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The role of community pharmacists with Syrian migration background in addressing healthcare needs of migrant population in Germany: a qualitative study

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Abstract

Background Migrants often face various barriers to their access to healthcare services. Community pharmacists play a crucial role in offering accessible, patient-centred healthcare services. However, little is known about the unique role of migrant pharmacists in addressing the healthcare needs of migrants. Therefore, this research aimed to investigate the role of migrant pharmacists in providing access to healthcare for migrant populations in Germany.

Methods This exploratory qualitative study used semi-structured interviews with Syrian migrant pharmacists working in Germany. Participants were recruited through contacts from the author's professional network. All interviews were remotely conducted, recorded, transcribed verbatim, and analyzed using inductive thematic analysis to ensure that findings are grounded in the original data.

Results Ten Syrian migrant pharmacists were interviewed. The findings highlighted the multifaceted role of migrant pharmacists, extending beyond medicine dispensing to bridging gaps in healthcare access through culturally appropriate services. Their ability to communicate in patients' native languages and provide tailored advice positioned them as key facilitators in addressing migrants' healthcare challenges. Participants described their proactive involvement in health promotion, particularly in raising awareness about preventive measures such as vaccinations. However, they also faced significant challenges, including regulatory constraints and resource limitations, which they navigated through various adaptive strategies.

Conclusions This study explored the role of migrant pharmacists, particularly those from Syria, in addressing the healthcare needs of migrants in Germany. Their ability to communicate in both Arabic and German and to understand cultural nuances is a key asset that helps overcome language barriers, making them an invaluable resource for migrant patients. The research highlighted the multifaceted nature of the pharmacists' roles, which extend beyond dispensing medicines, bridging gaps in healthcare access through culturally sensitive and linguistically appropriate services. The study also shed light on the adaptive strategies and recommendations for strengthening the role of migrant pharmacists.

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Keywords Migration, Access to healthcare, Community pharmacist, Qualitative, Interviews

Background

Forced migration has become one of the defining global issues of our time, with historically high numbers of people displaced from their homes due to conflict, persecution, and human rights violations [1]. According to the United Nations High Commissioner for Refugees (UNHCR), by the end of 2023, the global number of forcibly displaced individuals reached 117.3 million, the highest recorded level ever [2]. The Middle East and Africa have been particularly affected by forced displacement over the past decade. The conflict in Syria has displaced over 6 million people internally, with another 6 million fleeing the country. Similarly, conflicts in Iraq, Lebanon, Gaza and Yemen have significantly contributed to the mass forced displacement in the region [2]. In Africa, conflicts in countries like the Democratic Republic of Congo, Sudan, and South Sudan continue to force millions to flee their homes [3]. These regional conflicts, combined with the war in Ukraine that began in 2022, have created complex humanitarian emergencies, driving millions to seek refuge both within and outside their countries [4, 5].

Most forcibly displaced people remain within their home countries or move to neighbouring countries. According to the UNHCR, 75% of the world's refugees and other people in need of international protection are hosted in low- and middle-income countries, and 69% reside in countries neighbouring their own [3]. However, some refugees travel across different countries and continents to reach further destinations, seeking safety and stability [3]. In Europe, Germany hosts the highest number of asylum seekers and refugees. As of the end of 2023, Germany had accommodated over 1.2 million refugees, primarily from Ukraine, Syria, Afghanistan, and Iraq [2].

In Germany, asylum seekers' healthcare access is limited by the Asylum Seekers Benefit Act (AsylbLG) to emergency, maternity care, treatment for acute and painful conditions, vaccinations, and other necessary preventive measures (Articles 4 and 6 of AsylbLG) [6–8]. This restrictive system has faced criticism for inefficiency and human rights concerns [9, 10]. From a human rights standpoint, Bozorgmehr et al. have argued that restricting healthcare access based on residency status constitutes a violation of the right to health [9].

Community pharmacists play a crucial role in healthcare delivery by offering accessible services close to where people live. Traditionally responsible for dispensing medicines, their roles have expanded significantly in recent years [11, 12]. In many countries, the roles of community pharmacists now include care coordination, social prescribing, and providing support for

disadvantaged individuals [13, 14]. Additionally, pharmacists often provide vaccines, which includes distributing, educating about, facilitating, and administering vaccines. This has helped overcome barriers to accessing vaccines in different populations [15]. The International Pharmaceutical Federation (FIP) has developed the Global Competency Framework (GbCF) which is a structured assembly of competencies to support foundation level-community pharmacists' competencies development; it acts as a "mapping tool" for pharmacists' professional progress towards effective and sustained performance and advanced practice (Fig. 1) [16].

In Germany, 53,178 pharmacists were working in 17,571 community pharmacies nationwide in 2023 [17]. In 2020, approximately 2,000 pharmacists from Syria were certified or registered to work as community pharmacists in Germany [18]. The role of pharmacists in Germany has expanded to include personalized care initiatives (such as setting medication plans for chronic disease management), which are aimed at optimizing medicine use and improving patient outcomes. However, despite this progress, community pharmacists in Germany face limitations in their inclusion in broader healthcare reforms, with calls advocating further change in pharmacy practice by introducing pharmacy services into routine care [19, 20]. Enabling community pharmacists to play a more integral role within primary care networks could positively impact the health of socially disadvantaged individuals [21, 22].

With migrants facing barriers to accessing healthcare services, community pharmacists, especially those with migration backgrounds themselves, can play a critical role in providing healthcare for the migrant populations [23]. These pharmacists often serve as a low-threshold first point of contact for individuals with health-related concerns, making them well-positioned to address the primary care needs of underserved communities [21, 22]. Community pharmacists could address many of these challenges that arise from unfamiliarity with health systems [23]. However, there is a dearth of evidence on the unique role of migrant pharmacists in addressing the challenges and barriers to healthcare for migrants in their host countries [24]. The role that community pharmacists can play in providing medication review services with cultural competency is vital to address potential language barriers and address health inequities [25]. Thus, this study aimed to investigate the role of migrant pharmacists from Syria in providing healthcare for migrant populations in Germany. By exploring their experiences and views, the study sought to develop recommendations



Fig. 1 Global Competency Framework of the International Pharmaceutical Federation [16]

to strengthen their role in facilitating better access to care and medicines among migrants.

Methods

This study used a qualitative research design, which is well-suited to exploring complex social phenomena and gaining deep insights into human experiences [26]. We conducted semi-structured remote interviews and analysed them thematically [27]. The study was reviewed and approved by the University of Oxford's research ethics committee (Research ethics reference: OUDCE C1A 23 046/Date: 15.12.2023). All participants provided verbal informed consent prior to participation in the study, which was recorded in writing and reported according to relevant reporting guidelines [28].

Study advisory group

This group consisted of two community pharmacists selected through the principal investigator's social network. The selection criteria for the advisory group members included their professional expertise, availability, and willingness to provide feedback on the research study plan and materials. The advisory group played a crucial role in advising on the feasibility of the study, the potential challenges and the overall approach of the study. They provided feedback on the study material including the participants informed sheet, and the interview topic

guide. This aimed to ensure that the study addressed aspects that are of interest and importance to the participants and that it adhered to ethical standards and best practices in community-based research [29].

Sampling strategy and recruitment

Study participants were Syrian migrant pharmacists working in community pharmacies in Germany (Table 1). We focused in this study on Syrian migrant pharmacists given the high number of migrant pharmacists from Syria in Germany. This decision also enhances the feasibility of recruitment and data collection, as the principal investigator (SA) is a native Arabic speaker and has established access to social networks of Syrian pharmacists in Germany. They were recruited through the professional network (The Syrian Society for Doctors and Pharmacists in Germany (SyGAAD eV)) of the principal investigator (SA) and using a snowball approach [30]. They were selected using a purposive sampling strategy to ensure the inclusion of participants with different characteristics, such as age, sex, years of working experience in community pharmacies, and geographical locations of their pharmacies (including from areas with different proportions of migrant populations and in both rural and rural and urban settings). In this study, recruitment was carried out through direct email contact with potential participants. Initial participants were asked to refer other

Table 1 Eligibility criteria

Eligibility criteria	
Inclusion Criteria	<ul style="list-style-type: none">- Pharmacists with a license (Approbation) to practice as a community pharmacist in Germany.- Have migrated to Germany and self-identified as Syrian (self-reported migration background).- Currently working as a pharmacist in a community pharmacy in Germany.- Have at least six months of work experience in community pharmacies in Germany.- Those willing and able to give informed consent for participation in the study.- Any gender, aged 18 years or above (no upper age limit).- Fluent in Arabic or English.
Exclusion Criteria	Pharmacists with less than six months of work experience in community pharmacies were excluded. This criterion was set to ensure participants had adequate experience in addressing the healthcare needs of migrant populations.

potential participants who met the study eligibility criteria, thereby expanding the pool of respondents. Those interested in the study were asked to contact the investigator by email. Upon receiving the expression of interest, the investigator emailed potential participants a Participant Information Sheet in English and Arabic. This dual-language approach ensured that participants could fully understand the study details in their preferred language. Those who agreed to participate were asked to provide verbal consent, which was recorded in writing. Participants were not financially incentivised or reimbursed for participating.

Data collection

Semi-structured interviews were conducted remotely, using telephone or video calls depending on the participants’ preferences. Semi-structured interviews provide a flexible yet structured format that encourages participants to share their experiences and insights in their own words while allowing the researchers to probe deeper into specific areas of interest [31]. The interviews were conducted in Arabic and followed an interview topic guide designed to explore participants’ views and experiences under overarching topics derived from the research questions (Appendix 1). All interviews were audio-recorded and transcribed verbatim by the PI.

We recruited participants and conducted interviews until reaching data saturation. While we recognise that data saturation is a contentious concept and various definitions exist [32], we considered it as the point at which no new information or themes were observed in the data [33]. Specifically, we operationalised it at the theme level, i.e., as the point at which the themes that we developed to answer the research questions were considered robust and unlikely to change with additional interviews.

Data analysis

The PI transcribed the audio recordings of the semi-structured interviews in Arabic for analysis. The first author, a native Arabic speaker, translated the identified codes into English. Although the full transcripts were not translated, the English versions of the codes enabled

the second author (non-Arabic speaker) to actively participate in the analytic process through regular discussions with the PI about the data being collected and in developing codes, categories, and the themes in English.

The data was analysed using reflexive thematic analysis [27]. The transcripts were analysed and coded by the PI, using Nvivo software [34]. I began the analysis with data familiarization which involved conducting and transcribing interviews and repeated reading of transcripts. I then generated initial codes inductively, which involved labelling segments of the data that appear relevant to the research questions and are consistent with the participants’ experiences and insights. Codes were then grouped into categories (central organising concepts) that represented broader patterns and topics in the data. The next step was the development of themes. The process of theme development was iterative and required constant comparison and refinement to ensure that the themes were coherent and accurately reflected the data. This process involved frequent discussions of codes, categories and candidate themes with the second author, and with the advisory group members. We refined the final themes during the writing-up process.

Researcher reflexivity

With my experience as a pharmacist in humanitarian healthcare, particularly in providing access to healthcare for forcibly displaced populations across various countries, including Germany, I brought a unique and relevant perspective to this research. My prior studies on migrants’ access to medicines have significantly shaped my understanding of the challenges migrant populations face in accessing healthcare services in host countries.

Advocating for healthcare as a fundamental human right, I approached this project with an awareness of the benefits migrant pharmacists can offer migrant communities. While I strove for neutrality in data collection and analysis, my personal and professional experiences inevitably influenced my perspective. Participants were aware of my background and advocacy, which may have led some to emphasize positive aspects of their work or withhold information on practices deviating from pharmacy

Table 2 Participant demographic information

Demographics of participants	N
Age (years)	
Median	35
Range	29–41
Sex	
Male	7
Female	3
Years of experience working in community pharmacies in Germany	
Median	5
Range	4–8
Location of participants' pharmacies	
Urban	6
Rural	4
Total number of participants	10

regulations, possibly out of caution regarding my perceptions. As a Syrian pharmacist, I believe my shared cultural background fostered trust and facilitated open discussions. However, this shared identity may also have influenced participants to focus on positive experiences, reflecting a perceived collective responsibility toward the migrant community.

To address these issues, I engaged in critical discussions with my supervisor (AB) and members of the advisory group, allowing me to examine and mitigate the influence of my positionality. I also maintained reflective notes throughout the research process, regularly revisiting my role and decisions. By actively reflecting on these dynamics, I aimed to ensure that my findings genuinely represent participants' experiences while acknowledging the impact of my positionality on the study.

Results

Ten Syrian migrant pharmacists were interviewed; their characteristics are reported in Table 2. The interviews lasted between 21 and 99 (median 35) minutes.

We identified five themes that captured the different aspects of the perceived role and experiences of migrant pharmacists in providing access to healthcare for migrant populations in Germany. While we organized the findings into these five themes, some overlaps between the themes indicate close links between the different aspects of participants' experiences (e.g., their perceived roles and the perceived reasons for patients' consulting pharmacists).

Perceived roles of, and services provided by, migrant pharmacists

Participants described their role as multifaceted, extending beyond the traditional roles of dispensing medicines to encompass broader healthcare and social support for migrant communities. They highlighted their role as

essential healthcare providers who help bridge gaps in the complex German healthcare system while addressing cultural, linguistic, and systemic challenges faced by migrants. Their services reflect a blend of professional responsibilities and a strong social commitment to migrant patients.

Pharmacists reported their involvement in addressing medicine-related inquiries, particularly those shaped by religious and cultural concerns such as the use of halal medicines. Participants described researching medicine ingredients to provide accurate information, ensuring sensitivity to patients' cultural needs:

“Due to the patients’ frequent questions, I searched for the information about which medicines contain gelatin (pork product) and discovered that many products that are in the form of oil capsules contain non-vegetarian gelatin.” (Participant 1)

Requests for antibiotics without prescriptions, a common practice in some migrants' home countries, posed another challenge. Participants explained how they balanced professional compliance with cultural expectations while educating patients on German healthcare regulations:

“Some people need certain medicines, such as antibiotics and it is difficult to provide them because they need a prescription. They cannot get these medicines easily as they need a doctor’s appointment with the specific diagnosis for the medicine, so they visit the pharmacy here to find an alternative solution or specific advice to know the appropriate way to get the medicine.” (Participant 2)

Many pharmacists perceived themselves as the first point of contact for vulnerable migrant populations, particularly those who are undocumented or lack health insurance. Participants often addressed concerns about medicine affordability by guiding patients through processes to access medical support or directly assisting them through donations:

“I came across a case of someone... who did not have enough money to get medicine without a prescription. I gave them advice on how they should seek medical help from the camp... and organized an appointment for them with a dermatologist.” (Participant 9)

Participants also described the complexities of the social welfare system and their role in clarifying entitlements for asylum seekers. They helped patients understand and navigate the complexities of the health system:

"The social welfare office is responsible for covering their medical care... In many cases, the patient does not know about this and does not bring the paper with them. In this case, if they do not have it with them, they must pay the full cost of the medicine." (Participant 3)

Language barriers emerged as a significant obstacle for migrant patients in accessing healthcare. Pharmacists emphasized their efforts to improve communication by developing an understanding of multilingual keywords that include essential words and phrases in various languages that pharmacists learn and use to facilitate effective communication with migrant patients. These keywords typically include lay terms related to symptoms, medicines, or common expressions, and they serve as critical tools for overcoming language barriers and to ensure clarity:

"Even if the immigrant is Chinese, African, or Eastern European, we can be very patient to help them. By working with multilingual communities, I became aware of keywords that can improve my understanding of the patient." (Participant 6)

Participants also assisted in translating medical reports and explaining treatment plans, facilitating better access to healthcare services for migrants unfamiliar with the German system:

"Some patients need our help to explain to them what they need to do in Germany. Some patients do not know who will cover the costs of their treatment. We need to clarify this for them." (Participant 1)

Pharmacists reported offering additional healthcare services, such as measuring blood pressure and blood glucose, especially for migrants with limited access to primary care providers. Their shared cultural and linguistic backgrounds fostered trust among migrant patients, enabling pharmacists to address sensitive health issues; for example, the quote below illustrates how language proficiency and cultural sensitivity are critical in facilitating appropriate healthcare interventions in sensitive areas, such as sexual and reproductive health:

"I arranged for him an appointment at a health-care centre where he could get a lab test. I also put him in contact with a specialist who speaks Arabic." (Participant 4)

Another focus mentioned by some participants about their work was on raising awareness among migrant communities about vaccines. This role became even

more critical during the COVID-19 pandemic. Participants stated that migrant patients' trust allowed them to often counter misinformation during the COVID-19 pandemic:

"Patients were asking us a lot about the COVID vaccines. Immigrants trust the pharmacist and his information, while Germans do their search and reading on the internet." (Participant 5)

Beyond their healthcare responsibilities, participants described assuming broader social roles within migrant communities. They frequently provided support that extended into day-to-day life, such as helping migrants access community resources, arranging appointments, and translating non-health-related documents. Some pharmacists even assisted with employment or addressing family challenges:

"Sometimes I helped people find work. There was a lady who had a child with a mental disability, so I helped her by making appointments with Arabic-speaking psychiatrists in cities near the area." (Participant 6)

This social role was further emphasized through their shared experiences as migrants, which strengthened the bond between pharmacists and patients. Migrant pharmacists often served as advocates and guides, bridging cultural and systemic divides to improve the overall well-being of migrant communities.

Perceived reasons and advantages for seeking care from migrant pharmacists

Migrant patients often were perceived to seek healthcare in community pharmacies due to the multifaceted role of the migrant pharmacists. These pharmacists viewed themselves not only as healthcare providers but also as cultural mediators, educators, and trusted advisors who understand the unique challenges faced by migrant communities.

"As pharmacists, we play different roles, one of these roles is as healthcare providers, and another role is to market and sell the products (medicines). Migrants look at us not only as pharmacists. They come often to us with questions that usually should be asked to medical doctors, or to social workers in the humanitarian organization helping migrants." (Participant 7)

One of the primary reported reasons for migrants to turn to these pharmacists was their ability to address and overcome language barriers. This made interactions

with migrant pharmacists more comfortable and reduced migrants' anxiety associated with and unfamiliarity with the healthcare system. Participants reported that many migrants time their visits to coincide with the pharmacist's work schedule. This recognized trust and familiarity were the key components of the perceived migrant pharmacist's role in their communities.

"Speaking the same language gives the migrants the impression that we are from the same environment. This gives them the feeling that they can trust us to get the best of care when they consult us." (Participant 8)

Another common perceived reason for migrants to choose to seek healthcare from migrant pharmacists is the cultural competence of these pharmacists. Participants stated that migrant patients were often reassured by the knowledge that their cultural and religious beliefs would be respected. This made migrant pharmacists be considered not only as healthcare providers but also as trusted advisors who understand their unique needs.

"As a pharmacist with a Syrian background, I am fully aware of the culture of my community and the questions that are probably in the minds of the patients who visit me. At the same time, I have experience in medical matters in Germany and I can now provide appropriate advice about medicines and how to take them in an appropriate way." (Participant 9)

Health system-related challenges were reported to play a crucial role in driving migrants to seek care from migrant pharmacists. Long waiting times for appointments with specialists and the limited time available with doctors often left migrants seeking more immediate and accessible forms of care. Community pharmacists, who are more readily available and can spend more time with patients, fill this gap effectively. For many migrants, pharmacists became their first point of contact in the healthcare system.

"Sometimes patients are shocked by the long waiting time. In Syria, patients can see a doctor at any time, so the patient chooses the doctor they want with a relatively close appointment. For example, getting an appointment at the gastroenterologist can take six months, so new refugees have difficulty understanding the long waiting period with the burden of illness. They come to us. Our door is always open." (Participant 1)

Moreover, migrant pharmacists were often considered to be uniquely familiar with the medicines available in

their home countries and host countries. Migrants were reported to seek reassurance from migrant pharmacists that the medicines they used in Germany, especially if different to those used in their home countries, were appropriate for their conditions.

"They do not come to us only because of the German language barrier, but also because they are used to a certain type of medicines in their home country and do not know what is similar to it in Germany." (Participant 10)

Finally, the advantages of seeking care from migrant pharmacists were recognized not only by the patients but also by the owners of pharmacies located in areas with high numbers of migrants. These pharmacists were often preferred for employment in these areas because of their cultural insights and the languages they speak. This put them in a unique position to serve communities with diverse ethnic and cultural backgrounds.

"What I know that we are very much appreciated by pharmacy owners, especially those who have pharmacies in neighborhoods with many migrants. We have a great advantage to be employed in these pharmacies." (Participant 5)

Challenges faced by migrant pharmacists in providing access to healthcare for migrants

Participants reported a variety of challenges they faced while providing access to healthcare for migrant populations. These can be broadly categorized into health system-related challenges and patient-related challenges.

Participants illustrated how health system-related challenges pose significant obstacles to their efforts to provide access to healthcare services for migrant populations. Navigating the complex bureaucracy of the German healthcare system was a common challenge. The declining number of community pharmacies was seen as further exacerbating this challenge and increasing the workload on those that remain. Despite taking on more responsibilities, pharmacists often found themselves underpaid. For migrant pharmacists, these systemic issues were further intensified by the additional burden of ensuring that their services are accessible and culturally appropriate for migrant patients. Providing these additional services requires additional time, which may not always be available.

"We measure blood pressure or blood glucose, and review the medication plan. But the compensation for these services is not financially large, because the time that the pharmacist needs to develop and review a medication plan can be way better com-

pensated for. Practically the financial compensation for these services is very little to the point that it does not match the nature of the existing work. We provide these services because they are part of our work and not for compensation because it is not enough." (Participant 6)

Moreover, migrant pharmacists also reported encountering patient-related challenges. Participants described how migrant patients, particularly the elderly and those who rely heavily on pharmacists for guidance, often require more time and personalized care. The increased demand for extended consultations and personalized attention placed significant pressure on pharmacists. Some participants referred to the pressure on migrant pharmacists and the high expectations of their patients, who see them as trusted figures bridging the gap between the healthcare system and the migrant community. While this trust is valuable, it comes with the expectation that these pharmacists will go above and beyond their conventional role. This additional support was often provided without adequate compensation that such efforts might deserve.

"I resigned from the pharmacy where there were a large number of migrants because I started to suffer from psychological fatigue there. The pharmacist always tries to be patient and polite and treat people with respect, taking into account that most of the patients need health advice and need help. We must always absorb the patients' problems, which causes a lot of pressure, especially if there is only one pharmacist who speaks Arabic, Ukrainian, or other foreign language languages. The pressure on them will be enormous. It is a lot of pressure for one person to take alone." (Participant 1)

Adaptive strategies to overcome the challenges

Participants reported how they adapted to address the challenges they faced in their professional roles while providing access to healthcare for migrant populations. To address the common challenges related to language barriers, participants reported implementing various interventions to improve migrants' understanding of the information related to medicines and other healthcare interventions. For example, some pharmacists collaborated with other healthcare professionals, such as general practitioners (GPs), to provide patients with resources like multilingual videos.

Pharmacists also developed strategies to cope with system-related challenges. One key approach was leveraging the role of professional and social networks. These networks provided pharmacists with the support and resources they needed to navigate complex

issues limiting migrant patients' access to healthcare, share best practices, and collaborate on solutions. Some participants also stated that the pharmacy is not an isolated unit; it is a part of a broader healthcare system that requires constant interaction and cooperation with other healthcare providers. The need for collaboration between pharmacists, medical doctors, and other stakeholders has become increasingly apparent, particularly when addressing the needs of patients who are without health insurance.

"As a pharmacist, it is very difficult for you to address these different challenges alone. You need to collaborate with other pharmacists, doctors, organizations, and volunteers." (Participant 2)

Strengthening the role of migrant pharmacists in providing care for migrants

Participants in this study shared experiences and suggestions aimed at strengthening the role of migrant pharmacists in delivering care to migrant populations. These suggestions focused on enhancing communication, improving access and affordability, and fostering collaboration and professional support.

One key area identified for improvement related to pharmacists' capacity to provide information about medicines to their migrant patients in a comprehensive way. Participants suggested that providing medicine leaflets in different languages would be an effective way to enhance understanding among migrants. Additionally, participants proposed developing educational interventions, such as multilingual videos, to help explain complex medical procedures and the proper use of medicines.

"In some cases, and based on my role as a male pharmacist, I cannot directly refer to the issues in some cases as with female patients, especially since sometimes, instead of using language, you need to use pictures or specific expressions or drawings, so here we have a social barrier. So in the end, regarding consultations it is important to find alternative ways to provide the patient with comprehensive information that they can easily understand." (Participant 7)

Finally, participants stressed the importance of collaboration and professional support to enhance the effectiveness of migrant pharmacists. They suggested fostering greater collaboration between pharmacists, medical doctors, and other stakeholders such as nurses and social workers. Such collaboration could be further supported by professional networking with social services, ensuring that pharmacists have the connections they need to refer patients to appropriate resources. Participants also

emphasized the need for training on cultural competencies and system navigation to better equip pharmacists to serve multicultural societies. Additionally, there was a call for more support for pharmacists in high-demand areas, recognizing that those working in regions with large migrant populations may face unique pressures and require additional resources and assistance.

"I don't think the German health system will create an initiative on its own, but it is receptive to ideas if we present them in the right way. In my opinion, the process of presenting the right ideas will not only be through establishing a professional association, which is already a very good attempt and will be developed over time. Therefore, in my opinion, now is the right time to encourage immigrants to join unions, and it is even possible for the Syrian Pharmacists Association to provide support in this direction, because in the end many issues have to be dealt with at a higher legal level. Therefore, we have to be part of the health system to make the implementation of these suggestions easier in the long run." (Participant 8)

Discussion

This study explored the perceived roles of migrant pharmacists from Syria in addressing the healthcare needs of migrant populations in Germany. The findings highlighted the multifaceted nature of the pharmacists' roles, which extend beyond dispensing medicines to bridging gaps in healthcare access through culturally appropriate services. The pharmacists' ability to offer advice and care tailored to migrant patients and communicate in the patients' native language put them in a unique position to address many challenges faced by migrants in their access to healthcare services in Germany. This study also highlights the pharmacists' proactive involvement in health promotion, particularly in raising awareness about preventive measures like vaccinations. The challenges migrant pharmacists face in providing healthcare to migrants were also explored, along with the adaptive strategies they use to overcome these obstacles. Lastly, the findings emphasize the need to strengthen the role of, and support for, migrant pharmacists in providing access to healthcare for migrant populations. Our findings are situated within a broader trend of an expanding role for community pharmacists in the healthcare sector that has been observed over the past years [35, 36].

Migrant pharmacists play a critical role in improving access to healthcare for migrants. Their work goes beyond the conventional roles of dispensing medicines and providing advice about them. This role extended into areas such as health literacy improvement and broader social support. The role of community pharmacists in

this study aligns closely with several competencies outlined in The International Pharmaceutical Federation (FIP) Global Competency Framework (GbCF) [16]. For instance, their involvement in activities, such as advising on raising awareness about vaccination, aligns with the GbCF competencies related to health promotion [16]. Moreover, participants described tailoring their services to the specific cultural and social contexts of the population they serve, which is in line with the GbCF's emphasis on understanding and responding to the healthcare needs of diverse populations, a critical aspect of pharmaceutical public health [16].

The role of migrant pharmacists also extended beyond the traditional notions of professional identity in pharmacy. According to Kellar et al., professional identity in pharmacy is often seen as a singular, unified construct focused on developing a standard set of competencies and behaviors [37]. However, participants in this study embodied a more dynamic and multifaceted professional identity, one that adapted to the specific needs of their migrant communities. They engaged in activities that include social care, and advocacy roles that are not traditionally emphasized within the GbCF but are crucial in the context of migrant healthcare. This divergence suggests the need for a more flexible understanding of the professional identity in community pharmacy. One that recognizes and supports the diverse roles community pharmacists may need to adopt in various contexts [37].

The study underscored the critical role that shared language and cultural competencies play in encouraging migrants to seek care from migrant pharmacists and reducing the anxiety and misunderstandings that can occur in interactions with healthcare providers without such language and cultural awareness [23]. This finding is in line with previous research indicating that shared language and cultural competence are significant factors in the healthcare-seeking behaviors of migrant populations [38, 39]. Similar findings were also reported in a study from Denmark about the role of pharmacists with ethnic minority backgrounds in addressing cultural and linguistic issues encountered by patients of some ethnic minority backgrounds [24]. Moreover, the participants' understanding of both the healthcare systems in migrants' countries of origin and in Germany allowed them to offer reassurance and guidance. This dual knowledge base is essential in bridging the gap between different healthcare systems and helping migrants navigate the complexities of accessing care in a new environment [9].

Participants in this study reported challenges that are compounded by the ethical dilemmas inherent in their professional practice. For instance, participants referred to balancing regulatory compliance with the need to provide culturally sensitive care, particularly when dealing with requests for medicines like antibiotics

without prescriptions, a practice more common in some migrants' countries of origin but strictly prohibited in Germany [40–42]. While legal constraints define the boundaries of professional practice, they can also create ethical tensions when pharmacists must navigate conflicts between regulatory obligations and culturally driven patient expectations. For example, the need to adhere to legal requirements while also providing accessible care to migrants, who may not fully understand the regulations can place pharmacists in difficult ethical positions [42]. These challenges are not unique to Germany but are part of a broader global issue within the profession [42].

To overcome challenges encountered by migrant pharmacists, participants reported developing a range of adaptive strategies, including collaboration with other healthcare providers, leveraging professional networks, and utilizing multilingual resources. These strategies indicate the resilience and resourcefulness of pharmacists with migrant pharmacists in ensuring that their patients receive the care they need, despite systemic obstacles. Other studies emphasized the importance of interprofessional collaboration in improving healthcare outcomes for underserved populations [21]. Other researchers identified facilitators that can improve access to pharmaceutical care for migrants, including improving communication methods, and building stronger relationships with migrant communities [23]. These strategies align closely with the adaptive measures reported by participants in this study.

Community pharmacists often act as the first point of contact for health-related concerns among underserved groups, uniquely positioning them to address unmet healthcare needs [21, 22]. This observation strongly resonates with the findings of this study. Pharmacists perceived their role as essential in bridging the gap between the migrant community's healthcare needs and the healthcare system. However, the role of these pharmacists is often hindered and challenged by system-related barriers, such as limited time and resources and the complex legal and policy frameworks governing their practice. Similar challenges, including inadequate remuneration and psychological exhaustion were reported among community pharmacists in general [43, 44]. Addressing these barriers is crucial to fully realizing the potential of migrant pharmacists in enhancing access to healthcare for migrants. The integration of training programs to improve cultural competence, as well as the adaptation of existing pharmaceutical care interventions to better meet the needs of migrants, are strategies that could strengthen the role of community pharmacists [23]. Engaging pharmacists in the development of tailored healthcare interventions could lead to more effective and sustainable solutions that are responsive to the unique challenges faced by migrant populations.

While our current work did not directly assess patient experiences or agency in accessing healthcare in community pharmacies, future research should aim to explore how migrant patients perceive their interactions with community pharmacists and the extent to which they are empowered to engage in their care. Such investigations could further elucidate how culturally and linguistically tailored interventions not only enhance pharmacists' roles but also bolster patient participation and overall healthcare quality.

Strengths and limitations

One of the strengths of this study is its focus on exploring an under-researched area. By focusing on pharmacists with a Syrian migration background, the study provides valuable insights into how shared cultural and linguistic backgrounds can enhance healthcare delivery in migrant communities. The qualitative approach allowed for an in-depth analysis and development of understanding of the experiences and perspectives of these pharmacists. The use of semi-structured interviews facilitated the collection of rich, detailed data. The inductive approach in our data analysis ensured that the analysis remained grounded in participants' experiences and perspectives. This paper was written in compliance with the consolidated criteria for reporting qualitative studies (COREQ) (see Appendix 2) [28]. Another strength of the study is the involvement of two members of the target population in the research process. Their advice was valuable in shaping the study design, ensuring that the research was grounded in real-world practice.

The study also has some limitations. It focused exclusively on pharmacists with a Syrian migration background due to limited time and resources. While this has provided depth in one area, it may limit the transferability of the findings to community pharmacists from other backgrounds. Additionally, the study's findings are context-specific to Germany and may not be fully applicable to other countries with different healthcare systems and migrant populations. We acknowledge that the sample size can be considered relatively small. However, it was sufficient (especially due to a relatively narrow focus on Syrian pharmacists in Germany) to develop robust themes to address the specific research aim. Although the quotes were carefully translated into English by a native Arabic speaker (SA), a professional back-translation was not performed due to resource limitations. We acknowledge that doing so might have been useful. Instead, the quotes were checked by another Arabic native speaker to ensure accuracy of the content of the quotes. Finally, the data was collected and analyzed by one researcher. To ensure the quality of the data and analysis, both authors met regularly to discuss in detail the data being

collected, the analysis (e.g., codes and categories developed), and the themes and findings being identified. The advisory group also sense-checked the findings. The lead researcher kept a track record of the methods, decisions and documents (e.g., with the codes/categories and how they changed over time) and reflections on the research process.

Conclusion

This study identified the unique, multifaceted role of migrant pharmacists in addressing the healthcare needs and complex challenges in accessing healthcare of migrant populations in Germany. It highlighted the importance of shared language and culture between community pharmacists and migrant patients. Pharmacists supported patients in navigating the health system in Germany, overcoming financial and administrative barriers, and providing them with culturally sensitive advice and resources. The study also highlighted the perceived trusted position of the migrant pharmacists in their community and the role they can play in health promotion in these communities, particularly in raising awareness about preventive measures like vaccinations. The study also shed light on the adaptive strategies and recommendations for strengthening the role of migrant pharmacists to ensure better and more sustainable care provision for migrant populations in Germany. The integration of training programs to enhance cultural competence, as well as the adaptation of existing pharmaceutical care interventions to better meet the needs of migrants, are strategies that could strengthen the role of community pharmacists in addressing the gaps in the healthcare needs of culturally diverse societies.

Abbreviations

AsylbLG	Asylum Seekers Benefit Act
COREQ	Consolidated criteria for reporting qualitative studies
FIP	The International Pharmaceutical Federation
GbCF	Global Competency Framework
GPs	General practitioners
SyGAAD eV	The Syrian Society for Doctors and Pharmacists in Germany
UNHCR	United Nations High Commissioner for Refugees

Supplementary Information

The online version contains supplementary material available at <https://doi.org/10.1186/s12913-025-12654-4>.

Supplementary Material 1.

Acknowledgements

We would like to thank The Syrian Society for Doctors and Pharmacists in Germany (SyGAAD eV) for their collaboration on this project. We extend our gratitude to the members of our study advisory group for their invaluable guidance and contributions to this study. In particular, we thank Carole Nader for her insightful input, while respecting the preference of another member to remain unnamed.

Authors' contributions

S.A. and A.B. Conceptualization, S.A. and A.B. Methodology, S.A. Investigation, S.A. Data curation, S.A. and A.B. Formal analysis, S.A. Writing original draft, S.A. and A.B. review & editing, A.B. Supervision.

Funding

This research did not receive any specific grant funding from agencies in the public, commercial, or not-for-profit sectors. It was an unfunded study conducted as part of SA's Master's program at the University of Oxford.

Data availability

The underlying data obtained in this study included audio recordings that cannot be shared as they contain identifying information. The interview guides are provided as Appendix 1.

Declarations

Ethics approval and consent to participate

The study protocol, informed consent form, and the proposed advertising material were approved by the University of Oxford Research Ethics Committee (Research ethics reference: OUDCE C1A 23 046/Date: 15.12.2023). The study was conducted in accordance with the Declaration of Helsinki. All participants provided verbal informed consent prior to participation in the study, which was recorded in writing.

Consent for publication

Not applicable.

Competing interests

The authors declare no competing interests.

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Received: 28 December 2024 / Accepted: 25 March 2025

Published online: 24 April 2025

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