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Social Determinants of Health and Multidimensional Health Needs among Immigrants Participating in a Community-based Programme in Portugal: A Cross-sectional Study

Hélio Bragança[1]
Egas Moniz School of Health & Science
Célia Belim[2]
Instituto Superior de Ciências Sociais e Políticas, Universidade de Lisboa (ISCSP, ULisboa)
Iris Almeida[3**]
ialmeida@egasmoniz.edu.pt

Egas Moniz Center for Interdisciplinary Research (CiiEM), Monte da Caparica
Renata Benavente[4]
Câmara Municipal de Almada
Ana Brantes
Egas Moniz Center for Interdisciplinary Research (CiiEM), Monte da Caparica
Rita Cerqueira
Egas Moniz Center for Interdisciplinary Research (CiiEM), Monte da Caparica
Sofia Jordão[3]
Egas Moniz Center for Interdisciplinary Research (CiiEM), Monte da Caparica
Tiago Marques
Egas Moniz School of Health & Science
Ana Romão
Egas Moniz Center for Interdisciplinary Research (CiiEM), Monte da Caparica
Cecília Rozan
Egas Moniz Center for Interdisciplinary Research (CiiEM), Monte da Caparica
Sónia Vicente
Egas Moniz Center for Interdisciplinary Research (CiiEM), Monte da Caparica
Cristina Vaz Almeida
Sociedade Portuguesa de Literacia em Saúde (SPLS)

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Abstract

Background

Migrants experience health inequities shaped by social and structural determinants of health. However, evidence describing multidimensional health needs identified through community-based programmes in Portugal remains limited.

Objective

To describe the social determinants of health and selected health needs among immigrants participating in the ACOLHER community-based programme in Almada, Portugal, using the PROGRESS framework to organise the descriptive analysis.

Methods

A cross-sectional descriptive study was conducted among 152 adult immigrants participating in two editions of the ACOLHER Programme. Participants were recruited through convenience sampling during community-based activities. Data were collected through multidisciplinary health screening covering mental health, oral health, pelvic health, cardiometabolic risk, and functional capacity. Social determinants of health were described using the PROGRESS framework. Descriptive analyses were performed in accordance with the STROBE reporting guidelines.

Results

Participants experienced multiple indicators of social vulnerability, including unemployment, limited social support, and barriers to healthcare access (37.8%), despite living in a country with universal healthcare coverage. Nearly half of those screened for mental health presented clinically relevant psychological symptoms. Oral health assessment revealed a high prevalence of dental caries (81.1%), poor oral hygiene, and delayed use of dental services. Pelvic health assessment identified generally low-to-moderate symptom burden among participating women. Quantitative analyses of cardiometabolic and functional assessments were limited by incomplete outcome data.

Conclusions

The ACOLHER Programme provided a community-based opportunity to identify social vulnerabilities and unmet health needs among immigrants in Almada. Participants reported barriers to healthcare access despite formal entitlement to services, highlighting the potential value of community-based initiatives in

supporting health literacy, facilitating referral, and improving access to existing healthcare pathways. Future studies should evaluate the programme's impact on healthcare utilization and health outcomes.

Introduction

International migration is a defining feature of contemporary societies and an increasingly important consideration for public health systems worldwide. In 2020, approximately 281 million people were living outside their country of birth, representing 3.6% of the global population (1). Migration has also become a major demographic phenomenon within the European Union. As of 1 January 2025, 46.7 million people born outside the EU were residing in EU Member States, accounting for 10.4% of the total population, while 30.6 million non-EU citizens represented 6.8% of the population (2). These demographic changes highlight the growing importance of migrant health for equitable health policies, health system planning, and community-based public health interventions.

Health outcomes among migrants are increasingly recognised as being shaped by structural rather than migration-related factors alone. The UCL–Lancet Commission on Migration and Health argues that legal, social, economic, and political determinants—including rights, exclusion, policy environments, and access to services—play a central role in producing health inequalities (3). Similarly, the World Health Organization (WHO) emphasises that poorer health outcomes among migrants are largely explained by precarious living and working conditions, discrimination, legal insecurity, and barriers to healthcare access (4,5).

The social determinants of health (SDH) framework provide a useful lens for understanding these inequalities. The WHO defines SDH as the conditions in which people are born, grow, live, work, and age, together with the wider forces shaping these conditions (6). Among migrant populations, legal status, labour market segmentation, housing insecurity, limited welfare entitlements, language barriers, and administrative complexity frequently interact to restrict access to preventive care, chronic disease management, and continuity of care (7,8). Even within universal healthcare systems, formal entitlement does not necessarily translate into effective access. Migrants often experience linguistic, administrative, financial, and cultural barriers, together with limited health literacy and difficulties navigating healthcare systems, reducing access to timely and appropriate care (9,10).

These structural barriers contribute to a wide range of health inequalities. Mental health is particularly affected by the combined influence of pre-migration experiences and post-migration stressors, with refugees and asylum seekers showing increased risks of depression, anxiety, and post-traumatic stress symptoms (11). Evidence also highlights the importance of post-migration factors such as unemployment, discrimination, housing insecurity, legal uncertainty, and social isolation in shaping mental health outcomes among first-generation migrants (12,7,8). More broadly, migrant populations present diverse and interconnected health needs that are influenced by socioeconomic conditions, health literacy, and access to preventive and healthcare services.

To better understand these inequalities, this study adopted the PROGRESS framework, which identifies key social stratifiers associated with health inequities, including place of residence, race/ethnicity/culture/language, occupation, gender, religion, education, socioeconomic status, and social capital (13). This framework provides a structured approach to describing the social determinants that influence health opportunities, healthcare access, and unmet health needs among migrant populations.

Portugal provides an important setting for examining these issues. Although the country has a universal National Health Service, it has experienced rapid growth in its migrant population, particularly in metropolitan areas such as Almada (14). Ensuring that formal healthcare entitlements translate into effective access remains a major challenge, particularly in the presence of linguistic, cultural, administrative, and social barriers. Community-based programmes may help reduce these barriers by improving health literacy, facilitating early identification of health needs, strengthening referral pathways, and promoting more equitable access to healthcare.

Despite increasing international attention to migrant health, evidence from community-based interventions in Portugal remains limited, particularly studies integrating social determinants of health with multidimensional health needs. The ACOLHER Programme is a multidisciplinary community-based initiative developed in Almada through collaboration between academic institutions, municipal services, migrant associations, and civil society organisations.

The programme aims to promote health equity by improving health literacy, facilitating access to healthcare, identifying health needs through community-based screening activities, and supporting referral to existing health services.

This study aimed to describe the social determinants of health and selected health needs among immigrants participating in the ACOLHER Programme in Almada, Portugal, using the PROGRESS framework to organise the descriptive analysis.

Method

Study design

This cross-sectional descriptive study used routinely collected data from the ACOLHER Programme, a multidisciplinary community-based initiative developed to improve health access, health literacy, and the early identification of health needs among migrant populations in Almada, Portugal. The programme was disseminated through Almada City Council, migrant associations, community organisations, and local outreach activities. Participation was voluntary, and adults were presented to programme activities or attended following referral by partner organisations. Data were collected during routine multidisciplinary health screening at participants' first contact with the programme. The study is reported in accordance with the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) guidelines (15).

Study setting

The ACOLHER Programme is a multidisciplinary community-based initiative implemented in Almada, Portugal, in response to the rapid growth of the local migrant population and the need to improve access to health promotion and preventive healthcare. The programme was developed through a partnership between Egas Moniz School of Health & Science, Almada City Council, the migrant association AD SUMUS, GAT – Activists in Treatment Group, and other community organisations.

The programme complements existing healthcare services by providing health promotion, health literacy activities, multidisciplinary health screening, and referral to appropriate health and social care services. Two community-based programme editions were implemented during the study period (ACOLHER 1.0 and ACOLHER 2.0). These were held in the parishes of Laranjeiro and Monte de Caparica, respectively, which were identified by Almada City Council and community partners as strategic locations with a high concentration of migrant residents and good accessibility for the target population. Programme activities were promoted locally through municipal and community networks to maximise participation.

Screening activities were delivered in community settings by multidisciplinary teams comprising academic staff and supervised students from nursing, dentistry, psychology, and physiotherapy, working in collaboration with community partners. Participation was voluntary and free of charge, and individuals could attend one or more screening stations according to their interests and perceived health needs.

During the second event of the Acolher initiative, the Almada Seixal Local Health Unit, Citizen Services Office was present with the aim of providing information on access to the Portuguese National Health Service. The Citizen Services Office recorded 10 service interactions.

These interactions involved providing necessary information regarding access to the Portuguese National Health Service (SNS), User Registry and enrolment in Primary Health Care services. Details of the remaining interactions were recorded on the attendance sheets carried by the citizens, which were used by the organizers to track participant numbers. Most inquiries focused on the documents required to register minors. ~

The registration questionnaire used to collect sociodemographic and migration-related information was specifically developed for the ACOLHER Programme to support routine programme registration and was not previously published. The questionnaire was designed to collect baseline information on participants' demographic characteristics, migration profile, social determinants of health, and healthcare access. An English version of the questionnaire is provided as Supplementary Material 1.

Participants

The study included 152 adult immigrants. A convenience sample of adult immigrants (aged ≥ 18 years) was recruited among individuals attending ACOLHER Programme activities. Eligible participants were

invited to participate during programme registration and enrolled after providing written informed consent.

Participants were eligible if they: (1) were aged 18 years or older; (2) self-identified as migrants or immigrants; and (3) attended at least one screening station. Individuals who were unable to provide informed consent were excluded.

Screening domains and measurements

Data were collected during participants' first contact with the programme using a structured registration questionnaire and multidisciplinary health screening protocol.

The questionnaire collected sociodemographic and migration-related information, including age, sex, country of origin, educational attainment, employment status, year of arrival in Portugal, migration status, and reason for migration.

Participants could voluntarily attend one or more screening stations. Assessment domains included immigration and social support, infectious disease prevention (including sexually transmitted infection counselling), mental health, cardiometabolic risk, pelvic health, functional capacity, and oral health (Fig. 1). Each station combined brief health assessment procedures with health education, counselling, and referral when appropriate.

Cardiometabolic risk was assessed by trained nursing students using a structured instrument. Assessment included anthropometric measurements (weight and height for BMI calculation), blood pressure, capillary blood glucose, and heart rate, complemented by information on personal and family history of cardiovascular disease, current pharmacological treatment, dietary habits, fasting status, and attendance at routine health surveillance consultations.

Health assessments were conducted using standardised procedures specific to each screening station. Participants requiring additional assessment or treatment were referred to appropriate healthcare or community services according to predefined referral pathways.

The dataset included quantitative information for selected health domains, whereas other programme components generated descriptive records only and were therefore not included in the quantitative analyses (Table 1).

Table 1
Screening domains, instruments and data status.

Domain	Instrument or measure reported	Data status in available dataset
Mental health	Brief Symptom Inventory (BSI) (23–25). The BSI includes 53 items, nine symptom dimensions and three global indices. Internal consistency in the current study: Cronbach's alpha = .934.	Results reported for participants screened for psychological symptomatology, including comparison with Portuguese general population norms.
Pelvic health	Australian Pelvic Floor Questionnaire (APFQ), developed by Baessler et al (26). and described as culturally adapted and validated in Portuguese by Mesquita et al. (27). Internal consistency in the current study: Cronbach's alpha = .867.	Domain scores reported for bladder, bowel, prolapse and sexual function.
Oral health	DMFT index (Decayed, Missing and Filled Teeth), Gingival Index (GI) and Plaque Index (PI) described by Löe and Silness (28,29).	Assessment and measure an individual's lifetime experience of dental caries and the severity of gum inflammation and the amount of bacterial plaque to assess oral health status and treatment needs.
Immigration and social support	Initial registration form and guidance station involving AD SUMUS.	Sociodemographic, migration-related and PROGRESS-related results reported.

Data management

Because participation in individual screening stations was voluntary, not all participants completed every assessment. Consequently, the sample size varied across health domains. Missing data were not imputed, and all analyses were performed using complete-case data for each variable or screening domain.

Ethical considerations

Prior to participation, all individuals provided written informed consent. Participation in the programme was voluntary, and participants could choose which screening stations to attend. Participants received explanations of their screening results and, where appropriate, advice regarding follow-up care and referral to healthcare or community services. At the end of the programme, participants were invited to complete a satisfaction questionnaire; these data were not included in the present analysis.

The study complied with the ethical principles of the Declaration of Helsinki and applicable data protection legislation, including the General Data Protection Regulation (GDPR). Participant confidentiality and anonymity were ensured throughout data collection, management, and analysis. The study protocol was approved by the Ethics Committee of the Portuguese Society of Health Literacy

(Sociedade Portuguesa de Literacia em Saúde), Portugal (Approval No. CE-SPLS_06/2026). All methods were carried out in accordance with relevant guidelines and regulations.

Statistical analysis

Descriptive statistics were used to summarise participants' sociodemographic characteristics, migration profile, and health screening findings. Continuous variables are presented as means and standard deviations (SD) or medians and interquartile ranges (IQR), according to data distribution. Categorical variables are presented as frequencies and percentages. Percentages were calculated using the number of valid responses for each variable. Statistical analyses were performed using IBM SPSS Statistics version 30.0 (IBM Corp., Armonk, NY, USA).

Results

Participant characteristics

A total of 152 immigrants participated in the study, including 83 (54.6%) recruited during ACOLHER 1.0 and 69 (45.4%) during ACOLHER 2.0. Participants ranged in age from 18 to 84 years (mean 49.9 ± 13.7 years). More than half (55.9%) had arrived in Portugal in 2022 or later, whereas only 9.2% had arrived before 2015. Most participants (96.5%) self-identified as migrants. Family reunification was the most frequently reported reason for migration (39.2%), followed by employment (25.2%) and study (11.9%) (Table 2).

Table 2
Sample characteristics and migration profile of participants (N = 152)

Variable	Value reported
Total sample	N = 152 immigrants
ACOLHER edition	ACOLHER 1.0: 83 (54.6%); ACOLHER 2.0: 69 (45.4%)
Age (years)	18–84; *M* = 49.93, *SD* = 13.67
Year of arrival in Portugal	From 2022 onwards: 56%; before 2015: 9%; other periods: 35%
Self-reported migration status	Migrant: 96.5%; other categories (refugee, asylum, tourist, health-related travel): <3.5% combined
Main reason for migration	Family reunification: 39.2%; employment: 25.2%; study: 11.9%; health: 9.1%; better living conditions: 8.4%; asylum: 3.5%; other: 2.8%

Social determinants of health

The PROGRESS framework highlighted several social determinants potentially relevant to health inequalities. More than one-third of participants reported no current occupation, approximately one-

quarter lacked a close support network, and 37.8% reported barriers to healthcare despite living in a country with universal health coverage (Table 3).

Table 3
Social determinants of health mapped onto PROGRESS domains.

PROGRESS domain	Findings reported
Place of residence	Among valid responses (N = 149), 77.9% lived in Almada, 14.1% in Seixal and 8.1% in other municipalities, including Barreiro, Moita, Palmela, Sesimbra, Lisbon, Oeiras and Sintra.
Race, ethnicity, culture and language	Nationality: Cape Verdean 45.4%, São Toméan 26.3%, Angolan 7.9%, Brazilian 5.3%, Guinean 4.6%, and other nationalities 10.7%. Languages: Portuguese 54.3%, Kriolu 37.1%, Bangla 2.6%, Hindi 2.0%, Kikongo 1.3%, and Nepali, English, Ukrainian and Russian 0.7% each.
Occupation	No current profession: 35.5% (n = 54). Main reported occupations: restaurants/supermarkets 13.2% (n = 20), domestic work 12.5% (n = 19), construction/manual labour 11.2% (n = 17), education/health/social support 7.9% (n = 12), students 5.3% (n = 8), qualified professions 2.6% (n = 4), other activities 3.9% (n = 6).
Sex	Women: n = 106 (69.7%); men: n = 45 (29.6%). One participant's sex category or response status was not available.
Religion	Catholic 68.1% of valid responses, Evangelical 11.3%, Muslim 5.7%, Christian 1.4%, Jehovah's Witness 1.4%, Adventist 1.4%, Messianic 0.7%, Buddhist 0.7%, and no religious affiliation 7.1%.
Education	Primary education (1st-9th year): 52.6%; secondary education (10th-12th grade): 30.3%; bachelor's degree: 13.2%; no formal education: 0.7%.
Socioeconomic status	Housing: rented accommodation 66.4%, own home 10.1%, temporary accommodation 9.4%, institutional accommodation 7.4%, shacks 3.4%, family/friends 3.4%. Adequate living space: 67.3%; insufficient/overcrowded space: 32.7%. Safe water: 90.0%; sanitation: 93.0%. Own income: 62.9%; no income: 37.1%. Households of three to five members: 68.0%; single-person households: 3.3%; households of seven or more: 7.3%.
Social capital and healthcare access	Close family was the main support network for 62.7%; 23.2% reported no support. Access to healthcare services was reported by 62.2%, while 37.8% reported barriers. Among users of healthcare services, 63.3% relied on the public health system, 2.7% on private services and less than 1% on social or other services.

Mental health: BSI symptomatology

Seventy-three participants (48.0%) reported mental or emotional health concerns and completed the Brief Symptom Inventory (BSI). Among these, 67 (91.8%) had scores above the reference threshold in at least one BSI dimension, whereas six (8.2%) showed no clinically relevant symptomatology. Compared with Portuguese normative values, the highest symptom scores were observed for paranoid ideation, somatization and psychological distress (Table 4).

Table 4
Comparison between Portuguese general population norms and the immigrant sample with valid BSI data.

BSI dimension/index	General population M	General population SD	Immigrant sample M	Immigrant sample SD
Somatization	.573	.916	1.031	.843
Obsessive-Compulsive	1.290	.878	1.310	.724
Interpersonal Sensitivity	.958	.727	.890	.840
Depression	.893	.722	.960	.681
Anxiety	.942	.766	.965	.699
Hostility	.894	.784	.767	.728
Phobic Anxiety	.418	.663	.660	.734
Paranoid Ideation	1.063	.789	1.424	.809
Psychoticism	.668	.614	.920	.789
Global Severity Index (GSI/IGS)	.835	.480	1.023	.581
Positive Symptom Distress Index (PSDI/SP)	1.561	.385	2.221	.443
Positive Symptom Total (PST/TSP)	26.993	11.724	23.877	11.680

Pelvic health: APFQ screening

Among the total sample, 47 women completed the APFQ domains related to bladder, bowel and prolapse symptoms. Because 12 women were not sexually active at the time of data collection, the sexual-function domain was completed by 35 participants only (Table 5).

Table 5
APFQ domain scores among the immigrant sample.

Domain	M	SD	Interpretive note based on reported score range
Bladder function	4.86	6.15	Highest relative symptom burden among reported domains.
Bowel function	2.47	2.68	Mild symptom expression.
Prolapse symptoms	0.40	1.16	Minimal symptom burden.
Sexual function	1.52	2.02	Mild symptom expression; completed by sexually active participants only.
Total APFQ	3.95	4.07	Low-to-moderate overall pelvic floor dysfunction.

Considering that the maximum possible score per APFQ domain is 10, overall symptom severity was low across domains, although bladder function represented the highest relative burden. These results are interpreted cautiously because the subgroup is small and participation in this screening domain was voluntary.

Oral health

Fifty-three participants underwent oral health assessment, of whom 73.6% were women. Dental caries were identified in 81.1% of participants, with a mean DMFT (Decayed, Missing and Filled Teeth) index of 2.87 ± 1.72. Visible dental plaque was present in 79.2% of participants, while gingivitis was identified in 45.3%.

Most participants (69.8%) reported that their last dental visit had occurred more than one year before the assessment. The most frequently reported reasons for seeking dental care were toothache (53.8%) and tooth extraction (23.1%).

Cardiometabolic risk

A total of 113 adults were assessed at the cardiometabolic risk station (approximately 72% women; age range 18–84 years, mean 41.8 ± 14.2 years). The number of complete assessments varied slightly by variable owing to missing data or logistical constraints during collection: anthropometric measurements (n = 108), capillary blood glucose (n = 112), and blood pressure and heart rate (n = 113).

The mean BMI was 27.34 ± 5.46 kg/m², placing the group within the overweight range according to WHO criteria. Mean systolic and diastolic blood pressure were 134.40 ± 21.36 mmHg and 84.61 ± 11.64 mmHg, respectively, exceeding the optimal reference thresholds of < 120/<80 mmHg. Mean capillary blood glucose was 103.85 ± 41.92 mg/dL, and mean heart rate was 75.86 ± 13.29 bpm.

Complete nursing records were available for 47 participants and documented multiple cardiometabolic risk factors and health vulnerabilities, including personal and family history of hypertension and diabetes, absence of an assigned primary care physician, medication non-adherence, mental health concerns, limited health literacy, and health-risk behaviours such as tobacco, alcohol, or substance use.

Discussion

This study described the social determinants of health and selected health needs among immigrants participating in a multidisciplinary community-based programme in Portugal. Using the PROGRESS framework as a descriptive framework, the findings highlight the coexistence of socioeconomic disadvantage, migration-related challenges, and unmet health needs across multiple domains. Overall, the results reinforce current evidence indicating that health inequalities among migrant populations are largely shaped by structural and social determinants rather than migration itself (3,4).

More than one-third of participants reported barriers to healthcare despite formal entitlement to the Portuguese National Health Service. This finding illustrates the distinction between legal entitlement and

effective access previously described in European migrant health research (9,10). Barriers related to language, health system navigation, administrative procedures, and limited health literacy may reduce timely access to preventive and routine healthcare, even within universal health systems. In our study, these barriers coexisted with recent migration, unemployment, and limited social support, suggesting that multiple social determinants may jointly contribute to unequal healthcare utilisation.

Mental health emerged as one of the most important health needs identified during programme implementation. Nearly half of participants reported emotional or psychological concerns, and most individuals assessed with the Brief Symptom Inventory presented clinically relevant symptoms in at least one dimension. Although causal relationships cannot be inferred from this cross-sectional study, these findings are consistent with previous evidence demonstrating that migrant mental health is influenced by both pre-migration experiences and post-migration stressors, including financial insecurity, discrimination, housing instability, and social isolation (12,11). These results support the integration of mental health screening and referral pathways within community-based health promotion programmes.

The inclusion of pelvic health assessment expanded the multidimensional approach of the programme by addressing an often-overlooked component of migrant women's health. Although symptom severity was generally low, urinary and pelvic floor symptoms were identified among a proportion of participants. These findings are consistent with previous studies showing that women's pelvic health needs frequently remain under-recognised because of cultural barriers, stigma, limited health literacy, and reduced access to preventive healthcare (16,17).

Oral health assessment revealed a high prevalence of dental caries, visible dental plaque, and gingivitis, together with delayed use of dental services. Most participants reported seeking dental care primarily because of pain or tooth extraction, suggesting that access to oral healthcare remained predominantly symptom-driven rather than preventive. These findings are consistent with previous evidence linking socioeconomic disadvantage, reduced access to dental services, and limited oral health literacy with poorer oral health outcomes among migrant populations (28).

The cardiometabolic domain illustrated the interplay between clinical, social, and structural determinants of health among migrant populations. The discrepancy between the quantitative screening data and the more limited qualitative information documented in nursing records likely reflects language barriers, brief contact time during community-based activities, and known underreporting of health information among migrants (18). A substantial proportion of participants had no assigned primary care physician or reported irregular use of primary healthcare services, consistent with national data showing that only 49.7% of registered immigrants had an assigned primary care physician in 2023, compared with 83.5% of the native population (18). Discontinuity of care emerged as a further concern, illustrated by cases of participants with type 2 diabetes or hypertension who had interrupted treatment following migration (19). These findings reinforce evidence that some migrant populations develop type 2 diabetes 10 to 20 years earlier and at lower BMI levels than European populations (20), and that limited health literacy—a known determinant of poorer chronic disease control (21,22)—compounds these vulnerabilities.

Together, these observations support targeted, culturally responsive, and equity-oriented strategies to strengthen access, continuity of care, and health literacy within migrant communities.

The ACOLHER Programme provided a community-based opportunity to identify social vulnerabilities and unmet health needs among immigrants in Almada. Participants reported barriers to healthcare access despite formal entitlement to services, highlighting the potential value of community-based initiatives in supporting health literacy, facilitating referral, and improving access to existing healthcare pathways. Future studies should evaluate the programme's impact on healthcare utilisation and health outcomes.

Taken together, these findings suggest that community-based programmes such as ACOLHER can complement universal healthcare systems by facilitating early identification of health needs, improving health literacy, strengthening referral pathways to existing healthcare and social services, and supporting health system navigation. Rather than replacing routine healthcare, these programmes may help reduce practical barriers to access through culturally appropriate communication, community outreach, collaboration between healthcare providers, municipalities, academic institutions, and migrant organisations, and the provision of guidance on registration and access to healthcare services. The participation of the Citizen Services Office during the second programme edition further illustrated the value of integrating health system navigation support within community-based initiatives, as most enquiries concerned SNS registration procedures, and the documentation required for enrolling minors in primary healthcare.

Strengths and limitations

This study has several strengths. It applies an equity-oriented framework to describe the social determinants of health of a migrant population, provides empirical evidence from Portugal where community-based migrant health research remains limited, and evaluates a real-world multidisciplinary programme developed through collaboration between academic institutions, municipalities, healthcare professionals, and community organisations. A further strength is the simultaneous assessment of multiple health domains within the same community-based programme, providing a comprehensive overview of participants' health needs.

Several limitations should also be acknowledged. The use of a convenience sample limits the generalisability of the findings, and the cross-sectional design precludes causal inference. Because participation in individual screening stations was voluntary, prevalence estimates should be interpreted cautiously, as participants may have preferentially attended specific assessments according to their perceived health needs. Consequently, sample sizes differed across health domains, limiting direct comparisons between screening areas. Several variables were self-reported and may therefore be subject to recall or social desirability bias. In addition, linguistic diversity may have influenced participants' understanding of some assessment instruments despite support provided during programme activities. Finally, incomplete data for cardiometabolic and functional assessments limited

the quantitative analysis of these domains and highlight the need for more standardised data collection procedures in future programme implementation.

Conclusion

This study describes the social determinants of health and selected health needs among immigrants participating in a community-based programme in Portugal. Participants experienced multiple socioeconomic and healthcare access challenges alongside unmet mental, oral, and women's health needs. Despite universal healthcare coverage, barriers related to communication, health system navigation, and administrative complexity remained common.

Community-based multidisciplinary programmes may complement universal healthcare by improving health literacy, facilitating early identification of health needs, and strengthening referral pathways to existing healthcare services. Future longitudinal studies should evaluate the impact of these programmes on healthcare utilisation, continuity of care, and long-term health outcomes.

Implications for practice and policy

The findings support strengthening cultural and linguistically appropriate services within primary healthcare, expanding health navigation support, and improving collaboration between healthcare providers, municipalities, academic institutions, and community organisations. Community-based multidisciplinary programmes may complement universal health systems by reducing practical barriers to care, improving health literacy, facilitating early identification of unmet health needs, and strengthening referral pathways.

Routine collection of equity-related indicators using frameworks such as PROGRESS may also support the planning and evaluation of interventions aimed at reducing health inequalities among migrant populations. Implementing these approaches within universal healthcare systems is consistent with the principle of proportionate universalism, ensuring that preventive actions are delivered with an intensity proportional to levels of social disadvantage (see Table 6).

Table 6
Policy and practice recommendations derived from study findings

Area	Policy and practice recommendation
Cultural mediation and communication	Integrate trained cultural mediators and interpretation support within community-based and primary care services to reduce linguistic, cultural and trust-related barriers to care.
Health system navigation	Implement structured navigation support to improve understanding of entitlements, registration processes, appointment systems, referral pathways and continuity of care within the National Health Service.
Community-based integrated care models	Sustain and strengthen multidisciplinary community-based screening and health promotion models that integrate physical, mental and social health assessment, ensuring appropriate data completeness and follow-up capacity.
Intersectoral coordination	Formalise collaboration between health services, municipalities, migrant associations, universities and civil society organisations to ensure coherent referral pathways and reduce reliance on informal networks.
Social determinants and equity monitoring	Systematically collect and standardise PROGRESS-related indicators (place, language, occupation, education, socioeconomic status, social support and healthcare access) to support equity monitoring and service planning.
Proportionate universalism in service delivery	Operationalise proportionate universalism by combining universal health coverage with differentiated intensity of outreach, mediation and follow-up according to levels of vulnerability.
Mental health pathways	Develop culturally adapted, trauma-informed and stigma-sensitive mental health referral pathways for individuals presenting psychological distress, social isolation or migration-related vulnerability.

Declarations

Ethics approval and consent to participate

The study protocol was approved by the Ethics Committee of the Portuguese Society of Health Literacy (Sociedade Portuguesa de Literacia em Saúde), Portugal (Approval No. CE-SPLS_06/2026). Written informed consent was obtained from all participants prior to participation. All methods were carried out in accordance with relevant guidelines and regulations.

Consent for publication

Not applicable.

Competing interests

The authors declare that they have no competing interests.

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Author Contribution

All authors contributed to conceptualization, methodology, formal analysis, writing – original draft preparation, writing – review & editing, and visualization. Supervision was provided by Hélio Bragança. All authors have read and agreed to the published version of the manuscript.

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Data Availability

The data supporting the findings of this study are available from the corresponding author upon reasonable request. The data are not publicly available because they contain information that could compromise participant confidentiality.

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Figures

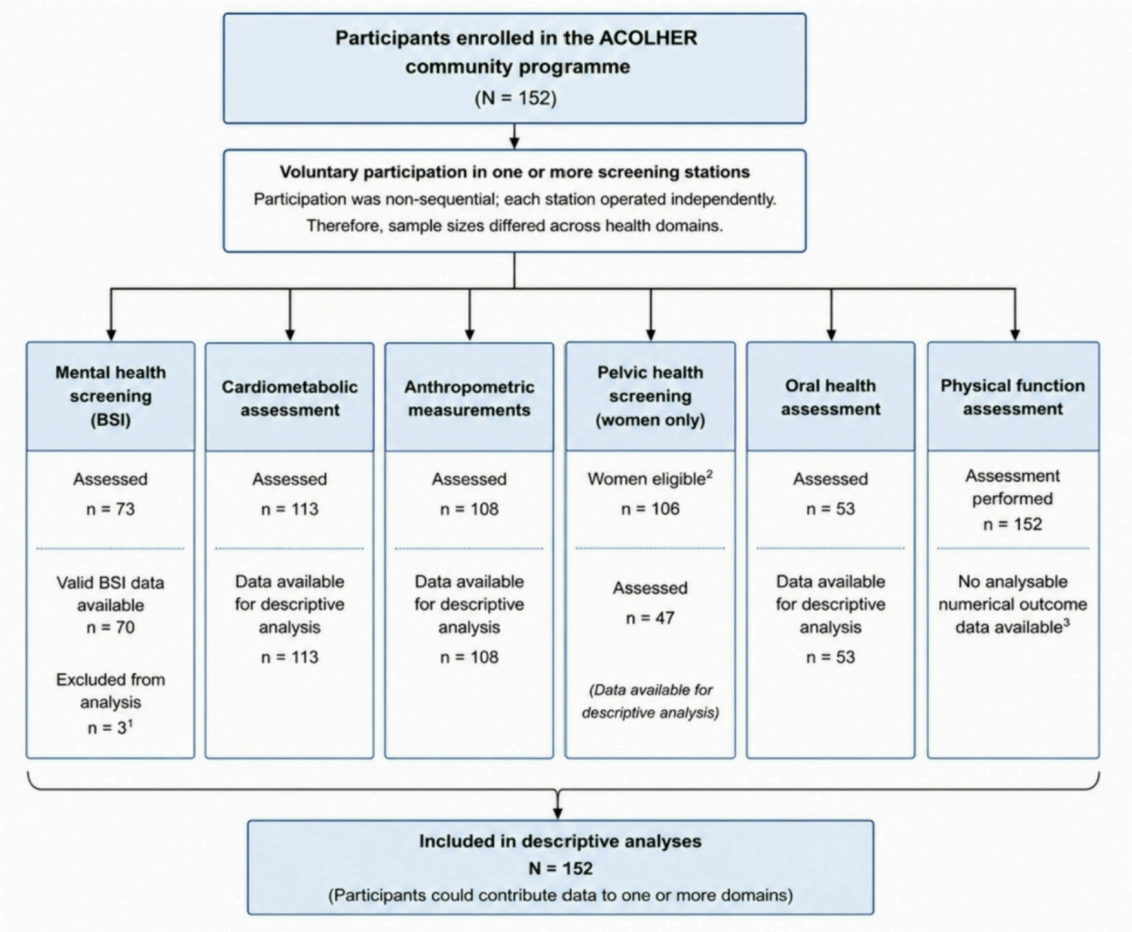


Figure 1

Flow of participants across the screening domains of the ACOLHER community-based programme.

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