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Experiences of health informers working with intercultural communication in Stockholm, Sweden during COVID-19: a qualitative study

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Background: During the initial period of the COVID-19 pandemic, it was noted that migrants in Stockholm, Sweden, had a higher risk of contracting the virus and had a higher risk of mortality. In response to this, to provide information to people who did not have Swedish as their native language and therefore had limited access to the latest information and guidelines due to potential language barriers, authorities implemented an intercultural communication response. One of the aspects of this response was to employ health informers who spoke different languages and station them in multicultural areas to provide information about COVID-19. This study explores the experiences of the health informers working with intercultural health communication during the COVID-19 response in Stockholm, Sweden.

Methods: Data was collected through semi-structured interviews, nine individual and four group interviews, with 23 participants. The data was collected between February and September 2022.

Results: The findings of this study give an understanding of how health informers experienced their on-the-ground work of communicating and disseminating COVID-19 information to migrants in Stockholm. The main themes that were developed included navigating information dissemination amongst multiple information sources and narratives, the personal connection created by the health informers, and the challenging but rewarding work environment. The findings highlighted that speaking the same language and building trust through personal conversations, drawing from own experiences, and relatability were important aspects of communicating health information.

Conclusion: In conclusion, this study gives a better understanding of the experience of the communication effort implemented by Region Stockholm to reach non-native Swedish speakers from the perspective of the health informers. Overall, the health informers experienced that they had an important role during the pandemic, and that they had a positive impact on the community.

KEYWORDS

COVID-19, intercultural communication, health communication, migrants, health equity

1 Introduction

The coronavirus disease (COVID-19) pandemic impacted the whole world, with the first case being recorded in late 2019 in China and the first case in Sweden being detected in late January 2020 (Liu et al., 2020; Tegnell et al., 2023). In March 2020, a global pandemic was declared by the World Health Organization (WHO) (World Health Organization, n.d.). Studies have shown that vulnerable populations, migrants being among them, have been overly represented when it comes to COVID-19 cases in many countries, including Sweden (Sze et al., 2020; Baral et al., 2021; Hayward et al., 2021; Rostila et al., 2021). During the first few months of the pandemic in 2020, people born in Syria, Lebanon, Somalia, Turkey, Iraq, and Iran had a substantially higher risk of mortality due to COVID-19 in Stockholm, Sweden (Rostila et al., 2021). A study including approximately 8 million adults who lived in Sweden during the first 2 years of the pandemic, investigating differences in mortality and hospital admissions, found that migrants from, for example, Africa, Asia, and the Middle East faced a greater risk of both (Rostila et al., 2023).

In Stockholm, there were also higher mortality rates among individuals with lower socioeconomic status during the first few months of the outbreak, often living in areas where the proportion of people born in Sweden was lower (Calderón-Larrañaga et al., 2020). Among possible reasons for the higher mortality rate have been mentioned as being engaged in occupations that needed direct contact with people, living in crowded homes, and not having access to adequate health information due to potential language barriers (Hayward et al., 2021; Rostila et al., 2021). It has also been reported that vaccine uptake was lower in areas where a higher proportion of inhabitants were migrants (Larsson et al., 2022; Spetz et al., 2022a, 2022b; Mitchell et al., 2024). A report from the Public Health Agency in Sweden (PHAS), determining differences in vaccine coverage in May 2022, comparing those born in Sweden, in Europe, and the rest of the world respectively, found that in every age group, coverage was highest among those born in Sweden (Tegnell et al., 2023; The Public Health Agency in Sweden, 2023). The vaccine uptake (second dose) among individuals born in Sweden was 88%, while the uptake was 67% for those born outside of the country (Tegnell et al., 2023; The Public Health Agency in Sweden, 2023). Reasons behind lower vaccine coverage among migrants included language barriers and a lack of accessibility to health information (Larsson et al., 2022). Navigating an unfamiliar society and healthcare system also made it more difficult to follow and understand guidelines and health information (Lebano et al., 2020). A review conducted at the start of the pandemic investigating communication efforts for migrants in Europe found that information in languages commonly spoken by migrants on testing and healthcare rights was only found in 6% of the countries (Nezafat Maldonado et al., 2020).

The PHAS had a leading role during the COVID-19 response. The Swedish approach to handling the pandemic was perceived to be different from that in other countries. Sweden's government largely followed the guidelines suggested by the PHAS, whereas governments themselves often led the response in other countries (Giritli Nygren and Olofsson, 2020). Another difference was the extent to which COVID-19 guidelines were legally binding or not, where, for example, legally binding lockdowns were put into place in other countries but not in Sweden (Giritli Nygren and Olofsson, 2020; Wenander, 2021). Some guidelines in Sweden were, however, legally binding during certain periods of the COVID-19 pandemic, such as the ban on large gatherings of people at restaurants and events. However, many guidelines, such as refraining from close contact with others and avoiding unnecessary travel, were not legally binding and rather strongly encouraged, but voluntary recommendations (Carlson and Tegnell, 2020; Tegnell, 2021; Tegnell et al., 2023). In February 2022, most of these guidelines could be lifted due to the decreasing burden of the virus on society as a whole and the healthcare system (Tegnell et al., 2023). Sweden's response, viewed as different, gave rise to a lot of discussion in international media and among scholars (Brusselaers et al., 2022).

The PHAS held weekly press conferences, presenting updated guidelines and recommendations, with communication to the general public being an important part of the response to the COVID-19 pandemic (Carlson and Tegnell, 2020). These conferences were livestreamed. Many tuned in to watch, and these briefings included a sign language interpreter. However, the information was not directly translated into other languages. Despite these weekly briefings, a report found that those living in vulnerable areas in Sweden, with a higher proportion of migrant inhabitants, used Swedish information sources to a lower degree than those living in other areas when it came to keeping up to date with information about the development of the COVID-19 pandemic (Esaiasson et al., 2020).

Already at the start of the pandemic, it became apparent that migrant groups in Stockholm were being disproportionately affected by COVID-19 (Calderón-Larrañaga et al., 2020; Rostila et al., 2021). As a response to this, Region Stockholm implemented several intercultural communication activities (Region Stockholm, 2021). Region Stockholm is responsible for the healthcare provided for the approximately 2.5 million people living in Stockholm (Region Stockholm, n.d.). Previous communication strategies had not adequately included ways to reach migrant groups in Stockholm. In the latest epidemic preparedness plan created by Region Stockholm in 2019, guidance on communication strategies for multicultural groups was lacking (Smittskydd Stockholm [Infection Control Stockholm], 2019).

This meant that intercultural communication measures needed to be created *ad hoc* based on the perceived needs and resources at hand. Twice during the pandemic, a broad task force on intercultural communication was organized. The task force consisted of representatives from the health and medical care administration of the unit for infection control, the communications department of the region, primary care, local municipalities, the Stockholm County Administrative Board (Länsstyrelsen), and the region's Transcultural Center (which focuses on migrant health in the region) (KPMG, 2021).

Various activities were launched to improve communication efforts to reach those residing in Stockholm who did not have Swedish as their native language (Region Stockholm, 2021; Transkulturellt Centrum [Transcultural Centre], n.d.). One of these included initiating work with so-called health informers, a group of multilingual peer advisors working with COVID-19 and vaccine communication in their local context and network (Transkulturellt Centrum [Transcultural Centre], n.d.). The inspiration for this measure came from the Regional Cancer Center, which had previously worked with peer advisors as part of an initiative to prevent and detect cancer in multicultural neighborhoods in Sweden (Efremius et al., 2023). The measures that were implemented by Region Stockholm became more comprehensive as

the pandemic developed, and also included collaboration with religious institutions and other local actors. Examples of other measures that were implemented included multilingual advertisements, posters, webinars, videos, and health communicators operating a multilingual telephone line (Region Stockholm, 2021). The information focused on both the spread of the virus and information about getting vaccinated against COVID-19, and was available in 37 different languages and dialects (Region Stockholm, 2021).

The health informers were laymen who could speak different languages and were local residents in communities in Stockholm (Strand et al., 2022). They were paid hourly by the region. Their task was to spread information about COVID-19 in their local context, including to local organizations. This measure was implemented in order to bridge the information gap for those who may not understand or know how to access the health information about the pandemic provided in Swedish (Region Stockholm, 2021). They received training from Smittskydd Stockholm (Infection Control Stockholm) about the spread of COVID-19, vaccination, and up-to-date recommendations (Strand et al., 2022). The various areas in which the health informers worked were areas where vaccine uptake was reported to be lower than in other areas of Stockholm (Region Stockholm, 2021). Those working as health informers themselves had a migratory background. They were not required to have any medical education or background. However, some of the health informers did have prior medical education and experiences from other countries or Sweden (as an assistant nurse, nurse, or doctor). They also worked or were active in their local communities.

The work with health informers started on the 18th of March 2021 and continued until the end of 2022 (KPMG, 2021). The work with health informers increased progressively, starting with 32 areas in March to approximately 50 by the end of May (KPMG, 2021). Health informers were placed in different areas of Region Stockholm to inform and answer questions on COVID-19 and give practical support on how to get tested and vaccinated. Examples of places where they were stationed included test centers, vaccine buses, schools, taxi queues, outside religious buildings, and in town centers. Topics they informed about included the spread of the virus, PCR tests, vaccination, vaccine certificates, health declarations, and how recommendations from the PHAS should be interpreted and followed. The health informers were continuously updated with the latest COVID-19 information to answer questions.

There was continuous dialogue among the task force that was put together regarding which geographical areas to prioritize and where to station health informers, determined week by week. During these meetings, the task force discussed vaccination coverage as well as infection rates, and alongside that, communication challenges encountered. This was a new approach to intercultural health communication that came as an immediate result of the higher COVID-19 morbidity among migrant communities and the lack of guidelines on how to reach these groups (Smittskydd Stockholm [Infection Control Stockholm], 2019; Region Stockholm, 2021). So far, no systematic exploration of how this initiative was experienced from the health informers' perspective has been conducted. In addition, a WHO report established that it is not clear to what degree evaluations of similar roles, such as intercultural mediators, have been conducted, including the lack of recommendations and collaboration with academic institutions. Although this study is not a direct evaluation, rather an exploration of communication experiences, it partially fills this identified gap (Verrept, 2019).

This study is part of a larger research project exploring communication activities implemented during the COVID-19 pandemic by Region Stockholm, created to reach individuals with a migratory background in Stockholm. The larger study started in 2022 and is a collaboration between the Transcultural Center in Region Stockholm and Uppsala University (Transkulturellt Centrum [Transcultural Centre], n.d.). The larger study explores the experiences not only of health informers but also of health communicators manning a multilingual health information phone service (this was first implemented in Stockholm and then on a national level), administrative staff who were part of communication outreach efforts, civil societies, and residents living in two multicultural areas of Region Stockholm. The term migrants in this paper will refer to those who have migrated through cross-border migration, and additionally, those who have a migratory background, for example, by having parents who migrated. The target group of the health informers was mainly individuals with a migratory background living in areas populated by others with a migratory background, including those who have migrated.

2 Theoretical framework

To further interpret the experiences of communicating intercultural health information as described by the health informers, the PEN-3 model will be used to discuss the findings of this study. The components of the model will be used only to discuss the results in the discussion section of this study. The PEN-3 model was developed in 1990, incorporating cultural viewpoints and aspects into a theoretical framework (Airhihenbuwa, 1990; Iwelunmor et al., 2014; Olufowote and Aranda, 2018). This model was developed as an attempt to respond to the lack of inclusion of sociocultural domains in other health behavior models, and underpins the role of culture when discussing health outcomes (Iwelunmor et al., 2014; Olufowote and Aranda, 2018). The model has been chosen for this study because of its inclusion and focus on cultural aspects. The framework has been used in other studies to include culture as a central component in health behavior, health programs, and interventions (Iwelunmor et al., 2014). It has been used to explore and better understand health behavior regarding infectious diseases such as HIV and malaria, and also regarding non-communicable diseases such as diabetes and cancer (Iwelunmor et al., 2014).

The PEN-3 model consists of three main dimensions: *cultural empowerment*, *relationships and expectations*, and *cultural identity* (Iwelunmor et al., 2014; Olufowote and Aranda, 2018). Within each of these three dimensions, three components are included that together become the acronym PEN. The *cultural empowerment* dimension explores health beliefs and behaviors and puts these into the categories of Positive, Existential (exploring existential beliefs that have neither a positive nor negative impact), and Negative. For the dimension *relationships and expectations*, perspectives on the health issue, as well as effects of others and of available resources, are examined as Perceptions, Enablers, and Nurturers. In the last dimension, *cultural identity*, this alludes to means of access and understanding, and is investigated through the domains of Person,

Extended Family, and/or Neighborhood (Iwelunmor et al., 2014; Olufowote and Aranda, 2018).

3 Study aim

The aim of this study is to explore health informers' experiences of intercultural health communication about COVID-19 and vaccination during the pandemic in Stockholm, Sweden.

4 Methods

4.1 Study design and study setting

This is a qualitative study, using individual and group interviews to explore the experiences of health informers working with intercultural health communication during the COVID-19 pandemic in Region Stockholm. The study settings, where the health informers were stationed, were multicultural areas in Region Stockholm.

4.2 Participants and sampling

The participants of this study worked as health informers in Region Stockholm during the COVID-19 pandemic. Purposive sampling was used, with the criteria for participation being working as a health informer for Region Stockholm. The focus was on interviewing those with longer work experience, from diverse areas, and with various language backgrounds. Recruitment of participants was done via the Transcultural Center, where the health informers were employed by the hour, as assigned by Region Stockholm.

The participants were 23 in total, 8 male and 15 female. They were between the ages of 18 and 55, and spoke 17 different languages. The languages that the health informers spoke included languages predominantly spoken in the Middle East, Africa, South Asia, and Eastern Europe. More information regarding other background characteristics, such as age, specific languages, or country of origin, will not be presented here as there were only a limited number of health informers that worked in Region Stockholm during the pandemic, and providing more background characteristics risks revealing their identity. They also had experience working/living in the areas in Stockholm where they were working as health informers. Not all health informers were interviewed. After interviewing 23 participants, the researchers noted that they were not getting any new information. While conducting the data analysis, it was decided that more interviews would be conducted if required. However, this was not the case as similar information and themes were observed towards the latter phase of the analysis, and it was determined that data saturation had been reached.

4.3 Data collection

Data was collected between the 25th of February and the 6th of September 2022. Four group interviews and nine individual interviews were held, with a total of 23 participants. The four group interviews consisted of six, two, three, and three participants in each interview. The participants themselves could choose how they wanted to participate, and a few of them preferred to be interviewed together with other participants. Some of the participants requested the group interview format to aid in expressing themselves in Swedish, as the interviews were all held in Swedish, and they could then ask their colleagues for help regarding language formulations during the interview.

Three of the authors were involved in the data collection process, with all of them having previous experience working with qualitative research and migration and health. These were SB, (female) researcher and the head of the Transcultural Center (held a group interview), BA, (male) a research assistant in the project (held interviews and observed group interviews), and SJP, (male) researcher at Uppsala University (held some of the interviews).

An interview guide was developed based on existing literature and the intercultural communication experiences of the Transcultural Center during the pandemic. The interview guide was developed to guide the discussion for the semi-structured interviews. The questions in the interview guide were designed to get an insight into the health informers' experiences as well as what the work entailed. Examples of questions included broader questions such as "how have you worked with communication about COVID-19 and vaccination during the pandemic?" to more specific, for example, "which information sources did those you met use about COVID-19 and vaccination?." Other examples of questions included were about the target group, how they tried to build trust with people, challenges they experienced, and what sort of support they received. In the interview guide, examples of potential follow-up questions were listed under some of the questions. All of the interviewers were researchers and had previous experience conducting interviews. The interviews lasted between 8 and 56 min (average length 27 min). The interviews were conducted in person at various locations, such as at the Transcultural Center, at the Stockholm Health Care Services in Region Stockholm, at a restaurant, and in connection with the Järva week (a large annual national event for politicians, civil society organizations, and citizens). All interviews were audio recorded, transcribed, and pseudonymized.

4.4 Data analysis

The interviews were analyzed inductively using thematic analysis, as described by Braun and Clarke in 2006 (Braun and Clarke, 2006). The analysis process started with familiarization with the data set by reading through the transcripts several times. Data was then coded initially, and initial subthemes were developed by SB and BA using the coding software NVivo (QSR International Pty Ltd, 2020), and thereafter by HA and SME, who coded the interviews manually. The codes were presented to all authors for discussion. Based on the discussion and consensus-building process, SME refined the codes to form subthemes and themes, which were put together based on the coding and analysis process. These initial subthemes and themes were then discussed with the remaining authors and revised to form final subthemes and themes, bringing in perspectives from those who had been involved in the data collection process and those who had not. In the discussion, the PEN-3 model and its dimensions are used to further interpret and discuss the results from the data analysis.

4.5 Ethical considerations

Ethical approval was sought and granted for this study by the Swedish Ethical Review Authority (No. 2022–01637-01). The study protocol for the research project has been registered and published in the Open Science Framework registry (osf.io/rt47j) and follows the principles of the Helsinki Declaration (World Medical Association, 2013; Strand et al., 2022). Informed written consent was received from every participant in the study after they were provided with written and oral information about participating in the study and the study's aim. All the participants were informed about the fact that participation was voluntary and that they could choose not to participate at any time. They were also informed that the data would be handled according to regulations in Region Stockholm. When transcribing the data, the transcripts were pseudonymized by omitting or changing information such as name, migratory background, religion, address, or anything that could potentially lead to the identification of any of the participants.

5 Results

The analysis of the individual and group interviews resulted in three overarching themes being identified. These three themes describe how the health informers experienced communicating health information to migrants during the COVID-19 pandemic. The three themes are (1) Navigating information dissemination amongst multiple information sources and narratives, (2) The personal connection created by the health informers, and (3) The challenging but rewarding work environment. These themes and subthemes can be observed in Table 1.

TABLE 1 Themes and subthemes.

Themes	Subthemes
Navigating information dissemination amongst multiple information sources and narratives	Ways to disseminate information Responding to mistrust and disinformation Experiences of the Swedish pandemic response
The personal connection created by the health informers	The importance of knowing the same language The importance of building trust Meeting different target groups
The challenging but rewarding work environment	The effect of the physical work environment Training and support received Experiencing the work as rewarding

5.1 Theme 1—navigating information dissemination amongst multiple information sources and narratives

The first theme is about how the health informers perceived the task of disseminating information about COVID-19, and in what ways it was conducted. This included informing generally about the COVID-19 pandemic, including the spread of infection and preventative measures that need to be taken, and information about vaccination. This theme also explores how health informers experienced mistrust and disinformation, how they approached responding to mistrust and disinformation about both COVID-19 and vaccination, and how Sweden's handling of the pandemic was viewed as different and therefore sometimes hard to understand for those who were following reports from other countries.

5.1.1 Ways to disseminate information

When describing their experiences of being health informers, the most common way of communicating was through speaking with people, explaining general information, and responding to questions. Besides oral communication, written material, such as brochures in various languages, was also used to reach as many people as possible and help people understand the current pandemic situation and guidelines during the different phases of the pandemic. One health informer described their experience of disseminating information about COVID-19 in the following way, focusing on the knowledge gaps which existed which they could fill:

> *"First, we hand out brochures and meet people out on the street, but always when we hand them out, they are very positive. But some of them do not take them, but there are a lot of people who take them. And then afterwards we work with staff providing the vaccinations, and many people cannot write, and sometimes we help them write, and we explain that it is better to prevent this illness, which is very serious. But we can tell that there are many people who need more information. They do not understand."*

Another way they could spread information and inform was through collaboration with local establishments. This was done by, for example, visiting mosques, churches, or schools in the area. There was also collaboration with local stores, for example, through putting up material about how to prevent the spread of infection, and this was described as appreciated by store owners and staff.

5.1.2 Responding to mistrust and disinformation

One of the most important aspects of the role, as experienced by the health informers, was responding to mistrust, which was often targeted towards the COVID-19 vaccines. This mistrust portrayed itself in different ways. Some of the theories the health informers heard included the vaccine being a tool used to implant a chip in the population or to make money. One contributing factor to this mistrust was described to be the time it took to develop the vaccine. The fast development led to distrust of its efficacy and safety. There was also mistrust toward authorities.

> *"They lacked trust in the vaccine as it came fast, and they asked us if it is true that the vaccine helps. That was the most common question. Then they think it can be some 'lie' from those in power."*

The health informers also brought up factors that they felt contributed to people's mistrust, for example, through the spread of disinformation on various social media platforms such as Instagram, Facebook, and YouTube. Disinformation was also circulated through people spreading rumors about things they had heard from others or read, for example, online. One participant explained how there

were several sources from which people had gotten information. It was also described how people with preconceived ideas about the vaccine could directly say no to hearing what the health informers had to say.

The role of the health informers was perceived as important in this context, to respond to the fear caused by disinformation during the pandemic. They could discuss and respond to disinformation in an informed way with current information.

5.1.3 Experiences of the Swedish pandemic response

The third subtheme focuses on the differences experienced by those who were following reports from other countries or had experiences from other countries, and comparing it with the Swedish response. Many were confused about the term "recommendation." Many migrants had questions and concerns about the handling of the pandemic in Sweden because of this comparison. Health informers in their role had to explain how the PHA's recommendations should be interpreted:

> *"There were very many that came from abroad, and they were like 'what is going on'. Because there, they were more used to restrictions, that is how it is. But in Sweden, it was more guidelines, it was recommendations, it was not like 'this is how it is'. It was very, for them, it was vague. They were like 'what is it that we are doing, should I, may I'. And we said, 'but you should not, but it is like not put into law that you cannot move around here and here'."*

It was experienced as a challenge for the health informers to explain why the information was communicated in a different way than in other countries, when people were following reports from international media and authorities. The pandemic response differed, and people were not familiar with the term "recommendations" as was often used in Sweden, and the health informers noticed confusion among some when other countries utilized laws, for example. The response in Sweden was perceived to be more relaxed than in other countries. This difference between the Swedish approach and approaches in other countries was also confusing because people were aware that, in other countries, those who did not follow the laws could face repercussions.

> *"I am from [a country in Africa] and there … the word recommendation does not exist. It is instead yes or no."*

5.2 Theme 2—the personal connection created by the health informers

The second theme is about the personal connection created by the health informers and how this was experienced and described, and what factors affected the relationship between the health informers and the people they communicated with. Many of the health informers brought up the importance of being able to speak different languages, and how important it was during the pandemic to be able to communicate with people in their first language to improve understanding and safety. The theme also includes the importance of building trust and having patience, especially with those who felt fear and uncertainty. In addition, the theme includes how they perceived meeting different target groups, including different generations and those with different backgrounds.

5.2.1 The importance of knowing the same language

An important factor that played into the interaction with people was the ability to communicate in their mother tongue. This both increased the understanding of the information and created a feeling of security for those who felt uncertainty about COVID-19 and the vaccine. The pandemic was an uncertain time with new information and recommendations that came out during the pandemic. Trying to keep up with the updated information about the virus, its spread, and about vaccination was described as generally difficult, and especially difficult if the information was not available in a language one could fully understand. This feeling of security and the importance of communicating with people in their native language was described by many as a key aspect of being able to communicate information about COVID-19:

> *"There are a lot of people who do not know Swedish, and even if they know Swedish, it is hard for them to understand all topics, everything surrounding COVID-19 and the vaccine, and what it is about. When we explain to them, it is hard to choose words that they understand, so it is very beneficial that we can speak the same language. We can then have an open discussion, and they can feel secure and ask about everything and not be shy anymore."*

Several participants described how the ability to speak different languages was the most meaningful factor for the work as a health informer. It was important to ensure that the information was conveyed in an understandable way, that the information was taken seriously, and that people considered the information and health informers as trustworthy, especially when countering disinformation.

5.2.2 The importance of building trust

Building trust was mentioned by many of the health informers as another important part of the role of communicating information, to create a personal conversation in addition to giving out verbal or written information. One participant explained how it was important as a health informer to create a personal connection by introducing themselves and explaining their role, that they can inform and answer questions the person may have, before handing out a brochure and explaining what is in it, to increase the chance that the information is received.

When the health informers were met with skepticism or fear tied to disinformation, it was described as important to repeat the information in different ways to get it across. The work therefore required patience, and the ability to, in the personal meeting, be able to repeat information so that it would be taken in by those who were skeptical, and how this approach could be rewarding.

> *"The first time it was difficult for us, too. People wanted to talk several times, no one wanted to get vaccinated. They are going to kill us, this vaccine. … Then we talk for maybe four, five days. The last day they come and get vaccinated. I think it is good to work with people. It is fun."*

Another important aspect was about building trust through relatability, to be able to relate to the health informer through, for

example, similar cultural backgrounds or experiences. The health informer was then viewed as someone who could understand the migrant's situation. The health informer's knowledge of the target group in a specific area, for example, was a contributing factor in being able to communicate information. Understanding people and their situation was described as important in order to be able to communicate with them.

The language aspect was also brought up here, that receiving information in someone's native language contributed to a feeling of trust, as they were able to understand the information. It was mentioned that even if they spoke Swedish, they wanted to hear the information in their native language from those with a similar cultural background.

The health informers also explained how they used different methods to build trust with those they spoke to, for example by drawing from their own experiences.

> *"When I told them I was vaccinated myself, I have taken my first, second, and third doses, then I can gain new trust. And nothing has happened to me. Not just me but the whole family is vaccinated, then it becomes easier to gain trust."*

5.2.3 Meeting different target groups

The health informers described differences that they experienced in their meetings with different groups. One example was the differences between generations. Some brought up that the younger generation was difficult to reach when it came to informing about vaccination, whereas others experienced it to be challenging to reach and communicate with older generations. However, it was also brought up that if the health informer was someone that young people, for example, could relate to, then it was easier to reach that group:

> *"I am [around 20 years old]. I worked with someone [older than me]. And we went to a high school. … And he stopped first and talked to teenagers, and I can say that he got completely ignored. He came. He tried to talk, and the teenagers just walked past him. Did not want to listen, and to us they said that this is just talk, just tricks. And when he left brochures, teenagers came up and knocked them over and stuff like that. So it was kind of like that. But as soon as I stepped in and started communicating with the teenagers then it was much, much easier to just sit down and just talk and listen."*

Women who were pregnant or breastfeeding were also a group that the health informers noted had many questions and were worried about the vaccine and how it would affect their children, for example, because of potential hormonal effects. Young women also asked questions about the vaccine's effect on fertility. One participant said that women were more ready to listen to the information provided, whereas it took a bit more effort to disseminate information among men. The health informers also described how people within certain groups could influence each other, both to decide not to get vaccinated and to decide to get vaccinated.

> *"At some point, I do not know, they have talked to each other, and someone said you do not want children if you take it. And then they said that if you take AstraZeneca you do not want [children]. Someone said to them, I do not know who. And that was the problem. Especially women. And they always asked a lot. Then we managed to talk to them. They talk to each other as well. The first group took the vaccine and they follow it, just follow it. And that was very good."*

In addition, at one of the vaccination centers, people could see two police officers getting vaccinated, something that was perceived as helpful and could encourage people to get vaccinated due to seeing public officials vaccinating themselves.

5.3 Theme 3—the challenging but rewarding work environment

The third theme is about the external factors that affected the role of communicating information as described by the health informers. The external factors included the physical work environment and its effect on the job, the training and support that the health informers received, and the feeling of experiencing the work as a health informer as rewarding, reaching people in the community, and making a difference.

5.3.1 The effect of the physical work environment

Working as a health informer often meant working outside in public places, such as by vaccination buses, test centers, in town centers, and outside religious buildings. Often, working outside was experienced as a challenge, as it was often cold outside or bad weather:

> *"The difficulty was the climate, for example. We worked outside, it was raining, and it was cold. In the beginning, we did not have that good gear, good clothes. But then we got coats. … Yes, but then we had breaks, short breaks. The biggest difficulty was the environment we worked in."*

The health informers worked in different areas within Region Stockholm, and access to facilities such as toilets and places to sit varied. Some of the participants explained how they were stationed far away from the closest available toilet, and described how they did not have access to places where they could sit while working. This depended on where the health informers were stationed, and experiences varied, although many brought up this challenge. A recommendation brought up by one participant was that if similar work is to be done in the future, ensure that there are places to sit close by during the work day.

5.3.2 Training and support received

Another factor mentioned that affected the role and work environment was the training and support the health informers received, to be able to communicate, inform, and answer questions regarding the pandemic. Many of the participants described how, before they started, they underwent a training course that gave them details about how they should work and important information they should know. Many described this training course as positive and that it gave them enough knowledge to feel that they were able to fulfill their work duties in a good way.

It was also brought up that information was continuously updated during the pandemic, as there were revised recommendations and information as the pandemic evolved. This meant that those working as health informers needed to continuously keep themselves updated

with new information. New questions would arise, and the health informers received support in answering these new questions:

> *"It was training, information that is targeted to us as health informers, and it happened many times that they collected the questions we have. And we received answers, and we received answers continuously. It was continuous that we got, and it was very good, very, very good, it made our job easier."*

It was also described how the health informers could turn to each other, the project manager, or Region Stockholm if questions arose that they did not feel they could answer. Some questions were described by some of the participants as harder to answer than others, for example, medical questions regarding health conditions or questions about the vaccine's mechanism and side effects. The health informers were instructed not to give out general health information or advise about specific diseases or health conditions. It was described how they, in those situations, felt comfortable referring to others, for example, nurses who were on site in the vaccination buses, or by giving out contact details to places people could turn to. These contact details could be to a healthcare center, or to the region's telephone line manned by health communicators that offered information in different languages.

> *"But I would say that the government agencies, especially in Stockholm, the healthcare region SLSO [Stockholm Health Care Services, Region Stockholm] did a very, very good job regarding that they have printed in different languages and had different lines that one can call and get someone that speaks your mother tongue."*

5.3.3 Experiencing the work as rewarding

Although some aspects of the role as a health informer were experienced as challenging, many health informers described their work positively and felt that they had been able to help out during the COVID-19 pandemic. Expressing the feeling of making a difference and receiving positive feedback. Some recounted situations where people had returned and thanked them for their work and shown appreciation:

> *"Good, a positive is that everyone who has taken the vaccines and who hesitated before came back to me and thanked me. It was very good, they thanked me. Came to me. A lot, a lot, many, many. And I think it was very good. Heard what I said. And they were very thankful."*

The health informers experienced that their work also led to people feeling comfortable getting vaccinated. Experiencing how people they communicated with went from not daring to get the vaccine to getting vaccinated after talking to them was described as a rewarding experience. Because of their in-person contact with people, they could follow how attitudes and behaviors changed over time. Furthermore, working with and meeting people with different backgrounds was described as rewarding, and many described how they felt that they had an important role during the pandemic through their work.

> *"It was very good, a very important role. As a health informer, I can say that it is a very important role for society, and it was very rewarding for me. Sometimes, some people come who do not have any idea about COVID-19, and we help and inform them about it, and they get very pleased after that."*

6 Discussion

The analysis of the individual and group interviews with the health informers resulted in three overarching themes describing their experience of communicating health information to migrants during the pandemic: navigating information dissemination amongst multiple information sources and narratives, the personal connection created by the health informers, and the challenging but rewarding work environment. These findings will first be discussed in relation to other literature, and then in relation to the PEN-3 model and its three dimensions. Overall, the health informers considered that the dissemination of health information worked well with the objective it had, spreading information in different languages to reach those who did not have Swedish as their native language and thereby increase access to information about the COVID-19 recommendations and updates. This was noticed through positive feedback from people they talked to, and experiencing the work as rewarding and as an important part of the COVID-19 communication response.

A lot of the participants brought up the importance of being able to communicate with people in their mother tongue, and how they noticed a change in people's perspectives, especially those who felt uncertainty and mistrust. Other studies have also mentioned the importance of providing health information in different languages, which was also an important finding in this study. A focus group interview study conducted in Sweden, exploring what foreign-born people suggested to be the best ways to increase COVID-19 vaccine uptake among migrants, also highlighted the importance of providing information in several languages (Söderberg et al., 2024). Not having access to information in their first language led to not following the information given by PHAS or from their local regions about the state of the pandemic in Sweden, and rather turning to other channels such as social media, family and friends, or reports from other countries (Söderberg et al., 2024). In the same study, communicating through social interaction was another one of the suggestions, underscoring the importance of a personal connection when disseminating health information, similar to the findings in this study (Söderberg et al., 2024). This importance is further emphasized by Ortega et al., who mention the importance of providing public health messages that can be understood by all, not only those who speak the country's language, to ensure health equity for all people residing in a country (Ortega et al., 2020). Interviews with migrants on COVID-19 vaccine uptake in Norway had similar findings, with suggestions including engaging local communities and incorporating culturally-sensitive communication to effectively spread information about COVID-19 vaccination (Kour et al., 2022).

Another important aspect that was raised in our study was the importance of building trust with others in the work as a health informer, and creating a personal connection through, for example, shared experiences. In this finding, an important aspect was the commonalities the health informers shared with people in the community, where they could act as cultural mediators. The European Migration Network defines a "cultural mediator" as a person who helps people who may not speak the same language or have the same

cultural background communicate (European Commission, n.d.). The term can also be used when referencing groups, for example, migrants and their host society (Council of Europe, n.d.). Other studies have shown the importance of using, for example, trusted members of a community to increase health information acceptance and reception. A qualitative study conducted in Belgium exploring community needs during the pandemic raised the importance of including communities in information and support measures (Nöstlinger et al., 2022). A systematic review investigating challenges and enablers when it came to access to the COVID-19 vaccine for migrants also mentioned trust-building through community members as a key enabler (Abba-Aji et al., 2022). Challenges that were faced regarding vaccine access included language barriers, and overcoming this barrier through, for example, utilizing community members was seen as a key enabler (Abba-Aji et al., 2022). A qualitative study interviewing migrants in Australia explored the communicative challenges faced during the COVID-19 pandemic (Haw, 2024). The findings of this study included that it is crucial to include communities from different cultures in the dissemination of information by collaborating with communities in the communication response, also highlighting trust building and including community members in pandemic responses (Haw, 2024). The importance of trust through collaboration with community members and those with similar experiences, as observed in the findings of this study and others, is a way to increase the willingness to listen and adhere to health information.

One of the challenges the health informers in our study faced was responding to disinformation and often mistrust toward the COVID-19 pandemic. There was a lot of rapid, changing information that came out during the COVID-19 pandemic, leading to false information being spread (Mheidly and Fares, 2020). The health informers described how many of those who were hesitant toward COVID-19 and the vaccine had received false information through social media. A survey conducted in Uppsala, Sweden, investigating what migrants thought about information about COVID-19, also found that many (46% of the respondents) were getting their information through social media (Roble et al., 2022). This could lead to mistrust and people being falsely informed, as misconceptions were being spread about COVID-19 during the pandemic on social media (Joseph et al., 2022). The health informers in this study described how they could combat disinformation in their social interactions, highlighting the importance of reaching different groups with accurate information from trustworthy sources such as the PHAS.

Another challenge that was faced by the health informers was explaining what the recommendations meant and how the recommendations should be followed. The handling of the pandemic in Sweden created confusion. This was likely because the approach in Sweden was not based on legally binding requirements, but rather recommendations, which differed from the approach in other countries (Giritli Nygren and Olofsson, 2020). The survey conducted in Uppsala, Sweden, also found, for example, that the website of the PHAS was not often utilized as an information source for migrants during the COVID pandemic (Roble et al., 2022). A qualitative study in Australia, interviewing key community stakeholders, explored what factors affected the communication response during the COVID-19 pandemic in multicultural communities (Seale et al., 2022). The study found that people often followed news reports from other countries, and this was further exacerbated by the fact that translations of official health information into various languages were delayed or not available (Seale et al., 2022). This led to the challenge that the news people followed did not reflect the national guidelines, and there were therefore misunderstandings and confusion regarding which guidelines to follow and the fact that they differed, similar to the findings in this study exploring health informers' experiences of health communication in Stockholm (Seale et al., 2022).

Together with the aspects of distrust and confusion regarding the term recommendation, trust toward authorities is also relevant in this context. In Sweden, trust toward authorities is generally high, and there was even an increase at the start of the pandemic (Esaiasson et al., 2021). This also affects how authorities communicate with any given population, for example, by using recommendations rather than law-binding regulations. For those migrating to Sweden, and coming from countries where there may be lower levels of trust toward authorities, this can lead to both it being difficult to trust information from authorities in a new country and understand how the authorities communicate with the population. However, it is also important to note that the values and norms, including trust in governments, are different for migrants when compared to their peers in home countries that did not migrate (Norris and Inglehart, 2012).

The challenges reported by migrants, as experienced by the health informers, are a result of larger structural inequality that exists in Sweden (Robling and Pareliussen, 2017). The challenges, such as disinformation, mistrust, and language barriers, brought up in the meeting with the health informers are outcomes of this inequality. The health informer approach was introduced because there was insufficient intercultural communication at the start of the pandemic. The challenge for migrants is not having access to important information in a language you understand, including translation services, and not acknowledging this in national mandates is one of the key structural issues. However, a number of other structural-level factors, such as legal status, employment, housing, neighborhood safety, and food security, can affect health as well as trust in and access to government information. Importantly, the health informer approach can help recognize and partially addresses these systemic issues, too, since it is built upon an emic insight into the lived realities of the community members.

The findings, alongside the discussion, highlight important aspects that can contribute to future intercultural language activities that adopt a similar peer approach, reaching and adhering to multicultural environments. As indicated in the results, the needs and approaches needed to meet various subgroups, such as pregnant women, older adults, and young adults, were different. It is vital that communication efforts are not adapted to migrants in general, but also to the various subgroups amongst them. Additionally, important aspects which should be highlighted in public health plans include providing health information in many languages, building trust through relatability, and collaborating with community members and multicultural communities themselves to create these approaches. These activities should also already be established before a crisis situation.

6.1 The importance of trust and community insight—interpretations using the PEN-3 model

The PEN-3 model (Airhihenbuwa, 1990; Iwelunmor et al., 2014) includes culture as an integral part of health behavior, and views

health as not only the responsibility of the individual, by highlighting community aspects. In this study, the experience of disseminating health information to multicultural communities in Stockholm has been explored. The three dimensions of the PEN-3 model include *cultural empowerment*, *cultural identity*, and *relationships and expectations* (Airhihenbuwa, 1990; Iwelunmor et al., 2014; Olufowote and Aranda, 2018).

The aspects within *cultural empowerment* include positive, existential, and negative values and beliefs that are formed by one's context, and cultural and/or social norms which can be either positively impacting, neutrally impacting (existential), or negatively impacting (Airhihenbuwa, 1990; Gross et al., 2018). In this study exploring experiences of communicating health information from the perspective of the health informers, there are examples of both positive and negative health impacts experienced to be influenced by the community. For example, it was described how certain groups could create a domino effect if one person decided to get vaccinated, creating a positive effect. In addition, the health informers were lay people who had insights into the cultural aspects of the community, and it was described how they had a positive effect on people's beliefs and perspectives in regard to COVID-19. A study conducted in Australia had similar findings, underlining that including diverse communities in the health communication process is important to overcome potential language or cultural challenges, which may not be sufficiently addressed by national mandates (Karidakis et al., 2022). In regard to negative effects, false narratives spread through rumors or social media could have a negative impact. The health informers were met with views of mistrust and uncertainty regarding the pandemic and the COVID-19 vaccine, with false information being spread through social media, and rumors spreading between people being mentioned as factors that could affect people's beliefs and health behaviors negatively.

The aspects within *relationships and expectations* encompass perceptions of the health issue, in this case, COVID-19, including the resources and structures available that promote health behavior. It also includes the influence of relationships with others on decision-making and how these dimensions can enable or nurture health behavior (Iwelunmor et al., 2014). This domain encompasses the importance of understanding the health information received, something that the health informers experienced that they were able to do in their role. This was done by building trust, being able to speak people's first languages, and navigating how to speak to different target groups. Through speaking the same language, building a personal connection, and being someone people could relate to, the relationship with the health informer was perceived to affect how open people were to taking in the COVID-19 information. Many participants also expressed how they had received positive feedback from others, with people thanking them for their work and for sharing information in a way that was tailored to them. This is an important aspect in crisis communication, to improve trust in the person conveying the information, important factors to do this include relatedness and having common experiences (Renn and Levine, 2010). In addition, health informers could, apart from being a resource themselves, refer people to other available resources if needed.

The domain *cultural identity* includes those who impact health behavior and, in this case, reception towards the provided health information from the health informers. This domain includes the community aspect, such as neighborhoods, and influence from extended family or persons (Airhihenbuwa, 1990; Iwelunmor et al., 2014). As the health informers had insight into the communities, they were able to represent the neighborhood aspect. Many health informers described their insight into the multicultural neighborhoods as a key factor in knowing how to communicate and formulate information surrounding COVID-19. They expressed how they could see a change in health behavior in some of those they communicated with, especially regarding decreasing vaccine hesitancy among those who were unsure of whether they wanted to get vaccinated. Being stationed in local communities and speaking the languages of those living in these communities led to them being able to act as cultural mediators and having an impact on health behavior through their dissemination of health information. A study conducted in Australia aiming to explore the impact of community leaders when it came to influencing health behavior had similar results, that it is important for communities and government entities to collaborate to ensure that health communication strategies are impactful (Wild et al., 2021).

6.2 Methodological considerations

This study explores the experience of health communication as a health informer during the COVID-19 pandemic in Stockholm by using qualitative individual and group interviews. This study gives better insight into the intercultural health communication activities implemented as a crisis response by Region Stockholm during the COVID-19 pandemic. This study is the first exploration of the health informers' intercultural communication experiences during the pandemic. As the health informers were associated with Region Stockholm, there could be a possibility that those who may not have wanted to listen to them felt distrust due to this affiliation. However, this was not observed in the data and therefore cannot be presumed. We also cannot know the view of those who did not interact with the health informers.

Several members of the research team were involved in the data collection process, which is a strength for the study's credibility because of the use of researcher triangulation. Several members of the research team were also part of the analysis process, further utilizing triangulation and increasing credibility (Carter et al., 2014). In addition, some members of the research team had been part of implementing this response during the pandemic, and therefore had prior insight. This is important to reflect upon out of a reflexive and positional perspective, with both strengths and limitations through prolonged engagement and an insider perspective, which gives a better understanding of the context but could potentially influence interpretations due to potential preconceptions. Other researchers who were part of the data analysis had not been involved in the data collection, thus bringing in both inside and outside perspectives. The formation of the subthemes and themes was done through peer debriefing from a mix of those who had been involved during the process and those who had not. Those who had not been involved in designing the project and data collection had limited understanding of the context and pre-work, but at the same time, limited preconceptions about the findings. This combination of insider and outsider perspectives is a methodological strength.

Regarding affiliation to the health informer initiative, SB, MS, and BA have an insider perspective as they are affiliated with the same unit

as the health informers, whereas SJP (who was also part of data collection), SME, HA, and ÖAC have outsider perspectives. While SJP and ÖAC are established researchers in the field of migration and health, they have not worked with health informers previously.

The data collection, data analysis, and finally drafting of the article were done through discussions from a combination of different perspectives, insider and outsider perspectives. This is not only in regard to pre-work with the health informer initiative, but also through varying professional and migratory backgrounds among the authors, having lived in Sweden varying amounts of time, also bringing in different perspectives. For example, SJP, ÖAC, BA, SME, and HA have a migratory background. SB and MS do not have a migratory background, but both have several years of research experience in migration and health. This mix of perspectives among the authors helped the data analysis and manuscript drafting be intensive and self-reflective, with all of us asking questions on what is supported by the data and what might have come through due to our professional and personal backgrounds in migration. We believe that this mix of experiences, combined with the discussion, helped us to enrich the study, while strongly basing our results and discussions on the data.

Another methodological consideration is that the findings regarding the opinions and feelings of the people in contact with the health informers and this health communication initiative come from the health informers' experiences and therefore interpretations. One potential limitation is the risk of recall bias, as the data was collected in 2022, the year after the work with the health informers started, and 2 years after the start of the pandemic. Recall bias is always a potential bias that can impact data, and this is especially a risk due to the long period that was impacted by the COVID-19 pandemic and the varying waves (Yamagata and Miura, 2023). However, the authors believe that this risk is minimal as COVID-19 and the vaccination were still a challenge that the health informers worked actively with at the time of data collection. In addition, because the interviews were conducted in Swedish, which is not the first language of the participants, this might increase the risk for misinterpretation through potential language barriers. This was possibly mitigated by the group interview format, since some participants requested to be interviewed together with colleagues to help with accurate formulations. Overall, this study gives a unique insight into the crisis communication effort implemented in response to the limited strategic guidelines available to reach migrant populations in Stockholm.

7 Conclusion

In conclusion, the health informers experienced their role during the COVID-19 pandemic as a positive and effective part of the response to increasing understanding of COVID-19 information among migrants in Stockholm. This study shows that relatedness and common experiences are important in crisis communication responses, in order to improve trust in the person and the information they are relaying. Their role was perceived as important, especially when they were met with misconceptions about the COVID-19 pandemic, and when explaining the pandemic approach and measures utilized in Sweden.

Other important aspects of the health informers' experiences of intercultural communication included the importance of being able to speak to people in their native language and creating a personal connection. The health informers' unique insights into the multicultural neighborhoods they worked in was also a beneficial factor in knowing how to reach people, and they experienced positive responses through for example, decreased vaccine hesitancy. However, some challenges were brought up, such as the physical environment, responding to skepticism, and reaching different target groups. Based on these findings, health informers could be a good way to ensure that health communication in future crises is reached by all, not only those who speak the majority language.

Data availability statement

The datasets presented in this article are not readily available due to confidentiality. The transcripts can be made available upon reasonable request. Requests to access the datasets should be directed to Sofie Bäärnhielm; sofie.baarnhielm@regionstockholm.se.

Ethics statement

The studies involving humans were approved by the Swedish Ethical Review Authority (No. 2022-01637-01). The studies were conducted in accordance with the local legislation and institutional requirements. The participants provided their written informed consent to participate in this study.

Author contributions

SME: Formal analysis, Writing – original draft, Writing – review & editing. SB: Funding acquisition, Conceptualization, Methodology, Investigation, Formal analysis, Project administration, Writing – review & editing. BA: Conceptualization, Investigation, Formal analysis, Writing – review & editing. HA: Formal analysis, Writing – original draft. MS: Funding acquisition, Conceptualization, Methodology, Formal analysis, Writing – review & editing. ÖAC: Funding acquisition, Conceptualization, Methodology, Formal analysis, Writing – review & editing. SJP: Funding acquisition, Conceptualization, Methodology, Investigation, Formal analysis, Writing – review & editing.

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Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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