

Barriers and facilitators to blood donation in the Global South, and Global North ethnic minorities: a scoping review

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Ensuring optimal matching between blood donors and recipients is essential for safe and effective transfusion therapy, particularly for patients with sickle cell disease and thalassemia. However, structural and cultural disparities in donor representation contribute to antigenic mismatches and increase the risk of alloimmunization among ethnic minority patients. Understanding determinants of blood donation is essential to diversifying donor pools. This scoping review explores barriers and facilitators to blood donation in the Global South and among ethnic minority groups in the Global North. A systematic search was conducted in Ovid MEDLINE, Ovid Embase, Web of Science, Scopus, and Global Index Medicus (July to August 2024). Studies addressing barriers, facilitators, and interventions related to blood donation were included. In total, 270 studies from 55 countries were analyzed. Commonly reported barriers were categorized as practical (eg, mobility of donation centers), medical (eg, ineligibility), and psychological (eg, needle phobia). Commonly reported facilitators were categorized as prosocial (eg, altruism), social (eg, staff hospitality), visibility (eg, education campaigns), and incentives (eg, token gifts). In the Global South, blood donation behavior was strongly shaped by lack of direct invitation to donate, family-oriented donation norms, religious beliefs, and context-specific incentive preferences. Among ethnic minorities in the Global North, barriers such as mistrust and exclusion were prominent, whereas bicultural identity and community engagement promoted donation. This review highlights the variation in donation decision-making and need for culturally responsive, context-specific recruitment, and retention strategies to improve donor representation, transfusion safety, and equitable access to blood products worldwide.

Introduction

Optimal matching between blood donors and recipients is essential to the safety and efficacy of transfusions. This need becomes particularly critical for patients with sickle cell disease and

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The data sets generated and analyzed during this study are available in the Open Science Framework repository at <https://osf.io/p69ty/files/osfstorage/69ed335a9768f0bb1df4e7ea>, which can be accessed at <https://osf.io/dfmbx>. The characteristics of the included studies are presented in a data extraction table in the Open Science Framework repository at <https://osf.io/p69ty>.

The research questions, search strategy, inclusion and exclusion criteria, study selection process, quality assessment, and data synthesis techniques were pre-defined in a registered protocol published on Open Science Framework.

The full-text version of this article contains a data supplement.

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thalassemia, for whom repeat red blood cell transfusions are crucial in managing and preventing complications.¹ Mismatches between donor and patient antigen profiles are associated with increased risk of alloimmunization, a potentially life-threatening immune response against foreign red blood cell antigens.² Furthermore, alloimmunization complicates future transfusions, because the development of multiple alloantibodies can make it difficult, sometimes impossible, to find compatible blood.³ In the general Western population, the cumulative incidence of alloimmunization is estimated at 2% to 5%^{4,5} but is substantially higher among transfusion recipients from ancestrally diverse populations in Western settings.^{5,6} This elevated risk is largely driven by antigenic mismatches between donor and recipient, particularly in contexts in which blood donor pools are less ancestrally diverse than transfusion-dependent patient populations.⁶ To reduce alloimmunization risk, minimizing donor-recipient antigen mismatches is essential, and increasing ancestral diversity among blood donors is a key strategy.

Two main reasons for the lack of blood donors from ethnic minority groups in Western blood supplies have been described. Firstly, current recruitment efforts are not effective in reaching and retaining potential donors from ethnic minority groups, due to limited understanding of individual cultural values and structural barriers.⁷ Second, donors of African descent are confronted with frequent deferrals due to lower hemoglobin values and travel to the country of origin, often areas where malaria is endemic, presenting a significant challenge to retention.⁸ A better understanding of knowledge, cultural sensitivities, and practical and emotional barriers related to blood and donation is required. For a more holistic understanding of individual and structural determinants of blood donation, we focus on 2 populations: general populations in the Global South and ethnic minority groups living in the Global North (terms increasingly considered reductive but used here for consistency).⁹ These populations are embedded in distinct contexts shaped by differences in health systems, cultural norms, and structural barriers.

To provide a comprehensive overview of the existing knowledge on this topic, this review takes an inclusive approach considering evidence from diverse research contexts, including those with limited resources. As such, variations across populations, health care systems, and geographic regions are captured, offering a more complete understanding of the factors influencing donation behavior and providing a foundation for developing novel, context-specific strategies for recruitment and retention of blood donors and effective donor-recipient matching.

Aims and background

This scoping review explored the determinants of donation behavior among general populations in the Global South and ethnic minority groups in the Global North. We addressed 2 key questions:

- 1 What are the barriers and facilitators for individuals from diverse ethnic groups to become and remain blood donors?
- 2 How can we identify more inclusive approaches to blood donation and long-term donor retention?

This review was conducted by an interdisciplinary team comprising a medical doctor, medical student, medical information specialist,

and a social scientist, each bringing distinct professional expertise. The team reflects diverse cultural backgrounds, including Middle Eastern descent, East African descent, and Afro-Surinamese heritage, all born and living in Western Europe, and of Western European background. This diversity informed the framing of research questions, interpretation of evidence, and sensitivity to regional and cultural nuances and contributed to a more inclusive understanding of blood donation practices across different contexts.

Methods

We adhere to the preferred reporting items for scoping reviews and meta-analyses with extension for scoping reviews guidelines.¹⁰

Search strategy

The systematic literature search was conducted from 10 July to 9 August 2024, using the databases Ovid MEDLINE, Ovid Embase, Web of Science, Scopus, and Global Index Medicus. The search strategy combined controlled terms and free-text terms for (synonyms of) “blood donation” (including “blood donors,” and “blood banks”), “countries in the Global South” (covering Africa, Asia, and Latin America, using both specific country names and regional terms), “motivation” (including “attitude,” “perception,” “trust,” “altruism,” “barriers,” “facilitators,” and “recruitment strategies”), and “people” (covering ethnic and racial minorities in the Global North, using terms such as “African-American,” “Afro-American,” “migrant,” and “underrepresented”). Retrieved citations were deduplicated using DedupEndNote.¹¹ The complete search strategy is provided in supplemental Tables 1-6.

Clinical trials and animal studies were excluded using the Cochrane randomized controlled trial (RCT) filter and a standard animal filter, because this scoping review aimed to map a broad range of barriers, facilitators, and contextual factors influencing blood donation and therefore focused on exploratory empirical studies. N.P.D., a medical information specialist at Amsterdam University Medical Centre, developed the search strategy in collaboration with Y.D. and E.-M.M., who reviewed and refined it before execution.

Study selection

Peer-reviewed quantitative, qualitative, or mixed-methods studies were included if they addressed barriers, facilitators, knowledge, attitudes, practices, or interventions related to blood donation. Studies from all world regions were considered. Studies conducted in the European Union, the United Kingdom, the United States, Australia, or New Zealand were excluded unless they specifically focused on blood donation among ethnic minority groups. Despite the research question focusing on the Global South, high-income countries located in this region that are not formally classified as part of the Global South, such as Japan and Qatar, were included. This reflects a contextual rather than income-based approach to country classification, prioritizing social, institutional, and population level characteristics over economic status alone.¹² Research targeting health care providers such as doctors or nurses was excluded, because their professional background could influence motivations for blood donation. Studies involving students in these disciplines were included. We

excluded papers unavailable through open access or academic libraries, nonoriginal publications such as conference abstracts, letters to the editor, reviews, commentaries, editorials and e-books, non-English publications, and studies that did not specifically address our research question or showed low scientific integrity.

Data extraction

The Y.D. independently screened all articles based on title and abstract using Rayyan, an online tool designed to facilitate the screening and selection process, categorizing articles as include, maybe, or exclude.¹³ E.-M.M. verified a random sample (10%) of excluded articles and reviewed all inclusion decisions. A total of 115 articles categorized as “maybe” were jointly reviewed by both screeners until consensus about inclusion and exclusion based on the selection criteria was reached. Subsequently, Y.D. and M.A. conducted full-text screening in Zotero, an open-source tool for managing references and full-text documents.¹⁴ The 18 articles classified as “maybe” during full-text screening were discussed with E.-M.M. until consensus was reached.

Information on barriers, facilitators, incentives, knowledge, attitudes, practices, and interventions was extracted, along with key findings and recommendations. In addition, the following data elements were extracted from the selected studies: first author, year of publication, study design, sample size, country and setting (urban/rural), sex distribution in the sample, blood donor status, study population, occupation or education level, religion, age, and donor type (voluntary, family/replacement, paid).

Data synthesis and quality assessment

An Excel spreadsheet containing all screened studies ($n = 346$) was developed in which both the data extraction and the eligibility decision could be reported. All studies were divided into 9 regions, as follows: sub-Saharan Africa (SSA), Latin America and the Caribbean, South Asia, Southeast Asia, East Asia, Central Asia, the Middle East and North Africa (MENA), Europe (non-Global North), and Oceania. In addition, studies focusing on ethnic minority groups residing in the Global North were grouped as a separate category. Regional categories were largely based on the World Bank regional classification, with minor adjustments made according to geographical location to better reflect regional and cultural proximity (eg, Pakistan categorized under South Asia instead of MENA).¹⁵ Once extraction for the first region was completed, the Y.D. and E.-M.M. reassessed the extraction table to determine whether additional variables should be included. These variables, that is occupation or education level and religion, were then added, and a final check was performed to ensure consistency and completeness.

The quality assessment was conducted using a lenient approach, intentionally chosen to accommodate the broad scope of this review and ensure the inclusion of studies from diverse regions. Although recognizing the potential limitations in research capacity in these regions, we prioritized inclusivity over strict methodological rigor. Study quality was assessed pragmatically based on adequacy of study design and transparency of reporting. In the data extraction table, we quantified missing data per study. Studies with ≤ 2 missing fields were classified as high quality, 2 to 3 missing fields moderate quality, and > 3 low quality. Although all included studies met the eligibility criteria, only a subset of high

and moderate quality is discussed in detail to illustrate key themes, whereas others informed the broader mapping of evidence.

Results

The study selection process is summarized in [Figure 1](#). The initial search yielded 16 383 records. After deduplication, 8690 unique records remained for title and abstract screening. After title and abstract screening, 346 records were assessed at full-text level, of which 270 met the eligibility criteria and were included in the final analysis.

These studies, published between 1989 and 2024, comprised research from 55 countries in the Global South as well as 43 studies focusing on ethnic minority groups in the Global North. The regional distribution of included studies was as follows: South Asia (23%), MENA (19%), SSA (19%), ethnic minorities in the Global North (16%), Latin America and the Caribbean (8%), East Asia (6%), Southeast Asia (6%), and other regions (3%). Oceania was prespecified but yielded no eligible studies. The results presented in “Commonly reported barriers and facilitators to blood donation across included studies” are structured by research question, with barriers and facilitators discussed first, followed by interventions.

Commonly reported barriers and facilitators to blood donation across included studies

Across all included studies, recurring barriers and facilitators to blood donation emerged ([Tables 1 and 2](#)). To provide structure, these barriers were grouped as practical, medical, and psychological. Practical barriers included not being asked to donate, limited knowledge of donation process, and difficulties in accessing donation centers due to distance, location, or time constraints. Medical barriers focused on concerns about ineligibility, anemia, and infection risk. Psychological barriers were the most diverse and included fear of needles, blood, pain, or fainting, general anxiety, mistrust of hospitals or blood banks, misconceptions, feeling unsuitable to donate, and previous negative experiences.

Facilitators were grouped as prosocial, social, visibility, and incentive-related factors. Prosocial motives, such as altruism, helping family or friends, saving lives, civic duty, moral duty, and religious obligation, were most prominent. Social influences included encouragement from others, observing peers donate, and positive staff interactions. Visibility-related facilitators involved education programs, mobile blood collection units, and greater awareness of blood needs. Incentives included token gifts, time off work, financial compensation, and health-related benefits. Together, these facilitators reflect personal, social, and structural factors that help offset barriers and promote blood donation.

Barriers and facilitators to blood donation in the Global South. This section focuses on main barriers and facilitators to blood donation in the Global South. [Tables 3-7](#) summarize region-specific factors, with some regions combined for clarity.

In SSA, the most frequently reported barriers were fear of pain, needles, infections, and HIV screening ([Table 3](#)).¹⁷⁻⁶⁵ Lack of information and persistent misconceptions regarding donation process further limited donation. Moreover, poor staff attitude and privacy concerns were negative influences. Practical barriers such

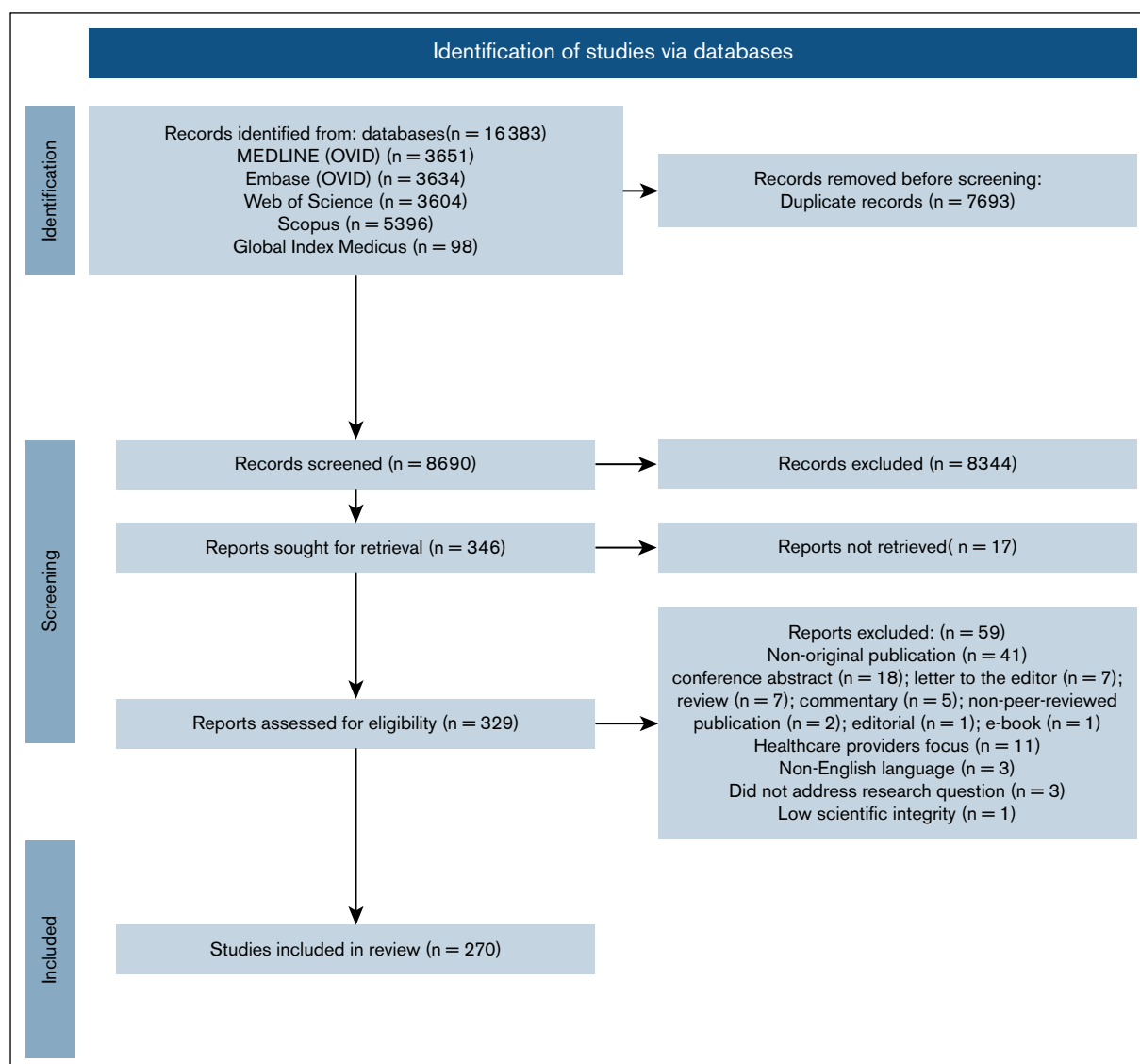


Figure 1. Preferred reporting items for scoping reviews and meta-analyses (PRISMA) flow diagram of the study selection process. The diagram shows the number of records identified, screened, excluded, and included in the final synthesis according to PRISMA guidelines.¹⁶

as limited access to donation sites, time constraints, and not being directly asked to donate blood were common in East, West, and Central Africa. Sociocultural variables included religious resistance among Jehovah's Witnesses in West Africa⁵⁰ and

skepticism regarding racial discrimination in Southern Africa.⁴⁷ In contrast, facilitators were largely consistent across regions: altruism, family or friends that required blood, nonmonetary incentives (eg, health incentives), education, and staff hospitality.

Table 1. Commonly reported barriers to blood donation across the included studies

	Practical	Medical	Psychological
Barriers	Not being asked to donate Lack of knowledge Remote living Inconvenient location of donation center Time constraints	Medical ineligibility Anemia concerns Fear of contracting infections	Needle phobia Fear of seeing blood Fear of pain Fear of fainting General anxiety about donation process Mistrust of hospitals/blood banks Misconceptions about donation process Feeling unsuitable to donate Previous negative donation experiences

Table 2. Commonly reported facilitators to blood donation across the included studies

	Prosocial	Social	Visibility	Incentives
Facilitators	Altruism Helping family or friends in need Saving lives Civic duty Moral duty Religious obligation	Being encouraged by others Seeing peers donate Staff hospitality	Education programs at schools or universities Mobile blood collection units Awareness of blood bank needs	Token gifts Day off from work Financial compensation Health incentives (eg, medical consultation, screenings)

In Latin America, the most frequently reported barriers were concerns about sterility, lack of information, and not being directly asked to donate (Table 4).⁶⁶⁻⁸⁵ Moreover, studies suggest that socioeconomic and educational disadvantages limit participation in blood donation, as individuals in these groups more often report limited donation knowledge, difficulties accessing donation sites, and competing work or caregiving demands.⁸² In the Caribbean, low awareness of blood shortages, fear of infection, and mistrust of transfusion-related process were prominent barriers (Table 4). Across both regions, facilitators centered on altruism, religious beliefs, national awareness campaigns, and influence of family or friends, with teachers being key influencers in motivating students to donate.

In South, Southeast, East, and Central Asia, the most frequently reported barriers were a persistent gap between knowledge and practice, fear-related concerns, and lack of direct opportunities to donate (Table 5).⁸⁶⁻¹⁷⁷ In South Asia, low social trust in blood banks and a preference for donating to relatives were reported,¹⁵⁵ whereas in Southeast Asia, refusal to donate to individuals of other religions or ethnic groups emerged.¹³⁸ In East Asia, misconceptions about health effects of blood donation and self-perceived poor health were more prominent.^{139,176} Across all regions, altruism, education, and improved accessibility consistently emerged as key influencers. Context-specific facilitators included blood donation camps in South Asia, awareness campaigns at attractive centers in Southeast Asia, Buddhist beliefs in East Asia, and helping family and friends in Central Asia.^{98,104,110,128}

In MENA, the most frequently reported barriers were fear-related concerns, limited donation site access, lack of awareness, and not being directly asked to donate (Table 6).¹⁷⁸⁻²²⁵ Key facilitators

included solidarity, helping family or friends, and religious beliefs, with mobile blood collection units and education-based initiatives further improving participation.^{178-180,188,202,205} In the Middle East, monetary incentives were often rejected, whereas a day off work or token gifts were widely accepted.^{185,187}

In Southeastern and Eastern Europe, lack of awareness and altruism were the most frequently reported barrier and facilitator, respectively (Table 7).²²⁶⁻²³⁰ Additional facilitators included minimal time spent at donation center and monetary incentives.²²⁸

Inclusive approaches to blood donation in the Global South. Intervention studies from the Global South ($n = 12$) highlight diverse, context-specific strategies to improve donor recruitment and long-term retention. In SSA, research from Ghana demonstrates that mobile phone caller tunes can promote blood donation by embedding short audio messages played to callers while the phone is ringing, allowing users to share personal values within their networks.²³¹ In Latin America, a Brazilian study, found that transportation vouchers reduced access barriers and temporarily increased donation, but also increased waiting times and reduced return rates, illustrating the importance of balancing short-term gains with long-term donor retention.²³² Complementary research emphasize the value of emotional appeal, stronger social media presence, and tailored campaigns.²³³ In South Asia, community-based education in India improved knowledge perceptions, with effects linked to occupation and education.²³⁴ In Southeast Asia, social capital, including trust and reciprocity, strengthened humanitarian values and sustained donation in Malaysia.²³⁵ East Asian studies highlights policy and digital approaches in China, including eligibility for free transfusions and outreach through social media and short message service

Table 3. Main barriers and facilitators to blood donation in SSA, ordered by frequency of reporting

	Barriers	Facilitators
East Africa 24 studies: Ethiopia (19), Uganda (2), Tanzania (3)	Lack of information Limited donation site access Misconceptions Fear of pain/needles	Altruism Civic duty Opportunities for disease testing Having relatives who received blood
West Africa 17 studies: Nigeria (12), Ghana (3), Senegal (1), Togo (1)	Fear of infections Fear of HIV screening Religious beliefs (Jehovah's Witness) Privacy concerns Not being asked to donate Poor staff attitude	Awareness of shortages Antenatal registration Family or friends in need of blood Health incentives Transparency about donation process
Southern Africa 5 studies: South Africa (3), Botswana (1), Namibia (1)	Fear and misconceptions Skepticism regarding racial discrimination Poor staff attitude	Altruism Education Health incentives Promotional communication
Central Africa 3 studies: Cameroon (3)	Not being asked to donate Limited donation site access Time constraints	Staff hospitality Nonmonetary incentives Targeted information

Table 4. Main barriers and facilitators to blood donation in Latin America and the Caribbean, ordered by frequency of reporting

	Barriers	Facilitators
Latin America 14 studies: Brazil (11), Chile (1), Colombia (1), Peru (1)	Concerns about sterility Lack of information Not being asked to donate Lower socioeconomic status Lower education level Younger age	Altruism Religious beliefs Influence of family and friends Teachers as key influencers
Caribbean 6 studies: Trinidad and Tobago (3), Bahamas (1)*, Barbados (1), Grenada (1), Jamaica (1)	Low awareness of blood shortages Fear of infections Mistrust of transfusion-related process	Having family members who are ill Donor convenience National awareness campaigns Being a university student

*One multicountry study covering Trinidad and Tobago and the Bahamas (counted once).

reminders with altruistic messages.²³⁶⁻²³⁸ In MENA, social media, particularly WhatsApp, facilitated connections between donors, blood banks, and patients.^{239,240} Donors also showed interest in mobile phone applications for blood donation, provided they include education, privacy protections, and practical features such as locating nearby centers, although older users were less likely to adopt them.²⁴¹ Nonmonetary incentives appealed to some donors, although most did not expect incentives.²⁴²

Barriers and facilitators to blood donation in ethnic minorities in the Global North. This section focuses on main barriers and facilitators to blood donation among ethnic minority groups in the Global North (Table 8 summarizing the results).²⁴³⁻²⁷⁴ The most frequently reported barriers were lack of information and fear of, and anxiety over, the donation process. Trust-related barriers differed by continent, with ethnic minority groups in Europe and North America emphasizing mistrust in health care systems,^{244,246,254} whereas ethnic minority groups in Australia highlight the belief their blood as unwanted.²⁶² In Europe, the emotional meaning of blood as a symbol of family ties discouraged donation to strangers,²⁵⁶ whereas direct personal recruitment appeals increased awareness of needs, suggesting that targeted outreach may motivate donation.²⁵⁷

Facilitators show strong overlaps across continents. Altruism and saving lives dominate, and are often linked to duty, community commitment, or religious beliefs. Knowledge and awareness also play a central role. In North America, encouragement from spiritual leaders was highlighted, underscoring the influence of trusted community figures on blood donation practices.²⁵² Convenience, nonmonetary incentives, and reassurance about donation safety could further increase willingness to donate across the Global North.

Inclusive approaches to blood donation among ethnic minorities in the Global North. Intervention studies among ethnic minorities in the Global North (n = 11) describe culturally informed strategies to improve donor recruitment and long-term engagement. In Australia, a tailored campaign for African migrants improved knowledge and attitudes but not short-term intentions or new donor registrations.²⁷⁵ In the United States, community-based initiatives, such as the Precise Match Program and the Sickle Cell Sabbath, showed that partnerships with African American and Hispanic communities and faith-based engagement increased first-time donor participation, although these efforts required intensive relationship building and showed mixed long-term outcomes.^{276,277} In Europe, anthropological and

Table 5. Main barriers and facilitators to blood donation in South, East, and Central Asia, ordered by frequency of reporting

	Barriers	Facilitators
South Asia 61 studies: India (40), Pakistan (16), Bangladesh (4), Nepal (1)	Logistical challenges Low awareness and misinformation Low social trust in blood bank Preference for donating to relatives Fear of needles, pain, infections, etc Not being asked to donate	Altruism Transparency about donation process Blood donation camps Campaigns emphasizing social responsibility Incentives or recognition for donors
Southeast Asia 15 studies: Malaysia (11), Philippines (2), Myanmar (1), Thailand (1)	Not being asked to donate Inconvenient hours/locations Knowledge gaps and misconceptions Fear of donation Refusal to donate to other religions/ethnicities	Altruism Experienced staff Social media use for promotion Awareness campaigns in universities/shopping centers Being young
East Asia 15 studies: China (12), Hong Kong (1), Japan (1), South Korea (1)	Lack of knowledge Misconceptions about health effects of donation Fear of needles, pain, infections, etc Mistrust Self-perception of poor health	Buddhist beliefs Social pressure Targeted promotion channels Incentives: gifts and health checks Experience of receiving blood Desire to know screening results Being an organ donor
Central Asia 1 study: Kazakhstan (1)	Not explicitly mentioned	Helping family and friends Being a young adult

Table 6. Main barriers and facilitators to blood donation in the MENA, ordered by frequency of reporting

	Barriers	Facilitators
Middle East 47 studies: Saudi Arabia (26)*, Iran (7), Turkey (7)*, Palestine (3)*, Jordan (2)*, Syria (2)*, Bahrain (1)*, Iraq (1)*, Israel (1), Lebanon (1), Qatar (1), United Arab Emirates (1), Yemen (1)*	Fear of infections, needles, health effects, etc Difficulty accessing donation centers Lack of awareness Anemia concerns Not being asked to donate Women already losing blood through menstruation Lack of time Medical ineligibility Monetary incentives	Helping family or friends in need Religious beliefs Social responsibility Education programs at school or university Mobile blood collection units Incentives like token gifts and day off work
North Africa 2 studies: Tunisia (2), Algeria (1)*, Egypt (1)*, Libya (1)*, Morocco (1)*, Sudan (1)*	Not being asked to donate Fear of pain or infections Medical ineligibility Lack of awareness Difficulty accessing donation centers	Solidarity Religious beliefs Insurance for family

*One multicountry study covering countries in the MENA region was counted once.

culturally mediated approaches helped identify rare blood types in migrant communities and encouraged voluntary donation beyond community pressure.²⁷⁸ Research from Australia underscores that donation behavior is shaped by social and cognitive meanings,²⁷⁹ and that addressing structural barriers alone is insufficient without accounting for home-host country cultural differences and generational variations.^{280,281} Additional evidence shows that intervention awareness reduced medical mistrust among refugees in Australia,²⁸² whereas culturally tailored digital messaging increased donation intentions among African Americans in the United States.²⁸³ Studies from Canada highlight the role of social networks, community embeddedness, and reciprocity,²⁸⁴ whereas European institutional analyses link blood donation to norms of citizenship and solidarity.²⁸⁵

Discussion

This review provides a broad understanding of how structural, cultural, and individual factors shape blood donation in the Global South and among ethnic minorities in the Global North. This mixed-methods scoping review analyzed 270 studies across 8 global regions. Overall, findings suggest that increasing donation requires awareness, addressing misconceptions, reducing logistical barriers, and strengthening facilitating factors including education, visibility, staff hospitality, and targeted outreach to specific groups.

Barriers and facilitators

One key result was that similar barriers and facilitators occur among donors and nondonors across the Global South and Global North and are reported by both ethnic minority and majority populations. Similarly, a previous systematic review among

sub-Saharan migrants in high-income countries identified fear of needles and pain, hemoglobin deferral, and other health-related factors as major deterrents to donation.²⁸⁶ These barriers mirror those seen in general and donor populations, suggesting that health concerns and fear-based barriers transcend migration background and donor status.²⁴⁹

One of the most prominent barriers across regions was the absence of a direct invitation to donate, with many individuals reporting they had simply never been asked to donate. This aligns with findings from The Netherlands, where people often do not realize that they are needed as donors.²⁵⁹ This lack of direct invitation is reinforced by misinformation, mistrust, negative experiences and word of mouth, and fear, creating multiple obstacles that require communication and targeted outreach.²⁵⁸ Among ethnic minority groups, these barriers are often intensified by feelings of social exclusion, lower trust in health care systems, and limited exposure to recruitment efforts. Moreover, 1 study observed that people from ethnic minorities expected blood banks to contact them if their blood was needed, reflecting donation practices in their countries of origin.²⁵⁷

Regarding facilitators, religious beliefs generally emerged as strong motivator for blood donation by emphasizing altruism, compassion, and moral duty. An important exception is Jehovah's Witnesses, whose doctrine prohibits blood transfusion and donation.^{23,50} Overall, findings highlight the potential of engaging spiritual and community leaders to promote positive donation attitudes within religious communities.

Each region also faces distinct influences shaped by local beliefs, norms, and practice, underscoring the need for tailored, region-specific interventions rather than one-size-fits-all approaches. Regional differences are reflected in the social meaning of blood

Table 7. Main barriers and facilitators to blood donation in Southeastern and Eastern Europe, ordered by frequency of reporting

	Barriers	Facilitators
(South)eastern Europe: 5 studies: Russia (2), Albania (1), Belarus (1), Serbia (1)	Lack of awareness Not being asked to donate Time-related concerns Medical ineligibility	Altruism Influence of family and friends Minimal time spent at donation centers Previous donation experience Having a healthy lifestyle Monetary incentives

Table 8. Main barriers and facilitators to blood donation in ethnic minorities in the Global North, ordered by frequency of reporting

	Barriers	Facilitators
Europe 8 studies*: the United Kingdom (4), The Netherlands (3), Ireland (1)	Lack of information or awareness Fear and anxiety of donation process Medical ineligibility Malaria-related exclusion Inconvenience Mistrust Emotional value of blood as a symbol of family ties	Altruism Community- or kin-related motives Religious beliefs Personal recruitment appeals Nonmonetary incentives Recognition or appreciation Awareness of sickle cell disease Expressive sense of citizenship
North America 15 studies†: United States (13), Canada (2)	Fear and anxiety of donation process Inconvenience Mistrust of health care system Lack of information or awareness Medical ineligibility Systemic racism/discrimination Sociocultural beliefs	Ability to save a life Sense of duty Being asked to donate Convenience of time and space Health incentives Community or family focus Assurance of safety of donation Spiritual leader encouragement
Australia 9 studies‡: Australia (9)	Perceived discrimination Feeling not included in host society Medical mistrust Belief that one's blood is not wanted	Increased knowledge Bicultural or integrated cultural orientation Religious beliefs Trust in the health care system

*Most studies focused on people from Africa, followed by India.
†Most studies focused on people from Africa, followed by Latin America.
‡Most studies focused on people from Africa, followed by unspecified migrant or refugee populations.

donation and in what types of donation systems are considered acceptable. In the family replacement/donation settings, such as in parts of North Africa and South Asia, blood donation is often viewed as family responsibility, rather than civic duty, potentially discouraging donation to strangers, perceiving blood as something of emotional and moral value within kinship networks.^{172,195} In a Nigerian study, most participants agreed that “blood should only be donated for family members and friends,” reflecting a strong family-oriented perspective.^{62 (p1512)} This understanding can persist after migration, as studies show that African ethnic minority groups in Europe continue to attribute family-related symbolic meaning to blood, limiting engagement in voluntary, nonremunerated donation systems.²⁵⁶ Together, these findings show how regional donation traditions shape donor motivations and underscore the need for culturally responsive strategies to support sustainable blood donation.

A key result of this review is that preferences for blood donation incentives vary by region and cultural contexts. In Belarus, monetary incentives appear relevant, particularly for regular donors.²²⁸ In contrast, studies from Saudi Arabia show strong rejection of monetary incentives, as blood donation is framed as religious and moral duty, and external rewards are seen as diminishing its altruistic value.^{178,185} However, nonmonetary incentives such as token gifts or time off work are acceptable forms of appreciation in the Saudi Arabian context.^{187,224} In SSA, health incentives such as medical consultation or screening, increased willingness to donate, especially in contexts with limited health care access.^{45,52} Preferences also vary within populations, as shown among Nigerian women, for whom certificates of recognition were valued.⁵² Overall, these findings illustrate that incentive strategies must align with local, moral, cultural, and socioeconomic contexts to support voluntary blood donation.

Another key result is that ethnic minorities exhibit different donation behaviors in host countries compared with their home countries.

Among Ghanaians in Ghana, motivation was mainly driven by personal connections to someone in need, whereas barriers included poor staff attitudes, lack of privacy, and concerns about blood misuse.⁴⁴ In contrast, studies among Ghanaians in The Netherlands found motivation centered on personal recruitment appeals, with fear (eg, of losing too much blood) and health-related ineligibility.²⁵⁷ These findings show how migration and context reshape donation barriers and facilitators.

Interventions

Across the Global South and ethnic minority groups in the Global North, intervention studies demonstrate wide variation in effective strategies, indicating that no single approach to increasing blood donation exists. Effective interventions range from culturally grounded communication and community education to digital tools; social network mobilization; and tailored incentives, depending on social, cultural, and institutional contexts. Strategies vary in focus, addressing either practical barriers or deeper issues of trust, social meanings, and moral frameworks. Importantly, facilitators effective in one setting may be ineffective or counter-productive in another, underscoring the need for context-sensitive design. Overall, findings highlight blood donation as a socially embedded practice shaped by regional traditions, migration histories, and institutional context, requiring inclusive and adaptable intervention approaches.

Limitations

Despite its contributions, this review has several limitations. Countries were classified by geographical region to ensure consistent, comparable, and accessible grouping of studies across different contexts. However, this approach may overlook developmental differences within and across region, particularly with regard to infrastructure. Second, most studies were knowledge, attitude, and practice studies relying on self-administered questionnaires with standardized items, which improves

comparability but may introduce response bias and limit depth and diversity of insights. Third, similar concepts (eg, altruism and moral duty) may have been defined differently across studies, which affected how we interpreted barriers and facilitators despite adhering closely to authors' wording. Finally, a lenient quality assessment was applied to account for potential limited research capacity in the Global South, which may have led to inclusion of studies with lower methodological rigor, potentially influencing the overall reliability of the findings.

Conclusion and outlook

In summary, this scoping review identifies key barriers and facilitators shaping blood donation in the Global South and among ethnic minorities in the Global North. Although limited awareness, fear, accessibility issues, and mistrust remain key obstacles, targeted educational campaigns, transparent communication, and culturally sensitive outreach efforts have the potential to enhance donation rates. Strengthening donor recruitment among under-represented populations is essential to improve donor diversity, transfusion safety, and equitable access to blood products. Future research should focus on developing and evaluating context-specific, evidence-based interventions that address both practical and social dimensions of blood donation.

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Authorship

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