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Social capital in the prevention and management of non-communicable diseases among migrants and refugees: a systematic review and meta-ethnography

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ABSTRACT

Globally, the burden of non-communicable diseases (NCDs) falls disproportionately on underserved populations. Migrants and refugees are particularly vulnerable due to economic instability and systemic poverty. Despite the myriad of health risks faced by migrants and refugees, access to appropriate healthcare is hindered by structural, cultural and socioeconomic barriers. We conducted a systematic review and meta-ethnography to obtain critical insight into how the interplay of social capital and structural factors (eg, state policies and socioeconomic disadvantage) influences the prevention and treatment of NCDs in migrant and refugee populations. We included 26 studies of 14 794 identified articles, which reported qualitative findings on the structure and functions of social capital in NCD prevention and management among migrants and refugees. We synthesised findings, using the process outlined by Noblit and Hare, which indicated that migrants and refugees experienced weakened social networks in postmigration settings. They faced multiple barriers in healthcare access and difficulty navigating healthcare systems perceived as complex. Family as the core of social capital appeared of mixed value in their NCD prevention and management, interacting with cultural dissonance and economic stress. Community organisations were integral in brokering healthcare access, especially for information diffusion and logistics. Healthcare providers, especially general practitioners, were important bridges providing service-user education and ensuring a full continuum of quality care. While social capital reduced immediate barriers in healthcare access for NCD prevention and management, it was insufficient to address structural barriers. System-level interventions appear necessary to achieve equitable healthcare access in host countries. PROSPERO registration number: CCRD42020167846.

Key questions

What is already known?
► Social capital can develop protective networks and facilitate healthcare access.
► It alleviates the negative impacts of socioeconomic disadvantages on health.
► These findings were not conclusive, and effects were not consistently desirable.

What are the new findings?
► Social capital is converted into practical resources, which were integral in improving health literacy, increasing access to appropriate healthcare, and adhering to prescribed treatment and self-management of non-communicable diseases (NCDs) among migrants and refugees.
► Successful conversion of social capital into effective NCD prevention and management depend on the interactions of individual circumstances, community dynamics and wider systemic and structural issues in the populations.
► Healthcare provider's cultural competency is crucial as linking capital to empower migrants and refugees to act on the health information received.

What do the new findings imply?
► Social capital can alleviate some healthcare access barriers among migrants and refugees.
► Structural forces and institutional actors are significant in building social capital among migrants and refugees.
► There is a need to enhance healthcare providers' cultural competency and encourage patient-centred communication between providers and migrants and refugees.

INTRODUCTION

Increasingly exclusionary social and health policies deprive low-wage migrants (hereafter 'migrants') and refugees/refugee-like migrants (hereafter 'refugees') of resources and opportunities for social mobility and quality healthcare.[1] Migrants move across borders in search of better economic opportunities. Asylum-seekers and refugees lose or are forced to leave their financial capital behind during flight. On arrival in destination

or transit countries, their human capital—knowledge and skills—is mostly unappreciated or unrecognised; social capital then becomes essential to building other capital.

Migrants and refugees experience a high burden of infectious, non-communicable and psychiatric diseases.[2] Quality healthcare access is underpinned by the degree of a health system's availability, accessibility, accommodation, affordability and acceptability in meeting the population's abilities to perceive, to seek, to reach, to pay for and engage with the systems.[3 4] The dissonance between these populations and transit or host health systems is manifested through multiple structural, physical, financial, sociocultural and communicative barriers in healthcare access.[5–8] Lack of health literacy compromises their efficacy in navigating health systems.[9] This is exacerbated by their lack of legal status, especially when inclusive health policies and socialeconomic protection (eg, social safety net) are absent.[10] While many states have to navigate difficult legal and humanitarian imperatives in hosting and accepting forced migrants, including refugees and asylum seekers, it is important to note the moral imperative of universal healthcare access for those in need.[11] Inclusive health policies require an effective translation of rights-based principles into accountable governance and concrete actions.[12] Consequently, and owing largely to socially exclusionist policies, health systems may struggle to address unmet health needs among migrants and refugees.[13 14] This is especially challenging when long-term treatments are required.

Non-communicable diseases (NCDs) are diseases that do not transmit from one person to another. In this paper, we use the WHO definition 'NCDs, known as chronic diseases, tend to be of long duration and are the result of a combination of genetic, physiological, environmental and behavioural factors.' The four main types of NCDs are cardiovascular diseases, cancers, chronic respiratory diseases and diabetes, and they require lifetime care.[15]

Health disparities among disadvantaged populations are evident with NCDs.[16] Compared with host populations, higher NCD prevalence rates were found in migrants,[17] and refugees in West Asia[18–22] and Southeast Asia.[18] Despite their unmet needs, state policies lack inclusivity to tailor health services to these populations. This results in low NCD-related health literacy, barriers to health service utilisation, including timely screening, effective treatment and self-management.[23 24] As a consequence, complications arise and cause catastrophic medical costs and lives lost.[25] Improving NCD prevention and management among migrants and refugees requires dissecting their complex yet unique circumstances to address the intersection of cultural identity, legal and immigration status, socioeconomic status, and the wider sociopolitical environments that underlie the unequal distributions of resources and capability in health.[16 26 27]

Social capital and migrant health

People mobilise personal, community and institutional resources to achieve various purposes. Social capital is a collection of resources derived from social connections and networks.[28] Portes summarised that social capital could be categorised into value introjection, bounded solidarity, reciprocity exchanges and enforceable trusts depending on the motivations of those who make social resources available.[29] Social capital is formed, maintained and enhanced based on three types of social networks: bonding, bridging and linking.[28] Bonding capital refers to resources drawn from strong ties within close kinship. Networks formed across heterogeneous groups provide bridging capital. Linking capital connects networks across vertical hierarchies. Resources mediated by these networks enable both emotional and material social support, information diffusion, education and job opportunities, and other benefits derived from collective efforts.[28 29] Bonding capital is thus essential for people to 'get by' in daily life, while weak ties such as bridging capital facilitate 'getting ahead' through more effective information diffusion, for example, access to economic opportunities outside of close kinship.[28 30 31]

The consequences brought by social capital vary among migrants and refugees. Membership in a close-bonding community often requires norm conformity, which exerts strong social control and restricts individual autonomy and liberty.[29] Similarly, social contagions of undesirable behaviours could bring about adverse social and health outcomes within close-knit communities if links to an external support system are absent.[32] Isolation from the wider community is common among migrants and refugees in host countries due to physical separation, stigmatisation and discrimination. This can reinforce social disadvantages and lead to poorer health.[33]

Social capital is instrumental in developing protective networks and facilitating healthcare access.[34] Specifically, it alleviates the negative health impacts of socioeconomic disadvantages among marginalised populations.[35] Quantitative studies reported positive effects of social capital on hypertension detection,[36] better control of diabetes[37–39] and cardiovascular disease risks.[38] However, such findings are not conclusive.[39 40] In a review of the negative health effects of social capital, strong bonding was found to facilitate the spread of high-risk behaviours among network participants.[32] In order to obtain holistic insights on these quantitative findings,[35–39] it is crucial to understand contextual effects of social capital on NCD prevention and management. In this paper, we aim to determine how social capital is organised, mobilised and used in NCD prevention and treatment among migrants and refugees using a meta-ethnography.[41]

METHODS

Operationalisation and categorisation of migrants

We focused on populations characterised by international migration, including migrants, refugees and asylum-seekers. The terms 'migrant' and 'refugee' encompass diversity and sometimes cause confusion. For example, a 'migrant' is generally understood as transient and

an 'immigrant' as permanent but this is not yet widely accepted.[42] Similarly, the 1951 Convention Relating to the Status of Refugees provides definitions for 'refugee' and 'asylum-seeker,[43] yet many authors still use them interchangeably. Despite such references, migration situations are complex and often contextual. Transient migrants might extend their stay in host country permanently without legal residency.[44 45] A refugee recognised by the host country legal system is fundamentally different from a mandate refugee recognised by the United Nations High Commissioner for Refugees[46] in a country that has no legal definition or recognition of refugee status.[5 47] Although these groups carry the same labels, actual experiences and needs differ due to specific juridico-political contexts.

In this paper, we adapted the International Organisation for Migration's definition of a migrant as '…a person who moves into a country other than that of his or her nationality or usual residence, so that the country of destination effectively becomes his or her new country of usual residence.'[42] We further narrowed the inclusion to only migrants who are economically disadvantaged. Although 'refugee' is legally defined,[43] the context and their legal status in host countries influence the treatments they receive. We included resettled refugees (refugees who were transferred from a transit country to another country that has agreed to admit them), mandate refugees (refugees defined by the 1951 Convention, regardless of whether the host country has ratified it) and asylum-seekers (individuals who are waiting for their asylum status to be assessed). Table 1 shows a summary of migration categories used in the review.

Database searches

We conducted a systematic review and meta-ethnography of academic literature reporting qualitative primary findings on migrant and refugee social capital and NCDs. The first and second authors searched seven academic databases systematically (ie, PubMed, Embase, PsycINFO, CINAHL, Scopus, EBSCOHost, Web of Science). The full search strings for all databases are included as online supplemental file 1. We combined search terms and subject headings, including relevant terms related to "migrant*", "refugee*", "social capital", "health*", "disease prevention", "disease management" and "qualitative/interpretive research". Broad concepts of "health", "prevention" and "disease management" were used instead of NCDs to capture more potential results. We used Boolean operators, wildcards and truncation appropriately. Additionally, we screened reference lists of all included articles for further inclusion.

Identifying relevant articles

We imported database search results into EndNote and removed duplicates. The first and second authors independently screened titles and abstracts against eligibility criteria (table 2), with all discordant articles included in full text screening. The authors then independently screened remaining full texts against eligibility criteria, with discrepancies discussed with the last author until consensus was reached. Acknowledging that the term 'migrant' is not universally defined, we included all articles on low-income immigrants unless authors explicitly indicated participants' citizenship status in host countries, thus those who were undocumented, possessed precarious legal status, hired as unskilled workers, worked in informal sectors or lived in a deprived neighbourhood were included. There have been debates on the framing of NCDs,[48] including the pros and cons of integrating mental health and NCD management.[49 50] In this synthesis, we restricted our focus to the four main NCD types (ie, cancers, cardiovascular diseases, chronic respiratory diseases, diabetes) to enable a deeper and more focused analysis. We included all aspects of preventing and managing these NCDs, such as health literacy, healthcare access, prevention, management and outcomes. During literature identification, we found substantial bodies of work related to social capital and mental health or HIV, indicating the need for similar specific syntheses in these areas of work. Figure 1 documents study selection using the Preferred Reporting Items for Systematic Reviews and Meta-Analyses.[51]

Extraction and quality appraisal

We extracted data to a spreadsheet using the following headings: lead author, publication year, study objectives, study country, study period, sampling, data collection, analysis, participants (ie, numbers, country of origin, immigration status, age range, gender), NCD focus and social capital findings. We assessed methodological strengths and limitations of included studies using the Critical Appraisal Skills Programme Checklist for Qualitative Research.[52] Adopting Malpass *et al*'s method we categorised studies as: (1) key article, conceptually rich and could potentially make a significant contribution to the synthesis; (2) satisfactory article, which could potentially contribute to the synthesis and (3) unsure, as the article was either less relevant or we had doubts about its methodological rigour.[53] Overall, most articles were satisfactory and contributed substantially to our synthesis,

Table 1	Migration categories used in this review
Term	**Categories**
Migrant	Low-wage migrant, low-skilled migrant, migrant or immigrant who lives in poverty, transient migrant, seasonal migrant worker, undocumented migrant, trafficking victim.
Refugee	Resettled refugee, mandate refugee, refugee in transit.
Asylum-seeker*	Individual who is waiting for their asylum claim to be assessed.

*'Asylum-seeker' is legally different from 'refugee'. For ease of readability, we group refugee and asylum-seeker together using the term 'refugee' in most of our writings, unless it is necessary to differentiate them.

Table 2 Eligibility criteria

Criteria	Inclusion	Exclusion
Exposure of interest	Any component of social capital (including bonding, bridging, linking, friends, family, relatives, neighbours, kinship, provider patient relationship, social isolation, social network, social cohesion, social participation, social support, social connection, social mobilisation, community capital, community network, community cohesion, community participation, community support, community connection, community mobilisation, trust, mistrust, reciprocity, emotional support, psychosocial support, neighbourhood cohesion, collective efficacy, solidarity, empowerment, civil society)	Studies that explored only social capital without linking them to any aspect of NCDs.
Outcomes of interest	NCD prevention (including lifestyle behaviours), NCD management, access to healthcare facilities for NCD care, NCD outcomes including one of cancers, cardiovascular diseases, chronic respiratory diseases, and diabetes	Studies that explored NCD perception and experiences without linking them to social capital.
Population groups	Refugees, asylum-seekers, low-wage migrant workers, low-skilled migrants, undocumented migrants, immigrants who lived in poverty, migrants with precarious status, forced migrants (including trafficking victims)	Studies that looked at expatriates, white-collar migrants, and internal migrants (rural–urban/urban–rural).
Research method used	Any qualitative methods, or mixed methods if they reported qualitative findings	Quantitative methods and findings
Publication type	Primary studies published in academic journals*	Reviews, opinion piece, conference proceedings, editorials and protocols.
Publication year	Published in or after 1990†	
Language	Any that includes an English abstract	No English abstract

*Only academic journals were included to apply a standardised appraisal in the quality assessment on qualitative research to all studies.
†These dates were chosen as most public health studies related to social capital were published after 1990.
NCDs, non-communicable diseases.

including three key articles. We categorised ten articles as 'Unsure' and reassessed how each of these articles influenced the overall synthesis towards the end. We found that 'key' and 'satisfactory' articles shaped overall synthesis with support from 'unsure' articles. We noted that a minor synthetic element on negative perspective of social contagion came solely from articles in the 'unsure' category. Table 3 presents the summary and assessment of included articles.
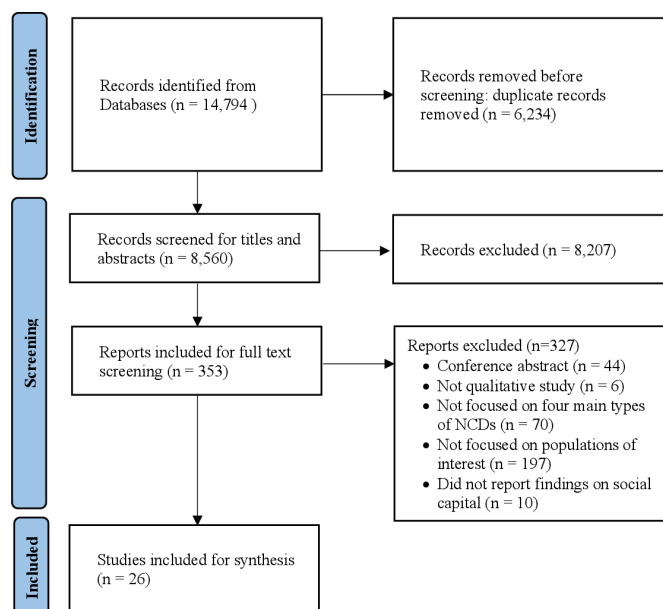
Figure 1 PRISMA diagram. NCDs, non-communicable diseases; PRISMA, Preferred Reporting Items for Systematic Reviews and Meta-Analyses.

Synthesising data

We synthesised included studies in Nvivo V.12, using the meta-ethnography approach developed by Noblit and Hare that emphasises comparative understanding rather than data aggregation.[41] This approach involved translation and synthesis of translation through analysing metaphors (eg, concepts and themes). First, the first and second authors conducted initial blinded double-coding of ten articles. In studies with mixed participants (eg, migrants, refugees, healthcare providers, community health workers), we coded only results relevant to migrants and refugees. We compared initial codes, noted inductive themes and established a preliminary thematic structure. We read and reread all studies, using an interpretivist lens in an iterative process of interpreting and discussing each coauthor's understanding of key concepts and their meanings. We held regular meetings to discuss preconceived ideas and potential biases to check reflexivity. We constantly referenced theoretical concepts on social capital and migration to enable deeper understanding of article authors' interpretations. We juxtaposed articles to establish how they related to each other and noted that all concepts were either reciprocal or formed lines of arguments, and none was refutational.

Patient and public involvement

Patients and the public were not involved in any stage of this study.

RESULTS

Table 3 shows 26 included articles of 14 784 initially identified. In total, 20 studies were conducted in the USA, 4 in

Table 3 Summary of included articles

Study country	Lead author (Publication year)	Assessment	Method	Social capital themes
Australia	Parajuli (2019)[76]	Key article	IDI with 30 purposively sampled Bhutanese women refugees, about cervical and breast cancers, analysed phenomenologically and using feminist methodological frameworks.	Roles of GPs; bridging roles of community workers; roles of interpreters; collective efficacy; social networks in awareness raising
Denmark	Lue Kessing (2013)[77]	Satisfactory	FGD and SSI with 29 refugees and immigrants, about breast cancer, analysed phenomenologically.	Maintenance of transnational tie; shrinking social networks; high level of trust on health system; roles of GPs
Jordan	McNatt (2019)[47]	Key article	IDI with 68 conveniently sampled Syrian refugees, about NCDs, analysed thematically.	Health system navigation; solidarity from host community; roles of healthcare providers
Sweden	Aweko (2018)[78]	Satisfactory	Individual interviews with 12 men and women immigrants about diabetes self-management, analysed thematically.	Doctor–patient relationship; family obligations; family support
Sweden	Olaya-Contreras (2019)[79]	Satisfactory paper	FGD with 33 purposively sampled Iraqi refugees and immigrants, about physical activity and diet, analysed thematically.	Family support; family obligations; traditions and cultural values
Netherlands	Nyaaba (2019)[54]	Satisfactory paper	SSI with 20 purposively sampled Ghanaian migrant workers, about hypertension, analysed thematically.	Peer support; patient–provider relationship; family and community support; intersubjective community norms; health system navigation
United States	Allen (2019)[80]	Satisfactory	FGD with 31 conveniently sampled Somali women refugees, about cervical cancer, used content analysis.	Doctor's and spouse's roles in decision making process for screening.
United States	Cartwright (2006)[44]	Unsure	Ten short-answer questions were asked to 171 conveniently and referral sampled undocumented and documented Mexican immigrants, about diabetes, analysed thematically.	Women's roles as primary caregivers; Impact of xenophobia on healthcare access; bridging roles of community workers
United States	D'Alonzo (2010)[81]	Satisfactory	Photovoice with eight purposively sampled Latin-American women immigrant, about physical activity, used developmental research sequence analysis method.	Family obligations; maintenance of transnational ties; support from religious institutions
United States	Devlin (2010)[55]	Satisfactory	FGD with 30 conveniently sampled Somali women refugees, about physical activity, analysed based on theory.	Family support; collective efficacy and social modelling; positive influence of peer support group
United States	Giuliani (2008)[82]	Unsure	FGD with 46 conveniently sampled Somali refugees, about smoking.	Peer pressure; family influences; family and peer support in cessation
United States	Helsel (2005)[83]	Unsure	Individual IDI with 11 conveniently sampled Laotian refugees, about type two diabetes and hypertension, analysed using grounded theory approach.	Family support; roles of care providers and patient educators
United States	Hu (2013)[58]	Satisfactory	FGD with 73 conveniently sampled Mexican immigrants, about diabetes self-management; used content analysis.	Lack of family support; lack of support from healthcare providers
United States	Kim (2004)[84]	Unsure	Written-response to open ended questions were collected from 256 referral-sampled immigrants, about cardiovascular diseases.	Roles of family members
United States	Kobetz (2011)[56]	Satisfactory	FGD with 18 conveniently sampled Haitian immigrants, about breast cancer, analysed using grounded theory approach.	Disclosure of illness; roles of family and peer support; support from religious institutions
United States	Lor (2018)[59]	Key article	FGD with 58 conveniently sampled Myanmar and Bhutanese refugees, about cervical cancer, analysed thematically.	Social networks in awareness raising; family and friend support; roles of positive relationship with healthcare providers
United States	Marinescu (2013)[85]	Unsure	FGD with 24 purposively sampled Somali refugees, about physical activity.	Intersubjective community norms; bridging roles of community workers

Continued

Table 3 Continued

Study country	Lead author (Publication year)	Assessment	Method	Social capital themes
United States	Mohamed (2014)[86]	Satisfactory paper	FGD with 17 and SSI with 3 Somali men refugees and immigrants recruited through convenience sampling, about physical activity, analysed inductively.	Family obligation; intersubjective community norms; collective efficacy and social modelling; family and friend support
United States	Murray (2015)[87]	Satisfactory paper	Photovoice with eight conveniently sampled Somali women refugees, about physical activity, analysed thematically.	Neighbourhood safety; intersubjective community norms; family obligations; family and neighbour support
United States	Nguyen (2011)[88]	Unsure	FGD and IDI with 110 Southeast Asian refugees and immigrant recruited through convenience and snowball sampling, about breast cancer.	Bridging roles of community workers
United States	Nicdao (2016)[89]	Satisfactory paper	SSI with 16 Laotian and Cambodian refugees or immigrants recruited through convenience and snowball sampling, about diabetes, analysed using grounded theory approach.	Shrinking social networks; social isolation; family support; doctor–patient relationship
United States	Saadi (2015)[90]	Satisfactory paper	Semistructured IDI with 57 Bosnian, Somali and Iraqi women refugees recruited through snowball and convenience sampling, about breast cancer, analysed thematically.	Family obligations; fatalism; patient–provider relationship; bridging roles of community workers; roles of interpreters
United States	Sanon (2016)[57]	Satisfactory paper	Critical ethnography with 31 Haitian immigrants recruited through purposive and snowball sampling, about hypertension self-management.	Maintenance of transnational ties; peer support; family obligation
United States	Schlomann (2012)[91]	Unsure	FGD with 21 purposively sampled Mexican immigrants, about diet and physical activity, analysed thematically.	Family and friend support; family obligations; shrinking social network; impact of xenophobia
United States	Vamos (2018)[92]	Satisfactory paper	IDI with 18 purposively sampled Mexican women migrants, about cervical cancer, analysed thematically.	Family and friend support; health system navigation; disclosure of illness
United States	Worby (2013)[45]	Unsure	Semistructured IDI with 64 mostly undocumented Central American male migrants recruited through purposive sampling, on alcohol consumption.	Unstable social network; lack of peer and family support; peer pressure; impact of perceived discrimination

FGD, focus group discussion; GPs, general practitioners; IDI, in-depth interview; NCDs, non-communicable diseases; SSI, semistructured interview.

Europe (ie, Denmark, Netherlands, Sweden) and 1 each in Australia and Jordan. All were published after 2000, with 15 including refugees while the rest focused on low-income immigrants, migrant workers or undocumented migrants. Ten studies focused on NCD prevention (eg, physical activity, diet, smoking and drinking) and access to NCD services, eight focused on cancer prevention and management (breast and cervical), and eight discussed diabetes and hypertension management. None of the eligible studies examined social capital using established theories or constructs, indicating the existing literature is generally undertheorised. This required a more interpretative approach to review findings than might normally be the case. We thus interpreted data from included studies based on established social capital theories, presenting our findings under two sections: (1) accessing appropriate healthcare services and (2) social capital in accessing NCD prevention and management. The first section contextualises the complex situation migrants and refugees experienced in host countries, while the second synthesises the social capital available and used to overcome difficulties.

Accessing appropriate healthcare services

The most salient themes within healthcare access were affordability and functional health literacy. Access to healthcare was largely compounded by financial hardship and difficulties in navigating the health system. Poverty caused their prioritisation of basic survival needs over health.

> Here it is like a luxury to get sick. You have to go work even if you are sick. And a doctor is so expensive that it's a luxury to even go to the doctor. (Mexican migrant in the US, Article #24)

While insurance was available to relieve financial stress for medical care among migrants and refugees in some countries, ease of access was often compromised by a complex and bureaucratic system untailored to their needs.[54–57] Copayment and opportunistic costs further hindered their receipt of necessary health services. Although most described host country health systems as more advanced, navigating these systems was challenging and often confusing, and exacerbated by low health literacy, lack of legal status and language barriers.[47 55 58 59] Consequently, some chose to get medicines from pharmacies and seek care from emergency services or private practices; ultimately incurred even higher costs. These experiences were intensified if the host country had an exclusionary healthcare system that penalised migrants and refugees.

Social capital in accessing ncd prevention and management

Structural, economic and sociocultural forces were integral in influencing migrants' and refugees' NCD prevention and management. Social capital in the forms of emotional, informational, logistic and linguistic supports thus became essential in subverting structural deterrents to seeking healthcare services. Interactions between social and individual roles were mediated by social capital, described under eight themes related to post-migration adjustment, family, transnational ties, friends, community, bridging capital and linking capital. Figure 2 presents the thematic scheme.
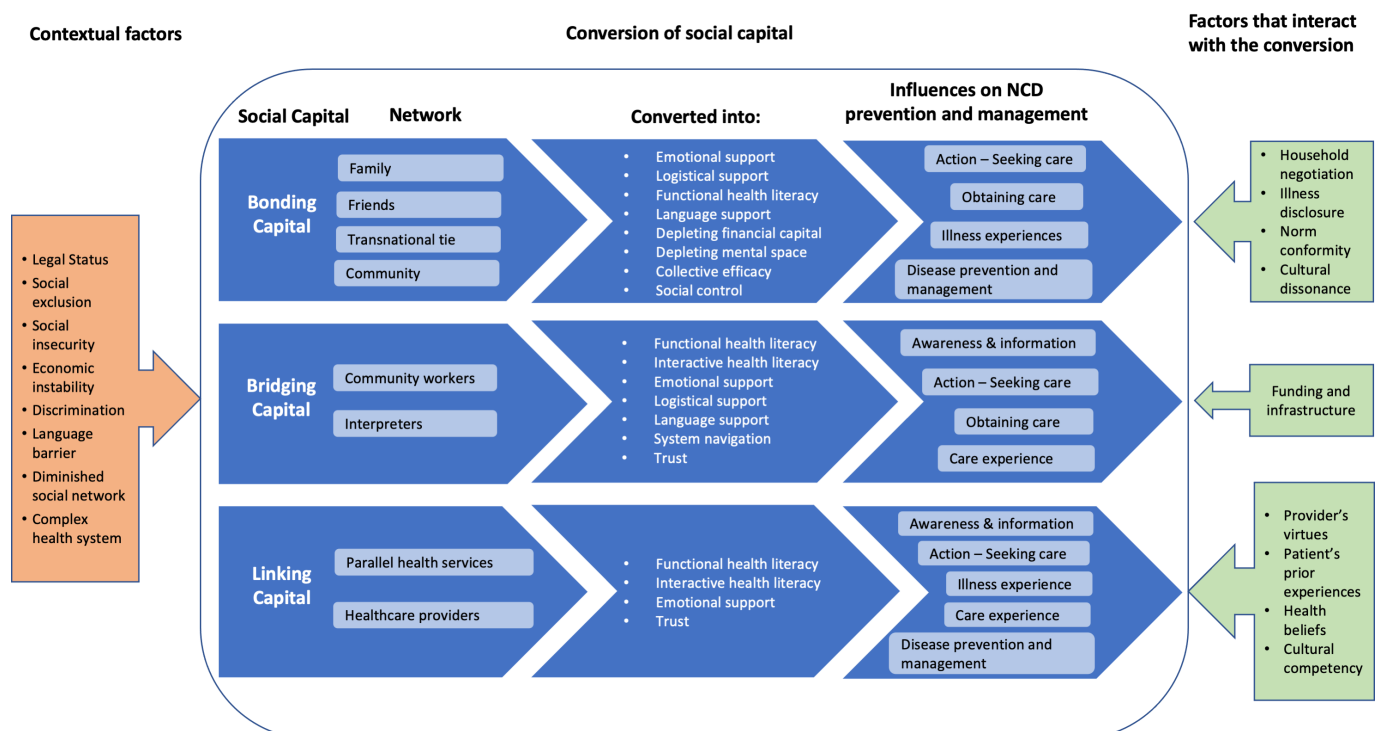
Figure 2 Contextual factors, conversion of social capital and its' interacting factors. NCDs, non-communicable diseases.

Postmigration: adjustment to a new system with diminished social networks

Migrants and refugees had difficulty adapting to host countries. Their full participation in society was obstructed by legal status, stigmatisation and language barriers. This lack of civic engagement further marginalised them, limiting health choices.

> My elderly mother used to walk to the mosque in the early morning… a car chased her and her friend as they walked… It was a man in a pick-up truck who was insulting them as they walked home. They refused to walk there again after that incident. (Somali refugee in the US, article #15)

The complex and prolonged process of adjustments to survive in host countries caused overwhelming stress, and was perceived as a root cause of physical and mental illnesses.

> [I]t's a stressful, stressful life and you forget about many things. You forget to live you're working so hard. You forget about social life, forget about yourself. (Mexican immigrant in the US, Article #24)

Social insecurity and economic instability further hindered NCD prevention and management. Livelihood stressors, combined with shrinking social networks postmigration, positioned work and health as competing priorities. Working multiple jobs or long hours was common for household survival, subsequently undermining NCD prevention and care.

> We all know that exercise leads to good health. Then again, people cannot keep it up. We won't have time, looking for food, jobs and paychecks. (Somali refugee in the US, article #15)

Family: core of social capital and double-edged sword

Family members appeared to be the primary source of social capital in NCD prevention and treatment. Those living alone in host countries lacked the protection extended by families. They often felt isolated and did not receive adequate support for disease management. Those living with families in host countries, received emotional support and bridging to healthcare systems. For example, educated family members read and translated health information, provided transportation, assisted with system navigation, and communicated with health workers for those not fluent in host country languages.

Changes in household compositions and community dynamics postmigration required shifting strategies. When community networks for health were limited, NCD management depended on negotiations within households. These included tasks distribution to maximise financial and human capital with factors such as family tradition, cultural values, meal habits and gender roles highlighted in negotiations. Some families were receptive to required dietary changes. For others, family traditions, cultural values, and habits contravened lifestyle recommendations and reduced adherence.

> [W]hen I meet relatives, they invite me [to eat] all the time, and I cannot say no…; this is considered impolite not to eat the food when offered; It is hard to say no to good food that you get served; My family thinks I'm too small, but I'm overweight! They offer me different dishes and meals the whole time. (Arab migrant in Sweden, Article #20)

Differences were also observed between genders. Men tended to obtain more spousal support for healthy eating, while women's dietary behaviours were reliant on family's acceptance.

> A challenge for me has been to convince my husband to use less oil and convince my children to eat less fried foods and sweets. (Latino migrant in the US, Article #10)

Migrant women who worked were exhausted by household chores and described physical exhaustion as compromising their abilities to adopt preventive health practices.

Transnational ties: costs of tie maintenance

How kinship was managed postmigration affected NCD prevention and management. Financial remittances were usually necessary in exchange for social capital extended by families in countries of origin. The emotional comfort received from their family affirmed their identities as responsible children, spouses and parents. To fulfil familial responsibilities, migrants focused on converting limited available resources (ie, time, mental space, physical capacities) into financial capital, deprioritising NCD preventive practices.

> Taking care of the children in Haiti, I think it does not make hypertension well. Because most of the times, you do not have the economy even for your own self if you were to get sick while you do not have insurance. (Haitian migrant in the US, Article #23)

For migrants with NCDs, the struggle to provide for their families became a motivation to manage their diseases as health was prerequisite to maximising income through labour.

> If I were to tell you the amount of money I send to Haiti, I could not talk about that, girl. I can tell you everything I make where it goes is Haiti because all my soul is in Haiti. [I have] six children in Haiti. If I were to let hypertension kill me, who would take care of them? So I am obligated to take my medications. (Haitian migrant in the US, Article #23)

Similarly, refugees who were uprooted from their home countries were apprehensive about relatives' health and safety across borders. These worries overwhelmed their daily life and intensified their need to maintain transnational ties for emotional comfort and bonding. Consequentially, NCD preventive practices and management were minimised.

> For diabetes patients, diet and food is not important. The mood and mentality play [a] big role. For instance, [if] I receive a call from Damascus, I feel sad for one month. I

am the only one who left the prison. […] Diabetes cannot be stable as long as my family is living like that. (Syrian refugee in Jordan, Article #14).

Friends: sources of informational, emotional and logistical support

Together with family, close friends within the same social group were significant in extending emotional, informational and sometimes logistical support to migrants and refugees. Friend ties were especially crucial for those separated from family. However, migrants and refugees were cautious about friends' support in illness management. Disclosure of illness, especially those perceived as stigmatised (eg, cervical cancer), could negatively affect friendships.

> Illness should be confidential; you are not supposed to talk about your illness to just anybody. Once you talk about your illness, you get a bad feeling because the person you are telling pulls away from you. (Haitian migrant in the US, article #11)

On acceptance of disclosure, participants often benefitted from friends' emotional and practical support. However, disclosure was still perceived as risk-taking.

Communities: distributed health literacy versus perceived social control

Community networks, including religious, cultural and grassroots support groups, provided a sense of security and enabled reciprocal exchanges of information and other practical support that enhanced NCD management. Community attachment fostered social cohesion and facilitated diffusion of health information. Network participants shared various health literacy skills to enable health promotion, while providing a platform for collective efficacy and role modelling.

> The second camel follows the steps of the first camel, you are what your friend is, and if you want to know somebody, look at his friends. (Somali refugees in the U.S., Article #06)

However, potential harms of communal bonds were noted such as facilitating risk behaviours.

> What? Are you too proud to drink with us? […] It is hard to avoid them, I must pass through the living room to go to my room, and they are there, playing music and drinking (Guatemalan migrant in the US, article #26)

Transnationalism played an instrumental role in the search for recognition of a shared identity, defined as a set of culturally mandated norms and expectations of group members. The perceived need to observe intersubjective community norms in the host countries exerted ongoing social control.

> There is no place just for women, and that is the only barrier I can see. (Somali refugee in the US, article #5)

Cultural dissonance was apparent in some communities in which, for example, joining western facilities such as gyms and following modern norms such as wearing sports attire were regarded as inappropriate.

> If you give an old (Somali man) a pair of shorts and Somali women see him running, Somali women will say he is crazy. (Somali refugee in the US, article #16)

Observing community norms in host countries often conflicted with effective NCD preventive practices and management, inhibiting lifestyle modification. Some health behaviours such as losing weight through exercising were seen as 'an act of vanity'[44] or betrayal of cherished beliefs.

Bridging capital: getting ahead with brokers of healthcare access

The structural, financial and language barriers to healthcare access could be narrowed by 'bridges' within communities. Difficulties in healthcare navigation were alleviated through community health workers, peer advocates or settlement workers. These agents provided emotional, informational, linguistic and logistical support bridging communities with healthcare systems. They were often well equipped with necessary skills and information to assist migrants and refugees beyond what closer networks could provide. These broker networks increased health literacy and facilitated adaptation in host countries.

> If we didn't have someone who spoke our language, I can't imagine how difficult life would have been. (Somali refugee in the US, article #22)

Linking capital: parallel health services in contexts of social exclusion

Humanitarian organisations were important resources in linking migrants and refugees to adequate NCD care. They filled the access gap by providing primary healthcare and referral services, delivering services tailored to participants' needs which effectively reduced physical barriers and opportunistic costs of visiting a clinic.

> At first, they gave us instructions for using the device [blood pressure monitor]. […] They come here every time. Things are good. (Syrian refugee in Jordan, Article #14)

These parallel services were especially crucial in countries with exclusionary national health policy against non-citizens. However, such services were often limited due to lack of funding and infrastructure.

Linking capital: patient-centred care for underserved populations

Relationships with healthcare providers determined the quality of care received and ultimately NCD prevention and management. Healthcare providers, especially physicians, were sources of health information. This was especially essential as mainstream health information often lacked cultural competency for migrants' and refugees' specific health and language needs. Trust and respect for physicians became the guide and initiator for NCD management, such as screening, lifestyle modification and treatment adherence.

Whenever my doctor schedules an appointment for me, I am always obligated to go and there is never any problem or difficulties with that. I respect doctors and their opinion. First there is a God, and then there is a doctor. (Bosnian refugee in the US, Article #22)

General practitioners often served as gateways to comprehensive care. Given migrants' and refugees' social position, more efforts were required to access this first point of contact, and failure hindered their access to adequate health services.

However, relationships with healthcare providers were highly contextual and inconsistent across studies, and shaped by provider virtues. High trust was placed on providers who exhibited professional conduct such as empathy, compassion and confidentiality. Other providers' nonchalant approach left migrants and refugees feeling unsupported. Those who experienced traumatising encounters in their countries of origin experienced intensified fear and mistrust in establishments, including healthcare providers. Scepticism about prescriptions and physician recommendations was common among those who believed in divine will, which affected their healthcare usage.

Some people do everything right, they eat right, they exercise, and cancer still comes on them, so you cannot tell me you have control. Even when you take care of the first cancer, it can go back. So, the control is God. (Haitian migrant in the US, Article #11)

Discordance between migrants' and refugees' needs and provider expectations also caused distress in NCD management. For example, lifestyle prescriptions that lacked cultural sensitivity and considerations of individual circumstances often failed to ensure patient engagement.

Language differences in healthcare settings needed to be managed adequately to avoid eroding trust. Interpretation services could empower participants to exercise patient rights and improve health literacy, but experiences with interpreters were not always positive. This sometimes led to more frustration when expectations were mismatched.

When we go to the hospital, we are not able to tell our problems openly or clearly. They will give us an interpreter by phone because we are not in a condition to speak. But the interpreter tells us to speak louder… Sometimes the interpreter themselves won't understand what we are saying because we are not in the condition to speak due to pain and keeps asking. (Bhutanese refugee in the US, article #12)

Although interpretation services were negatively perceived in some settings, they often enabled more effective communication among migrants and refugees with healthcare providers. Conversing in native languages through interpreters empowered them to discuss NCD treatment plans with providers, which ultimately improved treatment outcomes.

If GPs give the information, it would be good. They will listen, but if there is no interpreter, they cannot get a complete picture of any health problem and motivate them [women] to do these screening tests. (Bhutanese refugee in Australia, article #21).

DISCUSSION

To the best of our knowledge, the study is the first attempt to synthesise qualitative evidence on the roles of social capital in NCD prevention and management among migrants and refugees using a meta-ethnography approach. Our findings highlighted the types of social capital, although limited, which migrants and refugees converted into necessary resources for NCD care. Against the backdrop of low financial and human capital, migrants and refugees needed to adapt to diminished social networks, manage transnational ties and navigate complex systems in host countries. These factors influenced their illness experiences and abilities to manage chronic diseases. Notably, barriers to adequate health services for the populations were relatively uniform across studies and were reduced through kinship and network ties. Community health workers, peer advocates or settlement workers, and other institutionalised assistance provided informational and practical supports, and brokered access to health services. These community resources were essential in improving functional, interactive and critical health literacy, consequently empowering their clients to act. Granovetter noted in 'the strength of weak ties' that linking groups across greater social distance is especially significant in information diffusion.[31] Most linking networks among migrant and refugee communities were not bottom-up initiatives due to contextual limitations. Assistance was mostly through institutionalised delivery by governments or humanitarian organisations, suggesting the significant role of structural forces and institutional actors in building social capital in these populations.

In communities experiencing social exclusion, the conversion of social capital into practical resources was integral in improving health literacy, increasing access to appropriate healthcare and adhering to prescribed treatment and self-management of chronic illness.[60 61] However, such conversion among migrants and refugees sometimes brought undesirable outcomes, especially when health recommendations were not congruent with perceived cultural norms and family dynamics. Thus, it is important to understand how they may externalise illness experiences within social environments that are culturally circumscribed and may inhibit changes in lifestyle.[62] This finding highlighted how culture intertwines with socioeconomic situations and eventually shapes unique health needs.[63]

The relationships between healthcare providers and migrants were diverse, sometimes contradictory and contextual, often shaped by prior experiences, belief systems and quality of available services. Inequality, social

relations, and structural forces impact communication between providers and patients; and quality of communication could be improved through an 'exchange' instead of a 'transfer' of information.[64] Migrants' and refugees' relationship with providers influenced quality of care and ultimately health outcomes.[65] Some established strategies to address the issue include improving providers' cultural competency,[63] encourage reciprocal and dynamic communication, and addressing health beliefs.[65]

Implications for policy and research

Our review revealed a dearth of qualitative studies about social capital and NCDs among migrant and refugee populations. Importantly, none of these studies explored social capital based on established theories, instead using terms such as trust, support and networks. This scarcity is especially palpable in non-western regions, despite the high numbers of migrants and refugees hosted in these countries and an increasing trend of NCDs observed.[18 66–69] Despite having some of the most congested migration routes and supplying the highest number of international migrants globally, none of our included studies were from Asia. Consequently, perspectives from Asia, West Asia ('Middle East') and Africa are substantially lacking. Our findings corroborate a bibliometric analysis showing global migrant health research was dominated by high-income destination countries and focused on psychosocial, mental health, and health policy and systems with only 8.9% focused on NCDs.[70] This reflects national and global public health research priorities, and the inequalities in scientific research across scopes, populations of interest and countries, substantiating the need for global health decolonisation.[71]

The data of social capital and NCD were insufficient to build a holistic understanding of how different dimensions of social capital influenced the continuum of NCD outcomes. While more studies globally have linked social capital to NCDs in recent years,[38 60 72 73] very few qualitative studies were grounded in established social capital theories. The scarcity of such literature is more evident for migrants and refugees. Future research needs to explore how social capital is converted into resources required to prevent and manage NCDs based on established theories and concepts.

Our synthesis also highlighted the lack of cultural competency and effective provider–patient relationship with migrants and refugees, implying health systems are unequipped to address their needs. With increasing population mobility, the relevance of national health systems for non-citizens needs greater discussion. Their needs should be considered for achieving universal health coverage. Global health governance should emphasise rights-based universal health equity among migrants and refugees.[74]

Limitations

Electronic databases index qualitative studies differently, some with more limited terms than others.[75] Some relevant qualitative studies might have been omitted despite searching most major databases. However, we kept search terms intentionally broad and screened the reference lists of included studies to ensure comprehensiveness. Further, though we included sources in any language, we used English search strings, so it is possible that relevant articles in languages other than English may have been omitted as we did not translate search strings. Study settings were concentrated in western contexts, with a lack of data and perspectives from Asia and Africa that reduced the generalisation of our synthesis. Lastly, key terms including 'migrant', 'immigrant', 'refugee' and 'asylum-seeker' are often loosely defined or misused in the literature and interpretations subject to historical and political revision. Further research and consensus are needed to establish terms that better define these mobile population groups to enable further in-depth analysis.

CONCLUSIONS

Migrants and refugees faced structural, economic, social and cultural barriers in healthcare access, jeopardising their ability to prevent and manage NCDs. Social capital, especially from family and institutional networks, facilitated NCD care. However, social capital alone was insufficient to address unmet health needs of migrants and refugees. Alongside community empowerment, addressing NCD needs for migrants and refugees requires inclusive public policies grounded in principles of equity and justice.

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Supplemental material

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BMJ Global Health

Supplementary Material 1 – Search Strings

PubMed search

((((((refugee[MeSH Terms]) OR (transients and migrants[MeSH Terms])) OR (Refugee*[Title/Abstract] OR asylum-seeker*[Title/Abstract] OR stateless[Title/Abstract] OR immigrant*[Title/Abstract] OR migrant*[Title/Abstract] OR displaced person[Title/Abstract])) AND ((((((social capital[MeSH Terms]) OR (social support[MeSH Terms])) OR (community networks[MeSH Terms])) OR (social isolations[MeSH Terms])) OR (trust[MeSH Terms])) OR ("Social capital"[Title/Abstract] OR "social isolation*" AND "Social network"[Title/Abstract] OR "Social cohesion"[Title/Abstract] OR "social participation"[Title/Abstract] OR "social support*"[Title/Abstract] OR "social connection"[Title/Abstract] OR "social mobilisation"[Title/Abstract] OR "social mobilization"[Title/Abstract] OR "community capital"[Title/Abstract] OR "community network"[Title/Abstract] OR "community cohesion"[Title/Abstract] OR "community participation"[Title/Abstract] OR "community support*"[Title/Abstract] OR "community connection"[Title/Abstract] OR "community mobilisation"[Title/Abstract] OR "community mobilization"[Title/Abstract] OR trust*[Title/Abstract] OR mistrust[Title/Abstract] OR reciprocity[Title/Abstract] OR "emotional support*"[Title/Abstract] OR "psychosocial support*"[Title/Abstract] OR "neighborhood cohesion"[Title/Abstract] OR "neighbourhood cohesion"[Title/Abstract] OR "collective efficacy"[Title/Abstract] OR solidarity[Title/Abstract] OR empowerment[Title/Abstract] OR "civil society"[Title/Abstract]))) AND (((((((((health[MeSH Terms]) OR (health services accessibility[MeSH Terms])) OR (health literacy[MeSH Terms])) OR (primary prevention[MeSH Terms])) OR (secondary prevention[MeSH Terms])) OR (tertiary prevention[MeSH Terms])) OR (disease management[MeSH Terms])) OR (treatment adherence and compliance[MeSH Terms])) OR (((((Health[Title/Abstract] OR morbidit*[Title/Abstract] OR mortalit*[Title/Abstract] OR disease*[Title/Abstract] OR illness*[Title/Abstract] OR sickness[Title/Abstract] OR disorder*[Title/Abstract] OR disabilit*[Title/Abstract]) OR ("Access to health services"[Title/Abstract] OR "health service utilisation"[Title/Abstract] OR "health service utilization"[Title/Abstract] OR discriminat*[Title/Abstract] OR stigma[Title/Abstract] OR barrier*[Title/Abstract] OR facilitator*[Title/Abstract])) OR ("Health literacy"[Title/Abstract] OR Knowledge[Title/Abstract] OR awareness[Title/Abstract] OR information[Title/Abstract] OR education[Title/Abstract] OR attitude[Title/Abstract] OR behaviour*[Title/Abstract] OR behavior*[Title/Abstract] OR "health practice*"[Title/Abstract] OR "health practise*"[Title/Abstract])) OR (Prevent*[Title/Abstract] OR "health promotion"[Title/Abstract] OR "health seeking behaviour*"[Title/Abstract] OR "health seeking behavior*"[Title/Abstract] OR "high risk behaviour*"[Title/Abstract] OR "high risk behaviour*"[Title/Abstract] OR "physical activit*"[Title/Abstract] OR diet[Title/Abstract] OR "healthy eating"[Title/Abstract] OR "healthy lifestyle*"[Title/Abstract] OR "health behaviour*"[Title/Abstract] OR "health behavior*"[Title/Abstract] OR smoking[Title/Abstract] OR

alcohol[Title/Abstract])) OR ("Disease manage*"[Title/Abstract] OR "manag* disease*"[Title/Abstract] OR care[Title/Abstract] OR therap*[Title/Abstract] OR complian*[Title/Abstract] OR adheren*[Title/Abstract] OR treatment*[Title/Abstract] OR diagnosis[Title/Abstract])))) AND ((((qualitative research[MeSH Terms]) OR (anthropology[MeSH Terms])) OR (focus group[MeSH Terms])) OR ("framework analysis" OR "framework synthesis" OR "framework theory" OR qualitative OR "grounded theory" OR "mixed method*" OR "mixed design*" OR "multimethod*" OR "focus group*" OR narrative* OR phenomenology* OR discourse OR theme* OR subtheme* OR thematic OR "cognitive walkthrough" OR ethnography OR realist OR participatory OR "action research" OR record*))

Results: 1,588

Limit: From year 1990

EBSCOHost CINAHL

S1	(MH "Transients and Migrants") OR (MH "Refugees")
S2	TI (Refugee* OR asylum-seeker* OR stateless OR immigrant* OR migrant* OR "displaced person") OR AB (Refugee* OR asylum-seeker* OR stateless OR immigrant* OR migrant* OR "displaced person")
S3	S1 OR S2
S4	(MH "Support, Psychosocial+") OR (MH "Social Isolation+") OR (MH "Social Networks") OR (MH "Social Capital")
S5	TI ("Social capital" OR "social isolation*" "Social network" OR "Social cohesion" OR "social participation" OR "social support*" OR "social connection" OR "social mobilisation" OR "social mobilization" OR "community capital" OR "community network" OR "community cohesion" OR "community participation" OR "community support*" OR "community connection" OR "community mobilisation" OR "community mobilization" OR trust* OR mistrust OR reciprocity OR "emotional support*" OR "psychosocial support*" OR "neighborhood cohesion" OR "neighbourhood cohesion" OR "collective efficacy" OR solidarity OR empowerment OR "civil society") OR AB ("Social capital" OR "social isolation*" "Social network" OR "Social cohesion" OR "social participation" OR "social support*" OR "social connection" OR "social mobilisation" OR "social mobilization" OR "community capital" OR "community network" OR "community cohesion" OR "community participation" OR "community support*" OR "community connection" OR "community mobilisation" OR "community mobilization" OR trust* OR mistrust OR reciprocity OR "emotional support*" OR "psychosocial support*" OR "neighborhood cohesion" OR "neighbourhood cohesion" OR "collective efficacy" OR solidarity OR empowerment OR "civil society")
S6	S4 OR S5
S7	(MH "Preventive Health Care+") OR (MH "Health Services Accessibility+")
S8	(MH "Health+")
S9	(MH "Disease Management+") OR (MH "Patient Compliance+")
S10	(MH "Health Literacy")
S11	TI (Health OR morbidit* OR mortalit* OR disease* OR illness* OR sickness OR disorder* OR disabilit* OR "Access to health services" OR "health service utilisation" OR "health service utilization" OR discriminat* OR stigma OR barrier* OR facilitator* OR "Health literacy" OR

Knowledge OR awareness OR information OR education OR attitude OR behavio#r* OR "health practice*" OR "health practise*" OR Prevent* OR "health promotion" OR "health seeking behaviour*" OR "health seeking behavior*" OR "high risk behavio#r*" OR "physical activit*" OR diet OR "healthy eating" OR "healthy lifestyle*" OR "health behaviour*" OR "health behavior*" OR smoking OR alcohol OR "Disease manage*" OR "manag* disease*" OR care OR therap* OR complian* OR adheren* OR treatment* OR diagnosis) OR AB (Health OR morbidit* OR mortalit* OR disease* OR illness* OR sickness OR disorder* OR disabilit* OR "Access to health services" OR "health service utilisation" OR "health service utilization" OR discriminat* OR stigma OR barrier* OR facilitator* OR "Health literacy" OR Knowledge OR awareness OR information OR education OR attitude OR behavio#r* OR "health practice*" OR "health practise*" OR Prevent* OR "health promotion" OR "health seeking behaviour*" OR "health seeking behavior*" OR "high risk behavio#r*" OR "physical activit*" OR diet OR "healthy eating" OR "healthy lifestyle*" OR "health behaviour*" OR "health behavior*" OR smoking OR alcohol OR "Disease manage*" OR "manag* disease*" OR care OR therap* OR complian* OR adheren* OR treatment* OR diagnosis)

S12   S7 OR S8 OR S9 OR S10 OR S11

S13   (MH "Qualitative Studies+") OR (MH "Multimethod Studies")

S14   (MH "Phenomenology")

S15   TI ("framework analysis" OR "framework synthesis" OR "framework theory" OR qualitative OR "grounded theory" OR "mixed method*" OR "mixed design*" OR Multimethod* OR "focus group*" OR narrative* OR phenomenology* OR discourse OR theme* OR subtheme* OR thematic OR "cognitive walkthrough" OR ethnography OR realist OR participatory OR "action research" OR record*) OR AB ("framework analysis" OR "framework synthesis" OR "framework theory" OR qualitative OR "grounded theory" OR "mixed method*" OR "mixed design*" OR Multimethod* OR "focus group*" OR narrative* OR phenomenology* OR discourse OR theme* OR subtheme* OR thematic OR "cognitive walkthrough" OR ethnography OR realist OR participatory OR "action research" OR record*)

S16   S13 OR S14 OR S15

       S3 AND S6 AND S12 AND S16

Results: 987

Limits: Academic journal, from 1990

EBSCOHost – Humanities International Complete;Social Sciences Abstracts (H.W.Wilson);Urban Studies Abstracts

S2   TI ("Social capital" OR "social isolation*" "Social network" OR "Social cohesion" OR "social participation" OR "social support*" OR "social connection" OR "social mobilisation" OR "social mobilization" OR "community capital" OR "community network" OR "community cohesion" OR "community participation" OR "community support*" OR "community connection" OR "community mobilisation" OR "community mobilization" OR trust* OR mistrust OR reciprocity OR "emotional support*" OR "psychosocial support*" OR "neighborhood cohesion" OR "neighbourhood cohesion" OR "collective efficacy" OR solidarity OR empowerment OR "civil society") OR AB ("Social capital" OR "social isolation*" "Social network" OR "Social cohesion" OR "social participation" OR "social support*" OR "social connection" OR "social mobilisation" OR "social mobilization" OR "community capital" OR "community network" OR "community cohesion" OR "community participation" OR "community support*" OR "community connection" OR "community mobilisation" OR "community mobilization" OR trust* OR mistrust OR reciprocity OR "emotional support*" OR "psychosocial support*" OR "neighborhood cohesion" OR "neighbourhood cohesion" OR "collective efficacy" OR solidarity OR empowerment OR "civil society")

S3   TI (Health OR morbidit* OR mortalit* OR disease* OR illness* OR sickness OR disorder* OR disabilit* OR "Access to health services" OR "health service utilisation" OR "health service

utilization" OR discriminat* OR stigma OR barrier* OR facilitator* OR "Health literacy" OR Knowledge OR awareness OR information OR education OR attitude OR behavio#r* OR "health practice*" OR "health practise*" OR Prevent* OR "health promotion" OR "health seeking behaviour*" OR "health seeking behavior*" OR "high risk behavio#r*" OR "physical activit*" OR diet OR "healthy eating" OR "healthy lifestyle*" OR "health behaviour*" OR "health behavior*" OR smoking OR alcohol OR "Disease manage*" OR "manag* disease*" OR care OR therap* OR complian* OR adheren* OR treatment* OR diagnosis) OR AB (Health OR morbidit* OR mortalit* OR disease* OR illness* OR sickness OR disorder* OR disabilit* OR "Access to health services" OR "health service utilisation" OR "health service utilization" OR discriminat* OR stigma OR barrier* OR facilitator* OR "Health literacy" OR Knowledge OR awareness OR information OR education OR attitude OR behavio#r* OR "health practice*" OR "health practise*" OR Prevent* OR "health promotion" OR "health seeking behaviour*" OR "health seeking behavior*" OR "high risk behavio#r*" OR "physical activit*" OR diet OR "healthy eating" OR "healthy lifestyle*" OR "health behaviour*" OR "health behavior*" OR smoking OR alcohol OR "Disease manage*" OR "manag* disease*" OR care OR therap* OR complian* OR adheren* OR treatment* OR diagnosis)

S4   TI ("framework analysis" OR "framework synthesis" OR "framework theory" OR qualitative OR "grounded theory" OR "mixed method*" OR "mixed design*" OR Multimethod* OR "focus group*" OR narrative* OR phenomenology* OR discourse OR theme* OR subtheme* OR thematic OR "cognitive walkthrough" OR ethnography OR realist OR participatory OR "action research" OR record*) OR AB ("framework analysis" OR "framework synthesis" OR "framework theory" OR qualitative OR "grounded theory" OR "mixed method*" OR "mixed design*" OR Multimethod* OR "focus group*" OR narrative* OR phenomenology* OR discourse OR theme* OR subtheme* OR thematic OR "cognitive walkthrough" OR ethnography OR realist OR participatory OR "action research" OR record*)

S5   S1 AND S2 AND S3 AND S4

Results: 977

Limits: Academic journal, from 1990

Embase

Sources: MEDLINE, Embase

- #1 AND #2 AND #3 AND #4 AND [1990-2020]/py
- #4'qualitative research'/exp OR 'phenomenology'/exp OR 'multimethod study'/exp OR 'framework analysis' OR 'framework synthesis' OR 'framework theory' OR qualitative OR 'grounded theory' OR 'mixed method*' OR 'mixed design*' OR multimethod* OR 'focus group*' OR narrative* OR phenomenology* OR discourse OR theme* OR subtheme* OR thematic OR 'cognitive walkthrough' OR ethnography OR realist OR participatory OR 'action research' OR record*:ab,ti
- #3'health'/exp OR 'health care access'/exp OR 'health literacy'/exp OR 'prevention'/exp OR 'disease management'/exp OR 'patient compliance'/exp OR health OR morbidit* OR mortalit* OR disease* OR illness* OR sickness OR disorder* OR disabilit* OR 'access to health services' OR 'health service utilisation' OR 'health service utilization' OR discriminat* OR stigma OR barrier* OR facilitator* OR 'health literacy' OR knowledge OR awareness OR information OR education OR attitude OR behavio$r* OR 'health practice*' OR 'health practise*' OR prevent* OR 'health promotion' OR 'health seeking behaviour*' OR 'health seeking behavior*' OR "high risk behavio$r*" OR 'physical activit*' OR diet OR 'healthy eating' OR 'healthy lifestyle*' OR 'health behaviour*' OR 'health behavior*' OR smoking OR alcohol OR 'disease manage*' OR 'manag* disease*' OR care OR therap* OR complian* OR adheren* OR treatment* OR diagnosis:ab,ti

- #2'social environment'/exp OR 'social capital' OR 'social isolation*' OR 'social network' OR 'social cohesion' OR 'social participation' OR 'social support*' OR 'social connection' OR 'social mobilisation' OR 'social mobilization' OR 'community capital' OR 'community network' OR 'community cohesion' OR 'community participation' OR 'community support*' OR 'community connection' OR 'community mobilisation' OR 'community mobilization' OR trust* OR mistrust OR reciprocity OR 'emotional support*' OR 'psychosocial support*' OR 'neighborhood cohesion' OR 'neighbourhood cohesion' OR 'collective efficacy' OR solidarity OR empowerment OR 'civil society':ti,ab
- #1'migrant'/exp OR refugee* OR 'asylum seeker*' OR stateless OR immigrant* OR migrant* OR 'displaced person':ab,ti

Results: 2,343

Limit: from 1990

PsycInfo

1. exp Refugees/

2. exp Immigration/

3. (Refugee* or asylum-seeker* or stateless or immigrant* or migrant* or displaced person).ti. or (Refugee* or asylum-seeker* or stateless or immigrant* or migrant* or displaced person).ab.

4. 1 or 2 or 3

5. exp Social Capital/

6. exp Social Support/

7. exp Social Networks/

8. exp Social Isolation/

9. exp "Trust (Social Behavior)"/

10. (Social capital or social isolation* or Social network or Social cohesion or social participation or social support* or social connection or social mobilisation or social mobilization or community capital or community network or community cohesion or community participation or community support* or community connection or community mobilisation or community mobilizationOR trust* or mistrust or reciprocity or emotional support* or psychosocial support* or neighborhood cohesion or neighbourhood cohesion or collective efficacy or solidarity or empowerment or civil society).ti. or (Social capital or social isolation* Social network or Social cohesion or social participation or social support* or social connection or social mobilisation or social mobilization or community capital or community network or community cohesion or community participation or community support* or community connection or community mobilisation or community mobilizationOR trust* or mistrust or reciprocity or emotional support* or psychosocial support* or neighborhood cohesion or neighbourhood cohesion or collective efficacy or solidarity or empowerment or civil society).ab.

11. 5 or 6 or 7 or 8 or 9 or 10

12. exp Health Literacy/ or exp Health Care Utilization/ or exp Health/ or exp Health Care Access/

13. exp Prevention/

14. exp Disease Management/

15. exp Treatment Compliance/

16. (Health or morbidit* or mortalit* or disease* or illness* or sickness or disorder* or disabilit* or Access to health services or health service utilisation or health service utilization or discriminat* or stigma or barrier* or facilitator* or Health literacy or Knowledge or awareness or information or education or attitude or behaviour* or behavior* or health practice* or health practise* or Prevent* or health promotion or health seeking behaviour* or health seeking behavior* or high risk behaviour* or high risk behaviour* or physical activit* or diet or healthy eating or healthy lifestyle* or health behaviour* or health behavior* or smoking or alcohol or Disease manage* or manag* disease* or care or therap* or complian* or adheren* or treatment* or diagnosis).ti. or (Health or morbidit* or mortalit* or disease* or illness* or sickness or disorder* or disabilit* or Access to health services or health service utilisation or health service utilization or discriminat* or stigma or barrier* or facilitator* or Health literacy or Knowledge or awareness or information or education or attitude or behaviour* or behavior* or health practice* or health practise* or Prevent* or health promotion or health seeking behaviour* or health seeking behavior* or high risk behaviour* or high risk behaviour* or physical activit* or diet or healthy eating or healthy lifestyle* or health behaviour* or health behavior* or smoking or alcohol or Disease manage* or manag* disease* or care or therap* or complian* or adheren* or treatment* or diagnosis).ab.

17. 12 or 13 or 14 or 15 or 16

18. exp Qualitative Methods/

19. exp Mixed Methods Research/

20. exp Phenomenology/

21. exp Anthropology/

22. (framework analysis or framework synthesis or framework theory or qualitative or grounded theory or mixed method* or mixed design* or multimethod* or focus group* or narrative* or phenomenology* or discourse or theme* or subtheme* or thematic or cognitive walkthrough or ethnography or realist or participatory or action research or record*).ti. or (framework analysis or framework synthesis or framework theory or qualitative or grounded theory or mixed method* or mixed design* or multimethod* or focus group* or narrative* or phenomenology* or discourse or theme* or subtheme* or thematic or cognitive walkthrough or ethnography or realist or participatory or action research or record*).ab.

23. 18 or 19 or 20 or 21 or 22

24. 4 and 11 and 17 and 23

25. limit 24 to (peer reviewed journal and yr="1990 -Current")

Results: 1,980

Limit to peer-reviewed journal, from 1990

Scopus

(TITLE-ABS-KEY (refugee* OR asylum-seeker* OR stateless OR immigrant* OR migrant* OR "displaced person") AND DOCTYPE (ar) AND PUBYEAR > 1989) AND ((TITLE-ABS-KEY ("Social capital" OR "social isolation*" OR "Social network" OR "Social cohesion" OR "social participation" OR "social support*" OR "social connection" OR "social mobilisation" OR "social mobilization") OR TITLE-ABS-KEY ("community capital" OR "community network" OR "community cohesion" OR "community participation" OR "community support*"

OR "community connection" OR "community mobilisation" OR "community mobilization") OR TITLE-ABS-KEY (trust* OR mistrust OR reciprocity OR "emotional support*" OR "psychosocial support*" OR "neighborhood cohesion" OR "neighbourhood cohesion" OR "collective efficacy" OR solidarity OR empowerment OR "civil society")) AND DOCTYPE (ar) AND PUBYEAR > 1989) AND ((TITLE-ABS-KEY (health OR morbidit* OR mortalit* OR disease* OR illness* OR sickness OR disorder* OR disabilit*) OR TITLE-ABS-KEY ("Access to health services" OR "health service utilisation" OR "health service utilization" OR discriminat* OR stigma OR barrier* OR facilitator*) OR TITLE-ABS-KEY ("Health literacy" OR knowledge OR awareness OR information OR education OR attitude OR behavio#r* OR "health practice*" OR "health practise*") OR TITLE-ABS-KEY (prevent* OR "health promotion" OR "health seeking behaviour*" OR "health seeking behavior*" OR "high risk behavior*") OR TITLE-ABS-KEY ("high risk behaviour*" OR "physical activit*" OR diet OR "healthy eating" OR "healthy lifestyle*" OR "health behaviour*" OR "health behavior*" OR smoking OR alcohol) OR TITLE-ABS-KEY ("Disease manage*" OR "manag* disease*" OR care OR therap* OR complian* OR adheren* OR treatment* OR diagnosis)) AND DOCTYPE (ar) AND PUBYEAR > 1989) AND ((TITLE-ABS-KEY ("framework analysis" OR "framework synthesis" OR "framework theory" OR qualitative OR "grounded theory" OR "mixed method*" OR "mixed design*" OR multimethod*) OR TITLE-ABS-KEY ("focus group*" OR narrative* OR phenomenology* OR discourse OR theme* OR subtheme* OR thematic OR "cognitive walkthrough" OR ethnography OR realist OR participatory OR "action research" OR record*)) AND DOCTYPE (ar) AND PUBYEAR > 1989)

Results: 2,194

Limit: Article, from 1990

Web of Science

5 #4 AND #3 AND #2 AND #1

   Refined by: DOCUMENT TYPES: (ARTICLE)

4 TOPIC: ((framework analysis) OR (framework synthesis) OR (framework theory) OR qualitative OR (grounded theory) OR (mixed method*) OR (mixed design*) OR Multimethod* OR (focus group*) OR narrative* OR phenomenology* OR discourse OR theme* OR subtheme* OR thematic OR (cognitive walkthrough) OR ethnography OR realist OR participatory OR (action research) OR record*)

3 TOPIC: (Health OR morbidit* OR mortalit* OR disease* OR illness* OR sickness OR disorder* OR disabilit* OR (Access to health services) OR (health service utilisation) OR (health service utilization) OR discriminat* OR stigma OR barrier* OR facilitator* OR (Health literacy) OR Knowledge OR awareness OR information OR education OR attitude OR behavior* OR behaviour* OR (health practice*) OR (health practise*) OR Prevent* OR (health promotion) OR (health seeking behaviour*) OR (health seeking behavior*) OR (high risk behavior*) OR (high risk behaviour*) OR (physical activit*) OR diet OR (healthy eating) OR (healthy lifestyle*) OR (health behaviour*) OR (health behavior*) OR smoking OR alcohol OR (Disease manage*) OR (manag* disease*) OR care OR therap* OR complian* OR adheren* OR treatment* OR diagnosis)

\# 2 TOPIC: ((Social capital) OR (social isolation*) OR (Social network) OR (Social cohesion) OR (social participation) OR (social support*) OR (social connection) OR (social mobilisation) OR (social mobilization) OR (community capital) OR (community network) OR (community cohesion) OR (community participation) OR (community support*) OR (community connection) OR (community mobilisation) OR (community mobilization) OR trust* OR mistrust OR reciprocity OR (emotional support*) OR (psychosocial support*) OR (neighborhood cohesion) OR (neighbourhood cohesion) OR (collective efficacy) OR solidarity OR empowerment OR (civil society))

\# 1 TOPIC: (Refugee* OR asylum-seeker* OR stateless OR immigrant* OR migrant* OR (displaced person))

Results: 4,725

Limit: Article, from 1990