some first-order factors

$\chi^2(104) = 2686.106$, $p < .001$, CFI = .762, RMSEA = .138, 90% CI [.133, .142], SRMR = .081, AIC = 74508.32, sBIC = 74619.325; the four-factor model resulted in $\chi^2(98) = 1952.630$, $p < .001$, CFI = .837, RMSEA = .117, 90% CI [.113, .122], SRMR = .071, AIC = 73407.945, sBIC = 73532.818. A second-order model based on this four-factor structure did not converge and thus no interpretable fit indices could be obtained. A bifactor model based on this four-factor structure resulted in: $\chi^2(88) = 1619.572$, $p < .001$, CFI = .872, RMSEA = .110, 90% CI [.105, .115], SRMR = .064, AIC = 72901.313, sBIC = 73049.311. None of these solutions provided acceptable fit.

[10] We proceeded directly to the six-factor, second-order, and bifactor models, reasoning that the poor fit of the one-factor solution reflected the overly restrictive assumption of unidimensionality rather than the influence of a single weak item. For completeness, the one-factor model re-estimated without item 13 still fit poorly: $\chi^2(230) = 5063.167$, $p < .001$, CFI = .673, RMSEA = .125 [.122, .128], SRMR = .098, AIC = 107310.465, sBIC = 107470.026.

Table 3. Descriptive Statistics, Reliability Coefficients and Factor Loadings for the Six-Factor CFA Model

Items	*M* (SD)	*α*	Loadings
Cultural Maintenance (CM)	3.22 (0.69)	.67	
1. It would be good to see all ethnic groups in Poland retain their cultures.	3.49 (0.91)		.68
2. It is best for Poland if all ethnic groups forgot their cultural backgrounds as soon as possible.	3.59 (1.01)		.45
3. People who come to Poland should change their behaviour to be more similar to the local population.	2.58 (1.00)		.40
4. We should help ethnic and racial minorities preserve their cultural heritages in Poland.	3.24 (0.99)		.76
Equity/Inclusion (EQ)	2.80 (1.05)	.90	
5. I think that immigrants in Poland should have equal rights as people already living here.	2.84 (1.21)		.86
6. I think that immigrants in Poland should have fewer rights than those who were born here.	2.72 (1.20)		.81
7. I think that immigrants in Poland should enjoy the same freedoms as those who were born here.	2.81 (1.20)		.85
8. I think that immigrants in Poland should not have the same freedoms as those already living here.	2.82 (1.20)		.80
Social Interaction (SI)	3.23 (0.77)	.70	
9. If members of ethnic groups want to keep their own culture, they should keep it to themselves and not bother other people in this country.	2.68 (1.06)		.50
10. We should do more to learn about the customs and heritage of different ethnic and cultural groups in this country.	3.39 (1.00)		.70
11. I do not like being on a bus or a train in which there are many people of other cultures.	3.41 (1.17)		.60
12. I think that immigrants and people in Poland should seek more contact with one another.	3.41 (1.01)		.68
Essentialistic Boundaries (EB)	3.16 (0.76)	.69	

Table 3 cont.

Items	*M* (SD)	*α*	Loadings
13. Ethnic and cultural group categories are not very important, and so should not be used for understanding about other people.	2.71 (0.95)		.14
14. Racial and ethnic group memberships do not matter very much to who we really are.	3.33 (1.12)		.69
15. All human beings are individuals, and therefore race and ethnicity are not important.	3.27 (1.11)		.72
16. At our core, all human beings are really all the same, so racial and ethnic categories do not matter.	3.33 (1.07)		.79
Extent of Differences (DI)	3.35 (0.66)	.74	
17. All cultures should have their own distinct traditions and perspectives.	3.54 (0.85)		.61
18. Each racial and ethnic group should have their own distinguishing characteristics.	3.43 (0.85)		.67
19. All groups in Poland should clearly show their own distinctive cultural features.	3.08 (0.94)		.65
20. It is important for all groups in Poland to keep themselves distinct from other groups.	3.34 (0.86)		.66
Consequences of Diversity (CD)	2.99 (0.86)	.78	
21. Having a lot of different cultural groups in Poland makes it difficult to solve problems in our society.	2.90 (1.11)		.64
22. The unity of this country is weakened by ethnic groups sticking to their old ways.	3.19 (1.12)		.65
23. A society which has a variety of ethnic groups is more able to tackle new problems as they occur.	3.14 (1.05)		.67
24. I feel at ease when I am in a city with many immigrants.	2.71 (1.15)		.76

Note. Cronbach's *α* for the total MCI-r score = .91.

Table 4. Zero-order correlations between MI (total score) and the MCI subscales

Measure	1	2	3	4	5	6	7
1. Multicultural Ideology (total score)	-	.81***	.81***	.85***	.56***	.55***	.87***
2. Cultural Maintenance		-	.55***	.68***	.27***	.52***	.68***
3. Equity/Inclusion			-	.65***	.35***	.22***	.68***
4. Social Interaction				-	.33***	.40***	.73***
5. Essentialistic Boundaries					-	.19***	.39***
6. Extent of Differences						-	.34***
7. Consequences of Diversity							-

Note. ***p <.001.

suggested limited discriminant validity, which may have contributed to estimation difficulties for the higher-order specification.

Convergent and Discriminant Validity

To further examine the psychometric properties of the six-factor model of the 23-item MCI-r, and in line with prior recommendations (Cheung & Wang, 2017), we calculated the average variance extracted (AVE), which represents the average proportion of total indicator variance accounted for by the latent factor (Henseler et al., 2015). As noted by Stogianni et al. (2023), values above .50 are generally interpreted as evidence of convergent validity (Cheung & Wang, 2017), whereas lower values suggest that measurement error explains more variance than the latent construct, casting doubt on scale validity (Fornell & Larcker, 1981). We also computed composite reliability (CR)—an internal-consistency index that, unlike

Table 5. Corrected Item-Total Correlations for the Six-Factor Model (N = 1789)

Item	Item-Total Correlations
Cultural Maintenance (CM)	
Item 1	.48
Item 2	.45
Item 3	.37
Item 4	.50
Equity/Inclusion (EQ)	
Item 5	.79
Item 6	.77
Item 7	.78
Item 8	.76
Social Interaction (SI)	
Item 9	.39
Item 10	.55
Item 11	.50
Item 12	.53
Essentialistic Boundaries (EB)	
Item 14	.58
Item 15	.61
Item 16	.63
Extent of Differences (DI)	
Item 17	.50
Item 18	.57
Item 19	.51
Item 20	.55
Consequences of Diversity (CD)	
Item 21	.61
Item 22	.59
Item 23	.55
Item 24	.59

Cronbach's α, does not assume equal loadings; CR ≥ .70 was taken as acceptable (Hair et al., 2019).

Among the six subscales, only two demonstrated sufficient convergent validity: EQ (AVE = .69) and EB (AVE = .53). The remaining factors yielded AVE values below the recommended .50 threshold (CM = .35, SI = .39, DI = .42, CD = .46), indicating that more variance was attributable to measurement error than to the latent construct. Composite reliability (CR) met the .70 criterion for five subscales—EQ, EB, DI, SI, and CD (.72–.90)—whereas CM showed marginal reliability (CR = .67). Overall, internal consistency was acceptable for most subscales, but convergent validity was supported only for EQ and EB.

With regard to discriminant validity, the Heterotrait–Monotrait Ratio of Correlations (HTMT) was computed to assess whether the subscales represent empirically distinct dimensions of multicultural ideology. The HTMT quantifies the ratio of correlations across constructs (heterotrait–heteromethod) relative to correlations among indicators of the same construct (monotrait–heteromethod). Values below .85 are generally considered supportive of discriminant validity (Cheung & Wang, 2017).

In the present data, as shown in Table 6, HTMT coefficients indicate limited discriminant validity for a subset of subscale pairs. In particular, the CM–SI, CM–CD and SI–CD pairs clearly exceed the .85 guideline, suggesting these constructs are empirically indistinguishable. Most other pairs remain below .85, with EB showing consistently lower overlap with the other subscales and DI also remaining distinct. Two pairs are near but below the cutoff (EQ–SI and EQ–CD).

Taken together, the AVE and HTMT patterns imply that responses are largely driven by a common multicultural-ideology factor, with limited evidence for clearly separable dimensions; EB—and, to a lesser extent, DI—retain the most specificity beyond the general factor.

Bifactor model

In the next step, guided by the AVE and HTMT results, we estimated a bifactor model in which all items loaded on both a general factor and their respective subscales, allowing us to examine how much variance is captured by the common factor versus the specific dimensions. This solution yielded a fit profile broadly comparable to that of the correlated six-factor model based on the 23-item MCI-r (similar CFI, RMSEA, SRMR, with a small AIC improvement). The general factor was moderately to strongly defined, with most standardized loadings in the .34–.75 range. Several group factors, however, showed mixed performance. SI was unstable as a specific factor: two items had negative specific loadings (items 10 and 12) and the remaining two loaded only weakly. CD was also poorly defined, with three items loading near zero and one Heywood case[11] (on item 21), indicating local misfit. By contrast, EB showed acceptable specific loadings (.53–.63), and EQ and DI were moderately well represented (.49–.60 and .43–.60, respectively). For CM, two specific loadings were small and negative (items 1 and 4) suggesting little unique variance beyond the general factor.

To further evaluate whether the variance in the MCI-r responses is primarily captured by a general multicultural ideology factor or by its specific subdimensions—and to determine which subscales retain meaningful specificity—we computed model-based omega reliability from the bifactor solution for the 23-item MCI-r. Specifically, we report omega hierarchical for the general factor (ωH) and omega hierarchical for subscales (ωHS) (Reise et al.,

[11] A Heywood case is an inadmissible SEM/CFA solution in which an indicator's residual error variance is estimated as negative, implying that more than one hundred percent of the item's variance is explained (Hair et al., 2019). In standardized output, a loading greater than one in absolute value is a common symptom and typically coincides with a negative residual variance.

Table 6. HTMT coefficients between the MCI-r subscales

Measure	1	2	3	4	5	6
1. Cultural Maintenance	-	0.710	**0.995**	0.499	0.751	**0.936**
2. Equity/Inclusion		-	0.818	0.514	0.269	0.814
3. Social Interaction			-	0.582	0.556	**0.981**
4. Essentialistic Boundaries (w/o item 13)				-	0.304	0.612
5. Extent of Differences					-	0.449
6. Consequences of Diversity						-

Note. HTMT values greater than .85 are bolded.

2013; Rodriguez et al., 2016), which quantify the proportion of reliable variance in unit-weighted scores attributable to the target factor after partialling out the others (i.e., ωH reflects the general factor net of group factors; ωHS reflects each subscale net of the general factor). For reference, we adopt conventional heuristics that ωH/ωHS ≥ .70 indicates strong reliability, ≈ .40–.60 adequate, ≈ .30–.40 marginal, and < .30 negligible. AVE is not interpreted for bifactor structures. In addition, we calculated item explained common variance (IECV) from the bifactor solution to index, for each item, the proportion of common variance attributable to the general factor (IECV; Rodriguez, Reise, & Haviland, 2016), using the common thresholds of ≥ .80 (general-dominant), .50–.80 (mixed), and < .50 (specific).

The bifactor analysis indicated that the general factor is highly reliable: ωH = .87 for the total score (ωtotal = .95), implying that a large share of reliable item variance is common and can be validly summarized by a single global MCI score. In contrast, most specific factors contributed only modest unique reliable variance beyond the general factor: EB ωHS ≈ .49, DI ωHS ≈ .48 (both adequate), EQ ωHS ≈ .36, CD ωHS ≈ .37 (both marginal), CM ωHS ≈ .06 and SI ωHS ≈ .00 (both negligible). IECV results showed that several items—particularly from CM and SI, as well as most CD items—were predominantly explained by the general factor. In contrast, the EB items and most DI items retained clear specific variance, while the EQ items tended to show a mixed pattern, reflecting both general and specific influences. Interpretation of one CD item should be made cautiously due to a local estimation irregularity observed for that indicator.

In sum, the evidence generally supports using the global score of the 23-item MCI-r as the primary indicator in subsequent analyses. The EB and DI subscales retain meaningful specific variance beyond the general factor and can be reported as secondary scales when theoretically warranted, consistent with the AVE and HTMT results. In contrast, EQ shows only marginal specificity and overlaps substantially with the general factor, so it is not recommended as a standalone predictor or outcome. The SI subscale contributes negligible unique reliability and should not be interpreted separately. Likewise, CM should not be treated as an independent construct due to very low specificity and negative specific loadings in the bifactor solution. Finally, CD is also not advisable as a standalone scale given local misfit and weak specific loadings.

Measurement invariance

Because the study included a two-wave design, we first examined longitudinal measurement invariance of the six-factor solution of the 23-item MCI-r across Wave 1 and Wave 2 among participants who completed both waves of the study (N = 1,355). A longitudinal CFA with correlated uniquenesses for corresponding items across time showed acceptable fit at the configural level. Constraining factor loadings to equality across waves resulted in negligible changes in model fit (ΔCFI = .000, ΔRMSEA = −.001, ΔSRMR = .001), supporting metric invariance. Adding intercept constraints likewise produced only minimal changes (ΔCFI = −.002, ΔRMSEA = .000, ΔSRMR = .000), supporting scalar invariance according to recommended criteria based on changes in fit indices (Cheung & Rensvold, 2002; Chen, 2007).

Although the scaled χ^2 difference test was significant for the scalar step, Cheung and Rensvold (2002) note that chi-square difference tests in large samples may indicate lack of invariance even when differences in model parameters are trivial, and therefore recommend inspecting changes in approximate fit indices. In the present case, the changes in CFI, RMSEA, and SRMR were minimal and consistent with measurement invariance across time. Overall, these findings indicate that the measurement structure of the MCI-r remained stable across the three-week interval (see Table 7).

To further examine the comparability of the scale across demographic groups, we then tested measurement invariance of the six-factor solution for the 23-item MCI-r across gender using multi-group CFA (MG-CFA) with gender (0 = women, 1 = men) as the grouping variable. The configural model—freely estimated across groups—showed adequate but suboptimal fit (see Table 8). Constraining factor loadings (metric invariance) produced negligible change in fit (ΔCFI = .000, ΔRMSEA = −.002, ΔSRMR = +.001). Adding intercept constraints (scalar invariance) likewise yielded only small changes (ΔCFI = −.002, ΔRMSEA = −.001, ΔSRMR = +.001).

Table 7. Longitudinal measurement invariance of the six-factor model of the 23-item MCI-r across Wave 1 and Wave 2 (N = 1,355)

Model	Robust χ^2(df)	CFI	RMSEA [90% CI]	SRMR	AIC	sBIC
Configural (free)	3971.442*** (900) χ^2/df = 4.41	.893	.056 [.054, .058]	.060	149146.298	149608.238
Metric (loadings)	4004.540*** (923) χ^2/df = 4.34	.893	.055 [.054, .057]	.061	149131.981	149547.116
Scalar (loadings+intercepts)	4091.275*** (946) χ^2/df = 4.32	.891	.055 [.053, .057]	.061	149169.235	149537.566

Table 8. Measurement invariance of the six-factor model for the 23-item MCI-r across gender (0 = women, 1 = men)

Model	Robust χ^2(df)	CFI	RMSEA [90% CI]	SRMR	AIC	sBIC
Configural (free)	2778.812*** (430) χ^2/df = 6.46	.849	.088 [.085, .091]	.073	103742.265	104130.761
Metric (loadings)	2788.070*** (447) χ^2/df = 6.24	.849	.086 [.083, .089]	.074	103730.972	104080.156
Scalar (loadings+intercepts)	2851.887*** (464) χ^2/df = 6.15	.847	.085 [.082, .088]	.075	103749.327	104059.198

Although Satorra–Bentler χ^2 difference tests (Satorra & Bentler, 2001) were significant for the scalar step—unsurprising given the large sample size and degrees of freedom—current guidance prioritizes change-in-fit criteria (differences in CFI up to .010 and in RMSEA up to .015 are typically considered negligible; Cheung & Rensvold, 2002; Chen, 2007), under which both metric and scalar invariance are supported. Information criteria were mixed from metric to scalar (AIC increased slightly; sBIC decreased), so we rely on the change-in-fit-indices. Accordingly, the measure is comparable across women and men; latent mean comparisons (scalar invariance) and comparisons of factor covariances/relations are justified.

Test–retest reliability

To evaluate temporal stability of the MCI-r, we correlated subscale and total scores across a three-week interval (N = 1,355). The overall 23-item index showed high stability, r = .84, p < .001. Test–retest correlations for the six subscales ranged from .54 to .77 (see Table 9). EQ, SI, and CD demonstrated good stability, whereas CM and DI were moderate. EB displayed the lowest test-retest correlation. Overall, these results support the reliability of the MCI-r over time, particularly for the global index and the EQ, SI, and CD subscales.

In addition to Pearson correlations, we computed intraclass correlation coefficients using a two-way mixed, consistency model (reporting ICC(3,1) for single-measure and ICC(3,k) for average-measure reliability). The overall 23-item MCI-r score showed good single-measure stability and excellent average-measure stability across the retest interval (ICC(3,1) = .84; ICC(3,k) = .91; see Table 9). Among subscales, EQ and CD displayed good stability, SI was borderline good, CM and DI were moderate, and EB (without item 13) showed the lowest, moderate consistency. Overall, the MCI-r total score demonstrates robust test–retest reliability, with EQ, CD, and (to a slightly lesser extent) SI showing the strongest subscale stability.

Table 9. Test–retest reliability of the MCI-r total and subscales across a three-week interval (N = 1,355)

Measure	T1-T2 Correlation	*ICC* (Single)	*ICC* (Average)
Multicultural Ideology (23-item MCI-r)	.84***	.84	.91
CM	.69***	.69	.82
EQ	.77***	.77	.87
SI	.74***	.74	.85
EB (w/o item 13)	.54***	.54	.70
DI	.60***	.60	.75
CD	.77***	.77	.87

Note. ***p < .001.

Predictive validity

To assess predictive validity, we first computed bivariate correlations between the global score of the 23-item MCI-r, the two subscales with meaningful specificity —Essentialistic Boundaries (EB; excluding item 13) and Extent of Differences (DI)—and external criteria (attitudes toward refugees from Ukraine, social conservatism, and economic conservatism). As shown in Table 10, stronger endorsement of multiculturalism was statistically significantly associated with more favorable attitudes toward refugees and to the EB and DI subscales. Conversely, multiculturalism was statistically significantly negatively related to both social and economic conservatism, although the associations with economic conservatism were much weaker.

Next, we estimated hierarchical regressions predicting attitudes toward Ukrainian refugees (see Table 11). All nine predictors entered in two steps explained 40% of the variance, *adjusted* $R^2 = .39$, $F(9, 1663) = 123.90$, $p < 0.001$. The variables entered in Step 1 accounted for 15% of the variance, $F(8, 1664) = 36.57$, $p < 0.001$. Being male, older, having higher educational attainment, lower social conservatism, and higher economic conservatism predicted more favorable attitudes. Adding the 23-item MCI-r total score in Step 2 explained an additional 25% of variance, $\Delta F(1, 1663) = 699.67$, $p < 0.001$. MCI-r was by far the strongest predictor, indicating a large effect; all other unique effects were small once MCI-r was included. After adding MCI-r, the coefficient for social conservatism shifted from negative to a very small positive value, a reversal consistent with a suppression-like pattern involving shared variance with MCI-r. Economic conservatism remained a small but statistically significant positive predictor.

DISCUSSION

Given Poland's growing cultural pluralism and recent shifts in public attitudes, particularly the decline in solidarity and increasing ambivalence toward Ukrainians (CBOS, 2025), there is a clear need for a contextually appropriate instrument to assess intergroup relations in Polish. The Revised Multicultural Ideology Scale (MCI-r), which measures support for multicultural ideology, conceptualized as acceptance of cultural diversity and the

Table 10. Zero-Order Correlations Among the 23-item MCI-r (Global Score), EB, DI, Social and Economic Conservatism, and Attitudes Toward Refugees from Ukraine

Measure	1	2	3	4	5	6
1. Multicultural ideology (23-item MCI-r)	-	.63***	.55***	-.43***	-.06*	.58***
2. Essentialistic boundaries (w/o item 13)		-	.23***	-.29***	-.05*	.30***
3. Extent of differences			-	-.11***	-.04	.27***
4. Social conservatism				-	.13***	-.21***
5. Economic conservatism					-	.05*
6. Attitudes towards refugees						-

Note. *$p < .05$, ***$p < .001$.

Table 11. Regression analysis: Predicting Attitudes Towards Refugees From Ukraine

Variable	Step 1			Step 2		
	***B* (SE)**	**β**	***p***	***B* (SE)**	**β**	***p***
Gender	0.22 (.05)	0.11	<0.001	0.21 (.04)	0.11	<0.001
Age	0.02 (.001)	0.27	<0.001	0.01 (.001)	0.19	<0.001
Education	0.07 (.02)	0.11	<0.001	0.03 (.01)	0.05	0.008
Relationship status	-0.03 (.05)	-0.02	0.497	-0.01 (.04)	-0.01	0.764
Size of municipality	0.01 (.02)	0.02	0.494	0.01 (.01)	0.02	0.389
Social conservatism	-0.15 (.02)	-0.19	<0.001	0.03 (.02)	0.04	0.044
Economic conservatism	0.06 (.02)	0.07	0.001	0.06 (.02)	0.08	<0.001
SES	0.03 (.03)	0.02	0.422	0.03 (.03)	0.02	0.330
Multicultural ideology (23-item MCI-r)				0.88 (.03)	0.57	<0.001
R^2		0.15			0.40	
F		36.57	<0.001		123.90	<0.001
ΔR^2		0.15			0.25	
ΔF		36.57	<0.001		699.67	<0.001

recognition of the benefits of social contact across ethnic groups, addresses this need but has not yet been validated in Poland. Accordingly, this study aimed to translate and adapt the MCI-r for the Polish context and to contribute to the cross-cultural validation effort initiated by Stogianni et al. (2023).

Unlike findings from Germany, Luxembourg (Stogianni et al., 2023), Italy (Parisse et al., 2025), the UK (Lefringhausen et al., 2024), and Canada (Chahar Mahali et al., 2025), the four-factor solution did not replicate in our Polish sample. Instead, the results were most consistent with a six-factor representation of multicultural ideology for the 23-item MCI-r, reflecting the theoretical specification of the construct. A six-factor solution has so far been reported only with the Canadian data (Chahar Mahali et al., 2025); however, in that study the four-factor alternative was also identified and demonstrated a better fit.

Several explanations may account for this discrepancy. One concerns sample composition: previous validations relied primarily on student or convenience samples, whereas the present research employed a sample representative of the adult Polish population with respect to age, gender, and municipality size. Student participants, often overrepresented in psychological research (Henrich et al., 2010), tend to be younger, more educated, and more supportive of cultural diversity (Henry, 2008). Population-level data, in contrast, capture broader ideological heterogeneity and may therefore account for the emergence of the six-factor structure in Poland. Another concerns broader sociocultural context: compared with the Western European settings in which the scale was previously validated, Poland is a historically more homogeneous society in which large-scale cultural diversification is relatively recent (Baran et al., 2026).

Construct-validity results showed acceptable composite reliability across subscales, but AVE supported convergent validity only for EQ and EB. HTMT values pointed to limited separability: CM – SI, CM – CD, and SI – CD exceeded the .85 guideline; EQ – SI and EQ – CD were close to but below it; EB overlapped least with the other subscales, and DI was comparatively distinct. Together with the estimation difficulties encountered in the second-order model, this pattern indicates that responses are largely driven by a common multicultural-ideology factor, with limited evidence for clearly separable dimensions. The Essentialistic Boundaries factor (EB), and, to a lesser degree the Extent of Differences factor (DI), retain the most specificity beyond the general factor. Although several fit indices remained below conventional cutoffs, the interpretation of model fit was based on the total pattern of evidence, including theoretical coherence, parameter interpretability, reliability estimates, longitudinal stability, and predictive validity.

The relative specificity of the EB factor and, to a smaller degree, the DI factor in Poland is unique compared to previous adaptations of the MCI-r. In other countries – Germany and Luxembourg (Stogianni et al., 2023), Italy (Parisse et al., 2025), and the United Kingdom (Lefringhausen et al., 2024), these subscales were removed due to weak psychometric characteristics and limited theoretical coherence with multicultural ideology. In the present study, however, their retention may reflect the particular social meaning of group boundaries and cultural distinctiveness in the Polish context. As a relatively latecomer to large-scale migration compared with Western European countries, Poland remains a country in which public discourse continues to frame cultural difference in terms of "us versus them" (Woźniak & Tosik, 2019), reinforcing lay essentialism and the perceived salience of group boundaries. Psychological essentialism is especially likely to arise when social distinctions are viewed as natural, visible, and rooted in immutable characteristics such as language, ethnicity, or religion (Rothbart & Taylor, 1992; Yzerbyt et al., 1997). In such culturally homogeneous contexts, salient categorical cues may heighten perceptions of intergroup boundaries, amplifying the social relevance of distinctions reflected in the DI subscale, whereas EB may capture tendencies to counteract these essentialist beliefs. This dynamic reflects the broader societal polarization that has intensified in Poland in recent years, as identity-related issues have moved to the forefront of public debate (Białożyt & Sus, 2024).

In this context, the Essentialistic Boundaries and Extent of Differences subscales capture distinct yet complementary aspects of multicultural ideology. EB expresses a reduced emphasis of rigid, essentialist group boundaries (i.e., the belief that ethnicity, language, or religion should not define fixed social divisions), whereas DI captures the recognition and acceptance of clear intergroup distinctiveness and the visibility of cultural differences. Both dimensions correlated positively with the general multiculturalism factor (MI) and with favorable attitudes toward war refugees from Ukraine, suggesting that in the Polish social context, rejecting essentialist group boundaries and affirming cultural diversity appear to form coherent components of a broader pro-multicultural orientation. By contrast, in the Canadian validation (Chahar Mahali et al., 2025), EB and DI were negatively related to tolerance, with EB also correlating negatively with interculturalism, whereas DI showed no significant association with it. Thus, consistent with Stogianni et al.'s (2023) argument, EB and DI may partially reflect adjacent diversity ideologies (e.g., color blindness for EB), which may become particularly salient in contexts where diversity is recent and socially contested. Taken together, these findings underscore the importance of extending the validation of the MCI-r to other Central and Eastern European countries, where comparable historical and sociopolitical conditions may shape the structure and meaning of multicultural ideology.

The second-order model (specified over the six first-order factors of the 23-item MCI-r) did not converge in the current study. Although non-convergence alone does not definitively rule out a higher-order representation, the very high correlations among several first-order factors and the limited discriminant validity observed across some subscales suggest that the higher-order specification was

difficult to estimate in this sample. Complementing these results, a bifactor model based on the six-factor solution of the 23-item MCI-r yielded a fit profile broadly comparable to that of the correlated six-factor model, although several diagnostics still indicated local misfit. Reliability indices from the bifactor solution showed that the general factor (MI) was highly reliable. At the subscale level, EB and DI retained adequate unique reliability, EQ showed only limited unique reliability, whereas CM and SI contributed minimal variance beyond the general factor; CD also demonstrated weak and unstable specificity. Item-level IECV indicated that many CM, SI, and most CD items were dominated by the general factor, whereas EB and much of DI preserved clear specific variance and EQ showed a mixed pattern.

We removed item 13 because it showed consistently weak loadings and local misfit across specifications. Conceptually, the item was intended to tap low essentialism, the belief that rigid ethnic and cultural group categories are not central to understanding others. However, in Polish it may have been interpreted as promoting cultural blindness or indifference to group differences, thereby obscuring its intended meaning. Taken together, the bifactor results provide additional support for using the global score of the 23-item MCI-r as the primary indicator in future applications of the Polish MCI-r, with EB and, to a lesser degree, DI scales, reported as secondary scales when theoretically justified. Independent use of EQ, CM, SI, or CD is not advised.

The results also supported the stability of the measurement structure of the MCI-r across time. Longitudinal confirmatory factor analyses indicated configural, metric, and scalar invariance across the two waves of the study, suggesting that the scale measures the same construct equivalently across the three-week interval. In addition, multigroup CFA indicated configural, metric, and scalar (strong) invariance across gender, as judged by changes in CFI and RMSEA within recommended thresholds (Cheung & Rensvold, 2002; Chen, 2007). These results permit meaningful comparisons of latent means between women and men and are consistent with prior findings in German/Luxembourg and Italian samples (Stogianni et al., 2023; Parisse et al., 2025). Across the three-week testing period, the MCI-r showed high test–retest stability overall, with good stability for EQ and CD, borderline-good for SI, moderate for CM and DI, and the lowest, though still moderate, for EB.

Lastly, in our data, multicultural ideology (MI), operationalized as the global score of the 23-item MCI-r, showed clear predictive validity. Consistent with prior research indicating that multiculturalism fosters more positive intergroup relations (Berry, 2006; Ward & Masgoret, 2008; Whitley & Webster, 2019), stronger endorsement of multiculturalism in our study was associated with more favorable attitudes toward war refugees from Ukraine and to lower social and, to a much lesser extent, economic conservatism (see Yogeeswaran & Dasgupta, 2014).

Among the two subscales retaining meaningful specificity, EB and DI were positively, yet more modestly, related to pro-refugee attitudes. More broadly, these findings may be interpreted within the framework of receiving-society acculturation orientations. In Berry's model, multiculturalism corresponds most closely to support for integration, understood as acceptance of cultural maintenance combined with participation in the wider society (Berry, 2001; Arends-Tóth & Van de Vijver, 2003). Accordingly, although the present study did not directly measure receiving-society acculturation expectations, the finding that higher scores on the 23-item MCI-r were associated with more favorable attitudes toward Ukrainian refugees suggests that, in the Polish context, multicultural ideology may be linked to attitudes more compatible with integration than with assimilation or exclusion. This interpretation is also consistent with research indicating that diversity ideologies emphasizing recognition and inclusion of cultural difference are linked to more positive intergroup attitudes and improved intergroup relations (Verkuyten et al., 2020). Taken together, these findings indicate that multicultural ideology may play a similar role in societies where cultural pluralism is relatively recent and still evolving, such as those in Central and Eastern Europe. At the same time, this interpretation should be treated cautiously, because the predictive validity analyses focused on a group perceived as relatively culturally close. Future research should therefore examine whether similar patterns emerge in relation to groups perceived as more culturally distant.

Unlike studies that model specific subdimensions, we used only the global MCI-r index in the regression analysis to minimize redundancy in predicting attitudes toward Ukrainian refugees. All nine predictors explained 40% of the variance in the outcome, with Step 1 accounting for 15%. Adding the global score of the 23-item MCI-r in Step 2 increased the explained variance by 25%. The MCI-r was the strongest predictor ($\beta = .57$, $p < .001$), and all other unique effects were small once it was included. Additionally, men, older respondents, and those with higher educational attainment and higher economic conservatism reported more favorable attitudes toward Ukrainian refugees. When the overall multicultural ideology score was included in the model (Step 2), the coefficient for social conservatism shifted from negative to a very small positive value, a pattern consistent with a suppression-like effect involving shared variance with MCI-r. Economic conservatism remained a small but statistically significant positive predictor.

Although the Polish factor solution differed from those reported in Germany and Luxembourg, Italy, the United Kingdom, and (partly) Canada, the present results nonetheless advance the cross-cultural validation of the MCI-r. Across models, a strong and highly reliable general multicultural ideology factor emerged, indicating that responses are largely driven by a broad common multicultural ideology dimension in the Polish context. At the same time, the specificity of subdimensions appears more culture contingent: in our data EB and, to a lesser extent, DI retained adequate unique reliability beyond the general factor, whereas past studies yielding a four-factor solution

removed these facets. For cross-national comparisons, we therefore recommend prioritizing the global score of the 23-item MCI-r as the most comparable indicator; in the Polish context, EB, and, to a lesser extent, DI can be reported as secondary scales when theoretically warranted. Future work should explicitly test cross-national measurement invariance to confirm comparability of subscale scores.

A major strength of the study is the use of a sample representative of the adult Polish population with respect to age, gender, and municipality size. As is typical for CAWI surveys, however, there was a slight overrepresentation of participants with higher education (Sterrett et al., 2017), which may modestly limit generalizability to groups with lower educational attainment. Additionally, as with most self-report measures of socially valued constructs, responses may have been influenced by social desirability bias (Paulhus, 1991), particularly on inclusion normative items. Finally, the predictive validity analyses were cross-sectional. Future work should adopt longitudinal designs to establish temporal ordering and assess the stability of effects over time. In addition, the predictive validity analyses focused on attitudes toward Ukrainian refugees, who represent the largest migrant group in Poland and a group with relatively low perceived cultural distance. As a result, these findings may not necessarily generalize to attitudes toward other migrant groups that are perceived as more culturally distant. Future research should therefore examine whether similar patterns emerge when the scale is validated against attitudes toward other national or regional groups.

Practically, the MCI-r global index can serve as a policy-relevant barometer of diversity ideology in Poland, useful for evaluating integration programs, educational initiatives, and media campaigns, as well as for detecting shifts in intergroup relations over time. Future research could compare the MCI-r with related frameworks (e.g., interculturalism, color blindness, assimilationism) and further examine its associations with related constructs such as perceived threat, SDO, RWA, and ethnocentrism.

CONCLUSIONS

This study provides a Polish language adaptation of the revised Multicultural Ideology Scale (MCI-r) and offers generally supportive psychometric evidence, with important caveats, for its use. For most applications, we recommend the global 23-item MCI-r score; the EB and DI subscales can be reported as secondary indices when theoretically warranted. The measure may be useful for monitoring of societal attitudes toward multiculturalism and their links with policy frameworks, examination of associations with migrants' socio-cultural adaptation, and the design and evaluation of interventions that aim to foster positive intergroup contact and adaptation. Future refinement of the scale and additional validation studies are warranted. Overall, this version of the MCI-r provides a promising and contextually relevant tool for studying multicultural ideology and its role in shaping intergroup relations in contemporary Poland.

Conflict of interest: The authors declare that they have no conflict of interest.

Data availability: The data supporting the findings of this study are available from the first author upon request.

The use of AI: Throughout the preparation of this work, the authors utilized ChatGPT-5 for language corrections. Following the use of this tool, the authors carefully reviewed and revised the content as necessary, taking full responsibility for the final version of the publication.

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SUPPLEMENTARY MATERIALS

Table S1. Polish Adaptation of the Revised Multicultural Ideology Scale

Subscale	Polish	English
Instructions	Poniżej zapytamy Cię o Twoją opinię na temat wielokulturowości w Polsce. Prosimy, przeczytaj poniższe stwierdzenia i zaznacz do jakiego stopnia '*nie zgadzasz się'* lub '*zgadzasz się'* z każdym z nich. Niektóre stwierdzenia są sformułowane bardzo podobnie i różnią się tylko słowem lub dwoma albo zwrotem językowym. Abyśmy mogli jak najrzetelniej uchwycić Twoje opinie, prosimy bardzo o uważne przeczytanie każdego stwierdzenia.	In the following, we will ask you questions about your opinion about multiculturalism in Poland. Please read the following statements and indicate to what extent you agree or disagree. Some of these statements are worded very similarly, differing only by a few words or formulation. Thus, to allow us to capture your opinions as accurate as possible, please ensure to read each statement very carefully. If you prefer not to indicate an answer to any of these statements, then just move forward in the survey.
Cultural Maintenance (CM)	1. Byłoby dobrze gdyby wszystkie grupy etniczne w Polsce zachowały swoją kulturę (swoje zwyczaje kulturowe).	It would be good to see all ethnic groups in Poland retain their cultures.
	2. Dla Polski byłoby najlepiej gdyby wszystkie grupy etniczne zapomniały o swoim pochodzeniu kulturowym jak najszybciej.	It is best for Poland if all ethnic groups forgot their cultural backgrounds as soon as possible.
	3. Ludzie którzy przybywają do Polski powinni zmienić swoje zachowanie, aby bardziej upodobnić się do lokalnej społeczności.	People who come to Poland should change their behaviour to be more similar to the local population.
Equity/Inclusion (EQ)	4. Powinniśmy pomagać mniejszościom etnicznym i rasowym w Polsce w zachowaniu ich kulturowego dziedzictwa ("spuścizny kulturowej").	We should help ethnic and racial minorities preserve their cultural heritages in Poland.
	5. Uważam, że imigranci w Polsce powinni mieć takie same/ równe prawa jak ludzie, którzy już tu mieszkają/ zamieszkiwali.	I think that immigrants in Poland should have equal rights as people already living here.
	6. Uważam, że imigranci w Polsce powinni mieć mniejsze prawa (mniej przywilejów) niż ci, którzy się tutaj urodzili.	I think that immigrants in Poland should have fewer rights than those who were born here.
	7. Uważam, że imigranci w Polsce powinni cieszyć się tymi samymi swobodami (uprawnieniami) jak ci, którzy się tutaj urodzili.	I think that immigrants in Poland should enjoy the same freedoms as those who were born here.
	8. Uważam, że imigranci w Polsce nie powinni mieć tych samych swobód (uprawnień), jak ci którzy już tu mieszkają.	I think that immigrants in Poland should not have the same freedoms as those already living here.
Social Interaction (SI)	9. Jeżeli członkowie grup etnicznych chcą utrzymać swoją własną kulturę, to powinni zachować ją dla siebie i nie zawracać głowy innym ludziom w tym kraju.	If members of ethnic groups want to keep their own culture, they should keep it to themselves and not bother other people in this country.
	10. Powinniśmy robić więcej, aby poznać zwyczaje i dzieje różnych grup etnicznych i kulturowych w tym kraju.	We should do more to learn about the customs and heritage of different ethnic and cultural groups in this country.
	11. Nie lubię być w autobusie, tramwaju lub w pociągu w którym jest wielu ludzi z innych kultur.	I do not like being on a bus or a train in which there are many people of other cultures.
	12. Uważam, że imigranci i mieszkańcy Polski powinni nawiązywać więcej kontaktów ze sobą.	I think that immigrants and people in Poland should seek more contact with one another.
Essentialistic Boundaries	13. Etniczne i kulturowe kategorie grupowe nie są zbyt ważne i dlatego nie powinny być używane do zrozumienia innych ludzi.	Ethnic and cultural group categories are not very important, and so should not be used for understanding about other people.
	14. Przynależność do grup rasowych i etnicznych nie ma większego znaczenia dla tego kim naprawdę jesteśmy.	Racial and ethnic group memberships do not matter very much to who we really are.

Subscale	Polish	English
	15. Wszystkie istoty ludzkie to niezależne jednostki, dlatego rasa i etniczność nie są ważne.	All human beings are individuals, and therefore race and ethnicity are not important.
	16. U podstaw wszystkie istoty ludzkie są takie same, więc rasowe i etniczne kategorie są bez znaczenia.	At our core, all human beings are really all the same, so racial and ethnic categories do not matter.
	17. Wszystkie kultury powinny mieć swoje własne, odrębne tradycje i punkty widzenia.	All cultures should have their own distinct traditions and perspectives.
Extent of Differences (DI)	18. Każda grupa rasowa i etniczna powinna mieć swoje wyróżniające cechy.	Each racial and ethnic group should have their own distinguishing characteristics.
	19. Wszystkie grupy w Polsce powinny wyraźnie pokazywać swoje wyróżniające cechy kulturowe.	All groups in Poland should clearly show their own distinctive cultural features.
	20. To ważne dla wszystkich grup w Polsce, żeby zachowały cechy odróżniające je od innych grup.	It is important for all groups in Poland to keep themselves distinct from other groups.
	21. Obecność wielu różnych grup kulturowych w Polsce utrudnia rozwiązywanie problemów w naszym społeczeństwie.	Having a lot of different cultural groups in Poland makes it difficult to solve problems in our society.
	22. Jedność Polski jest osłabiona przez grupy etniczne trzymające się swoich dawnych stylów życia i tradycji.	The unity of this country is weakened by ethnic groups sticking to their old ways.
Consequences of Diversity (CD)	23. Społeczeństwo, które zawiera różne grupy etniczne, jest bardziej zdolne do poradzenia sobie z nowymi problemami, gdy takie się pojawiają.	A society which has a variety of ethnic groups is more able to tackle new problems as they occur.
	24. Czuję się swobodnie, gdy jestem w mieście z wieloma imigrantami.	I feel at ease when I am in a city with many immigrants.

Note. Although randomized item presentation is recommended, we retain the original order here for clarity. Item 13 (shaded) was excluded from the scale; users of the Polish MCI-r should likewise omit it when computing the global score and the EB subscale. The subscales comprised the following items: CM, items 1–4; EQ, items 5–8; SI, items 9–12; EB, items 13–16; DI, items 17–20; and CD, items 21–24.

Table S2. Descriptive statistics for the test–retest subsample (Wave 2; N = 1,355)

Variable	*N* or mean	% or SD
Gender		
Women	795	58.7
Men	560	41.3
Age (years)	47.09	15.36
Education		
Primary/middle school	21	1.5
Vocational	112	8.3
Secondary	397	29.3
Post-secondary	153	11.3
Bachelor's degree	134	9.9
Master's degree or postgraduate education	538	39.7
Relationship status		
Not in a relationship	357	28.1
Married/in a relationship	915	71.9
Size of municipality		
Village	454	33.5
<20,000 residents	165	12.2
20,000-99,000 residents	281	20.7
100,000-500,000 residents	259	19.1
>500,000 residents	196	14.5
Social conservatism	2.59	1.26
Economic conservatism	2.70	1.06
SES	3.05	0.72

Note. Categorical variables are reported as *n* (percent). Continuous variables are reported as *M* (*SD*). The subsample includes participants who completed both waves, passed attention checks in both waves, and reported living in Poland and being born in Poland.