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Refugee Characteristics and Public Attitudes: Evidence from an Image-Based Vignette Experiment

Nevena Kulic¹, Eleonora Clerici¹, Debora Mantovani²,
Loris Vergolini²

¹ University of Pavia

² University of Bologna

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Abstract

Drawing on Intergroup Threat Theory, this study examines how attitudes towards asylum seekers and refugees vary by gender, age, social class as realistic threat, and religion, ethnicity, and arrival context as symbolic threat. It involves a pre-registered factorial survey experiment (N=2,000; 2024–2025) implemented in Italy, relying on hypothetical image-based scenarios generated with Midjourney, where asylum seekers and refugees are depicted with randomized characteristics. Findings show that vignettes depicting women or mixed-gender groups increase support for asylum, whereas female refugees alone are associated with higher support for integration policies. The presence of children strongly increases support for asylum requests and integration policies, particularly regarding financial benefits. Individuals from lower social classes also attract greater support for both asylum and integration policies, especially for language courses. Religion, ethnicity, and arrival context show no significant effects. The article concludes that perceived realistic threat is more influential than symbolic threat in shaping attitudes toward asylum and integration policies.

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1. INTRODUCTION

Between 2014 and 2016, Italy experienced an unprecedented influx of asylum seekers and refugees as a direct consequence of the geo-political shifts following the “Arab Spring” and the Syrian conflict (Nascimbene and Di Pascale, 2011; Florio, 2021; Holloway et al., 2021). Since then, Italy has remained a key destination due to its central location in the Mediterranean Sea (UNHCR, 2025). In this period, almost 500,000 migrants arrived on the Italian shores, mainly men from Nigeria, Gambia and Senegal, and others entered the country from the Balkan route,

¹ The corresponding author.

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especially Pakistanis (Colucci, 2018; Petrovic, 2020). Most of these migrants are religiously and culturally distinct newcomers, which is a factor that may amplify and intensify societal anxieties, especially given the nation's symbolic position as the heart of Catholicism (Nese, 2022). Also, the media coverage amplified these tensions by framing immigration as a “massive invasion” and a “threat,” particularly targeting asylum seekers and refugees. These groups are frequently depicted using images of overcrowded boats, reinforcing perceptions of crisis and uncertainty. Such portrayals contribute to a climate of fear and confusion among the public (Esses et al., 2013), further exacerbating negative stereotypes. Mistrust, lack of confidence and negative feelings are reinforced by the widespread belief that many asylum seekers and refugees are “bogus” rather than “genuine” claimants, which undermines their legitimacy and public support (Neumayer, 2005; Esses et al., 2017).

Within this context, the study investigates the extent to which Italian citizens endorse policies aimed at accepting refugees and promoting their integration. Furthermore, it examines how these attitudes are shaped by specific attributes of asylum seekers and refugees, covering gender, age, social class, religion, ethnicity, and arrival context. Understanding the views of citizens is a first step towards anti-discriminatory and inclusive policies and gives an insight into potential biases surrounding (forced) immigration (Esses et al., 2017). These perceptions and levels of acceptance are analyzed through the Intergroup Threat Theory (Blalock, 1967; Stephan et al., 2016), which focuses on perceived threats and distinguishes between realistic threats (e.g., competition for jobs, housing, resources) and symbolic threats (e.g., threats to national identity, language, and culture). To explore this topic, an image-based vignette experiment on 2,000 Italian respondents was designed and embedded within a nationally representative quota survey, using visuals generated by the Artificial Intelligence tool *Midjourney*.

The contribution of this study is manifold, encompassing both methodological and substantive aspects. First, the adoption of image-based scenarios within a survey-experimental design represents a relatively recent innovation, and this is among the first studies to apply this approach in immigration research. Images constitute a valuable tool, as they provide a more realistic depiction of real-life situations (Eifler and Perzold, 2022) and help reduce social desirability bias by activating more automatic responses (Ross et al., 2021). Moreover, the use of survey experiments remains relatively rare in the Italian context (e.g., Matera et al., 2020; Barisione, 2020).

Second, this study focuses specifically on attitudes towards asylum seekers and refugees, who remain underexplored compared to the broader literature on immigrants (von Hermann and Neumann, 2019). Distinguishing asylum seekers and refugees from economic migrants is

crucial, given their status as forced migrants under the 1951 Geneva Refugee Convention (UNHCR, 2019). Forced migrants tend to elicit more empathetic attitudes, supporting humanitarian assistance and cultural rights (Augoustinos and Quinn, 2003; Verkuyten et al., 2018), yet they remain vulnerable to suspicion and securitized media portrayals, particularly when racialized or identified as Muslims (De Coninck, 2020; Abdelaaty and Steele, 2020). Their often lower socio-economic status, as well as perceived cultural and religious differences, can exacerbate fears of incompatibility and security threats (Kustov, 2019; Helbling and Traunmüller, 2020). At the same time, existing research shows that certain characteristics – such as being a woman or being accompanied by children – can elicit more positive responses (von Hermanni and Neumann, 2019; Ecker et al., 2020). Third, asylum seekers and refugees raise important challenges regarding public support for policies aimed at facilitating their integration into host societies, which often depends on perceptions of their vulnerability (Czymara, 2021; Mavisakalyan and Sevoyan, 2021). For this reason, it is essential to account for perceived vulnerability when assessing how refugees’ characteristics shape attitudes towards them. By design, this experiment distinguishes between vulnerability and threat in evaluating the impact of refugees’ characteristics on public attitudes.

The article is organized into six sections. The first one reviews previous studies on how migrants’ socio-demographic and cultural characteristics shape public attitudes and perceptions. The second one outlines the theoretical framework that informs the experimental design and hypotheses. The third and fourth sections describe the methodology, including the data and analytical strategies employed. The fifth paragraph presents the experimental results. Finally, the sixth section discusses the findings and conclusions.

2. THE ROLE OF MIGRANTS’ SOCIO-DEMOGRAPHIC AND CULTURAL FEATURES FOR PUBLIC ATTITUDES

Previous literature on public attitudes towards immigrants spotlights the role of migrants’ socio-demographic and cultural features – such as socio-economic status, gender, age, ethnicity and religion – in influencing evaluations and perceptions of individuals. For instance, the socio-economic profile of many asylum seekers and refugees, who frequently hail from economically disadvantaged and politically unstable regions, has been shown to reinforce negative perceptions and exclusionary attitudes among host populations (Kustov, 2019). Moreover, a significant proportion of these forced migrants come from non-EU and predominantly Muslim countries. This intersection of cultural and religious alterity is often perceived as incongruent with Western values and societal norms, thereby amplifying public fears related to cultural incompatibility, religious extremism, and threats to national security (Helbling and Traunmüller, 2020). Similarly,

research stresses that ethnic differences often trigger negative evaluations (Savelkoul et al. 2011; Spruyt and Elchardus 2012; Statham, 2016). Empirical evidence also suggests that female migrants and those with children are more likely to be viewed favorably by natives (von Hermanni and Neumann, 2019; Ecker et al., 2020).

From a methodological perspective, a key challenge in exploring natives' attitudes towards different groups of immigrants is the issue of social desirability bias. Most cross-national and country-based surveys (e.g., Eurobarometer, ESS, ISSP; Finizio et al., 2023) assess natives' levels of acceptance, opinions, and perceptions of migrants through direct questioning, which prompts respondents' tendency to provide socially acceptable answers. To reduce the challenges posed by social desirability bias and better comprehend the influence of respondents' and migrants' characteristics in shaping attitudes towards migrants, researchers have increasingly adopted survey-experimental methods (Mutz, 2011; Auspurg and Hinz, 2015) in recent decades, especially in the U.S. and Europe.

A significant body of research focuses on public support and immigration policy preferences. Aalberg and colleagues (2012) apply vignette experiments and find that Norwegians are more likely to admit individual immigrants with strong economic credentials. In contrast, cultural distinctiveness plays a minor role in shaping opinions at the individual level. Other experimental studies have examined how migrants' economic and labor-related characteristics shape attitudes towards them. In Switzerland, Helbling and Kriesi (2014) examine attitudes towards different groups of migrants using an online experimental survey and reveal that preferences for high-skilled immigrants are driven by a combination of cultural, economic, welfare-related, and work ethic considerations. Similarly, in the U.S., Hainmueller and Hiscox (2010) use a survey experiment to explore attitudes toward high- and low-skilled immigrants, finding a consistent preference for high-skilled immigrants across all skill levels of native respondents. Turper et al. (2015) observe that immigrants with strong economic credentials are generally more welcomed in both the U.S. and the Netherlands.

In contrast, cultural attributes, such as skin tone or country of origin, play a minimal role in shaping perceptions, particularly when evaluating immigrants for citizenship. Similar findings emerge from the vignette-based experiment carried out by Iyengar and colleagues (2013) in their multinational study involving Australia, Canada, Japan, South Korea, Norway, the U.K., and the U.S. Across contexts, natives consistently support more professional immigrants than unskilled immigrants and those accompanied by families. Notably, economic and family-related characteristics play a more significant role in shaping attitudes than cultural attributes, such as Middle Eastern nationality or Afrocentric appearance.

As far as the cultural dimension is concerned, a growing number of experimental studies investigate the role of migrants' religion. In Sweden, Olsson et al. (2019) use a factorial design experiment to examine how immigrants' religion and perceived acculturation strategies affect majority attitudes, finding that immigrants perceived as favoring contact with the host society attract more favorable intergroup attitudes. In the U.S., Williamson (2020) tests whether prejudices can be mitigated by highlighting similarities between Muslim Americans and other Americans in terms of hobbies, identities, and attitudes toward violence. The intervention leads to modest improvements, especially among individuals predisposed to prejudice. Conversely, a set of survey experiments carried out in Norway, Sweden, the U.S. and the U.K. reveal that attitudes towards Muslim immigrants are not more negative than those towards immigrants in general (Strabac et al., 2013). Additionally, a survey experiment in Turkey by Lazarev and Sharma (2017) investigates the effects of religious priming on Turkish citizens' attitudes and behavior towards Syrian refugees, showing that religious cues emphasizing common Muslim religion between two groups significantly increase both charitable donations and attitudinal support.

Other studies differentiate among various categories of migrants, such as asylum seekers and refugees, who may be perceived more positively. For instance, by employing a factorial survey design with vignette-based methodology, von Hermanni and Neumann (2019) find that the "cause of flight" (e.g., political persecution or war) is a decisive factor in shaping respondents' evaluations of asylum applications, followed by respondents' general economic, fiscal, and crime concerns as predictors of anti-asylum sentiments. Additionally, the authors illustrate that the likelihood of granting refugee status is significantly higher when asylum seekers are presented alongside children rather than as sole adults. Heterogeneity within the same immigrant group has also been pointed out by Ecker and colleagues' experiment (2020), which stresses that vignettes portraying women tend to receive greater approval, and women are more positively evaluated than men.

Concerning the relevance of immigrants' socio-demographic traits, Shao et al. (2023) focus on gender and ethnic dimensions. Resorting to an innovative vignette-based experiment with images, they show that, if immigrants are male or black, Chinese respondents are less likely to endorse liberal immigration policies, showing a preference for female or non-black immigrants. Mediation analyses further reveal that this bias was driven primarily by concerns about public safety and cultural threats, rather than economic considerations.

In Italy, the use of experimental techniques to investigate attitudes towards immigration remains very limited. Matera et al. (2020) conducted a factorial experiment to examine how immigrants'

religion and perceived acculturation strategies affect Italians' attitudes. Findings indicate that Muslim immigrants who are perceived as abandoning their heritage culture receive more favorable responses than those who retain it.

3. INTERGROUP THREAT THEORY

Intergroup Threat Theory is a common theoretical framework suitable for exploring natives' attitudes towards migrants (Stephan et al., 1999). It argues that attitudes towards migrants are shaped more by perceived threats linked to their characteristics than by actual threats; in other words, perceived threats can have real consequences even when they are not accurate (Stephan et al., 2009). This theoretical framework originally identifies four types of threat that shape negative attitudes (Stephan and Stephan, 2000): (i) realistic threats, which involve competition for scarce resources and directly affect natives' well-being; (ii) symbolic threats, which refer to differences in morals, values, norms, and beliefs; (iii) intergroup anxiety, defined as the anticipation of negative outcomes in interactions with out-group members (Stephan and Stephan, 1985); and (iv) negative stereotypes, which attribute undesirable traits to out-group members and help justify discrimination (Eagly and Mladinic, 1989; Esses et al., 1993). A revised version of the theory (Stephan and Renfro, 2002; Stephan et al., 2016; von Hermanni and Neumann, 2019) instead distinguishes between two types of threats (realistic vs. symbolic), which are further specified into two levels (individual vs. group). Realistic threats at the individual level refer to potential harm, like personal physical danger, economic loss, resource deprivation, material wealth, and security. Realistic threats at the group level encompass broader societal concerns regarding welfare, fiscal burden, and power relations. Symbolic threats at the individual level entail challenges that may undermine natives' sense of self-identity or self-esteem and comprise psychological factors such as fear and anxiety. Finally, symbolic threats at the group level refer to the perception of conflicts emerging from oppositional social values, belief systems, traditions and ideologies.

Accordingly, this study applies this framework to analyze how attitudes towards asylum seekers and refugees in Italy vary according to their individual characteristics. More specifically, it examines the extent to which Italian citizens support policies aimed at granting refugee status and promoting integration, and how these evaluations are shaped by the perceived threats associated with specific migrant attributes.

However, attitudes are also driven by humanitarian concerns, particularly perceptions of migrants' vulnerability alongside perceived threat (Hillenbrand et al. 2025). It is therefore important for research designs to distinguish between these two mechanisms. In this study,

Intergroup Threat Theory is applied by explicitly separating perceived vulnerability from threat-related considerations.

3.1 Representation of realistic and symbolic threats

Perceptions of realistic and symbolic threats are often correlated and may coexist (Rios et al., 2018), as many migrant attributes evoke both material and cultural concerns simultaneously. In this research, six features related to realistic and symbolic threats are considered: gender, age, social class, religion, ethnicity, and arrival context. Realistic threats are operationalized through asylum seekers' and refugees' gender and age as well as social class (von Hermanni and Neumann, 2019). According to the theory, men are often perceived as potential sources of physical, criminal, or economic danger, and are therefore more threatening (Rudman and Goodwin, 2004). Hence, male immigrants may be viewed as labor-market competitors (individual-level threat) and a burden for the welfare system (group-level threat), whereas women are generally perceived as less threatening (Adida et al. 2018; von Hermanni and Neuman, 2019).

In contrast, children are typically considered more vulnerable (Joint Data Center on Forced Displacement, 2022) and perceived as needing humanitarian assistance rather than posing competition. For this reason, children tend to elicit more favorable attitudes, as recent empirical studies find that child asylum seekers are more likely to receive approval (von Hermanni and Neuman, 2019; Ecker et al. 2020).

Finally, according to the theory, lower-class immigrants are perceived as being more realistic threats, as lower socio-economic status may heighten perceptions of insecurity (individual-level threat) and welfare dependence (group-level threat) (Helbling and Traunmüller, 2020; Kustov, 2019; Joint Data Center on Forced Displacement, 2022). Indeed, as previously discussed, experimental studies consistently show that natives prefer immigrants with strong economic credentials to their low-skilled counterparts across contexts (Hainmueller and Hiscox, 2010; Helbling and Kriesi, 2014; Turper et al., 2015).

Symbolic threats are analyzed through asylum seekers' and refugees' religion and ethnicity, and the context surrounding the immigrants. Muslim individuals are often conceived as more symbolically threatening than other religious groups, as they may be seen as challenging the cultural identity, values, and traditions of non-Muslims and Western Europeans at the individual and group levels (Spruyt and Elchardus, 2012; Strabac et al., 2013; McLaren and Johnson, 2007; Van der Noll et al., 2018). Such negative reactions emerge not only among highly religious majority members (in the Italian context, Catholics) but also among individuals who endorse

secular or laic ideologies (Saroglou et al., 2009; Van der Noll, 2014). Also, due to the growing anti-Muslim prejudice, the Muslim religion could trigger feelings of anxiety and fear (Strabac and Listhaug, 2008; Savelkoul et al., 2011; Spruyt and Elchardus, 2012; Statham, 2016; Abdelaaty and Steele, 2020; Bansak et al., 2016), resulting in Christians receiving greater support than Muslims (Bansak et al., 2016).

Similarly, ethnic differences frequently lead to negative sentiments (Savelkoul et al., 2011; Spruyt and Elchardus, 2012; Statham, 2016; Dražanová, Ruhs, 2024). Hence, in the Italian context, non-White individuals might be perceived as more symbolically threatening to natives' identity or may trigger feelings of anxiety and danger (group-level threat). Indeed, they may be seen as symbolic threats to Italian traditions, ideology, and collective identity. These perceptions are often reinforced by media and sports portrayals (Mauro, 2024; Kyeremeh, 2019).

Finally, the contextual setting in which asylum seekers and refugees are depicted can influence threat perception. Within the framework, perceptions of symbolic threat arise when members of a host population view out-groups as endangering their cultural values and identity. As resettlement typically entails severe disruption and uncertainty (Kirmayer et al., 2011), asylum seekers and refugees depicted as residing in reception centers or camps are more likely to be perceived as symbolically threatening since they may appear as a more permanent and proximate presence, potentially evoking fear and anxiety (group-level threat). By contrast, when asylum seekers are portrayed as being in transit, they may elicit less perceived threat and greater compassion, as they appear more vulnerable and distant. Empirical evidence supports this distinction, highlighting how the spatial context in which immigrant populations are distributed within a country significantly influences host-community attitudes (Banulescu-Bogdan, 2022).

3.2 Attitudes towards asylum seekers and refugees

Citizens' attitudes towards asylum seekers and refugees are linked to their willingness to endorse concrete policy measures, and public opinion can be seen as a key intermediary between refugee characteristics, policy design, and actual integration. In fact, previous research has documented that attitudes towards asylum seekers and refugees are shaped by concerns about their long-term inclusion (Ferris, 2020) and that these attitudes are crucial for refugees' well-being and for the successful implementation of integration policies (Alakoc et al., 2023).

First, this study examines citizens' inclination to accept asylum requests. Acceptance of asylum reflects public support for granting legal protection and long-term residence rights to forced migrants and constitutes a distinct but closely related outcome to integration policies. The asylum acceptance can be interpreted as the most direct indicator of support for refugee integration

(Czymara, 2021). Previous research highlights that attitudes towards asylum seekers are shaped not only by humanitarian considerations but also by evaluations of refugees' integration potential and perceived future contribution to society (Bansak et al., 2016). Examining asylum acceptance, alongside support for integration policies, allows for a more comprehensive understanding of public attitudes towards forced migrants.

In the migration literature, two important dimensions of integration are usually identified as structural and cultural (Portes and Rumbaut, 2001). The structural dimension is associated with labor market integration and the avoidance of poverty risks, whereas the cultural dimension refers to the acquisition of the norms and values of the host society. In the present study, we consider as a second set of outcomes: access to financial assistance, housing support and Italian language courses. These outcomes are mainly related to the structural dimension of integration since financial and housing support are intended to limit the poverty risks of asylum seekers and refugees. More precisely, financial assistance and housing support reduce economic insecurity, allowing refugees to invest in human and social capital, thereby fostering labor market integration and facilitating broader social participation (Frattini, 2017; Hynie, 2018; Ferris, 2020). Language courses may be related to both dimensions. In fact, language acquisition can be intended in terms of human capital as a fundamental skill for labor market access and long-term employment prospects (Ferris, 2020). At the same time, language skills are related to cultural integration, enabling social interactions and reducing social and symbolic distance between refugees and host societies (Ager and Strang, 2008).

For these reasons, the present study focuses on citizens' support for these three integration-related government interventions. These measures correspond closely to what the integration literature identifies as facilitators of integration, namely resources that enable immigrants to move towards autonomy and participation (Ager and Strang, 2008; Hynie, 2018). Moreover, they represent policy instruments that are highly visible and debated in the public discourse, making them particularly suitable for assessing attitudes towards asylum seekers and refugees. Financial assistance and housing support directly involve the allocation of public resources and are therefore particularly sensitive to citizens' perceptions of fairness and redistribution. Language courses are often presented as a key mechanism for cultural integration and thus occupy an important position in political and public discourse on integration. Empirical evidence shows that support for these measures varies considerably across countries and over time, reflecting broader societal debates about migration and welfare (Solano and De Coninck, 2023).

Given that public support for these measures is often subjectively assessed by host populations, understanding the factors that shape willingness to provide such support is of high importance

(Xuereb, 2023). However, despite the urgency of this issue, Xuereb (2023) underscores that research addressing public support for asylum seekers and refugees remains relatively limited.

3.3 Hypotheses

Drawing from the above theoretical framework, representation of realistic and symbolic threats, and the four types of attitudes, the study develops the following pre-registered hypotheses about the relation between the characteristics of asylum seekers and refugees and Italians' attitudes towards them. We hypothesize that:

H1. Citizens are more likely to support integration measures of groups that represent lower realistic threats – such as women, children – and lower symbolic threats – such as high-social class, whites and non-Muslims.

As the types of integration measures vary in focus, they reflect distinct aspects of economic and social integration. In this regard, Neureiter (2022) suggests that language acquisition is broadly perceived as a more acceptable form of integration. While H1 predicts that respondents will be more supportive of integration measures targeting groups perceived as lower threats such as women and children, we expect language courses to represent a partial exception to this pattern. This is because language acquisition is specifically tied to economic integration and labour market participation, domains in which men are disproportionately represented. In the Italian context, migrant women have significantly worse employment rates than men (Direzione Generale dell'Immigrazione e delle Politiche di Integrazione, 2023), and male migrants are more likely to enter employment soon after arrival compared to women (Impicciatore and Molinari, 2025). Since language proficiency is widely viewed as a prerequisite for workforce participation, the association between male migrants and economic participation may override threat-based reasoning in this specific policy domain.

H1a. Yet, citizens will be more likely to support organizing Italian language courses for images featuring only men as their association with the labor market may prevail over perceived threat.

H2. Citizens are more likely to support asylum requests for groups that represent lower realistic threats – such as children and women – and lower symbolic threat – such as high-social class, whites and non-Muslims.

H3: Citizens are more likely to accept asylum requests for those who represent lower symbolic threat – when individuals are in the process of migrating than when individuals are in the hotspot/refugee camps and already in the destination.

3.4 Experimental design

The hypotheses are tested via a factorial survey experiment involving AI-generated images³ depicting randomized hypothetical migration scenarios involving asylum seekers and refugees⁴.

The choice of images is informed by previous literature suggesting that using visual stimuli, such as video clips, photos, or images, allows for a more natural and realistic representation of the situations under study (Eifler and Perzold, 2022; Eifler, 2007; Goyal et al., 2017). Images simultaneously provide all the relevant information in a more enriched and realistic manner, thereby activating both visual and verbal mental representations and inducing emotional arousal. Moreover, the impersonality of the scenarios proposed makes respondents feel more comfortable discussing sensitive issues (Ross et al., 2021) and helps reduce the social desirability bias (Cerdán-Torregrosa et al., 2023). Indeed, this experimental design enables the detection of respondents' implicit attitudes towards asylum seekers and refugees without directly disclosing the study's purposes or the manipulated dimensions (Shao et al., 2023).

Moreover, in this study, AI-generated images are preferred to real photographs for three main reasons: (i) harmonizing the depicted situations (weather conditions and individual characteristics); (ii) ensuring the dimensions of interest are included in the images (e.g. gender, age, skin color, clothes); and (iii) complying with legal requirement (fictional rather than real images are used to avoid privacy and copyright issues). However, while AI-generated images enhance control, they may not fully recreate the same emotional impact as real photographs, although emerging evidence suggests that they can still evoke robust affective responses (Gilbert et al., 2025).

While the vignette images underwent an initial peer review prior to the survey implementation, a post-test validation was conducted among 94 university students (288 vignette observations) from two large Italian universities to assess whether respondents correctly recognized the intended dimensions. The validation was successful, confirming that the dimensions were correctly recognized and therefore appropriate for experimental manipulation (see Appendix, Tables 18-20 for details).

³ These images represent the vignettes the respondents were asked to assess. In this article, the terms image and vignette are used interchangeably.

⁴ The images were created using the paid version of the AI tool Midjourney (link: <https://www.midjourney.com/home>). Each vignette's specifications were described in the input prompts provided to Midjourney. To ensure visual consistency and harmonization across scenarios, fixed parameters were requested. For instance, all images were depicted in spring or summer settings to avoid introducing seasonal cues that might imply additional vulnerability.

The vignette experiment follows a full factorial structure incorporating and combining theoretically relevant factors explained above (gender, age, social class, religion, ethnicity, and contextual setting), which results in 144 potential images. This number is a product of categories for each of the 6 factors: $3 \times 2 \times 2 \times 3 \times 2 \times 2$ (Table 1).

TABLE 1. VIGNETTE’S DIMENSIONS AND ATTRIBUTES BASED ON THE THEORETICAL FRAMEWORK

<i>(Perceived) Realistic Threats</i>	Gender composition	Only men
		Only women
		Women and men
	Age composition	Only adults
		Adults and children
	Social class	High class (Well-dressed)
Low class (Poorly dressed)		
<i>(Perceived) Symbolic Threats</i>	Religion	Non-Muslims
		Muslims
	Ethnicity	Black
		White
		Asian
	Contextual setting	In transit
		Camps

More precisely, the factors are operationalized as follows.

Gender refers to the composition of the group in terms of gender and distinguishes between men; women; men and women together as a group.

Age refers to the composition of the group and differentiates between only adults; adults with children.

Religion refers to Muslims vs. non-Muslims. In the vignettes, religious identity is signaled through symbolic markers, such as clothing or religious symbols. Non-Muslims are typically not marked by specific attire or visible religious symbols, whereas Muslims are often identifiable by religious garments: women wear the hijab and men wear longer traditional clothing (Höpflinger, 2014).

Ethnicity is also detectable in the vignettes, distinguishing among: White, Black, and Asian. The inclusion of multiple groups is important, as different groups elicit different forms of threat (Cottrell and Neuberg, 2005).

Social class is defined by clothing in image-based vignettes, in which individuals are portrayed as either well-dressed (high social class) or poorly dressed (low social class). Patterns of cultural consumption, such as clothing, serve as powerful indicators of an individual's socio-economic background. Indeed, clothing can be considered a non-verbal resource that conveys clear social signals, influencing both impressions and behavior (Lennon and Davis, 1989; Aghaei et al., 2017).

Finally, the *contextual setting* of the scenario is categorized into two modalities: migration routes and reception camps.

Vignettes in the form of images were randomly assigned to respondents, and each respondent was asked to evaluate two vignettes. This provides a total of 4,000 observations on 2,000 respondents. Consequently, the respondents assessed: 1) the level of vulnerability of the different scenarios portrayed by each vignette on a scale from 1 (completely safe) to 10 (completely precarious); 2) the level of acceptance of asylum request and 3) the attitudes towards government interventions as described below, both measured on a scale from 1 (strongly opposed) to 10 (strongly in favor).

4. EMPIRICAL STRATEGY

For the post-experimental analyses, a set of two-level multilevel models with the attitudes at level 1, nested in respondents (level 2) was estimated. In this way, it is possible to account for the statistical dependencies of the multiple ratings by each respondent. Outcomes are quasi-metric variables gauged on a ten-point scale, and this allows us to use linear random intercept models:

$$y_{ij} = \beta_1 Gender_{ij} + \beta_2 Age_{ij} + \beta_3 Ethnicity_{ij} + \beta_4 Religion_{ij} + \beta_5 Class_{ij} + \beta_6 Setting_{ij} + \beta_7 Vulnerability_{ij} + \mu_{0j} + \varepsilon_{ij} \quad (1)$$

where:

- y_{ij} represents the outcome for vignette i rated by respondent j ;
- $Gender_{ij}, Age_{ij}, Ethnicity_{ij}, Religion_{ij}, Class_{ij}, Setting_{ij}$ are the vignette's characteristics;
- $Vulnerability_{ij}$ is the variable referred to the perceived vulnerability of the images depicted;
- μ_{0j} is the random intercept for respondent j (which captures the variability in mean response levels between participants);

- ε_{ij} is the vignette-level error (i.e., level-1 residual).

As suggested by Hillenbrand et al. (2025), threat is not the sole driver of attitudes towards migrants, but vulnerability can also play a relevant role. Hence, controlling for vulnerability in the models allows for a clearer identification of the effect of threat.

y_{ij} refers to support to: (a) accepting the asylum requests of the people shown in the picture; (b) providing financial aid until they become independent and self-sufficient; (c) providing housing; (d) organizing courses to learn Italian. Responses were measured on a scale from 1 to 10, where 1 indicates “strongly opposed” and 10 indicates “strongly in favor.”

In the Appendix, additional models are reported and are intended as robustness checks. The first set of additional models adds respondent-level covariates: age, gender, employment status, education and macro-geographical area of residence as defined by the quota benchmarks. In a second set of additional models, estimates are based on fixed-effect models that exploit within-respondent variability. In the third set of models, regressions are repeated using only the first vignette of each respondent, mimicking the between-experimental design and aiming to reduce any potential social desirability bias (see Tables 14 and 15 in the Appendix). In the fourth set of models, controls for the number of people in the image are included (see Table 16 in the Appendix). Robustness checks confirm the overall robustness of the results, with only minor differences in the between-subjects experimental design, suggesting some presence of social desirability bias in the main models regarding women and black ethnicity.

5. DATA

The experiment is embedded in an online cross-sectional survey (Computer Assisted Web Interviewing, CAWI) of 2,000 respondents, targeting the Italian population aged 18-70 (Authors 2025). The survey employs a non-probability quota sampling design, with quotas based on respondents’ gender, age, geographical area of residence, education, and employment status; these variables are used as controls in the analyses. The survey also collects detailed socio-demographic and attitudinal information, which is not included in the present analysis. All controls, including assessed perceived vulnerability of migrants depicted in the images, are presented in Table 2. Overall, respondents clearly recognize the vulnerability of asylum seekers and refugees (mean = 7.6), with the situations generally rated as relatively unsafe.

TABLE 2. INDEPENDENT VARIABLES USED IN THE ANALYSIS (N=2,000)

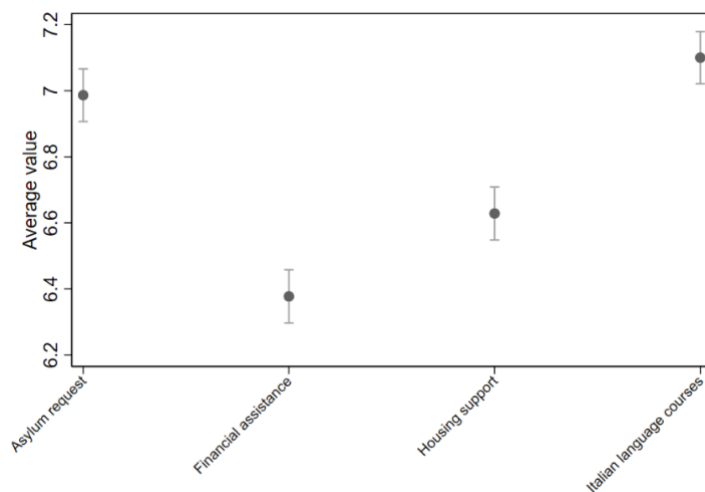
Variable	Percent	Variable	Percent
<i>Gender</i>		<i>Education</i>	

Man	51.10	Low	31.90
Woman	48.65	Medium	43.95
Other	0.25	High	24.15
<i>Age</i>		<i>Employment status</i>	
18-24	10.35	Employed	58.25
25-34	16.00	Unemployed	8.55
35-44	18.90	Inactive	30.30
45-54	24.15	Other	2.90
55-64	21.80		
65-70	8.80		
<i>Macro-region</i>			Mean
North-West	27.40	<i>Vulnerability</i>	7.6
North-East	18.65		
Center	19.80		
South and Islands	34.15		

6. RESULTS: HOW PROFILES OF ASYLUM SEEKERS AND REFUGEES INFLUENCE THE VIEWS OF ITALIAN CITIZENS

Figure 1 describes the four key dependent variables used in the analysis and their mean values on a scale from 1 to 10. The relatively high level of recognized vulnerability of situations as shown above does not correspond to the attitudes of respondents towards the granting of asylum status and the government interventions in the sphere of financial assistance, housing support, and Italian language courses. All these four dimensions receive a lower level of support in line with previous findings (Banulescu-Bogdan 2022). The lowest support regards financial assistance (6.4), followed by housing support (6.6), asylum request (7.0) and Italian language courses (7.1).

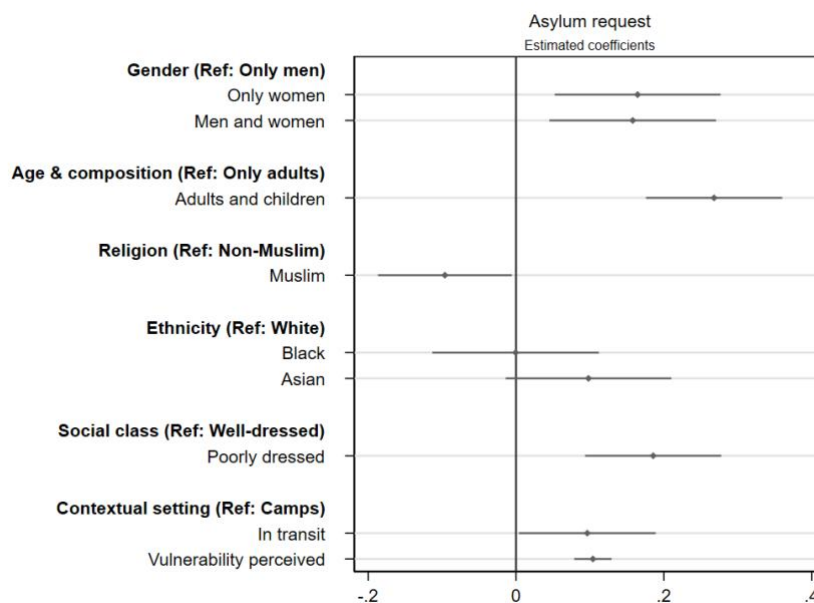
FIGURE 1. DESCRIPTION OF DEPENDENT VARIABLES (I.E., SUPPORT FOR INTEGRATION POLICIES, AND SUPPORT FOR ASYLUM CLAIMS) SHOWING MEANS WITH 95% CONFIDENCE INTERVALS



6.1 Support for asylum seekers' application

Support for asylum seekers' claims can be considered ultimately the most important dimension, as the acceptance of their request grants protection and offers legal status, allowing them to live and work in the receiving country. Figure 2 reports the estimates from the linear random intercept multi-level model including vignette characteristics and perceived vulnerability.

FIGURE 2. SUPPORT FOR ASYLUM CLAIMS, 95% CONFIDENCE INTERVALS, ESTIMATED FROM RANDOM-INTERCEPT MULTILEVEL REGRESSION INCLUDING ONLY VIGNETTE CHARACTERISTICS AND PERCEIVED VULNERABILITY (N = 4,000).



Results highlight the role of gender: the presence of women, as well as mixed-gender groups, increases support for asylum acceptance by 0.16 points ($p < 0.01$) compared to men alone. The

presence of children is also an important factor, increasing support by 0.27 points ($p < 0.01$). In contrast, depicting a Muslim individual decreases support for asylum claims by 0.09 points ($p < 0.05$), while no significant differences are found by ethnicity. Finally, portraying low-class individuals, as well as individuals in transit rather than in camps, increases support by 0.10 points ($p < 0.05$) and approximately 0.19 points ($p < 0.01$), respectively. Regarding vulnerability, the higher the perceived vulnerability, the higher the support for asylum acceptance, indicating important humanitarian concerns of citizens. However, all the effects are modest, amounting to less than 0.1 standard deviations.

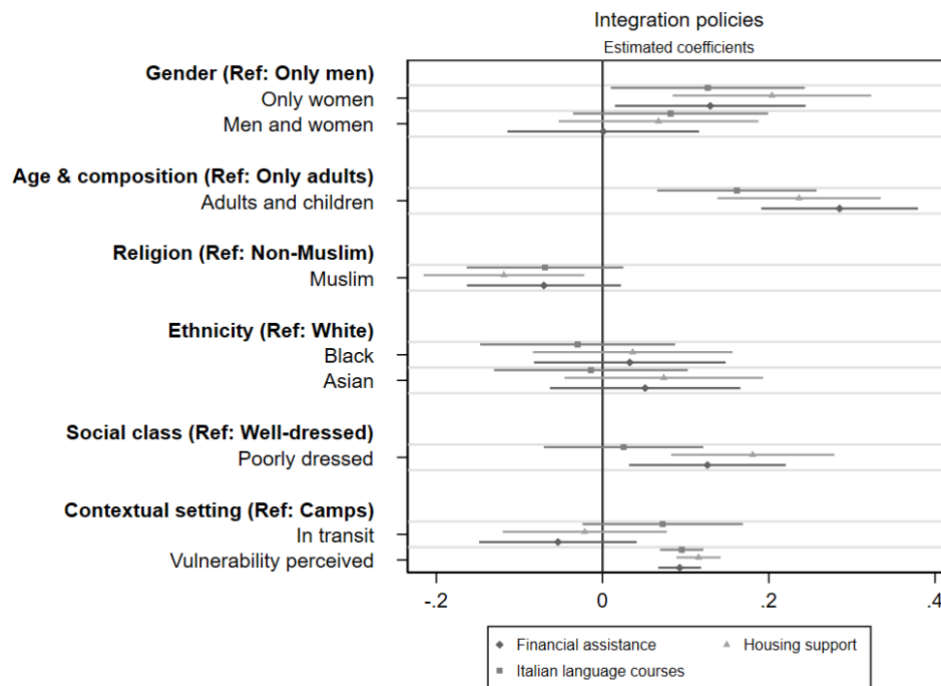
To sum up, the hypothesis that respondents are more likely to accept asylum seekers' requests for images featuring children and women compared to those featuring only men finds confirmation in the data (H2). Respondents are also less likely to accept asylum seekers' requests for images featuring individuals with Muslim traits. Also, hypotheses regarding contextual settings are confirmed (H3), since respondents are more likely to support asylum seekers' requests for those who are in the process of migrating than for those in the hotspot/refugee camps. Contrary to expectations, the findings do not support that either high social class or white ethnicity increases the support for asylum seekers' requests. The results portray a complex picture of the role of symbolic and realistic threat and only partial confirmation of the hypotheses.

6.2 Support for asylum seekers' and refugees' economic and social integration

The second set of dependent variables refers to support for integration measures. Respondents were asked to evaluate their support for asylum seekers' and refugees' integration policies: financial assistance, housing support, and Italian language courses. Figure 3 shows the coefficients of the multi-level models with random intercept that include only vignette-level characteristics and perceived vulnerability.

FIGURE 3. SUPPORT FOR FINANCIAL ASSISTANCE, HOUSING SUPPORT, AND ITALIAN LANGUAGE COURSES, WITH 95% CONFIDENCE INTERVALS, ESTIMATED FROM RANDOM

INTERCEPT MULTILEVEL REGRESSIONS INCLUDING ONLY VIGNETTE CHARACTERISTICS AND PERCEIVED VULNERABILITY (N = 4,000).



Similarly to prior results, support for integration policies is directly shaped by asylum seekers’ and refugees’ gender. Women receive greater support across all measures of integration than men, whereas no statistically significant differences are observable in vignettes depicting only men versus vignettes with women and men together. The difference between men and women is approximately 0.13 for all dependent variables. As for housing, support increases by more than 0.20 ($p < 0.01$) when women are in the vignettes than when men are. Also, images portraying adults with children increase support for integration policies, but interestingly, particularly in the domain of financial assistance (0.39, $p < 0.01$), and less so for housing support (0.24, $p < 0.01$) and Italian language courses (0.16, $p < 0.01$). This finding is unexpected, given that financial help is the least popular measure in our results. The religion – signaled in the image-base vignettes through clothes, scarves or religious symbols – is related to support for integration policies but only in relation to housing: while seeing a Muslim makes no difference for the financial assistance or Italian language courses, seeing a Muslim in the picture is associated with less support for housing integration policies (-0.12 , $p < 0.05$). Ethnicity does not meaningfully alter the support for integration policies. Lastly, while being well dressed as a synonym of high social class was expected to be influential for all types of integration measures, the opposite is evident. The presence of low-class migrants (e.g. badly dressed individuals), when depicted in images, is associated with a larger support for integration, particularly with regard to housing (0.18, $p < 0.01$) and financial support (0.13, $p < 0.01$), whereas for language courses it is not significant (see Tables

6, 7, and 8 in the Appendix). The estimated effect sizes range between 0.1 and 0.2 standard deviations.

To sum up, the findings are partially consistent with Hypothesis 1 (against H1a). Specifically, support for all three integration policies targeting asylum seekers is significantly higher when the vignettes depict only women rather than only men or a mixed-gender group, and when children are present in the vignettes. This refers to the important role of perceived realistic threat. These results are stable across models, without controls and with controls (in the Appendix). In contrast to Hypothesis 1, individuals depicted as belonging to a lower social class (as signaled by poorly dressed characters) receive greater support than those portrayed as belonging to higher social classes, who would be expected to represent a lower perceived realistic threat.

In contrast, with regard to symbolic threats, no statistically significant differences emerge in support for integration policies based on whether the vignettes depict white, Asian, or Black migrants. The expectation that support for government interventions would decrease for images featuring individuals with visible Muslim traits is confirmed only in the case of housing, but not for financial assistance and language courses.

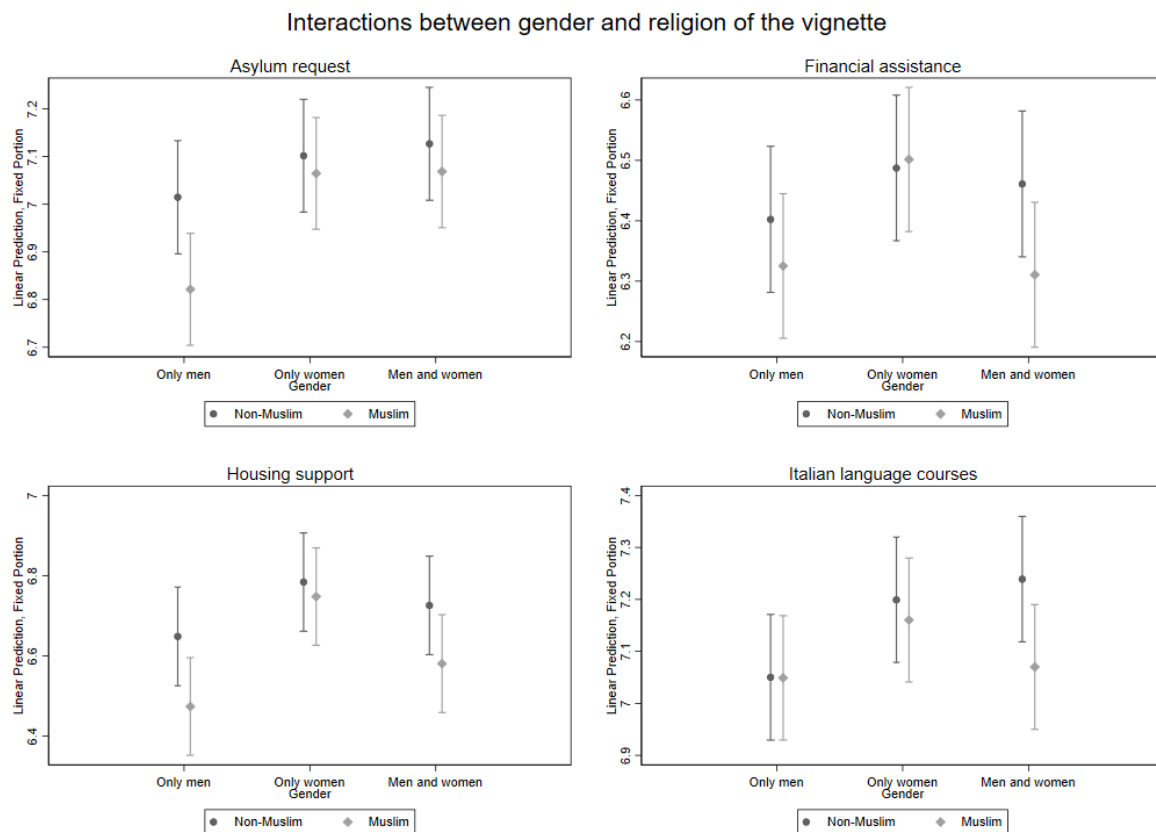
6.3 How religion interacts with gender, age and ethnicity

Given Italy's deep-rooted Catholic identity and traditions (Nese, 2022), immigrants' religion is a potentially influential factor shaping how they are perceived, particularly in interaction with gender, age and ethnicity.

Regarding the interaction between religion and gender (Figure 4), vignettes depicting only Muslim women are better evaluated than those with Muslim men or men and women together in terms of support for financial assistance. Muslim men and women, and Muslim women are still favored over Muslim men for language and asylum support. The differences between men and all the other groups are larger for Muslims than for non-Muslims. Overall, the interaction suggests that gender stereotypes intersect with religious identity, amplifying the disparity in evaluations between Muslim men and other groups. This pattern may reflect broader societal narratives that portray Muslim men as more threatening, while Muslim women are viewed through a lens of vulnerability and in need of protection.

FIGURE 4. PERCEIVED VALUES OF THE DEPENDENT VARIABLES (I.E., SUPPORT FOR INTEGRATION POLICIES, AND SUPPORT FOR ASYLUM) OF THE VIGNETTE IMAGES BY THE INTERACTIONS BETWEEN THE GENDER AND RELIGION OF THE VIGNETTES ALONG WITH

THEIR 90% CONFIDENCE INTERVALS FROM THE MULTILEVEL REGRESSION INCLUDING ONLY VIGNETTE CHARACTERISTICS AND PERCEIVED VULNERABILITY (N = 4,000)

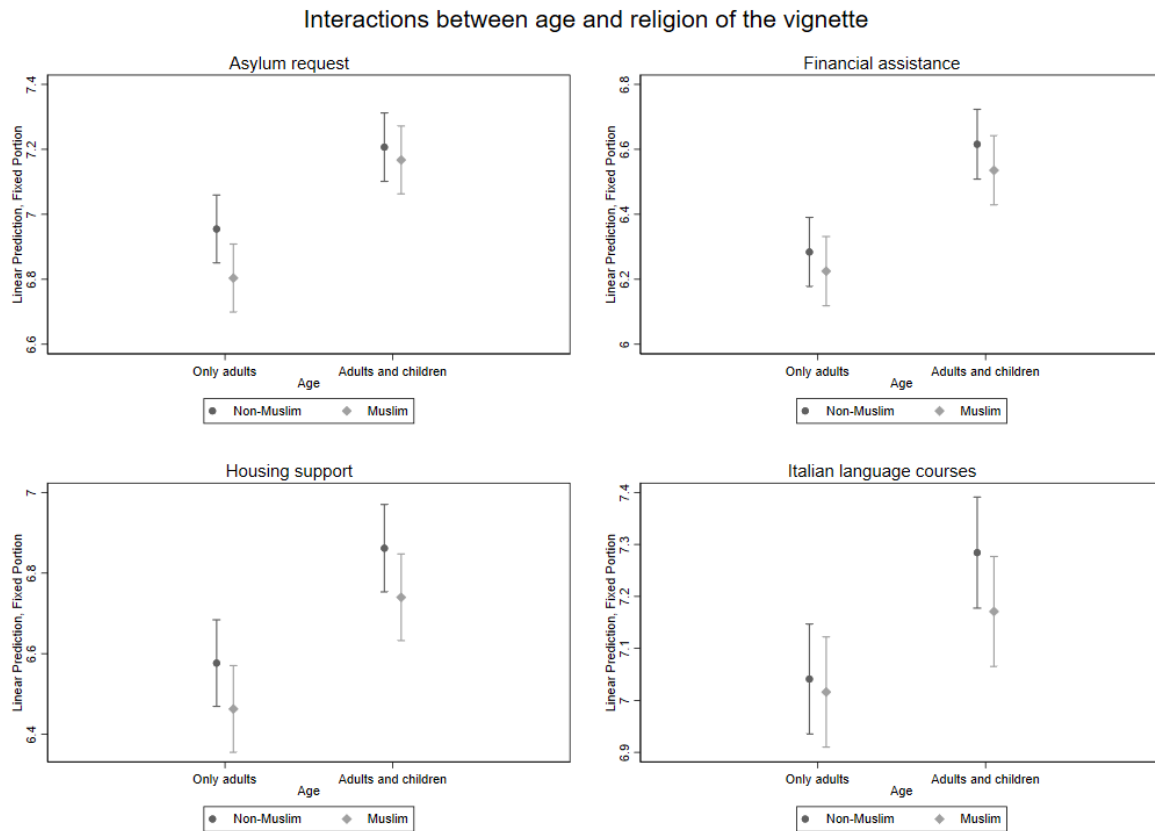


Note: The scales used in the charts are not harmonized.

The interaction between religion and age is another potential layer of bias in the views of Italian respondents (Figure 5). Across outcomes, adults with children receive greater support than adults only, indicating a general “family premium” effect. However, the gap between vignettes with children and those with adults only is slightly larger for non-Muslims than for Muslims for all outcomes except for asylum: non-Muslims adults with children are largely favored for integration policies and asylum claim compared to adults only, whereas this gap is smaller for Muslims. This means that the evaluation of adults and adults with children is moderated by religion: family composition tends to positively influence support, but the effect is less pronounced for Muslim individuals.

FIGURE 5. PERCEIVED VALUES OF THE DEPENDENT VARIABLES (I.E., SUPPORT FOR INTEGRATION POLICIES, AND SUPPORT FOR ASYLUM) OF THE VIGNETTE IMAGES BY THE INTERACTIONS BETWEEN THE AGE AND RELIGION OF THE VIGNETTES ALONG WITH THEIR

90% CONFIDENCE INTERVALS FROM THE MULTILEVEL REGRESSION INCLUDING ONLY VIGNETTE CHARACTERISTICS AND PERCEIVED VULNERABILITY (N=4,000).

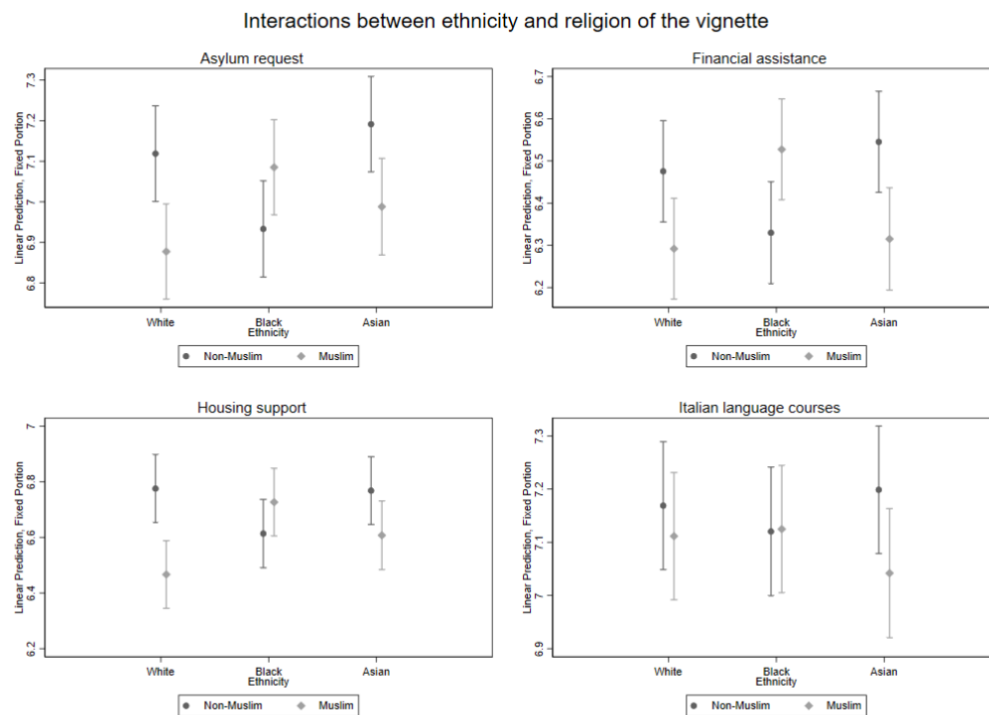


Note: The scales used in the charts are not harmonized.

Regarding the intersection of religion and ethnicity Figure 6 stresses that Islam religion does not play a uniform role across the different ethnic groups. In particular, for White and Asian asylum seekers and refugees, being Muslim is often a penalizing attribute, resulting in lower support for acceptance of asylum request and aid for integration policies, such as financial assistance, housing and Italian language courses compared to their non-Muslim counterparts. For black migrants, being Muslim is an advantage in the case of asylum claim acceptance, financial and, though more limited, housing support. Additionally, black Muslims are more likely to obtain greater support, with the exception for Italian language courses, in comparison with all other ethnic Muslim groups. Hence, across all outcomes, the role of the religion varies by ethnicity.

FIGURE 6. PREDICTED VALUES OF THE DEPENDENT VARIABLES (I.E., SUPPORT FOR INTEGRATION POLICIES, AND SUPPORT FOR ASYLUM) OF THE VIGNETTE IMAGES BY THE INTERACTIONS BETWEEN THE RELIGION AND ETHNICITY OF THE VIGNETTES ALONG WITH

THEIR 90% CONFIDENCE INTERVALS FROM THE MULTILEVEL REGRESSION INCLUDING ONLY VIGNETTE CHARACTERISTICS AND PERCEIVED VULNERABILITY (N=4,000).



Note: The scales used in the charts are not harmonized.

7. DISCUSSION AND CONCLUSIONS

This study examines how Italian citizens’ attitudes towards asylum seekers and refugees vary according to their features, such as their gender, age, religion, ethnicity, social class, and the arrival context. These characteristics and the hypotheses presented in previous sections were informed by Intergroup Threat Theory. To test the implications of this theory, a factorial survey experiment with hypothetical situations based on AI-generated images was conducted in Italy in the fall of 2024 on a sample of 2,000 respondents. The Italian context is a critical case, as the rapid rise of immigrants, particularly undocumented, non-EU migrants, has been linked to heightened negative attitudes towards immigration (Papademetriou and Banulescu-Bogdan, 2016). For instance, recent polls show that 55% of Italians feel there are “too many immigrants” (Finizio et al., 2023), while the Migrant Integration Policy Index rates Italy’s integration policies as only “halfway favorable”. Similarly, Istituto Carlo Cattaneo (2018) reports that Italy is one of the European countries with the highest rates of anti-immigrant and anti-Muslim attitudes.

In this context, our study provides valuable insights into how Italian citizens perceive integration and asylum policies for different groups of asylum seekers and refugees. The study provides five key findings.

First, in the eyes of the Italian respondents, the migrants' gender significantly shapes attitudes towards integration measures. Indeed, women are consistently associated with higher levels of support across all types of integration policies. This may be linked to prevailing perceptions that women represent a less problematic presence within society, as they are comparatively less involved in criminal activities and are often viewed as more compliant with social norms. Such perceptions likely contribute to more favorable citizens' attitudes towards their inclusion and support within integration measures. These findings align with previous studies (Adida et al., 2018; von Hermanni and Neumann, 2019) and reinforce the theory, as women are less often perceived as realistic threats compared to men. Furthermore, another notable result concerns mixed-gender depictions, in which men and women appear together. They may be perceived as a family unit, which can mitigate perceptions of threat by evoking associations with stability and caregiving. This mitigation emerges in attitudes towards asylum claims too: respondents express greater support for asylum requests when images depict both men and women together, compared to when only men are shown.

Secondly, the presence of children emerges as a key factor. Children significantly influence support for all integration measures, especially financial assistance. Although financial support is generally among the least popular measures, it receives the highest level of approval when directed towards adults with children. This suggests that Italians are particularly sensitive to this group and are more inclined to support such arrangements, even when such policies are otherwise unpopular. These results align with and confirm previous studies (Joint Data Center on Forced Displacement, 2022; von Hermanni and Neumann, 2019; Ecker et al., 2020) and support theoretical expectations that children are perceived as posing less of a realistic threat, thereby facilitating broader public acceptance of measures aimed at their inclusion.

Thirdly, individuals from lower social classes constitute another category associated with higher levels of public support. This group may be favored for several reasons: they are not perceived as a threat to white-collar employment, and they are often viewed as more vulnerable due to their socioeconomic condition. Furthermore, the underlying motive for migration may shift the criteria for support; while the public opinion typically favors high-skilled profiles for economic migrants, unskilled individuals may be viewed with greater empathy when perceived as asylum seekers and refugees, as their lack of human capital heightens their perceived vulnerability. Such perceptions may foster greater empathy and a stronger inclination to support integration measures targeting this demographic group. This trend, however, contrasts with findings from studies conducted in other national contexts, which generally indicate a public preference for high-skilled immigrants over their low-skilled counterparts (Helbling and Kriesi 2014;

Hainmueller and Hiscox 2010). Thus, contrary to expectations based on the theoretical framework, respondents did not perceive individuals from lower social classes as threatening.

Fourthly, religion was assumed to be an important factor in perceptions in the context of Italy as it may pose a challenge to Italian traditions, cultural norms, and collective identity, particularly when migrants are seen as distant outsiders from culturally unfamiliar regions. However, religion does not appear to be a fundamental driver in perceptions, with the exceptions of housing and asylum. Yet, when looking at the combined effect of religion and ethnicity, Black Muslims are seen as associated with greater support for integration measures. Within this framework, White Muslims receive the most significant penalty in terms of public support, indicating a particularly strong negative bias against this group. This bias may be explained by the association of White Muslims in the Italian context with individuals from North Africa (e.g., Morocco, Tunisia, Algeria), parts of the Middle East (e.g., Syria, Lebanon, Iraq) or Eastern Europe and Asia (e.g., Albania, Pakistan). These populations are highly visible in Italy, with North African communities constituting a significant portion of the Muslim population (Fondazione ISMU, 2024). Consequently, they may be more susceptible to stereotypes, prejudices, and negative perceptions associated with anti-Muslim representations and hate speech (Amnesty International, 2019; Cervi, 2020; Vitullo, 2023). Such associations may amplify negative biases and reduce public support for integration measures. Moreover, while there is a general tendency to favor adults with children over adults without them, this preference is weaker when the family in question is Muslim.

When looking at the interaction between religion and gender, Muslim women are less penalized than Muslim men, suggesting that the gap in public attitudes between men and women is more pronounced among Muslims than non-Muslims. These findings align with previous research and our expectations rooted in the Inter Group Theory. Indeed, prior studies highlight that Muslim individuals are often conceptualized as more symbolically threatening than non-Muslims (Spruyt and Elchardus, 2012; Strabac et al., 2013; Saroglou et al., 2009; Van der Noll, 2014; McLaren and Johnson, 2007; Van der Noll et al., 2018), negatively influencing public support for their integration (Bansak et al., 2016). Furthermore, in line with the theoretical framework, although religion can be perceived primarily as a symbolic threat, its interaction with gender amplifies perceptions of realistic threat, resulting in stronger negative attitudes toward men compared to women.

Finally, in contrast to previous studies (Savelkoul et al., 2011; Spruyt and Elchardus, 2012; Statham, 2016), the ethnic differences of the individuals depicted in the images do not influence respondents' levels of public support.

To sum up, this is among the first studies in immigration research to employ image-based survey experiments. Substantively, it advances the understanding of public attitudes toward asylum seekers and refugees, a group often overlooked in favor of broader research on immigrants. In particular, the study highlights how gender, the presence of children and low social class as examples of low realistic threats elicit positive public attitudes, whereas religion and ethnicity as examples of symbolic threat have a minor influence on public support for the integration of refugees. The condition of transit as a symbolic threat is influential only in supporting asylum acceptance. Future research could replicate this methodology in other countries with varying levels of immigration intensity, enabling a more comprehensive and comparative analysis.

Disclosure of Data and Code

The data underlying this article are not publicly available due to an embargo but may be shared upon reasonable request. However, the do-file with the analyses is included.

Conflicts of Interest

The authors have no conflict of interest to declare.

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Ethical approval

The study was conducted in accordance with the provisions described in the documents submitted to the Bioethics Committee and in full compliance with Regulation (EU) 2016/679 – General Data Protection Regulation – and Legislative Decree No. 196/2003, as amended – Personal Data Protection Code. Furthermore, it complies with the provisions of the “Ethical Rules for the Processing of Data for Statistical or Scientific Research Purposes,” published pursuant to Article 20, paragraph 4, of Legislative Decree No. 101 of 10 August 2018, by the Italian Data Protection Authority (Garante per la protezione dei dati personali), with Decision No. 515 of 19 December 2018. The study was approved by the Ethics Committee of the University of Bologna.

Informed consent

Informed consent was obtained from all subjects involved in the study.

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