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Immigrants' self-perceived barriers to healthcare: A systematic review of quantitative evidence in European countries

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ABSTRACT

Background: with Europe's demographic diversity growing due to immigration, understanding and addressing the barriers to healthcare experienced by immigrants is of paramount importance. However, an updated systematic review of the literature on this topic is missing.
Methods: we systematically searched the PubMed and Scopus databases to synthesise quantitative evidence regarding self-perceived barriers to healthcare access faced by immigrants in Europe. Peer-reviewed articles, written in English, published from 2011 onwards, studying adult populations not in detention centres were eligible for the review. Articles were charted according to the population of study, sample size, geographical area and level of study (local vs national), and applied methodology (descriptive vs inferential).
Results: linguistic and health literacy barriers emerge as the most prominent, and most studied, barriers to healthcare for immigrants. The extant literature covers disproportionally Northern European countries; often uses small sample sizes and convenience sampling; and is particularly limited as far as the undocumented population is concerned.
Discussion: policies should aim at increasing the availability of interpreters and healthcare materials translated in different languages, as well as at better training health professionals to address specific immigrants' needs. We encourage future research to focus on healthcare barriers faced by immigrants in Southern and Central European contexts; to improve results' robustness and external validity by using high quality sampling techniques and larger sample sizes, and including native populations as comparison groups; and to put more attention to the experience of undocumented immigrants, as they are the immigrant population with the most critical and precarious healthcare status.

1. Background

Access to healthcare is a fundamental right crucial for the well-being of any population. As Europe witnesses increasing demographic diversity through immigration, understanding and addressing the barriers to healthcare experienced by immigrants becomes paramount. This systematic literature review focuses on synthesising quantitative evidence to comprehensively analyse the self-perceived barriers to healthcare access faced by immigrants in Europe.

The dynamic nature of immigration patterns in Europe has brought about a rich tapestry of cultural, linguistic, and socio-economic diversity. This diversity also presents challenges, with immigrants often encountering significant barriers when seeking public services, of which healthcare is one of the most crucial to one's wellbeing. The complexities involved in navigating healthcare systems in a foreign land, coupled with socio-economic disadvantages, potential language barriers, cultural differences, and legal intricacies, contribute to distinctive sets of challenges for immigrant populations compared to natives.

Research on the topic of barriers to healthcare experienced by immigrants has traditionally focused on long-standing host countries such as the United States and Canada, documenting differences in healthcare access between migrant and native populations [1,6,8,11,21,22,27,41,42,45]. Research in Europe is sparse, as information on the health of migrants, including health determinants and their use of health services, is not readily available in most EU countries [2–4,15,16,24,25,34,44,46]. Studies specifically focused on barriers faced by migrant groups are even more sparse and an updated quantitative comprehensive study is lacking. To the best of our knowledge, Gil-Gonzalez et al. [17] is the most updated umbrella review of barriers to healthcare access among migrants. The paper analyses systematic reviews conducted from 1950

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to 2011, mostly in the USA and Canada, while only two of the reviewed studies are conducted in European countries (Denmark, Germany, the Netherlands, Spain, Sweden, the UK, and Italy). These latter studies, which focused on somatic and mental healthcare in particular, mainly reported indirect measures of barriers to healthcare, such as lower uptake of medical examinations [10,31]. The present paper contributes to advancing the knowledge on the topic by disentangling healthcare barriers faced by immigrants through an updated systematic review. This review identifies quantitative studies in which immigrants are personally asked to report on the various barriers they face, focusing on the less-studied European context.

The numerous obstacles and barriers faced by migrants, as highlighted by research, can be primarily categorised as either formal or informal [32]. Formal (structural) barriers stem from external systemic factors related to health policies, such as legal restrictions or policy-based constraints, and the organization of health systems, such as infrastructure limitations, difficult timetables, geographical distance from health services, and waiting times [28]. Legal restrictions on entitlement to health services (including lack of health insurance and legal limitations on eligibility), are common in many European Union countries and may disproportionately impact undocumented migrants and asylum seekers. Mostly, only emergency services are available to undocumented migrants, and some EU member states even restrict access to emergency care, although there are variations among EU countries. Although the Directive 2013/33/EU establishes that EU Members must provide emergency care and essential treatment for illnesses and serious mental disorders to asylum seekers, national legislation varies across Members States, and asylum seekers may face some barriers or limitations. Bozorgmehr and Razum [5], for example, illustrate the case of asylum seekers in Germany, who are provided with healthcare-vouchers valid for a limited period of time. Other structural issues, such as long waiting times, high medication costs, and residency-base requirements, can hinder healthcare access for undocumented and documented migrants alike [4,15,19]. Formal barriers may also include special requirements for referral to specialist care and the imposition of user fees, contributing to inequity in access, especially for migrant groups with lower socioeconomic status.

Informal (agency-based) barriers arise from the individual perspectives or actions of migrants, such as distrust of the healthcare system, language barriers, lack of awareness or health literacy, and sociocultural factors. Language knowledge stands out among the informal barriers, contributing to heterogeneity in healthcare utilization. Various studies have found that limited proficiency in the host country's language leads to lower or inappropriate use of health services [7,14,16,32,37]. Moreover, limited communication with migrant patients may lead to misunderstandings, missed appointments, non-compliance, and ultimately result in suboptimal care and reduced treatment adherence [1,19,22,26,40]. These adverse outcomes can also stem from limited health and legal literacy. For example, a lack of awareness about rights and legal matters, may prevent migrants from realizing their legal rights during medical care and hinder their ability to overcome barriers to accessing healthcare services [43].

Socio-cultural factors encompass discrimination and stigmatization, often intertwined with cultural preferences regarding health beliefs. The health beliefs held by patients and their families, who may have a limited understanding or sharing of Western medical concepts, may generate mistrust against Western medical treatments; on the other hand, Western health practitioners may have limited understanding or sharing of other health belief systems [47]. Hence, reduced adherence to Western medical treatments may stem from the increased prominence of traditional health beliefs over biomedical protocols, particularly when dealing with complex medical issues during periods of stress and illness [23,35,47]. Cultural preferences include the recourse to 'traditional' healers by some ethnic group members [7,18,35]. Finally, the literature highlights the importance of personal characteristics, especially education and age, in predicting health service attendance among migrants.

Both documented and undocumented migrants may experience agency-related barriers, but undocumented migrants may experience heightened distrust of the system or reluctance to seek help due to fear of deportation, while documented migrants may struggle more with barriers such as language difficulties or lack of awareness about available services.

As healthcare systems strive to be inclusive and responsive to the needs of diverse populations, an evidence-based understanding of the barriers to healthcare faced by immigrants becomes indispensable. Through the synthesis of quantitative evidence, this review aims to identify common patterns and potential determinants of healthcare access barriers for immigrants in Europe. The identification of common or country-specific barriers provides the policymakers at different decision levels, and healthcare providers, with a quantitative base to elaborate effective strategies to mitigate these barriers, fostering a healthcare environment that is equitable and accessible for all, regardless of immigration status or background.

The remainder of the paper is structured as follows: the following section reports the PRISMA checklist for systematic reviews, detailing the data and the methods used; the Results section provides a summary of the healthcare barriers outlined in the selected articles and presents their incidence within the immigrant population; finally, the Discussion section critically assesses the findings and concludes.

2. Methods

The applied method is a systematic literature review of the quantitative evidence. The present study follows the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) checklist.

2.1. Eligibility criteria

2.1.1. Population

We focused on the adult immigrant population. We excluded studies on immigrants in detention centres because of the low comparability of results.

2.1.2. Outcome of interest

Studies must identify specific barriers to accessing healthcare reported by immigrants. We excluded from the review studies that indirectly find evidence of barriers to healthcare, such as lower access rates for immigrants compared to natives. Studies that express barriers only in a generic form (e.g. surveys asking whether an immigrant "has experienced difficulties in accessing healthcare") without disentangling specific barrier types were excluded. Additionally, studies that only identify legal restrictions, such as the absence of health insurance, as barriers to healthcare for immigrants were excluded, as we believe that such policy issues warrant separate investigations.

2.1.3. Setting

We included in the review studies conducted only in European countries. In addition to the EU28 countries, Switzerland, the UK, Norway, Iceland and Eastern European countries were considered eligible settings.

2.1.4. Study design

For the sake of homogeneity and comparability, we selected only studies that quantitatively report immigrants' self-perceived barriers to healthcare. Indeed, as highlighted by Sataloff et al. [39], systematic reviews usually include a single type of studies (qualitative or quantitative).

2.1.5. Comparator

We included in the review studies with and without a comparison group.

2.1.6. Other

We excluded studies written in languages other than English. We conducted searches for peer-reviewed studies published from 2011 onwards, as the most updated umbrella review refers to the period before 2012.

2.2. Information sources

Two major online databases were searched: PubMed and Scopus. We chose to search these citation databases because they include topics relevant to our review question and materials are indexed. PubMed Includes over 18 million citations from MEDLINE, a database of journal articles in life sciences, especially biomedicine, maintained by the National Library of Medicine (NLM), and other life science journals. Subject coverage includes all areas of medicine and related disciplines. Scopus is a multidisciplinary database which is very strong in the sciences and has many useful search features.

2.3. Search strategy

The research question was divided into two main topics: access to healthcare and immigration. For the first topic, search terms included: access to healthcare, accessibility of health services, health services availability, availability of health services, programme accessibility, health services misuse, health services need, health services demand, and barriers to health care. For the second topic, search terms included: immigrant*, migrant*, emigrant*, alien*, transient*. Searches were conducted in titles and abstracts. The final search string was entered into the two search engines linking the keywords with the Boolean operator "OR" and the two main topics with the Boolean operator "AND". We applied further restrictions regarding the publication year (2011 onwards) and language (English). The search was conducted on 19/09/2023. The full search strings are reported in Table 1.

2.4. Selection and data collection process

We compiled an Excel file containing all titles and abstracts resulting from the search. We identified duplicate records based on DOI. When DOI was not available, the presence of duplicates was manually checked based on titles. One author (A1) reviewed each title and abstract to exclude those not meeting the inclusion criteria. A1, A2 and A3 independently reviewed the full text of the selected studies. The decision to include a study in the final selection was jointly made by the three authors. One author (A1) collected data from the studies and summarised it into an Excel file. No automation tool was used in the process.

Table 1
Search strings.

Search engine	Search string
Pubmed	((migrant*[Title/Abstract]) OR (immigrant*[Title/Abstract]) OR (emigrant*[Title/Abstract]) OR (alien*[Title/Abstract]) OR (transient*[Title/Abstract])) AND ((access to health care[Title/Abstract]) OR (accessibility, health services[Title/Abstract]) OR (availability of health services[Title/Abstract]) OR (health services availability[Title/Abstract]) OR (accessibility of health services [Title/Abstract]) OR (programme accessibility[Title/Abstract]) OR (health services misuse[Title/Abstract]) OR (health services needs [Title/Abstract]) OR (health services demand[Title/Abstract]) OR (barriers to health care[Title/Abstract]) AND (2011:2023[dp]) AND (eng[la]))
Scopus	TITLE-ABS-KEY ((migrant* OR immigrant* OR emigrant* OR alien* OR transient*) AND ("access to health care" OR "accessibility, health services" OR "availability of health services" OR "health services availability" OR "accessibility of health services" OR "programme accessibility" OR "health services misuse" OR "health services needs" OR "health services demand" OR "barriers to health care")) AND PUBYEAR > 2010 AND PUBYEAR < 2024 AND (LIMIT-TO (LANGUAGE, "English"))

2.5. Data items and synthesis methods

From each publication we extracted the following items: bibliographic information (authors, journal, publication year), country of study, geographical level of study (national or local), year(s) of data collection, number of observations, sampling strategy (random sampling, cluster sampling, convenience sampling), type of population of study (non-natives, refugees & asylum seekers, selected nationalities, undocumented), other restrictions based on population characteristics (if any), applied methodology (purely descriptive vs inferential analysis), comparator group (if any), barriers discussed. Results were synthesized in an Excel table recording the above-mentioned characteristics of the studies (Data items). Table 2 and Fig. 2 report the key articles' features. A table reporting the full characteristics of the studies is available in the Appendix.

2.6. Reporting bias and certainty assessment

We formally assessed the risk of bias of the selected studies by applying a checklist adapted from the JBI critical appraisal tool for prevalence studies and the JBI critical appraisal tool for cross-sectional studies [29,30]. We chose to include only published, peer-reviewed, work in order to ensure that a minimum standard of quality is met.

3. Results

3.1. Study selection

The final search strategy yielded 1487 studies. After removing 404 duplicates, we reviewed the titles and abstracts of 1083 articles. The number of studies that did not meet the eligibility criteria was 1055, while 28 studies qualified for full-text analysis. Finally, 22 studies were included in the review. The selection process is summarized in Fig. 1.

3.2. Risk of bias in studies and certainty of evidence

More than half of the selected studies have a low risk of bias (12 studies). The rest of the selected studies have a moderate risk of bias (10 studies) due to small sample size, lack of a comparison group and/or lack of strategies to deal with confounding factors. A table reporting risk of bias results is available in the appendix. As the goal of the review is to qualitatively identify all healthcare barriers self-reported by migrants in Europe, and considering the paucity of research on the topic, we chose to include in our review research with both low and moderate risk of bias. Moreover, since we include only peer-reviewed studies, we believe that a reasonable standard of quality is met.

3.3. Study characteristics

Table 2 lists in alphabetical order of the articles included in the review along with some key characteristics. Publishing years range from 2012 to 2023, as per criteria applied. The 22 articles appeared in 6 different journals: International Journal of Environmental Research and Public Health (5 articles; [2,6,7,11,12] in Table 2), Health Policy (2 articles; [5,18]), BMC Public Health (2 articles; [21,22]), BMC Research Notes (2 articles; [9,15]), BMC Health Services Research (2 articles; [8,16]), The European Journal of Public Health (2 articles; [1,17]).

The studies included data from 29 different European countries: two thirds of the studies used local-level data (14 articles; [1,3,4,8,9,12,14–22]), and one third used national-level data (8 articles; [2,5–7,10,11,13,18]). Only 2 studies included data from multiple countries, while the rest focus on a given country [5,19]. Among the latter, Northern European countries (10 studies; [1–3,9,10,15,16,18,20,22]) have been studied more often than Southern (6 studies; [4,7,11,14,17,21]) and

Table 2
List of studies selected for the review and key features.

ID	Author (pub. year)	Journal	Sample size	Context of study	Population of study	Comparison group	Research Methods
1	Baroudi et al. (2020)	The European J of Public Health	1089	Sweden, 2016–2017	Non-natives	Natives	Descriptive; Multilevel analysis
2	Çilenti et al. (2021)	Int J Environ Research and Public Health	3000	Finland, 2011	Selected nationalities (Russian, Somali, Kurdish)	None	Descriptive
3	Darling et al. (2013)	Postgraduate Medical J	50	Switzerland, 2010	Non-natives	None	Descriptive
4	Desipris et al. (2022)	Archives of Hellenic Medicine	136	Greece, 2020	Refugees	None	Descriptive
5	Dourgnon et al. (2023)	Health Policy	222,000	Multiple countries, 2013–2015	Non-natives	Natives	Descriptive; Linear probability model
6	Dzuvora et al. (2014)	Int J Environ Research and Public Health	912	Czech Republic, 2013	Selected nationalities (Ukraine and Vietnam)	Within immigrants (type of permit)	Logistic regression
7	Garcia-Subirats et al. (2014)	Int J Environ Research and Public Health	21,818 & 15,200	Spain, 2006 & 2011	Selected nationalities (Born in low- and middle- income countries)	Natives	Descriptive
8	Giese et al. (2013)	BMC Health Services Research	242	Germany, 2011–2012	Selected nationalities (Turkish)	Within immigrants (2nd generation)	Descriptive; Logistic regression
9	Hadziabdic et al. (2014)	BMC Research Notes	53	Sweden, 2011–2012	Refugees	None	Descriptive
10	Harpelund et al. (2012)	Scandinavian J of Public Health	2866	Denmark, 2007	Selected nationalities (Jugoslavia, Iran, Iraq, Lebanon, Pakistan, Somalia, Turkey), includes Pakistani and Turkish descendent	Within immigrants (nationalities)	Descriptive; Logistic regression
11	Kantaris et al. (2014)	Int J Health Planning and Management	625	Cyprus, 2010–2011	Non-natives	None	Descriptive
12	Klingberg et al. (2020)	Int J Environ Research and Public Health	172	Switzerland, 2016–2017	Asylum seekers	Natives	Mean difference
13	Koopmans et al. (2013)	International J of Social Psychiatry	9077	Netherlands, 2001–2003	Selected nationalities (Suriname, Dutch Antilles, Morocco and Turkey)	None	Descriptive; Logistic regression
14	Linhas et al. (2019)	Pulmonology journal	119	Portugal, 2015–2016	Non-natives	None	Descriptive; Logistic regression
15	Mangrio et al. (2018)	BMC Research Notes	641	Sweden, 2015–2016	Refugees	None	Descriptive
16	Mona et al. (2021)	BMC Health Services Research	104	Sweden, 2014–2016	Undocumented	None	Principal Component Analysis
17	Ndumbi et al. (2018)	The European Journal of Public Health	672	Spain, 2013–2015	Non-natives, undocumented	Within immigrants (regular vs irregular)	Descriptive; Logistic regression
18	Nielsen et al. (2023)	Health Policy	486	Denmark, 2021	Non natives, Refugees	Within immigrants (type of permit)	Descriptive; Logistic regression
19	Riza et al. [25]	Int J Environ Research and Public Health	1407	Multiple countries, 2018–2019	Non natives, Refugees	None	Descriptive
20	Topal et al. (2012)	Health and Quality of Life Outcomes	416	UK, 2010	Selected nationalities (Turkish)	Within immigrants (Cyprus vs Turkey)	Descriptive; Logistic regression
21	Vianello et al. (2020)	BMC Public Health	170	Italy, 2019	Selected nationalities (Moldovan)	None	Descriptive; Logistic regression
22	Wångdahl et al. (2014)	BMC Public Health	455	Sweden, 2013	Refugees	None	Descriptive; Logistic regression

Central (4 studies; [6,8,12,13]) European countries. Sweden is the most frequently studied country (7 studies in total, including 2 multi-country studies; [1,5,9,15,16,19,22]). The sample size spanned from 50 observations to 222,000 observations. Only 7 out of 22 studies used datasets with more than 1000 observations [1,2,5,7,10,13,19] and only 2 out of 22 studies used datasets with more than 10,000 observations [5,7]. A random sampling strategy representative at the national level has been applied in 6 out of 22 studies [2,5–7,10,13]. Studied timeframes ranged from 2001 to 2021. The most studied period was 2015–2016.

We classified the immigrant populations under study as follows: non-natives (8 studies; [1,3,5,11,14,17–19]), refugees and asylum seekers (7 studies; [4,9,12,15,18,19,22]), selected nationalities of interest (8 studies; [2,6–8,10,13,20,21]), and undocumented immigrants (2 studies; 16 and 17). Among the selected nationalities were: Turkish immigrants living in Germany, the UK and the Netherlands; Russian, Somali and Kurdish immigrants living in Finland; Surinamese, Dutch Antillean and Moroccan immigrants living in the Netherlands; Ukrainian and Vietnamese immigrants living in Czech Republic; Moldovan immigrants living in Italy. Several articles applied additional population restrictions, such as age brackets, spoken language, and length of residency in the country. One study focused specifically on individuals with a particular illness (HIV, [17]), while two studies concentrated on individuals with a given occupation (domestic helpers, [11] and sex workers, [3]). Finally, one study exclusively examined the female population [21].

Most papers identified access to generic healthcare services, measuring factors such as the difficulty in reading “medical pamphlets” or in obtaining appointments with “a doctor”. Two papers focused on specific health services (youth centres, [1], and mental health services, [13]), while two others concentrate on access to given local health services (the Emergency and Ambulatory care Departments in Lausanne, Switzerland, [3], and the University Hospital Marienhospital in Herne,

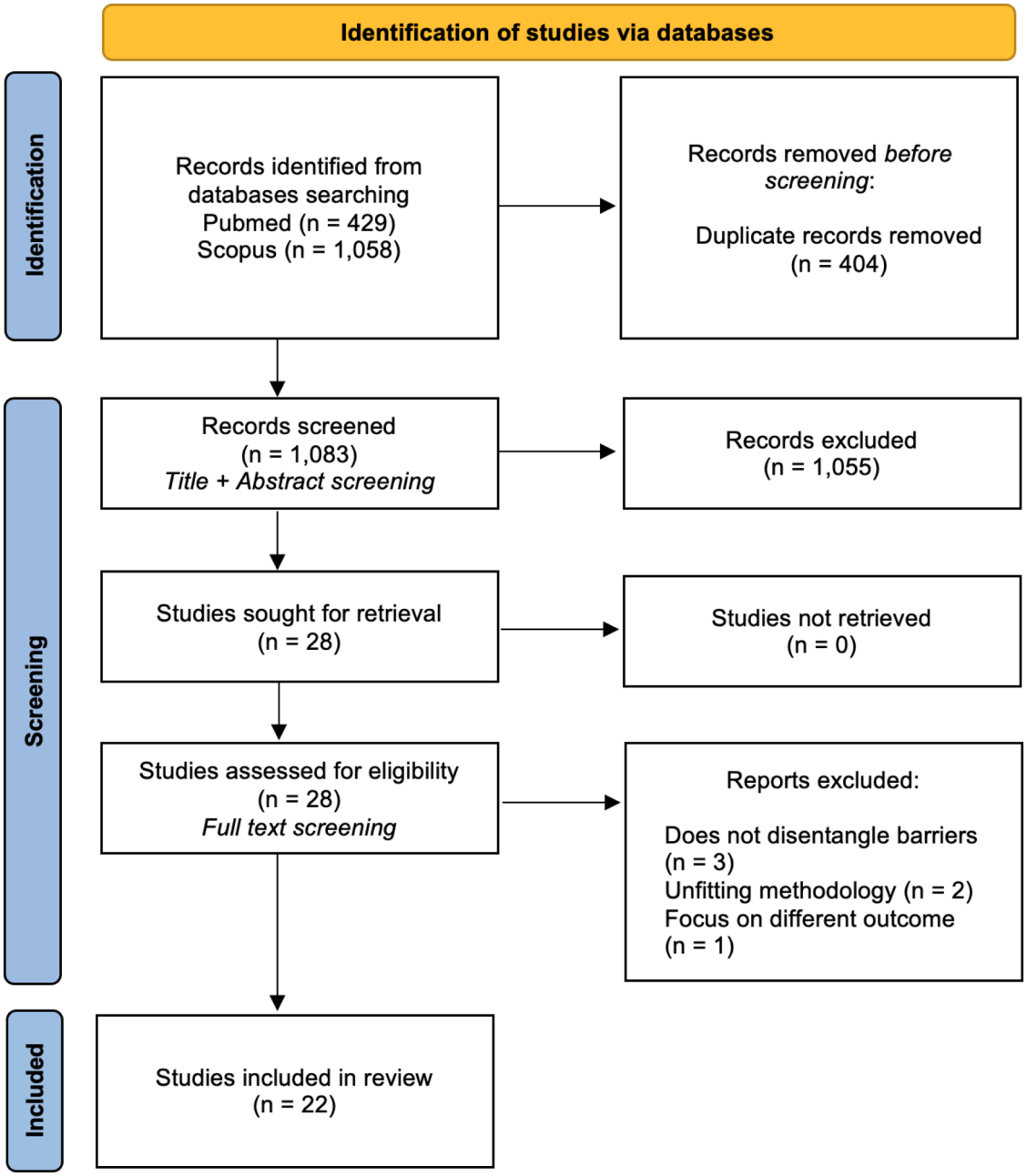

Fig. 1. PRISMA flow diagram of papers' selection.

Germany, [8]).

As for the statistical methods chosen to study immigrants' barriers to healthcare, 10 articles reported only descriptive statistics [2–4,7,9,11,12,15,16,19], while 12 articles applied regression analyses [1,5,6,8,10,13,14,17,18,20–22]. Within the former group, one article used principal component analysis to assign barriers into two macro-areas [16]. Among the articles applying regression analyses, 8 used barriers to healthcare as a dependent variable [1,5,8,10,14,17,18,22], while 4 articles used barriers to healthcare as an independent variable [6,13,20,21]. In these studies, the logistic model was the most frequently used. Comparison of immigrants to natives was conducted in 5 articles [1,5,7,12,13], while 5 articles made comparisons within the immigrant group, according to their nationality, country of birth, or permit status [6,8,10,17,18.20]. Finally, 11 articles did not juxtapose any comparison group to the immigrant group, neither within nor between other populations [2,3,4,9,11,14–16,19,21,22].

Fig. 2 illustrates the described characteristics of the studies. The grid categorised articles according to the immigration group under focus (non-natives, refugees and asylum seekers, selected nationalities and undocumented immigrants) and the geographical level of the studied data (local level or national level). The circles' size indicates the sample size (1–199; 200–499; 500–999; 1000–9999; 10,000–99,999; 100,000+), the circles' colour indicates the geographical area under focus (Northern Europe, Central Europe, Southern Europe) and the darker border line indicates studies that report barriers with purely descriptive statistics. The number shown inside the circles refers to the papers' ID as shown in Table 2 above. Studies may belong to more than one category.

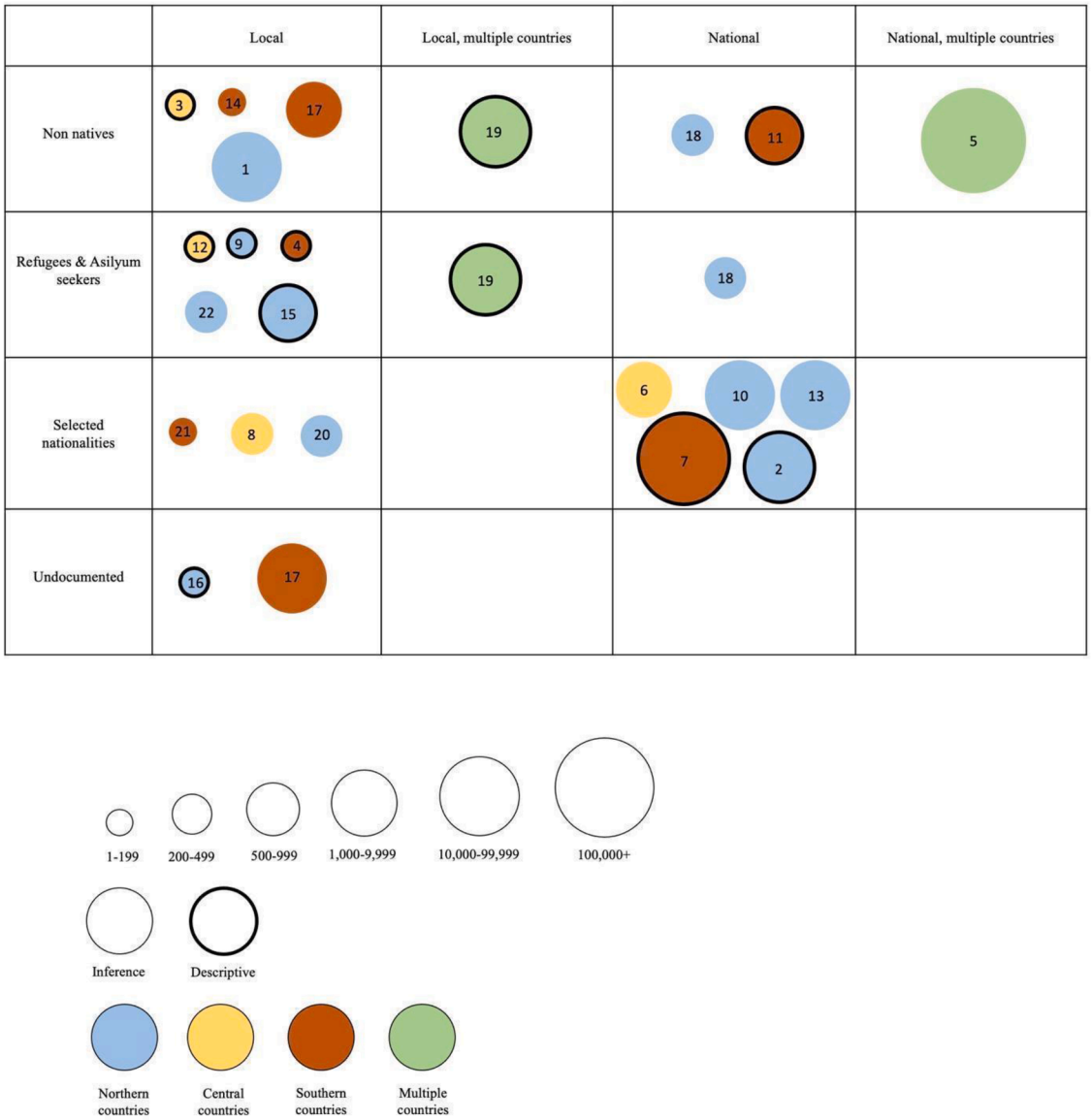

Fig. 2. . Selected articles by immigrant group and geographical level of study.
Legend: Circle sizes indicate the sample size; dark borders indicate a purely descriptive methodology; colours indicate the region of study (Norther, Central, Southern European countries, or multi-country); numbers indicate the papers' ID as shown in the Table 2 above.

3.4. Results of individual studies: barriers to healthcare faced by immigrants

We identified 10 different barriers to healthcare faced by immigrants, as reported in Table 3. The first category includes all barriers linked to linguistic issues, including proficiency in the host-country language and the perceived need for interpreters. The Health Literacy category pertains to barriers arising from ignorance of the health system and of one's rights, as well as difficulties in understanding medical pamphlets and information. The Financial category encompasses all barriers related to the cost of services, including interpreter fees and transport expenses to access health services. We categorised all barriers related to distrust due to cultural differences, immigrants' scepticism regarding the effectiveness of treatments and the quality of health services, and concerns about confidentiality under the label "Trust". The Geographical Location barrier refers to delayed or renounced care due to travel distance and lack of travel assistance. The Waiting Time category encompasses waiting times to get appointments and in facilities. The Time Schedules category refers to problems with opening hours of health services. The Fear category includes fear of the police, fear of job loss, as well as fear of relatives or friends finding out about the visit. The Discrimination category refers to feelings of discrimination for any reason, either by health professionals or by fellow patients. Finally, we created a residual category for barriers that could not be assigned to any

Table 3
Number of studies investigating a given barrier to health care, and their ID as per Table 2.

Barriers to healthcare	Number of studies	References ID
Linguistic	16	[2,4,6,8–20]
Health Literacy	11	[2,3,4,11,12,14–17,21,22]
Financial	11	[2–5,7,11,14–17]
Trust	9	[1,2,4,11,12,14–17]
Geographical location	7	[2,4,7,9,11,14,16]
Waiting Time	7	[2,4,7,14–17]
Time Schedules	7	[4,7,11,12,14,15,17]
Fear	3	[1,14,16]
Discrimination	3	[1,4,14]
Other	8	[2–5,7,11,15,16,20]

of the 10 listed categories, due to disagreement among the authors or questions' phrasing that could not be linked to a specific category, either because too generic ("it has been difficult to get treatment for other reasons"), or too specific ("did not get medication because the employer did not buy it").

The most frequently considered barrier was the linguistic one, discussed in 16 articles. Among these, 6 articles exclusively focused on language as a barrier, and 10 articles include it among other barriers. The second most considered barriers are health literacy and financial barriers, discussed in 11 studies, followed by trust, and logistical barriers (distance, waiting times, and time schedules). Fear and discrimination are the least discussed barriers, present in only 3 articles.

3.4.1. General immigrant population

Health literacy, which refers to the individuals' ability to gain access to, understand and use information in ways which promote and maintain good health [33], emerged as a significant barrier for immigrants. In one study [11], 70% of surveyed immigrants considered their knowledge of health insurance policy to be bad or very bad, with 36.7% unsure about their health insurance status, and 14.9% unaware of how to access the health service. Another study [14] showed that 68% of the respondents found it hard to understand how they could be assigned a doctor, and 65% were unsure about their rights to access medical care. Similarly, a third study [3] found that 66% of their sample was not aware of the local ambulatory care department, and 38% was not aware of the local Emergency Department. Lastly, in another study [21], respondents with a limited health literacy visited GPs and specialists less often than those with good health literacy, and made less use of preventive health services such as mammography and pap smear.

The language barrier was also a common obstacle to healthcare for immigrants, albeit with considerable variability. Research indicated that 38.6% [11], 36.5% [20], and 21% [14] of the respondents declared to need assistance in order to communicate with health professionals. One study [8] found that 55.4% of respondents self-rated their proficiency in the host-country language to be average or worse, and 46.3% of them did not have a good understanding of what the physicians told them. Immigrants with a poor knowledge of the host-country language were found to be twice as likely to not enter the public health insurance system compared to those having a good knowledge of the language [6]. Gimeno-Feliu et al. [18], while finding that only 19% of their sample declared a need for an interpreter when visiting a doctor or hospital at the time of the interview, it also discovered that 70% of them had previously attempted to use friends or family as interpreters. Claassen et al. [10] revealed that 14.9% of the surveyed immigrants expressed a need for interpreters, although with significant variations based on nationality. As expected, the language barrier was found to decrease in importance as the length of stay increases [10] and to be drastically less prominent among second-generation immigrants [8]. Finally, national language proficiency was not significantly correlated to the use of mental health care in a Dutch nationally representative sample, suggesting that language may not be a significant barrier to accessing mental healthcare services in the Netherlands [13].

The incidence of financial barriers reported in the studies is 61% [3], 37% [14], 27.2% [11] and 2.7% [7]. As for logistic barriers, reported prevalence is 58% [14], and 23.3% [7] for waiting times concerns; 42% [14], 22.8% [11] and 13.7% [7] for time schedule issues; and 32% [14, 11] for problems related to the geographical location of the health facilities, although another study found an incidence of only 1.9% in 2006 and 0% in 2011 [7] for such issues. Discrimination from health professionals was mentioned by 28% of respondents, and discrimination from other patients by 11% of respondents [14]. Trust concerns were mentioned by 28% [14] and by 6% [11] of interviewed immigrants. Fear of losing one's job was reported by 25% of respondents in one study [14].

The ranking of the three most commonly reported barriers, rather than the exact incidence, was reported by one study [2]. These belong to the Trust, followed by the Financial and the Linguistic category for one immigrant group (Russian origin); and to the Financial, followed by the Linguistic and the Waiting Times category for a second immigrant group (Kurdish origin). Finally, one reported barrier was highly contingent on the population group of interest: among immigrants living in Cyprus working as domestic helpers, 30% mentioned the unwillingness of their employers to grant leave as a reason for not using health services despite needing them [11].

Few studies compared outcomes between immigrants and native populations [5,7,1]. Compared to natives, immigrants were more likely to experience both financial and non-financial barriers in a sample from 27 European countries [5]. In Carroll et al. [7], the prevalence of the barriers "lack of time" and "personal reasons" was higher among immigrants compared to natives; however, the prevalence of "waiting times" and "financial cost" was higher among natives. Ahmed et al. [1] found a significant negative penalty for immigrants compared to natives concerning self-perceived equity, respect, and overall friendliness, but no penalty regarding privacy and confidentiality concerns, feeling of judgement and fear of exposure.

3.4.2. Refugees and asylum seekers

Several studies have highlighted linguistic barriers among refugees and asylum seekers [9,19,18,12,15]. Gimeno-Feliu et al. [18] found that compared to people holding an EU/EEA residence permit, refugees were more likely to experience interpretation needs (OR 10.2, 95CI 5.28–19.7). Cernigliaro et al. [9] found that more than 90% of interviewed refugees needed interpreters during interactions with healthcare, and Hacker et al. [19] stated that 56% of interviewed refugees were always or most of the time in need of an interpreter. Cupertino et al. [12] reported that 53.8% of the asylum seekers sample could not communicate with the doctor because of language barriers. In De Vito et al. [15] about 30% of refugees mentioned language barriers as a reason for not seeking healthcare (33.6% of men and 26.7% of women).

Limited health literacy emerged as another significant barrier for refugees and asylum seekers [4,12,15,22]. Kalich et al. [22] found that 80% of interviewed refugees had limited functional health literacy, and 62% of them had limited comprehensive health literacy. Moreover, Björngren Cuadra [4] found that 59.5% of sampled refugees mentioned "ignorance about where to go" as a barrier to healthcare, Cupertino et al. [12] showed that 30.2% of interviewed asylum seekers had no knowledge of the local health system, and De Vito et al. [15] reported that almost 20% of respondents did not know where to turn when in need of healthcare.

Other barriers investigated among refugees and asylum seekers included waiting times (mentioned by 46.4% of men and 57.5% of women in [15] and by 67% of respondents in [Ref. 4], financial barriers (mentioned by 39.1% of men and 28.8% of women in De Vito et al. [15] and by 50.9% of respondents in Björngren Cuadra [4], geographical location (mentioned by 69.6% of respondents in Björngren Cuadra [4] and by 60% of respondents in Cernigliaro et al. [9]), and time schedules (mentioned by 37.9% of respondents in Björngren Cuadra [4], 25.4% of respondents in Cupertino et al. [12], and about 10% of respondents in De Vito et al. [15]). About 30% reported discrimination in Björngren Cuadra [4]. Trust issues were reported by 20% of respondents in Björngren Cuadra [4], about 12% of respondents in De Vito et al. [15] and 19.4% of respondents in Cupertino et al. [12]. Refugees were compared to natives only in Cupertino et al. [12], which found that opening hours were a barrier with higher prevalence among natives than among asylum seekers.

3.4.3. Undocumented immigrants

Two studies identified undocumented immigrants [16,17]. Devillanova and Frattini [16] focused solely on this immigrant group and categorised barriers to healthcare into three main areas: "fear of being taken by the police/authorities", "structural factors" (such as lack of public transport and long waiting times), and "psychosocial factors",

which relate to the way the patients and their relatives perceive illness. The prevalence of self-perceived barriers to healthcare among this sample of undocumented immigrants was 55.4% [16]. Gil-González et al. [17] compared undocumented migrants to regular migrants, showing that undocumented migrants were more likely to experience barriers in access to healthcare. However, the discussion of the specific barriers was conducted only on the overall migrant sample, without differentiating by immigration status.

4. Discussion

Our review highlighted a great diversity in the research of migrants' barriers to healthcare services. Some studies focused on a single barrier, while others looked at multiple types of barriers. Most studies referred to sub-national contexts, making it difficult to compare findings and identify common patterns of behaviour among foreign populations. In addition, some contexts remained unexplored or under-researched (Southern Europe), while others have received more attention (Sweden). Often, analyses at a local level are based on small samples (less than 200 people) which limits the possibilities of comparison between subgroups and affects the robustness of the estimates. The most studied period was 2015–2016, likely reflecting heightened interest in the topic during this time. This increased attention may be attributed to the 2015 refugee crisis that followed the Syrian civil war, along with the second Libyan civil war and the 2014–2017 conflict in Iraq. However, as migrants remain a stable component of the European population, and migration flows to Europe have continued to be sustained afterwards, additional research considering more recent years is needed.

Despite this diversity, the analysis presented above allowed us to draw out some key considerations.

The review highlighted that undocumented migrants, the group most at risk of experiencing these structural barriers, remain under-researched. This lack of data on undocumented migrants restricts the ability to monitor and address the specific challenges they encounter. This underscores the need for targeted surveys among undocumented migrants to gather statistical evidence that can inform and support the development of tailored policies, that should aim to provide healthcare access regardless of immigration status.

On the other hand, policies aimed at addressing agency-related barriers should focus on enhancing community outreach, implementing health literacy programs, and fostering trust between healthcare providers and migrant communities. Our results indicate that health literacy is the most common barrier across European countries, affecting a relatively constant proportion of foreign population. While many barriers exhibit significant variability depending on both the country of origin and destination, the results for health literacy were rather homogenous, indicating that approximately 60/70% of the foreign population struggles to understand the healthcare system. To the best of our knowledge, this is the first time that this homogeneity has been highlighted and it is a call for policy interventions to promote health promotion and education programmes targeted at migrants, and the adaptation of health services to migrants, to increase migrants' knowledge of the health system, to raise migrants' awareness of their health rights and to help them access appropriate services through (audio-visual) campaigns and visual materials. In addition, it is crucial to fund training programmes for medical and health personnel to adopt a clear health communication strategy, including the use of videos, pictograms or other forms of communication [20], and to provide "guidelines for staff on the care entitlements of different migrant groups" ([38], p. 11). Communication can also be improved through the recruitment of migrant health professionals [13]. These policies are usually aimed at documented migrants, although there is no shortage of cases where policies are also aimed at the undocumented, as in the case of the Italian Region of Emilia Romagna, where specific programs to facilitate access to healthcare for undocumented migrants, including outreach and support services, were implemented [9].

Confirming previous evidence, we found that another significant challenge faced by immigrants was the access to professional interpreting services, the limited availability of which hinders accurate communication of medical information and patient understanding, limiting patients' adherence to care recommendations and medication use. Relying on relatives or friends as interpreters may not always be ideal due to potential language and confidentiality issues. To reduce language barriers, in addition to promoting literacy and language classes among recent migrants, Dauvrin and Varga [13] and Hersh et al. [20] suggest the use of new technologies such as videoconferencing with interpreters, which reduces costs and guarantees access to translation, or the use of visual aids. Once again undocumented are excluded from most policies that address cultural and language barriers. Among them, however, these barriers may be more pronounced due to fear of disclosing undocumented immigrant status. Policies could include community-based health initiatives that specifically address these barriers. For example, in several U.S. states, "Promotores de Salud" (Community Health Workers) programs train members of local communities to provide health education and navigation assistance to undocumented populations, helping them overcome fears associated with seeking care [12].

Moreover, many migrant patients experience social isolation and lack support networks, making it essential to build connections with social services, NGOs, families, and community associations for holistic care. This is particularly the case for undocumented migrants who do not have access to formal welfare support and may also have low levels of social support due to their recent arrival.

Financial barriers are usually considered to be one of the main barriers. However, according to our systematic review, there is no consensus on this finding: immigration contexts differ in terms of free entitlement to health care and the presence of NGOs providing free health care support to migrants excluded from formal support, which reduces the impact of financial barriers.

In addition, there are three methodological or technical issues that were not directly considered in the previous systematic reviews, but which we believe have emerged from our review as being particularly important when approaching the study of migrant barriers. First, the choice between whether or not to use a comparison group, and thus the identification of the group itself. Migrants may face the same barriers as natives, and indeed some barriers are not specific to migrants (structural barriers, such as waiting times, difficult timetables, and geographical distance from health services) but affect the whole population. Therefore, comparing with the native population can aid in interpreting the results and determining whether migrants encounter more difficulties or if their challenges are primarily attributable to structural factors such as long waiting lists or limited access in certain areas. This underscores the importance of examining the determinants of access to health services within each national context and customizing interventions to tackle the specific challenges faced by migrants in different healthcare systems.

Conversely, when investigating migrant-specific barriers, such as language or discrimination, it may be more suitable to compare migrants from different countries or migrants with different characteristics (such as civil stratification or length of stay) to identify disparities in access to health services and promote targeted policies. Regarding this last point, it would also be valuable to consider the perspective of healthcare providers, who encounter several difficulties when providing care for migrant patients. One significant challenge for them is the lack of access to medical history, especially for undocumented migrants, complicating treatment decisions and continuity of care [38]. Finally, legal and socio-economic challenges affecting migrants' health and well-being can also limit comprehensive care.

Second, the results of descriptive studies comparing migrants with natives or migrants with different characteristics may be biased by differences in the age structure of the population and therefore in their healthcare needs. Migrants are younger than the native population, and migrants who have been in the destination country longer may be older

than recent migrants, so some may face fewer barriers to health services because they do not need healthcare. Therefore, to avoid biased results one should always opt for matching techniques or multivariate models.

Finally, the lack of survey data at the national level on migrants' access to healthcare severely limits the analyses. Most of the studies are based on ad-hoc surveys designed by the authors to be conducted only once, often through convenience sampling, while only a few studies used data routinely collected by surveys already included in statistical monitoring programmes.

Providing updated data and monitoring migrants' access to healthcare system could help in evaluating policies interventions.

4.1. Limitations of the study

Our revision is constrained by several factors. Firstly, we limited our scope to include only papers published in English, potentially overlooking relevant findings published in other languages. Secondly, our search was confined to two online search engines, Scopus and PubMed, which, while quite comprehensive in their coverage, may have missed some pertinent articles. Additionally, we excluded grey literature from the review, which could have provided valuable insights. Furthermore, our focus was specifically on barriers to healthcare as reported by immigrants themselves, thus overlooking indirect measures of these barriers, such as lower uptakes compared to natives, and evidence of health professionals' witnessing barriers to healthcare for immigrants. In addition, we did not systematically assess the quality of the selected articles, leaving room for bias to be carried over from the primary studies to our review. Finally, comparisons and generalisation of results between studies are limited by differences in the populations studied and the barriers assessed, as stated in some of the papers reviewed (1, 2, 4, 5, 9, 20, 22). Despite the impossibility of generalising the results, the host contexts may be so different in terms of the health care system and entitlement to care, the presence of NGOs supporting undocumented or documented migrants, that generalisation is not always a suitable approach.

5. Conclusions

We performed the first systematic review on immigrants' self-perceived barriers to healthcare in Europe. Based on the findings, it becomes evident that addressing immigrants' ignorance of the health system warrants greater attention from policymakers and stakeholders. Enhanced understanding of the health system can facilitate timely access to health care, minimizing treatment delays, boosting migrants' engagement in screening campaigns, and curbing the misuse of emergency departments. As mentioned in the introduction, tackling barriers to accessing healthcare, encompassing legal, communication, cultural, and bureaucratic difficulties, is paramount, particularly given the health challenges faced by migrants and refugees [36]. Further and more robust research on other immigrants' perceived barriers to health care is also needed to better inform policy makers.

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CRediT authorship contribution statement

Chiara Allegri: Writing – review & editing, Writing – original draft, Validation, Methodology, Formal analysis, Data curation, Conceptualization. **Elisa Barbiano di Belgiojoso:** Writing – review & editing, Writing – original draft, Validation, Supervision, Project administration, Methodology, Funding acquisition, Conceptualization. **Stefania Maria Lorenza Rimoldi:** Writing – review & editing, Writing – original draft, Validation, Supervision, Methodology, Conceptualization.

Declaration of competing interest

None.

Supplementary materials

Supplementary material associated with this article can be found, in the online version, at doi:10.1016/j.healthpol.2025.105268.

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