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Posted Date: 31 March 2026

doi: 10.20944/preprints202603.2396.v1

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Article

Residents' Perceptions of Multicultural Human Resources in Tourism and Hospitality: An Initial Psychometric Assessment

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Abstract

Multicultural human resources have become increasingly visible in tourism and hospitality in many destinations. However, limited attention has been paid to how residents perceive the growing multicultural workforce in these sectors. Although previous research has examined tourism impacts, workplace diversity, and multicultural attitudes from related perspectives, an instrument specifically designed to assess residents' perceptions of multicultural human resources in tourism and hospitality is lacking. This study introduces the Residents' Perceptions of Multicultural Human Resources in Tourism and Hospitality Scale and presents an initial psychometric assessment based on a preliminary sample of 108 valid responses collected in the Algarve, Portugal. The findings showed acceptable item variability, favourable internal consistency across the proposed dimensions, and adequate conditions for exploratory factor analysis. However, the exploratory solution did not reproduce the original seven-dimensional framework in full, instead pointing to a more condensed four-factor structure. Overall, the results suggest that the instrument provides a promising basis for future research while also indicating the need for further refinement and confirmatory testing in larger and more diverse samples.

Keywords: multicultural human resources; residents' perceptions; tourism and hospitality; scale development; psychometric assessment; exploratory factor analysis

Introduction

Multicultural workforces have become increasingly visible in the tourism and hospitality industries. Labour shortages, international mobility, and the globalised character of service work have contributed to a stronger presence of employees from diverse cultural and national backgrounds across destinations. However, research on diversity in hospitality remains somewhat fragmented, and the field still has room for more context-sensitive measurements and stronger empirical consolidation. Existing studies have repeatedly highlighted both the growing relevance of diversity and the need for more focused work on how it is understood and managed in tourism and hospitality settings (Im et al., 2023; Malik et al., 2017; Manoharan & Singal, 2017; Madera et al., 2023).

This is important because, in destination settings, workforce multiculturalism is not only an internal organisational issue. It is also part of the wider environment through which residents experience tourism and hospitality in the region. Research on residents' attitudes has consistently shown that support for tourism is shaped by how people interpret the benefits, costs, and place-related outcomes, including community effects and destination image (Gursoy et al., 2002; Gursoy et al., 2019; Styliadis et al., 2014). More recent work continues to show that residents' place image, destination image, and broader evaluative responses remain closely tied to support, satisfaction, and behavioural predispositions toward tourism development (Qin et al., 2025; Šerić et al., 2024; Sustacha, 2026; Uslu et al., 2023). However, most of this literature has examined tourism development in

broader terms rather than residents' perceptions of the multicultural composition of the workforce itself. Consequently, an important question remains underexplored: how do residents interpret the growing presence of multicultural human resources in tourism and hospitality?

A further difficulty is that the most relevant measurement traditions come from neighbouring, rather than fully overlapping, areas of research. Some instruments focus on how employees perceive the benefits and threats of cultural diversity in the workplace (Hofhuis et al., 2015). Others have examined the endorsement of multiculturalism more broadly (Lefringhausen et al., 2024), while another line of work has addressed competence-based judgements in intergroup perception (Fiske et al., 2002). These contributions offer valuable conceptual anchors; however, none were developed specifically to assess residents' perceptions of multicultural human resources in tourism and hospitality destinations. In this sense, the literature provides important building blocks but not an integrated instrument tailored to this context.

Addressing this gap is relevant for both theoretical and practical purposes. From a theoretical perspective, it extends the study of multiculturalism beyond employee- and management-centred approaches by bringing residents into the discussion as a distinct evaluative group. From a practical perspective, it may help clarify whether multicultural human resources are perceived primarily as a source of functional benefit, sociocultural enrichment, social and operational challenges, destination image enhancement, public support, or competence differentiation by national origin. In the early stages of instrument development, such questions are better approached through theoretically grounded item construction followed by preliminary psychometric testing rather than premature confirmatory claims (Boateng et al., 2018; Hinkin, 1995; Lim, 2026; Worthington & Whittaker, 2006). Recent methodological guidance has further reinforced the importance of cumulative validation, staged refinement, and a clear distinction between exploratory and confirmatory phases in scale development (Lim, 2026).

Against this background, this study introduces the Residents' Perceptions of Multicultural Human Resources in Tourism and Hospitality Scale and reports an initial psychometric assessment based on a preliminary sample. Specifically, this study aimed to examine the preliminary descriptive performance of the items, assess the internal consistency of the proposed dimensions, determine whether the item matrix was suitable for exploratory factor analysis, and explore whether the observed factor structure was consistent with the proposed dimensional framework.

Method

Participants and Procedure

This study is based on a frozen preliminary dataset collected until March 27, 2026. After data screening, the final analytical sample comprised 108 participants. No duplicate records, incomplete questionnaires, missing values in the scale items, or out-of-range responses were found. Therefore, the sample was retained in its entirety for the present analyses.

The participants' age ranged from 15 to 70 years, with a mean age of 31.92 years ($SD = 14.56$) and a median age of 25.50 years. Regarding gender, 58.3% identified as female ($n = 63$) and 41.7% as male ($n = 45$). Most respondents were Portuguese (88.9%, $n = 96$), followed by Brazilian participants (8.3%, $n = 9$), and 2.8% ($n = 3$) reported another nationality. The sample was also highly concentrated in respondents who currently reside and/or work in the Algarve (97.2%, $n = 105$).

Regarding education, the largest group held a bachelor's degree (40.7%, $n = 44$), followed by respondents with technical or vocational qualifications (27.8%, $n = 30$), and those with secondary education (18.5%, $n = 20$). In terms of employment, the sample was mainly composed of students (42.6%, $n = 46$) and employees working for others (38.0%, $n = 41$). Nearly half of the participants reported having resided and/or worked in the Algarve for their entire lives (48.1%, $n = 52$). Taken together, these characteristics indicate that the sample was strongly anchored in the Algarve context, while also showing some concentration of relatively young and educated respondents.

To characterise the sample and support the interpretation of residents' perceptions, the questionnaire included a set of sociodemographic and contextual variables. Age, gender, nationality, education, employment status, and professional activity were collected because they may be associated with different forms of exposure to tourism and hospitality, distinct social positions, and potentially different views on multicultural human resources. Given the regional focus of the study, residence and/or work in the Algarve, as well as the length of residence and/or work in the region, were included to capture participants' degree of territorial embeddedness and familiarity with the local tourism context. These variables were not treated as part of the latent structure under assessment but were considered important for sample characterisation, contextual interpretation, and future comparative analyses.

Data were collected using a structured questionnaire administered to residents of the Algarve. The survey included a preliminary version of the Residents' Perceptions of Multicultural Human Resources in Tourism and Hospitality Scale, along with sociodemographic questions. For the purposes of this preprint, the dataset was frozen on March 27, 2026, and treated as the analytical basis for an initial psychometric assessment. Before the analyses were conducted, the dataset was screened to verify response completeness, detect potential duplicate entries, confirm the valid response range, and assess whether any items required reverse coding. No such problems were observed.

Instrument

The instrument used in this study was the Residents' Perceptions of Multicultural Human Resources in Tourism and Hospitality Scale (RPMC). The preliminary version of the scale comprised 34 items organised into seven proposed dimensions: perceived functional benefits, sociocultural enrichment and intercultural openness, perceived social and operational challenges, social acceptance and inclusion, perceived impact on destination image, support for a multicultural workforce, and perceived professional competence by nationality. All items were assessed using a six-point Likert scale ranging from 1 (strongly disagree) to 6 (strongly agree). No item required reverse coding for the dimension-level analyses.

The instrument was constructed based on prior work on workforce diversity, multiculturalism, destination-related evaluations, and competence-based intergroup judgment; however, the present study focused on the initial psychometric behaviour of the proposed item set. In line with recommendations for early-stage scale development, this stage emphasised theoretically grounded item construction, internal consistency, and exploratory assessment of the latent structure rather than confirmatory validation (Boateng et al., 2018; Hinkin, 1995; Worthington & Whittaker, 2006).

Data Analysis

The analytical strategy followed a structured sequence consistent with the aims of the initial psychometric assessment. First, the sample was described using basic descriptive statistics. Second, item-level descriptive analyses were conducted to examine the central tendency, variability, and response distribution. Third, the internal consistency of each proposed dimension was assessed using Cronbach's alpha and McDonald's omega coefficients. Corrected item-total correlations were examined to identify items with weaker discriminatory performance.

Subsequently, the factorability of the item matrix was assessed using the Kaiser-Meyer-Olkin measure of sampling adequacy and Bartlett's test of sphericity. Once these conditions were satisfied, exploratory factor analysis was conducted to examine the initial latent structure of the instrument. In line with methodological recommendations, the exploratory phase was treated as a necessary step for understanding the empirical organisation of the items before any confirmatory procedures could be considered (Fabrigar et al., 1999; Worthington & Whittaker, 2006). Factor extraction was performed using principal axis factoring with oblimin rotation, as the correlations between the latent dimensions were theoretically plausible.

The interpretation of the exploratory solution was based on factor loadings, communalities, item-total correlations, and internal consistency results. At this stage, the purpose was not to make

definitive decisions about final item elimination but rather to identify stronger and weaker items, evaluate the coherence of the proposed dimensions, and inform future stages of refinement. Given the current sample size, the present study should be interpreted as an initial psychometric assessment rather than a final validation of the instrument. Confirmatory factor analysis, structural equation modelling, measurement invariance, and definitive evidence of convergent and discriminant validity were outside the scope of this manuscript and reserved for later stages of data collection.

Results

Sample Characteristics

The analytical sample comprised 108 participants in total. Their age ranged from 15 to 70 years, with a mean of 31.92 years (SD = 14.56) and a median of 25.50 years. Regarding gender, 58.3% of respondents identified as female (n = 63) and 41.7% as male (n = 45). The sample was predominantly Portuguese (88.9%, n = 96), with smaller proportions of Brazilian participants (8.3%, n = 9) and respondents of other nationalities (2.8%, n = 3).

The sample was also strongly concentrated in the Algarve context, as 97.2% of respondents (n = 105) reported residing and/or working in the region. In terms of education, the largest group held a bachelor’s degree (40.7%, n = 44), followed by participants with technical or vocational qualifications (27.8%, n = 30), and secondary education (18.5%, n = 20). Regarding employment status, the sample was mainly composed of students (42.6%, n = 46) and employees working for others (38.0%, n = 41). Overall, the sample was regionally anchored and somewhat concentrated among younger and relatively educated respondents.

Table 1. Sample Characteristics.

Variable	Category	N	%
Gender	Female	63	58.3
	Male	45	41.7
Nationality	Portuguese	96	88.9
	Brazilian	9	8.3
	Other	3	2.8
Education	Lower secondary education	3	2.8
	Secondary education	20	18.5
	Technical/vocational qualification	30	27.8
	Bachelor’s degree	44	40.7
	Master’s degree	6	5.6
	Doctoral degree	5	4.6
Employment status	Student	46	42.6
	Employee working for others	41	38
	Unemployed	11	10.2
	Self-employed	5	4.6
	Business owner	3	2.8
	Retired	2	1.9
Residence/work in algarve	Yes	105	97.2
	No	3	2.8
Length of residence/work in algarve	Less than 1 year	2	1.9
	1 to 3 years	13	12

	4 to 10 years	16	14.8
	11 to 20 years	11	10.2
	More than 20 years	12	11.1
	All life	52	48.1
	Never resided/worked in Algarve	2	1.8

Item-Level Descriptive Statistics

All items used the full response range of 1–6. The mean values ranged from 3.81 to 5.07, suggesting generally moderate to favourable evaluations across the scale. Standard deviations ranged from 1.24 to 1.56, indicating acceptable variability in all items.

The skewness values were predominantly negative, indicating a general tendency toward agreement. The strongest negative skewness was observed in SAI1, the item referring to equal rights for foreign workers, and SAI2, the item referring to equal freedom and opportunities across cultural backgrounds. This pattern suggests a moderate ceiling tendency for normatively framed inclusion items. However, no item showed evidence of extreme distortion or insufficient variability at this stage.

The highest mean was observed for SAI2, the item referring to equal freedom and opportunity across cultural backgrounds (M = 5.07, SD = 1.24), followed by SAI1, the item referring to equal rights for foreign workers (M = 4.98, SD = 1.37). In contrast, the lowest means were found for PIDI3, the item referring to multicultural workers contributing to a more open and friendly social environment in the Algarve (M = 3.81, SD = 1.45), and PSOC5, the item referring to the possibility that a highly multicultural workforce may create greater social distance between some residents and the tourism sector (M = 3.81, SD = 1.49), suggesting comparatively greater heterogeneity in these perceptions. Taken together, the descriptive results indicate that the item pool performed adequately in a preliminary psychometric assessment.

Table 2. Item-Level Descriptive Statistics.

Code	M	Sd	Min	Max	Skewness	Kurtosis
PFB1	4.48	1.26	1	6	-0.44	-0.30
PFB2	4.27	1.29	1	6	-0.33	-0.47
PFB3	4.06	1.27	1	6	-0.36	-0.21
PFB4	4.06	1.29	1	6	-0.27	-0.78
PFB5	4.19	1.25	1	6	-0.32	-0.68
SCIO1	4.29	1.30	1	6	-0.60	-0.17
SCIO2	4.24	1.32	1	6	-0.48	-0.27
SCIO3	4.16	1.43	1	6	-0.40	-0.50
PSOC1	4.13	1.41	1	6	-0.34	-0.51
PSOC2	4.23	1.41	1	6	-0.62	-0.20
PSOC3	3.85	1.50	1	6	-0.39	-0.75
PSOC4	4.19	1.32	1	6	-0.55	-0.16
PSOC5	3.81	1.49	1	6	-0.21	-0.78
SAI1	4.98	1.37	1	6	-1.33	1.04
SAI2	5.07	1.24	1	6	-1.24	0.71
SAI3	4.42	1.43	1	6	-0.57	-0.53
SAI4	4.40	1.43	1	6	-0.46	-0.78
SAI5	4.72	1.25	1	6	-0.71	-0.40

PIDI1	4.01	1.46	1	6	-0.42	-0.57
PIDI2	3.90	1.56	1	6	-0.30	-0.89
PIDI3	3.81	1.45	1	6	0.01	-0.97
PIDI4	3.89	1.55	1	6	-0.33	-0.83
PIDI5	3.99	1.42	1	6	-0.38	-0.61
SMW1	4.31	1.36	1	6	-0.59	-0.16
SMW2	4.39	1.37	1	6	-0.56	-0.36
SMW3	4.44	1.36	1	6	-0.63	-0.25
SMW4	4.58	1.31	1	6	-0.65	-0.28
SMW5	4.28	1.31	1	6	-0.20	-0.82
PPCNO1	4.13	1.41	1	6	-0.66	-0.20
PPCNO2	4.07	1.44	1	6	-0.53	-0.39
PPCNO3	4.16	1.41	1	6	-0.55	-0.41
PPCNO4	4.17	1.44	1	6	-0.49	-0.53
PPCNO5	4.25	1.44	1	6	-0.70	-0.13
PPCNO6	4.14	1.39	1	6	-0.78	0.23

Preliminary Internal Consistency

The internal consistency results were favourable across all seven proposed dimensions. Cronbach’s alpha values ranged from .845 to .954, and McDonald’s omega values ranged from .851 to .954. The strongest coefficients were observed for perceived impact on destination image ($\alpha = .954$; $\omega = .954$) and support for a multicultural workforce ($\alpha = .942$; $\omega = .942$), indicating very high internal consistency in both dimensions.

Perceived functional benefits also showed strong reliability ($\alpha = .905$; $\omega = .907$), as did social acceptance and inclusion ($\alpha = .859$; $\omega = .861$), sociocultural enrichment and intercultural openness ($\alpha = .854$; $\omega = .859$), and perceived professional competence by national origin ($\alpha = .872$; $\omega = .874$). The lowest reliability coefficient was found for perceived social and operational challenges ($\alpha = .845$; $\omega = .851$), although this still represented acceptable internal consistency for the exploratory stage.

Inspection of the alpha if the item deleted results suggested only limited gains in reliability for most dimensions. The most notable case emerged in Perceived Social and Operational Challenges, where removing one item slightly improved the alpha coefficient. However, overall, this pattern supported the provisional retention of all dimensions at this stage.

Table 3. Preliminary Internal Consistency.

Dimension	K	Cronbach’s α	Mcdonald’s ω	Lowest corrected item-total correlation	Highest α if item deleted
Perceived functional benefits	5	0.905	0.907	0.625	0.912
Sociocultural enrichment and intercultural openness	3	0.854	0.859	0.657	0.857
Perceived social and operational challenges	5	0.845	0.851	0.416	0.870

Social acceptance and inclusion	5	0.859	0.861	0.659	0.835
Perceived impact on destination image	5	0.954	0.954	0.814	0.952
Support for a multicultural workforce	5	0.942	0.942	0.787	0.938
Perceived professional competence by national origin	6	0.872	0.874	0.549	0.871

Corrected Item-Total Correlations

The corrected item-total correlations were satisfactory, indicating adequate internal homogeneity within the proposed dimensions. Most items showed moderate to high correlations with their respective dimension totals, suggesting that they were broadly aligned with the intended latent constructs.

The weakest corrected item-total correlation was observed for PSOC4, the item referring to the weakening of social cohesion when cultural groups remained too separate ($r = .416$), making it the item that most clearly deserves monitoring in future studies. Although this value remained above the minimum threshold commonly considered acceptable in exploratory studies, it was noticeably lower than that of the remaining items in the same dimension. The second point of attention was PPCNO1, which referred to the influence of national origin on competence evaluation ($r = .549$). Although it was the lowest within its dimensions, it was still acceptable.

In contrast, many items showed strong corrected item-total correlations. This was particularly evident in Perceived Impact on Destination Image and Support for a Multicultural Workforce, where several items exceeded .80. Overall, the results suggest that the scale shows encouraging internal coherence, while also pointing to a small number of items that should be followed more closely in later stages of refinement.

Table 4. Corrected Item-Total Correlations by Dimension.

Dimension	Item	Corrected item-total correlation
Perceived functional benefits	PFB1	0.625
	PFB2	0.814
	PFB3	0.825
	PFB4	0.777
	PFB5	0.774
Sociocultural enrichment and intercultural openness	SCIO1	0.786
	SCIO2	0.657
	SCIO3	0.740
Perceived social and operational challenges	PSOC1	0.679
	PSOC2	0.752
	PSOC3	0.739
	PSOC4	0.416

	PSOC5	0.685
Social acceptance and inclusion	SAI1	0.659
	SAI2	0.743
	SAI3	0.662
	SAI4	0.666
	SAI5	0.664
Perceived impact on destination image	PIDI1	0.814
	PIDI2	0.887
	PIDI3	0.864
	PIDI4	0.904
	PIDI5	0.888
Support for a multicultural workforce	SMW1	0.872
	SMW2	0.875
	SMW3	0.787
	SMW4	0.862
	SMW5	0.814
Perceived professional competence by national origin	PPCNO1	0.549
	PPCNO2	0.647
	PPCNO3	0.733
	PPCNO4	0.701
	PPCNO5	0.661
	PPCNO6	0.752

Factorability of the Matrix

The item matrix was deemed suitable for exploratory factor analysis. The Kaiser-Meyer-Olkin measure of sampling adequacy produced a global value of .889, indicating good overall adequacy of the sample. Bartlett’s test of sphericity was statistically significant, $\chi^2(561) = 3276.78$, $p < .001$, confirming that the correlation matrix was not an identity matrix and that the data were appropriate for factor analysis.

The item-level MSA values were acceptable. The lowest values were found for PPCNO1, the item referring to the influence of national origin on competence evaluation (.607); PPCNO6, the item referring to the perception that foreign workers’ training and qualifications are influenced by their national origin (.636); PSOC5, the item referring to the possibility that a highly multicultural workforce may create greater social distance between some residents and the tourism sector (.647); and PSOC4, the item referring to the weakening of social cohesion when cultural groups remain too separate (.675). However, no item fell below the conventional minimum threshold of .50. Therefore, these results support proceeding with the exploratory factor analysis.

Table 5. Factorability of the Item Matrix.

Indicator	Value
Kmo global	0.889
Bartlett’s test of sphericity	$\chi^2(561) = 3276.78, p < .001$
Lowest item-level msa values	
Item	MSA

Ppcno1	0.607
Ppcno6	0.636
Psoc5	0.647
Psoc4	0.675

Exploratory Factor Analysis

An exploratory factor analysis was conducted using principal axis factoring with an oblimin rotation. The retention of factors was based on the eigenvalues, parallel analysis, and interpretability. Although six eigenvalues were above 1.00, the parallel analysis supported the retention of a four-factor solution. This solution explained 58.24% of the common variance.

The first factor combined items originally proposed under Perceived Functional Benefits, Sociocultural Enrichment and Intercultural Openness, Perceived Impact on Destination Image, and Support for a Multicultural Workforce. Rather than appearing as clearly distinct dimensions, these items were clustered into a broader evaluative factor, reflecting a generally positive view of multicultural human resources in tourism and hospitality.

The second factor corresponded to perceived social and operational challenges. All five items from this dimension loaded onto the same factor, although PSOC4, the item referring to the weakening of social cohesion when cultural groups remain too separate, showed a weaker contribution than the others. The third factor clearly represented perceived professional competence by national origin, with all six items loaded coherently. The fourth factor corresponded to social acceptance and inclusion, with the five items from this dimension forming a consistent cluster.

Overall, the exploratory solution offered only partial support for the originally proposed seven-dimensional framework. The most notable divergence concerned the positive dimensions, which appeared empirically closer to each other than initially expected. In contrast, perceived social and operational challenges, perceived professional competence by national origin, and social acceptance and inclusion emerged as more clearly differentiated factors.

Table 6. Rotated Pattern Matrix for the Exploratory Factor Analysis.

Item	F1	F2	F3	F4	H ²
PFB1	.560				.403
PFB2	.833				
PFB3	.795				
PFB4	.799				
PFB5	.841				
SCIO1	.687				
SCIO2	.767				
SCIO3	.577				
PSOC1		-.785			
PSOC2		-.763			
PSOC3		-.828			
PSOC4		-.408			.298
PSOC5		-.757			
SAI1				.700	
SAI2				.888	
SAI3				.516	
SAI4				.552	.458

SAI5			.570
PIDI1	.846		
PIDI2	.913		
PIDI3	.887		
PIDI4	.917		
PIDI5	.877		
SMW1	.716		
SMW2	.658		
SMW3	.738		
SMW4	.720		
SMW5	.645		
PPCNO1		-.552	.354
PPCNO2		-.610	
PPCNO3		-.691	
PPCNO4		-.722	
PPCNO5		-.773	
PPCNO6		-.829	

Note. Principal axis factoring with oblimin rotation. Only salient loadings ($\geq .40$ in absolute values) are displayed. F1 = broad positive evaluation of multicultural human resources; F2 = perceived social and operational challenges; F3 = perceived professional competence by national origin; F4 = social acceptance and inclusion. The h^2 values were reported for items identified as comparatively weaker in the exploratory solution.

Item Retention and Preliminary Interpretation

The results support the provisional retention of the 34-item instrument. Most items showed satisfactory descriptive behaviour, acceptable corrected item-total correlations, and meaningful factor loadings. Therefore, the findings do not justify immediate item elimination based on purely statistical grounds, especially given the preliminary sample size and exploratory purpose of the study.

However, a small number of items warrant closer attention. PSOC4, the item referring to the weakening of social cohesion when cultural groups remain too separate, was the weakest item across multiple indicators, showing the lowest corrected item-total correlation, lowest communality, and smallest loading within its factor. Therefore, it should be retained with caution and re-evaluated in future studies. Three further items deserve monitoring for more modest, though not critical, reasons: PFB1, the item referring to the role of multicultural human resources in helping tourism and hospitality respond to labour shortages; SAI4, the item referring to the idea that foreign workers do not need to abandon their cultural habits to be accepted; and PPCNO1, the item referring to the influence of national origin on competence evaluation.

Taken together, the results suggest that the instrument shows encouraging preliminary psychometric behaviour and that the proposed dimensional structure may require refinement in subsequent studies. In particular, the current evidence suggests that several positively framed dimensions may not yet be empirically distinct in smaller exploratory samples.

Discussion

This study was designed as an initial psychometric assessment of the Residents’ Perceptions of Multicultural Human Resources in Tourism and Hospitality Scale. Taken as a whole, the results offer encouraging, although preliminary, evidence regarding the usefulness of the instrument. The scale showed acceptable item variability, favourable internal consistency across all proposed dimensions,

and a correlation matrix suitable for exploratory factor analysis (EFA). In methodological terms, this provides a positive starting point because early-stage scale development is expected to show whether an item pool behaves coherently enough to justify further refinement, rather than to deliver immediate confirmatory closure (Boateng et al., 2018; Hinkin, 1995; Lim, 2026; Worthington & Whittaker, 2006).

The first point worth emphasising is that the descriptive behaviour of the items was generally satisfactory. All items used the full response range, the standard deviations remained adequate, and no serious floor effects emerged. However, there were signs of a moderate ceiling tendency in a small number of inclusion-oriented items, particularly SAI1, the item referring to equal rights for foreign workers, and SAI2, the item referring to equal freedoms and opportunities across cultural backgrounds. This pattern is not particularly surprising. Items framed around equality and inclusion often attract stronger agreement because they reflect socially desirable positions, which may reduce variability without necessarily weakening their substantive relevance. At this stage, the more appropriate interpretation is that these items remain conceptually important but should continue to be monitored in later samples, especially if future confirmatory analyses suggest a weaker discriminative value.

The second encouraging result concerns internal consistency. All seven proposed dimensions reached acceptable to very strong reliability levels, and McDonald's omega closely followed Cronbach's alpha across dimensions. This suggests that the initial grouping of items was not random. In particular, perceived impact on destination image, support for a multicultural workforce, and perceived functional benefits showed especially strong internal coherence. Preliminary evidence suggests that respondents react to these domains in relatively structured ways, even if the broader factorial solution indicates that some of them may still overlap empirically. This distinction is important. Strong internal consistency indicates that items within a provisional dimension move together; however, it does not, by itself, demonstrate that dimensions are empirically distinct from one another.

The most important substantive result emerged from the exploratory factor analysis. Rather than reproducing the initially proposed seven-dimensional framework, the analysis yielded a more condensed four-factor solution. Most notably, items originally designed to reflect perceived functional benefits, sociocultural enrichment and intercultural openness, perceived impact on destination image, and support for a multicultural workforce clustered together in a broader positive factor. Initial findings indicate that, in this preliminary sample, respondents did not strongly separate these favourable evaluations into clearly bounded domains. Instead, they appeared to be closely related expressions of a wider positive appraisal of multicultural human resources in tourism and hospitality.

This result is consistent with prior literature. Hofhuis et al. (2015), in developing the Benefits and Threats of Diversity Scale, showed that perceptions of cultural diversity in work settings tend to involve broad positive and negative appraisals rather than highly fragmented dimensions of diversity. More recent work in hospitality and tourism has also pointed to the growing interdependence between diversity, inclusion, organisational positioning, and stakeholder-oriented interpretations of value (Im et al., 2023; Liu et al., 2025; Madera et al., 2023). In the destination context, it is plausible that residents who perceive multicultural human resources as useful for staffing, service quality, and future preparedness may also see them as socially enriching, supportive of destination image, and worthy of future endorsement. From this perspective, the convergence of these positive dimensions may reflect substantive overlap rather than simple measurement failure.

This pattern resonates with more recent destination research. Studies on resident-centred destination evaluations have continued to show that image, satisfaction, support, and behavioural predispositions are closely connected, even when they are conceptually distinguished (Qin et al., 2025; Šerić et al., 2024; Sustacha, 2026; Uslu et al., 2023). Although these studies do not focus specifically on multicultural workforces, they explain why the positive evaluations in the present study may have moved together. If residents interpret multicultural human resources as part of how

the destination functions, presents itself, and evolves socially, then functional benefits, destination image, and support may be less distinct at the attitudinal level than they appear to be conceptually. Early psychometric patterns therefore point to the possibility that these domains may require sharper item boundaries if the intention is to preserve them as separate factors in later validation stages.

In contrast, three parts of the instrument appeared more clearly differentiated: perceived social and operational challenges, perceived professional competence by national origin, and social acceptance and inclusion. This is a significant finding. This suggests that respondents may distinguish more clearly between broad positive evaluations of multicultural labour and domains that activate perceived tension, threat, competence stereotyping, or explicit normative inclusion. The relative autonomy of the challenge factor is especially consistent with Hofhuis et al.'s (2015) distinction between benefits and threats in perceptions of workplace diversity. In other words, positive appraisals and perceived difficulties are not simply opposite ends of the same attitude; they may also operate as partially independent evaluative frames.

The Perceived Professional Competence by National Origin factor is theoretically coherent. Within the stereotype content model, competence is treated as one of the central dimensions through which social groups are judged (Fiske et al., 2002). In the present study, the six items in this domain clustered together with relative clarity, suggesting that respondents treated competence-based national differentiation as a recognisable and distinct form of perception rather than as a minor extension of general approval or disapproval. This matters because it indicates that attitudes toward multicultural human resources may include not only broad support or resistance, but also more specific judgements linked to perceived professional capability by origin.

The relative autonomy of social acceptance and inclusion also deserves attention. Although this dimension was positively framed, it did not fully merge with the broader positive evaluative factor. This may reflect the fact that inclusion-related items are normatively charged in a somewhat different way. A resident may believe that multicultural workers should have equal rights, equal opportunities, and the possibility of maintaining cultural practices, while being less convinced about broader operational or destination-level benefits. In this sense, inclusion may function less as a utilitarian judgment and more as a principled stance. This distinction is conceptually plausible and may prove theoretically useful if it remains stable in later analyses. Recent work on multicultural ideology and diversity and inclusion in hospitality also supports the view that the endorsement of inclusion can operate as a distinct attitudinal orientation rather than merely as a by-product of other favourable perceptions (Lefringhausen et al., 2024; Madera et al., 2023).

At the item level, one case requires more careful consideration than the others. PSOC4, the item referring to the weakening of social cohesion when cultural groups remain too separate, consistently emerged as the weakest indicator across several diagnostics. Its corrected item-total correlation was the lowest in the scale, its communality was comparatively modest, and its contribution to the factor was less robust than that of the remaining challenge items. Nevertheless, the findings do not justify immediate deletion. In early psychometric work, removing items too quickly based on one exploratory sample can lead to premature narrowing of the construct domain. A more defensible interpretation is that PSOC4 captures a relevant but somewhat more diffuse concern than items referring to communication problems, operational difficulty, or social discomfort. Social cohesion is a broader and more abstract concept, and respondents may interpret it less uniformly. For now, the item should be retained with caution and re-evaluated in a larger sample.

More broadly, the present findings reinforce the importance of treating this manuscript strictly as an initial psychometric assessment. The scale appears promising in several respects. The item pool behaved adequately, reliability was consistently favourable, the matrix was factorable, and the exploratory structure was meaningful rather than chaotic. At the same time, the current evidence does not support any claim that the original seven-dimensional framework has already been confirmed. Instead, preliminary evidence suggests that some theoretically distinct positive domains are still empirically overlapping, at least in this exploratory sample. This is precisely the kind of result

that exploratory psychometric work is meant to identify before confirmatory procedures are undertaken.

From a substantive perspective, the study also offers an initial contribution to tourism and hospitality research. Much of the existing literature has examined residents' support for tourism development in broad terms; in contrast, the present study directs attention to a more specific and increasingly relevant object of evaluation: multicultural human resources. The results suggest that residents do not respond to this reality in one undifferentiated way. Instead, they appear to combine broad positive appraisals with more distinct judgments about challenges, inclusion, and competence based on national origin. Even at this preliminary stage, this distinction adds nuance to how workforce multiculturalism may be understood at the destination level.

Overall, the most defensible conclusion is that the scale provides a credible basis for continued development but not yet for final confirmatory claims. A larger and more diverse sample is still needed to examine whether the positive dimensions can be empirically separated more clearly, whether weaker items remain problematic, and whether the broader framework can be supported under more demanding conditions. For now, the results should be interpreted with caution. Nevertheless, the initial findings indicate that the instrument is sufficiently coherent to justify further refinement and continued validation work.

Limitations

The present findings should be interpreted in light of several limitations. First, the analytical sample remains relatively small for a study concerned with the development of a multidimensional instrument. Although the sample was adequate for an initial exploratory psychometric assessment, it is insufficient to support stronger confirmatory claims regarding the final structure of the scale. The methodological literature has long emphasised that exploratory evidence can be useful at early stages; however, more robust validation requires larger samples and subsequent confirmatory testing (Fabrigar et al., 1999; Hinkin, 1995; Worthington & Whittaker, 2006).

Second, the data collection process is still ongoing. This means that the present manuscript is based on an interim empirical base rather than a final dataset. For this reason, the current results should be read as preliminary evidence rather than definitive psychometric proof. The value of this stage lies in identifying promising patterns, weaker areas, and possible directions for refinement, not in establishing the final measurement model.

Third, the sample shows a degree of sociodemographic concentration that should be acknowledged. Most respondents were Portuguese, strongly connected to the Algarve, and somewhat concentrated in younger and relatively educated profiles. This concentration does not invalidate the present analyses; however, it indicates that the observed attitudinal structure may partly reflect the characteristics of this particular respondent profile. Different patterns may emerge in broader, older, less educated, or more nationally diverse samples.

Fourth, the present study does not provide a robust confirmatory validation of the instrument. Confirmatory factor analysis, structural equation modelling, measurement invariance, and stronger evidence of convergent and discriminant validity were deliberately left outside the scope of this manuscript. This was a methodological decision rather than an omission. Given the current sample size and the exploratory purpose of the study, attempting to treat those procedures as final validation steps would risk overstating what the data can reasonably support (Boateng et al., 2018; Worthington & Whittaker, 2006).

Finally, caution is required in any attempt to generalise the present findings beyond the current context. The scale was examined here within a specific regional setting and through a preliminary sample. Therefore, the results should not be interpreted as evidence that the same dimensional structure would necessarily hold in other tourism destinations, cultural environments, or population groups. At this stage, the most defensible position is that the study provides transparent early evidence of psychometric promise, while leaving broader generalisation to future research with larger and more diverse samples.

Next Steps

The present preprint should be understood as one step within a broader scale development process rather than as the endpoint of validation. Therefore, the next stage of the research will focus on expanding the sample. A larger and more heterogeneous dataset will be essential not only to improve statistical stability but also to reduce the concentration observed in terms of region, nationality, age profile, and educational background. This expansion is especially important if the instrument is to be examined beyond the specific profile captured in the present preliminary sample.

Once a larger sample has been obtained, the psychometric analyses will need to be repeated. This will allow the descriptive behaviour of the items, the internal consistency of the proposed dimensions, and the exploratory structure of the instrument to be re-examined under more robust empirical conditions. Repeating these steps is important because early exploratory patterns can change as the sample size increases and respondent diversity improves. For this reason, the current findings should be treated as informative but not yet stable.

A subsequent stage should involve a confirmatory factor analysis. This will enable us to test whether the dimensional structure suggested by the present results can be supported in a more rigorous way and whether the proposed model shows acceptable fit under confirmatory conditions. In particular, confirmatory testing will be important for clarifying whether the positively framed domains can be empirically distinguished or whether they are better understood as a more integrated attitudinal factor. This is a central issue emerging from the current study and one that cannot be adequately resolved through exploratory analysis alone (Fabrigar et al., 1999; Worthington & Whittaker, 2006).

In addition to CFA, a later phase may incorporate structural equation modelling. This step would allow the instrument to be used not only as a measurement tool but also as part of a broader explanatory framework linking residents' perceptions of multicultural human resources to related outcomes, such as support, resistance, image-related interpretations, or other tourism and hospitality attitudes. However, this stage should only be undertaken once the measurement structure has been more firmly established. In other words, SEM belongs to the later validation and application phase, not to the present preliminary stage (Hinkin, 1995; Worthington & Whittaker, 2006).

Item refinement may also become necessary. The current results do not justify immediate item deletion; however, they do indicate that some indicators should be monitored more closely in future samples. In particular, PSOC4, the item referring to the weakening of social cohesion when cultural groups remain too separate, should be re-examined carefully, given its comparatively weaker performance across several diagnostics. Likewise, PFB1, the item referring to the role of multicultural human resources in responding to labour shortages, SAI4, the item referring to the idea that foreign workers do not need to abandon their cultural habits in order to be accepted, and PPCNO1, the item referring to the influence of national origin on competence evaluation, may warrant closer inspection in subsequent analyses. Future refinement may therefore involve retaining these items unchanged, rewording them for greater clarity, or reconsidering their role depending on how they behave in larger confirmatory samples.

In summary, these next steps demonstrate that the present manuscript is part of a cumulative validation process. The current evidence is useful because it identifies both promising elements and unstable areas, thereby clarifying where further work is most needed. The study will continue through sample expansion, renewed psychometric testing, confirmatory modelling, and, if necessary, targeted item refinement. Only after these stages have been completed will it be possible to make stronger claims about the final structure and validity of the instrument.

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