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The Perception of Names in Experimental Studies on Ethnic Origin: A Cross-National Validation in Europe

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A growing body of research uses field and survey experiments to examine ethnic discrimination. Central to these studies is the use of people's names as a proxy for ethnic origin. However, names signal more than solely ethnic markers. Moreover, their signals might vary across national contexts. Scholars should pre-test the perception of names used in experiments in order to properly interpret their results and reveal the mechanisms underlying discrimination. There is, however, no comprehensive study yet in Europe which thoroughly pre-test the perception of names across countries with profoundly different migration histories. In this paper, we present the dataset '*Perceptions of names in Europe*', containing the perceptions of 1078 names studied across nine European countries: Belgium, Czech Republic, Germany, Hungary, Ireland, the Netherlands, Spain, Switzerland, and the United Kingdom. The dataset includes 82.400 evaluations from 8.240 respondents about the distinctiveness of Sub-Sahara African, Muslim and Roma names in terms of minority-majority group status, gender, religiosity, socioeconomic status, skin colour, and language proficiency. Information on respondents' background characteristics are also available.

Background & Summary

In recent years, the investigation of ethnic discrimination and implicit racial bias has gained significant traction in Europe[1–4]. Used as invaluable tools for both academic and policy purposes, field and survey experiments, such as correspondence, audit and vignette studies, offer crucial insights into ethnic discrimination in access to markets and services, including but not limited to employment, housing and education[5,6]. In addition, implicit association tests aim to examine the associations between ethnic categories and positive/negative attributes[7,8].

Central to these studies is the use of individuals' names as a proxy for majority and minority group status, defined along ethno-racial lines. This practice is underpinned by the assumption that names convey precise signals of people's ethno-racial background[9–11]. Recent studies challenge this assumption, by highlighting the nuanced nature of name-based perceptions, which vary across national or regional contexts[12–14]. Moreover, names are found to convey more than solely ethnic markers, like social class, religiosity and gender. This complicates the interpretation of experimental results[10,12,13,15–17]. This complexity is further compounded by the

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multiple ethnic origins and religious affiliations present in the European context[18–21]. To grasp the intersectional signals that names hold, it is therefore necessary to understand their perceptions[22].

A comprehensive examination of the perceptions of names across European countries is lacking. While a similar study has recently been conducted in the United States[23], their data and results cannot simply be transferred to Europe as these contexts differ in their socio-cultural landscape, demographic composition, and migration histories. Names are powerful identity markers, and name-based discrimination is both persistent and pervasive in many European societies[24]. The drivers of discrimination are less well understood, however. Recent studies pointed to a complex interplay of nationality, ethnic origin, accent, phenotypic features, religion, and perceived foreignness, challenging the generalizability of U.S. research findings for the European context[25,26]. Especially the role of religion - and Islamophobia specifically - remains a crucial factor in understanding discrimination but is often deeply intertwined with ethnic bias and is difficult to disentangle in correspondence studies[18,27].

We present the first large, cross-national dataset[28] '*Perceptions of names in Europe*', containing 1078 names studied across nine European countries: Belgium, Czech Republic, Germany, Hungary, Ireland, the Netherlands, Spain, Switzerland, and the United Kingdom. To reflect the demographic diversity of these European countries, we focused on names originating from Sub-Saharan Africa, Muslim majority countries and Roma minorities, which represent some of the most disadvantaged groups in these contexts. The specific groups tested in each country depended on which populations are most racialized within that context. The dataset includes 82.400 evaluations from 8.240 respondents about the distinctiveness of names in terms of minority-majority group status, gender, religiosity, socioeconomic status, skin colour, and language proficiency of distinct names in each country. Information on respondents' characteristics such as gender, age category, country/region of origin, parental country of origin, and level of education are available in the dataset[28]. Altogether, this dataset provides a unique resource and a relevant tool for researchers, educators and policymakers who study ethnic discrimination and bias in a European context.

Methods

Ethical approval for this study was granted by the Ethics Committee for Human Sciences (ECHW) of the Vrije Universiteit Brussel in Belgium, which was the coordinating institution for this survey (approval number ECHW 460). Data collection was conducted by Bilendi, a professional survey provider operating across Europe, which adhered to GDPR and EU ethical guidelines. Informed consent for participation and data sharing was obtained directly from all respondents prior to participation. The data were collected through two repeated online surveys that were fielded in autumn 2023 and early 2024. The name evaluations in this dataset[28] are based on non-probability samples of the adult population in the nine countries. Quotas on respondents' gender, education, age, and linguistic region (i.e. Flanders and Wallonia in Belgium, French, and German speaking regions in Switzerland, and Castilian speaking regions in Spain) were included. The data collection consisted of two comparable rounds among two separate samples of respondents, each with the same set of questions, except that the second round included an additional question on skin tone. All countries collected data through two repeated rounds, except for Spain who fielded in early 2024 with one large round. Informed consent for participation and data sharing was obtained directly from participants. The data collection was pre-registered and is available on OSF[28]. To represent the most prevalent minority groups across the nine countries, we selected some of the most common countries of origin of Muslim and African migrants in the European contexts. For the selected Muslim-majority countries, Moroccan, Turkish, and Pakistani names were used; for the Sub-Saharan African countries, Congolese, Nigerian, and Senegalese names were chosen; and for the European group, names from the majority population in the nine countries and Roma community were included.

A total of 8.240 respondents rated 10 names each, resulting in a total of 82.400 observations (See Fig. 1). Per unique survey, the names were randomly drawn from a country-specific preselected list. We used a sequential approach in the selection of names, opting, wherever possible, for register data on the most common names and surnames for the relevant groups in the surveyed country. In the specific case of certain origins (such as Roma) or countries where register data were not available, we considered alternative options: names that are commonly featured on historical registers, websites listing popular names for specific groups, popular names from lists of other -neighbouring or context similar- countries, or names that were previously used in other correspondence studies. These names were verified with national NGOs and spokespersons to get to select the most common names in each country (see attachment for step-by-step guide for name list creation). We chose at least five of the most popular first and last names for each minority/majority group status in each country and randomly paired them. Additionally, three names that were most common in all tested countries were added, resulting in a total of eight combinations of first and last names per country of origin. This method of name selection was applied separately for male and female names, obtaining a total of 16 first and last names combinations per minority/majority group status. With seven groups in our design, we tested a total of 112 first and last names combinations per country. Because of country-specific research interests, we additionally tested 10 extra names per minority-majority group status in Switzerland, as well as Ukrainian names in Switzerland, the UK, and Germany.

The respondents were asked to assess the names on seven different dimensions: gender, ethnic origin, religiosity, skin colour, socio-economic status, and language fluency (See Fig. 1 for more details). Each name was rated on all dimensions before the next one was shown to the respondent. In addition to the questions concerning the perception of the names, we collected demographic information on the respondents (i.e., the respondents' gender, region of residence, age, educational level, and country of birth of both parents).

To quantify name perceptions, we calculate 'congruence rates', measuring the extent to which the signals of ethnic origin (here region) and gender are perceived as intended. The respondent-level congruence rate is a dichotomous variable, whereby 1 stands for "congruent to our intended signal" and 0 for "not congruent to our

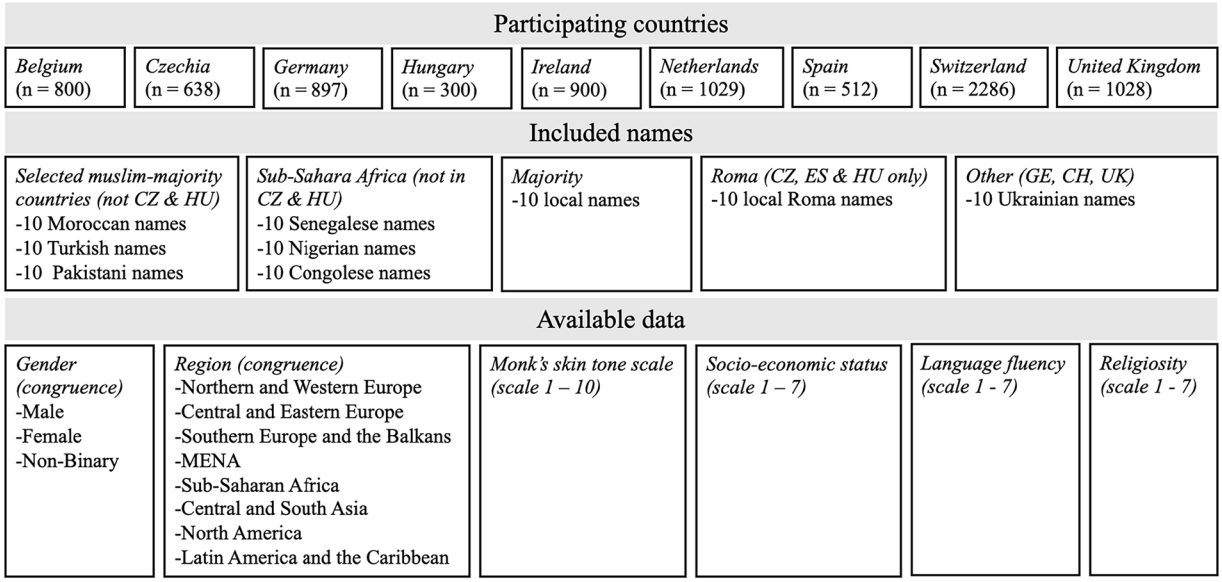

Fig. 1 Overview of the sample frame and survey content.

intended signal" (choosing the "I don't know" option was coded as not congruent, providing us with a conservative estimate of the congruence rates). Hereafter, name-level congruence rates are calculated, representing the percentage respondents who score 1 on the individual-level congruence rate. Hence, this allows us to measure the degree to which a name reliably signals particular characteristics, in turn helping us assess the effectiveness and potential biases of name-based proxies in studying discrimination[10]. Besides intended signals, people might also perceive other attributes through names. Hence, perceptions of religiosity, socio-economic status, fluency and skin tone are coded on a 7-point Likert scale.

Data Records

Our dataset[28] is available on OSF (https://doi.org/10.17605/OSF.IO/YD5QV). Four versions of the raw data are provided in the data file, in.csv,.dta,.RDS, and.sav (file name: NameSurvey_DATARAW_2025). The data is accompanied with a replication package that includes the following codes. Code in "0_setup.R" checks the installed packages and installs the required ones if not installed yet. Code in "1_process.R" processes all national raw data, combines them into one dataset, transforms and recodes variables, generates derived variables and exports the working dataset. Code in "2_analysis.R" imports the working dataset and generates all tables and figures present in the publication. A codebook is available for additional information on the dataset and its variables.

Technical validation

Technical validation ensures that the dataset[28] accurately, reliably, and consistently captures perceptions of names across European countries. To ensure the highest data quality, we implemented multiple measures to assess and enhance respondent attentiveness and engagement. First, we tracked the time each respondent took to complete the survey, recording it in the variable –"time_variable"- in order to check the quality of the answering behaviour. Figure 2 shows the time respondents spent to complete the survey. On average, respondents spent around one minute per name, or around 10 minutes to complete the full survey. Additionally, an attention check question was included. Respondents who answered this question incorrectly were excluded from the final dataset to maintain data integrity. Both the time and attention measures helped to filter out inattentive responses, ensuring that the dataset reliably reflects respondent perceptions of name-based attributes.

The construct validity is further shown through estimates of OLS regressions represented in Fig. 3, indicating clear trends - and hence consistency across the different country-samples - within our integrated dataset[28]. In this figure, we compare results for minority groups to the majority group. Each model focuses on a different perception measure - gender, region of origin, SES, language fluency, religiosity, and skin colour- and includes binary indicators as the independent variables - names from the selected Sub-Saharan African countries, the selected Muslim-majority countries, and other ethnic groups (Ukrainian and Roma), with the majority group as the reference category. Besides country-specific contextual differences, the pattern and clustering of the coefficients across countries for each attribute suggest that respondents from diverse national contexts share broadly similar associations with each category. Looking at the distribution of name perceptions, ethnic minority names have generally lower congruence rates compared to majority name counterparts. Respondents find it harder to recognize the region of origin of minority group status names as compared to majority group status names. Also for gender, congruence rates are lower for ethnic minority than ethnic majority names, although respondents in the Netherlands and Belgium score significantly better. In all countries, ethnic minority names are perceived as having a lower SES and language fluency, a darker skin tone and as being more religious as compared to ethnic majority candidates.

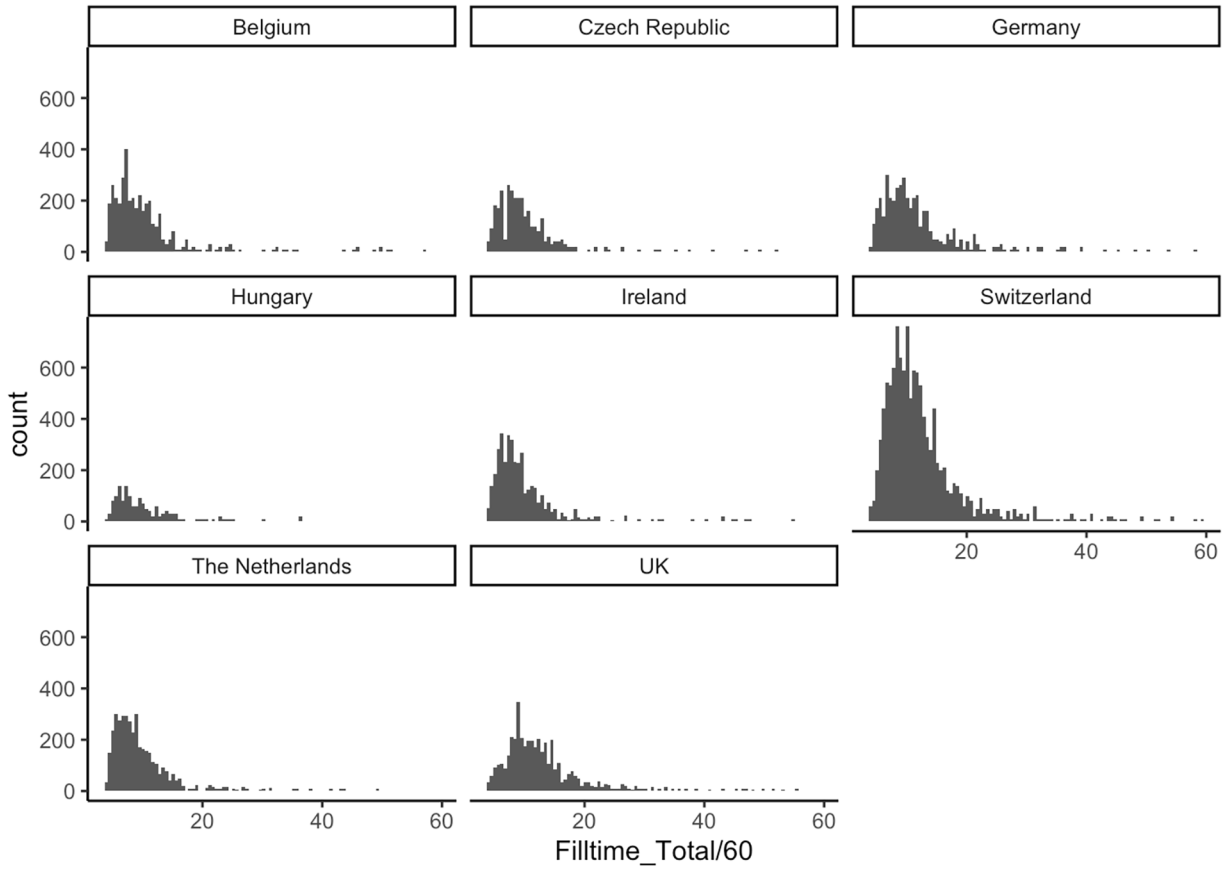

Fig. 2 Distribution of time (in minutes) spent for 10 names in a session.

The top left and middle panels show congruence rates for gender and region. When looking at the top left panel indicating gender congruence rates, it appears that Turkish names are best to be used in Germany when wanting to convey a strong gender signal among groups from Muslim-majority countries. In Belgium and Spain, respondents find it easier to assign gender to Moroccan names. In addition, in the Netherlands and the UK, both Pakistani and Moroccan names convey clear signals. Based on the middle panel, it appears that the regional congruence rates for the Muslim-majority countries are highest for Moroccan names in Belgium, Ireland and Spain, whereas in the Netherlands, Germany and Switzerland Turkish names score better. In the UK, Pakistani and Moroccan names are more easily recognised. Looking at the Sub-Saharan African region, Senegalese names have the highest congruence rates in the UK, whereas Congolese names are best recognized in Belgium, Spain, the Netherlands, Switzerland, and Ireland. Patterns of congruence rates are likely to be dependent on what groups are socially significant minorities in a given country.

The other panels show perceptions of different noisy signals, and hence perceptions besides gender and region. Going to the top right panel, when considering each specific country, there are no big differences in SES perceptions between tested regions. More interestingly, respondents from Belgium, the Netherlands, Germany and Switzerland generally perceive minority group status names lower in terms of SES as compared to respondents from Ireland, Spain, and the UK. Moving down to the bottom left panel, name perception in terms of language fluency appear to mostly differ between countries. In Spain and Germany, minority group status names score lowest on perceived fluency, followed by Ireland, the Netherlands, the UK respectively. Belgium and Switzerland perceive the highest language fluency, although still way lower in comparison to ethnic majority names. The bottom middle panel indicates that ethnic minority names are overall perceived as more religious as compared to ethnic majority names. Here, names from Muslim-majority countries are perceived as most religious, followed by names from Sub-Saharan Africa and, lastly, Ukranian and Roma names. This trend is stable across the tested countries. The only exception is that Nigerian names are not perceived as more religious than ethnic majority names in Spain. When considering country differences, perceptions of religiosity are highest (and mostly similar) in the Netherlands, Belgium, Germany and the UK, and lowest in Spain and Ireland. The bottom right panel, then, shows that names from Sub-Saharan African countries are generally perceived as having a darker skin tone as compared to names from Muslim-majority countries. Results within the Muslim and Sub-Saharan African groups are relatively similar per country. In Spain, the tested minority names score lower on skin tone than the majority group as compared to the other countries. Whereas in Ireland (followed by the UK), names from Muslim-majority countries are perceived as having the darkest skin tone. In Belgium, this is true for names from the Sub-Saharan African countries (except for Nigerian names).

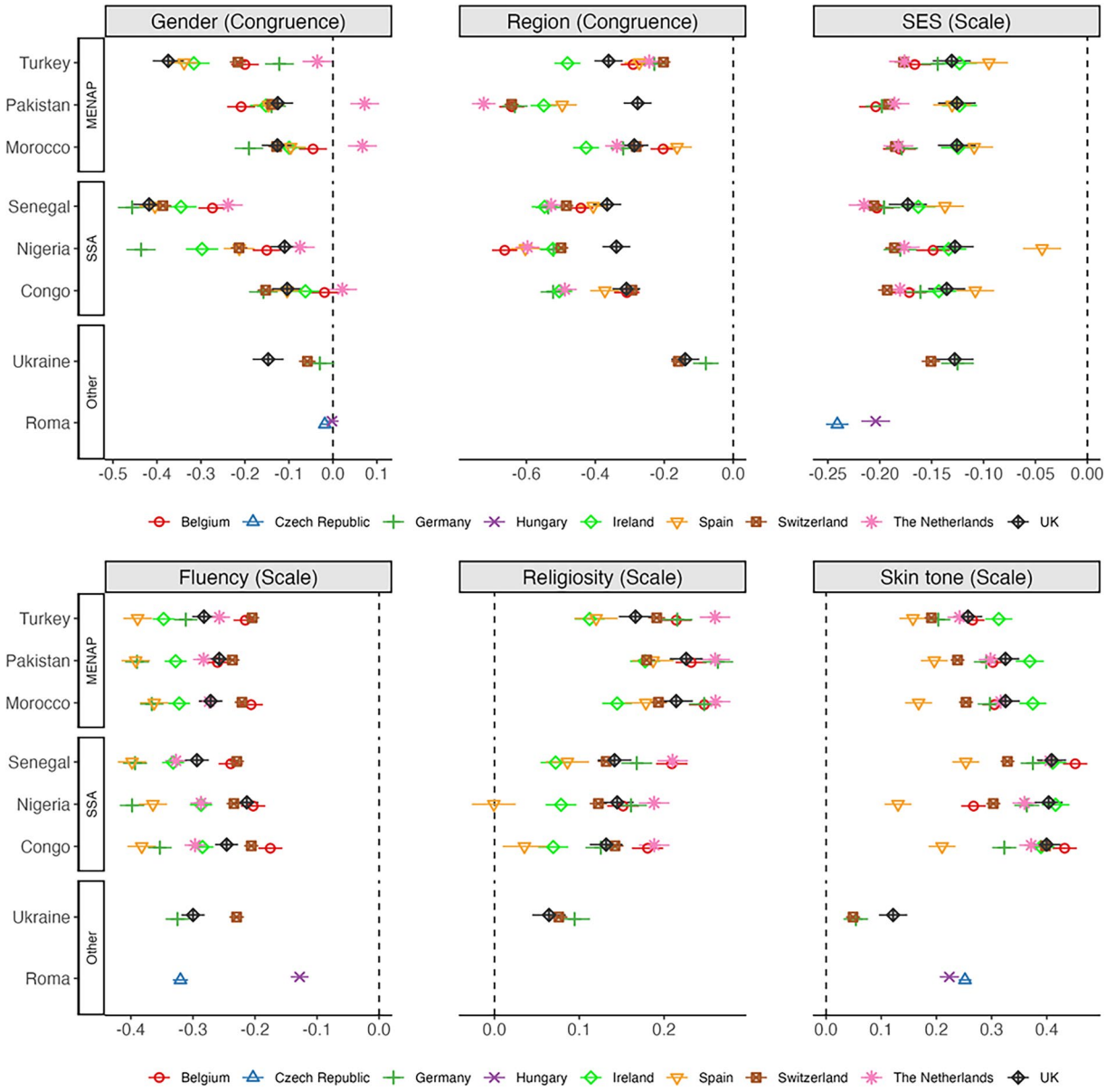

Fig. 3 OLS Regressions on name perception measures (congruence rates and scales). Note: The x-axes for gender and region show the congruence rates coded as '1' if a respondent identifies the intended signal and '0' otherwise. SES, Language fluency, Religiosity, and Skin tone are questioned on a 7-point Likert scale, whereafter they are recoded to range from 0 to 1. The dotted line shows the reference category, namely the score for the majority names.

When looking at the individual congruence rates of names, it becomes clear that individual name perceptions are rarely fully congruent with the intended signal. Especially with respect to the geographical variables such as the perceived region of origin, there are large variations between names within countries. For example, in the case of Belgium, names of Congolese origin exhibit a large range of region congruence rates (CRs). A name like Sarah Bokungu is perceived to align strongly with its Congolese origin (region CR = 0.78), indicating that most respondents correctly identify the geographical association. Conversely, a name like Serge Tandia, achieves a much lower region CR of 0.13, suggesting a significant mismatch between signalled and perceived origin. This variability suggests that individual name signals do not always uniformly convey their intended geographic identity, even within the same national or cultural context. Such disparities underscore the necessity of testing and validating name signals before employing them in research contexts. When names are used to represent specific attributes—such as ethnic origin, nationality, or region—their selection must account for the variability in public perception to avoid introducing bias or misinterpretation in the data.

Congruence rates rarely achieve a perfect score (CR = 1), even for the most recognised names. This finding reveals an inherent variability in perceptions, with no name being universally and unequivocally linked to its intended cultural or social signal. While attributes like gender generally achieve higher congruence rates,

there also remains a substantial variation between individual names. For example, within the same Congolese origin group, Monique Ngalula achieves an exceptional gender CR of 0.98, nearly perfect in signalling its gender association. However, Maxime Ngalula, another Congolese name, shows a much lower gender CR of 0.64, demonstrating that the clarity of gender signalling is not consistent across names either. This variability not only shows the complexity of name-based perception but also emphasises the importance of considering the context and audience when using names as signals in research. Names are not just identifiers; they carry nuanced perceptions that can vary significantly depending on context and respondent's experiences, cultural exposure, and biases. Testing these signals rigorously ensures that they serve their intended purpose and minimises unintended distortions in research findings.

Usage Notes

Uniquely, this paper proposes data on name perceptions that covers nine European countries. The data demonstrate the methodological and contextual challenges associated with experimental studies, especially those that rely on names to signal a treatment of interest e.g., ethnic origin of the applicant. As proper estimation and inference of the results of such studies relies on the accuracy of the treatments used, testing the validity of the names is of utmost importance. An inaccurate assumption that a signal will be perceived as intended by the researchers may skew the accuracy of the findings, and ultimately the drawn conclusions. Moreover, and as our data also indicates, a name signals more than just one attribute, stimulating perceptions of ethnic origin, gender, religiosity, SES, language fluency, and skin tone. This makes it harder to disentangle the intersecting effects of these attributes. Accordingly, a thorough examination of the varying attributes that are associated with a specific name is a necessary undertaking, especially when conducting research across different cultural, linguistic, or national contexts, as is the case in the current study.

The socio-political and historical contexts of the studied country should be considered. Researchers should note that which origin groups and related names to choose as signals in experimental designs is dependent on what groups are socially significant minorities in a given country. To provide a concrete example: Belgian respondents demonstrate higher congruence rates in recognizing Congolese (CR = 0.55) compared to Nigerian (CR = 0.20) or Senegalese (CR = 0.38) names. This is likely due to the higher share of Congolese ethnic minorities in Belgium, leading to more social awareness. Consequently, in the Belgian context, it is more appropriate to use Congolese names in experimental designs when the research question aims to measure discrimination towards Sub-Saharan African minority groups. Ultimately, scholars who aim to test other countries in Europe than the nine tested here should reflect - and eventually pre-test - whether the names are appropriate to use in their context.

General usage notes, like considering what attributes should be held constant depending on the research question, using multiple names instead of using solely one per tested group, using names in experimental designs as signals for other attributes besides solely ethnic origin, and looking into the effect of respondent characteristics on perception of names, are proposed by Crabtree *et al.*[23] but are equally valuable for names in this dataset[28].

This paper adds to ongoing research on ethnic discrimination using experimental designs by proposing a unique dataset on name perceptions across nine European countries. Before, name perceptions were mostly tested in the U.S. or in a singular European country. However, given differing socio-political and historical contexts, name perceptions are not necessarily transferable from one country to another, even within Europe. Moreover, we tested the perception of 1.078 names stemming from different origin groups on multiple signals: region, gender, religiosity, socio-economic status, skin tone and language fluency. Resulting in 82.400 observations, this dataset[28] allows researchers to consciously use names in different experimental designs to measure discrimination. The data are accompanied by an online tool to easily access and assist the selection of names that were tested in this study: https://equalstrength.github.io/NameSurvey/.

Code availability

The code can be accessed on OSF (https://doi.org/10.17605/OSF.IO/YD5QV).

Data availability

The dataset[28] has been deposited to OSF and is available at https://doi.org/10.17605/OSF.IO/YD5QV. The data is available in multiple formats and is accompanied with a replication package.

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Competing interests
The authors declare no competing interests.

Additional information
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