Background and aims

The COVID-19 pandemic has had an unprecedented impact on public health worldwide [1], with more than 6 million deaths and approximately 490 million cases confirmed globally as of April 2022 [2]. Although everyone is at risk of being infected by the virus, there are some populations that are at greater risk of contagion due to structural barriers related to factors such as age and socioeconomic conditions [3].

There is increasing concern about the disproportionate burden of COVID-19 disease among migrants since the World Health Organization (WHO) declared it a pandemic [4]. In Europe, several countries have reported an excessive burden of infection and higher hospitalisation rates among migrants compared with the general population [5-7]. As a consequence, the UCL–Lancet Commission on Migration and Health appealed for migrants to be urgently included in countries’ responses to COVID-19 [8].

Migration is a process that has profound social and health implications. Even in countries with comprehensive social welfare, migrants often belong to population groups of lower socioeconomic status, are
exposed to poor living and working conditions, and have limited access to health services [9,10] due to barriers such as miscommunication with health-care providers and lack of trust [11,12]. Such factors consequently increase the risk of health problems. Among migrants, as with other groups, socioeconomic factors increased the risk and severity of COVID-19, exacerbating existing health inequalities during the pandemic [13-16]. However, in addition to socioeconomic factors, other aspects, unrecognised at the time, came into play, which resulted in increased health disparities among migrants during the pandemic [17].

In this paper, migrants are defined as persons born abroad of two foreign-born parents and four foreign-born grandparents [18]. Migrants comprise a heterogeneous 15% of the total population in Norway. They have a variety of cultural and socioeconomic backgrounds and different lengths of residence in the country [18]. In response to the pandemic, Norway implemented several measures to prevent and delay the spread of COVID-19 [19]. Initially, such strict measures as social distancing, the closing of schools and other institutions were implemented nationally and information was disseminated through official channels without specific or adapted interventions targeting subgroups of the population. However, concerns over migrants lacking relevant health information [20] resulted in the translation of the recommendations into several languages some weeks thereafter. The process began with the languages spoken by the major migrant groups in Norway (i.e. Polish, Somali, and Arabic), and additional languages regularly appeared on the official Internet sites. This translated information was disseminated in collaboration with non-governmental organisations (NGOs) through non-official channels to reach selected migrant groups, with a specific effort to reach the Somali community, which had high infection rates at the time [21]. Nevertheless, a stable 20%-40% of COVID-19 positive cases throughout the pandemic were among migrants, who were also over-represented among hospitalised patients [22].

Several studies on migrants’ experiences vis-à-vis the COVID-19 pandemic have been published lately in the Nordic countries [23,24] and in other parts of the world [25,26]. This study first explored migrants’ experiences with information relating to COVID-19 and the prevention measures adopted in Norway at a very early stage of the pandemic, and then identified the factors that either hindered or facilitated access to, understanding and use of this information.

Discussing the findings through the lens of intersectionality [27] allowed us to see the complexity of participants’ experiences with information related to COVID-19. An intersectionality perspective acknowledges the complexity of the social world [27], promoting the understanding that human experience ‘cannot be reduced to single markers’ [28] since people’s lives are shaped by many interconnected factors, for example, gender, education, age, and ethnicity.

Methods

Study setting and participants

This qualitative study is part of Inncovid.Norge, a research project initiated in response to the COVID-19 pandemic. The project team includes bilingual researchers with a migrant background, fluent in Somali, Arabic, Tamil, Spanish, and Polish. The researchers recruited participants through (a) key members of Norway’s Somali, Arabic, Tamil, Chilean and Polish communities; (b) their personal networks; (c) information about the study posted on existing Facebook groups used by the immigrant communities; (d) Viber and WhatsApp; and (e) snowballing methodology [29]. A purposeful sampling technique was used that aimed at variation in age, gender and education within each of the migrant groups. Fifty-five interviews were conducted.

Participants included 26 men and 29 women from Somalia (10), Syria (15), Sri Lanka (10), Chile (10), and Poland (10), whose first language was one of those specified. The sociodemographic characteristics of the participants are presented in Table I.

Data collection

Semi-structured interviews via telephone were conducted in April and May, 2020. This was at the beginning of the COVID-19 outbreak in Norway, when physical distancing was required to prevent transmission. Following obtaining informed consent at the beginning of the interview, participants answered sociodemographic questions (e.g., age, gender, education level, length of residence in Norway and civil status). Thereafter, the interview guide included 14 questions on the following topics: sources of information about the pandemic; risk perception; knowledge of, opinions about, and adherence to the authorities’ measures and recommendations to prevent rapid growth in infection; psychological impact of the situation; and responses to illness. The interviews were conducted in the participants’ native tongue and lasted from 30 to 45 min; all were audio-recorded and transcribed verbatim.
Table I. Sociodemographic characteristics of the participants.

| Gender | Age category | Country of origin/parents' origin | Education | Period of residence in Norway (years) |
|--------|--------------|-----------------------------------|-----------|--------------------------------------|
| 1 F    | 41–50        | Poland                            | University | 16                                   |
| 2 F    | 41–50        | Poland                            | High school | 9                                    |
| 3 M    | 31–40        | Poland                            | High school | 10                                   |
| 4 M    | 31–40        | Poland                            | Secondary (vocational) | 15                                   |
| 5 F    | 51–60        | Poland                            | University | 5                                    |
| 6 F    | 21–30        | Poland                            | Secondary (vocational) | 4                                    |
| 7 F    | 41–50        | Poland                            | University | 3                                    |
| 8 M    | 51–60        | Poland                            | University | 11                                   |
| 9 F    | 61–70        | Poland                            | University | 39                                   |
| 10 F   | 31–40        | Poland                            | University | 8                                    |
| 11 F   | 51–60        | Chile                             | Secondary | 16                                   |
| 12 M   | 51–60        | Chile                             | Secondary | 32                                   |
| 13 M   | 30–40        | Chile                             | Secondary | 11                                   |
| 14 F   | 61–70        | Chile                             | Basic     | 25                                   |
| 15 F   | 41–50        | Chile                             | Secondary (vocational) | 32                                   |
| 16 M   | 21–30        | Chile                             | Vocational course | 9                                    |
| 17 F   | 61–70        | Chile                             | Vocational course | 40                                   |
| 18 M   | 31–40        | Chile                             | University (master's student) | 1                                    |
| 19 M   | 31–40        | Chile                             | University | 10                                   |
| 20 F   | 61–70        | Chile                             | Vocational course | 32                                   |
| 21 F   | 61–70        | Syria                             | High school | 5                                    |
| 22 M   | 41–50        | Syria                             | Secondary | 3                                    |
| 23 F   | 61–70        | Syria                             | High school | 4                                    |
| 24 M   | 41–50        | Syria                             | Primary   | 3                                    |
| 25 F   | 31–40        | Syria                             | High school | 6                                    |
| 26 F   | 41–50        | Syria                             | Secondary | 4                                    |
| 27 F   | 21–30        | Syria                             | High school | 3                                    |
| 28 F   | 31–40        | Syria                             | University | 9                                    |
| 29 M   | 41–50        | Syria                             | No school | 2                                    |
| 30 M   | 51–60        | Syria                             | Secondary | 7                                    |
| 31 F   | 41–50        | Syria                             | High school | 5                                    |
| 32 M   | 31–40        | Syria                             | Primary   | 1                                    |
| 33 M   | 41–50        | Syria                             | High school | 5                                    |
| 34 F   | 61–70        | Syria                             | High school | 5                                    |
| 35 M   | 41–50        | Syria                             | Secondary | 5                                    |
| 36 F   | 21–30        | Sri Lanka                         | University | Born in Norway                       |
| 37 M   | 31–40        | Sri Lanka                         | University | 16                                   |
| 38 M   | 51–60        | Sri Lanka                         | High school | 39                                   |
| 39 F   | 31–40        | Sri Lanka                         | University (bachelor's student) | 15                                   |
| 40 M   | 51–60        | Sri Lanka                         | High school | 31                                   |
| 41 M   | 51–60        | Sri Lanka                         | High school | 30                                   |
| 42 F   | 51–60        | Sri Lanka                         | High school | 35                                   |
| 43 M   | 41–50        | Sri Lanka                         | High school | 10                                   |
| 44 M   | 41–50        | Sri Lanka                         | University (bachelor's student) | 11                                   |
| 45 F   | 80–90        | Sri Lanka                         | No school | 8                                    |
| 46 F   | 41–50        | Somalia                           | Primary school | 22                                   |
| 47 F   | 31–40        | Somalia                           | Primary school | 12                                   |
| 48 F   | 41–50        | Somalia                           | University | 31                                   |
| 49 M   | 41–50        | Somalia                           | High school | 13                                   |
| 50 F   | 21–30        | Somalia                           | High school | 10                                   |
| 51 M   | 41–50        | Somalia                           | Secondary school | 17                                   |
| 52 M   | 51–60        | Somalia                           | High school | 32                                   |
| 53 M   | 51–60        | Somalia                           | Bachelor | 30                                   |
| 54 M   | 41–50        | Somalia                           | University (bachelor's student) | 6                                    |
| 55 F   | 51–60        | Somalia                           | High school | 25                                   |
Data analysis

Professional interpreters and bilingual project assistants with written and oral proficiency in Norwegian and participants’ native tongues transcribed the audio recordings and translated the transcriptions into Norwegian. The members of the research team who interviewed participants from each of the target migrant groups analysed the transcripts. Only the analysis of the part of the interview that focused on COVID-19 information is included in this paper. Thematic analysis was performed following Braun and Clark’s six steps: becoming familiar with the data; generating initial codes; searching for themes; reviewing the themes; defining and naming the themes; and writing the report [30].

The coding followed a combined deductive and inductive approach. In this process, the researchers used the codebook proposed by the first author, based on the interview guide, to identify patterns in the data (deductive coding) and add new (inductive) codes. All transcripts were coded by two independent researchers as a quality control. Any disagreements were discussed in detail between the research team at a 1-day workshop. Likewise, the reports containing the analysis and data extracts for each group of participants were shared and discussed with the rest of the research team, and a consensus on codebooks and themes was reached.

Ethical considerations

The research project obtained ethical approval from the Regional Ethical Committee (Project no. 132585). Participants were provided with written and verbal information in their native tongues about the aims and design of the study, confidentiality and what their participation would entail. To avoid physical meetings, oral informed consent over the telephone was obtained before the interviews.

Results

We present our findings under four key themes: multiple and contradictory information sources, language barriers, conspiracy theories/speculations, and strategies for information provision and ways ahead.

Multiple and contradictory information sources

The participants used various sources of information on COVID-19 that were often combined (e.g., Table II, Q: 1 and 2). These included both official sites (e.g., Norwegian Institute of Public Health, Oslo Municipality, employers, NRK state TV) and non-official sites (e.g., VG, a Norwegian tabloid newspaper, friends, and Facebook). In addition, many participants used information sources from their country of origin (e.g., websites, TV, radio, newspapers) and from such international media as the BBC and CNN.

Some participants used social media and friends as their main sources of information on COVID-19 (Table II, Q: 3 and 4). For example, a Syrian participant explained that she often searched for information on Facebook and YouTube because ‘It is often where people share their opinions and there are dialogues’ (Table II, Q: 3). Among the participants with a high level of education, some followed international discussions on the pandemic and checked the official statistics (Table II, Q: 5 and 6).

The multiplicity of sources often conveying contradictory information made several of our participants wonder which sources and whom they could trust. Participants were unable to assess the degree of reliability of information sources (Table II, Q: 7 and 8). The participants from Chile used various sources of information to keep updated on the pandemic (Table II, Q: 9).

One reason why the informants had access to so many information sources was because they lived transnational lives. They were regularly in contact with their relatives overseas and many were responsible for caring for family members back home (Table II, Q: 10). By comparing the contradictory information coming from their country of origin and that from Norwegian sources, several participants became confused as they felt responsible for providing reliable information to their relatives back in their home countries. In this context, informants criticised the authorities of both their home and host countries for not handling the pandemic well enough. For example, a Polish participant was sceptical about the Norwegian authorities’ approach to using face masks (Table II, Q: 11), which were mandatory in Poland but not required to be worn at that time in Norway.

Language barriers

Lack of competence in Norwegian hindered some of our participants’ access to information from the official Norwegian sources, including the translated information, since it was not easy to find on Norwegian websites. This was a particular barrier for those who had resided in Norway for a shorter time and who were older (Table III, Q: 12 and 13).

Participants who did not have a good level of Norwegian developed different coping strategies to
remain up to date with information on COVID-19. Some of them described how their children translated the information available on the Norwegian sites. Others focused only on foreign information sources.

**Conspiracy theories/speculations**

Some participants from Poland and Syria were sceptical about the official information on COVID-19 and provided explanations for the pandemic by referring to conspiracy theories. For the Polish participants, the conspiracy theories went hand in hand with a lack of trust in the authorities, whereas the Syrian participants trusted the Norwegian authorities and their handling of the pandemic. Among some of the participants, we found an assumption that there is a group of people who rule the world, therefore, it was no coincidence that the virus came from the market situated so close to a well-guarded Chinese laboratory (Table III, Q: 14). One interviewee explained that only an exclusive group of people had access to that knowledge. One of the participants from Syria heard from her father that the virus had already appeared in the world in the 1990s (Table III, Q: 15), which was grounds to distrust the official information.

**Strategies for information provision and ways ahead**

Many of the participants with jobs regularly received information on the pandemic from their employers, trade unions and the municipalities (Table IV, Q: 16...
and 17). In this way, participants were provided with all the updates regarding the recommendations and measures implemented by the authorities and thus did not have to look for information. Participants with school-aged children or those who went to school themselves talked about getting updated information about COVID-19 in Norway from the school (Table IV, Q: 18).

The participants expressed a wish for information in different languages. Many of them had problems finding official information on the pandemic in their language in Norway. Some of the Somali participants said that the authorities should have expedited the translated information and used the right channels to disseminate it among migrant communities (Table IV, Q: 19). A Tamil participant suggested that the authorities could have provided short summaries of the official information on national TV in different languages (Table IV, Q: 20). The Somali participants also suggested that people from their own community could have been used to inform them in their language.

Most participants did not comment on the content of the information on COVID-19, except for some of the Somali participants who wanted more specific guidance on everyday activities (Table IV, Q: 21 and 22), including how to proceed in the case of a high fever and what kind of medicines one should have.

**Discussion**

To combat a pandemic, the health authorities have to protect and support all members of society, including migrants [31]. While in most countries there was some delay in information dissemination to migrant populations compared with the general information strategy, most European governments targeted migrants by translating the information and allyng with NGOs to disseminate it. However, the situation in terms of percentage of migrants represented in the pandemic has not improved, and we still need to understand how migrants perceived the initial situation when the infection rapidly spread through migrant environments. Providing culturally and linguistically adapted information to prevent the transmission of COVID-19 was a necessary starting point, but might not have been experienced as intended at the receiving point [14].

Our participants used various sources of information on COVID-19, including formal and informal channels. However, partly because of this reliance on formal/informal sources, many were confused and accessed unreliable information. Migrants’ lack of competence in Norwegian has previously been cited as one of the main obstacles to equitable health services [32-34] and may have resulted in limited access to reliable information on the pandemic, especially on the measures implemented by the authorities. According to a previous study of the Republic of Korea during the MERS epidemic, migrants may not be aware of the seriousness of the epidemic and may not know how to protect themselves when there is a lack of information in their mother tongue [35].

Our findings indicated that contradictory sources of information about COVID-19 hindered participants’ trust in information. Difficulty determining reliable sources of information when the world is inundated with huge amounts of information on the pandemic is common [36]. However, migrants, especially those involved in transnational activity, are typically exposed to information emanating from at least

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**Table IV. Selected participant quotes that illustrate the theme ‘strategies for information provision and ways ahead’**

| Quote number | Quotes |
|--------------|--------|
| Q: 16        | I received information about the coronavirus all the time. Through my work. The job [employer] sends us every...every...two or three times a week all the recommendations and everything, so from the HR manager we constantly receive the measures one must do, at work yes, yes. Email. At work. (Chilean, Participant 12) |
| Q: 17        | I work as [indistinct speech] for 20 years. I take a bus to work, 15 minutes away. It was at work they explained to us about the corona. (Tamil, Participant 41) |
| Q: 18        | TV news; NRK, TV2 and from my teachers. I have received enough information about coronavirus through various channels. (Somali, Participant 47) |
| Q: 19        | The authorities could have chosen a different strategy to spread the information and recommendations; they could make posters in understandable language and translated into different languages, and which could be put/hung at the meeting places for immigrants and different districts. (Somali, Participant 48) |
| Q: 20        | I think they should have had a short summary in each language when announcing in the media...information about the day measures, on TV, so, most people watch TV and then they will quickly understand it. (Tamil, Participant 9) |
| Q: 21        | There was little focus on what to do in practice if you get sick, information about staying home was not good enough I think. (Somali, Participant 48) |
| Q: 22        | It’s about getting more information. For example, if you get a very high fever, how many times I can give paracetamol. How many times can I give medication for the fever. You cannot give paracetamol to patients all the time, because it is said that some people got very high fever...If the children do not struggle with breathing, how many times can I give paracetamol? How many times per week can the children get a shower? Should the children wear light or thick clothes? Should we keep the window open or not? I just wanted to ask those questions but would not take the children to the hospital or go myself. (Somali, Participant 55) |

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two countries. A transnational flow of information could make it even more challenging to determine which information is reliable, as countries might apply different measures to prevent transmission of the virus. Migrants’ lack of competence in Norwegian and not knowing which information source to trust points to limited health literacy, of which one of the components is to be able to use the information [37].

Some of our participants being found to endorse a conspiracy-theory interpretation of the pandemic, especially among the Poles, showed how important it is for authorities to explore and address the specific information needs and common difficulties of particular migrant groups. According to a survey conducted in Poland, 45% of respondents agreed that ‘some foreign powers or countries are deliberately contributing to the spread of the coronavirus’ [38]. Such conspiracy theories, misinformation and rumours may in turn have resulted in a lack of trust in the way the authorities were dealing with the pandemic and a consequent lack of adherence to their recommendations. Furthermore, alternative ways of perceiving COVID-19 could be connected to the transnational lives that some migrants live, and being overly judgemental of such different world views is not constructive.

Providing migrants with accessible, appropriate and reliable information poses an extreme challenge for the health-care systems of receiving countries. Many governments have found developing new forms of interaction with their citizens difficult, and instead rely on existing communication channels. However, this strategy may not work with migrant groups, which was highlighted by the participants in our study. The participants wanted information to be translated into their own language, but also reported that it was difficult to find existing translated material, which indicated that availability does not necessarily translate into accessibility.

The experiences of our informants were shaped by the intersection of such factors as level of education, length of residence in Norway, language competence and family situation. Participants who had lived in Norway for longer, were well educated and had a good grasp of Norwegian did not experience any difficulties in accessing and understanding the information.

The participants appreciated the information they received through work and school, which targeted everyday challenges that were not necessarily linked to the migrant identity, but rather addressed them as parents, workers and citizens. Therefore, our study indicates that people with a migrant background should be recognised as individuals with their own specific needs and not only as representatives of migrant groups. However, by participating in society, migrants, especially economic migrants who have not been resident in Norway for long, become dependent on the correct information and the appropriate conditions facilitating them to follow up recommendations. Several NGOs have recently raised concerns about the situation of Polish temporary migrants that should not be ignored in analyses.

In a multicultural society, this pandemic has clearly demonstrated the need for a longer-term strategy to ensure reliable and trustable communication with migrants. Future research should include long-term intervention studies aimed at developing and evaluating models of effective communication with migrant communities – indispensable during such crises as a pandemic.

**Strengths and limitations of the study**

This study explored the experiences of several migrant groups with regard to accessing and understanding COVID-19-related information. The main strength of this study was using interviewers who belonged to the same ethnic groups as the interviewees. Furthermore, the transcripts were coded by two researchers: an ‘insider’ who represented the target migrant group, and an ‘outsider’ who did not belong to the group. This method of coding provided greater objectivity.

There are some limitations to our study. First, the results may not be representative of all migrants in Norway because of the use of a qualitative method and purposeful sampling technique. Second, the interviews took place over the phone, which made it impossible to gauge and act on non-verbal cues.

**Conclusions and recommendations**

It is difficult to stop the spread of a virus once it is endemic in a given group, therefore health authorities must take appropriate preventive action. The Norwegian health authorities, Municipality of Oslo, NGOs, and other institutions and organisations developed material on COVID-19 and recommended control and prevention measures that were translated into different languages. However, their response was not quick enough. The findings of our study showed how important it is from a public health perspective to engage with migrants through the various facets of their lives to ensure access to accurate, credible and timely sources of information during a pandemic. The authorities should maintain an ongoing dialogue with migrant organisations and NGOs in order to disseminate accurate information among all migrant groups. This study indicated the
vital role of trusted information sources such as schools and workplaces during crisis situations like the pandemic. It is recommended that health authorities work closely with such institutions and assure open channels of communication during inter-epidemic periods.

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References
[1] World Health Organization. Timeline of WHO’s response to COVID-19, www.who.int/news-room/detail/29-06-2020-covidtimeline (2020, accessed 22 April 2020).
[2] COVID-19 situation update worldwide, www.ecdc.europa.eu/en/geographical-distribution-2019-ncov-cases (2020, accessed 22 April 2020).
[3] European Centre for Disease Prevention and Control. Guidance on infection and control of COVID-19 in migrant and refugee reception and detention centres in the EU/EEA and the UK. www.ecdc.europa.eu/en/publications-data/covid-19-guidance-infection-prevention-control-migrant-refugee-centres (2020, accessed 30 June 2020).
[4] Platt L and Warwick R. Are some ethnic groups more vulnerable to COVID-19 than others? www.ifsf.org.uk/inequality/chapter/are-some-ethnic-groups-more-vulnerable-to-covid-19-than-others/ (2020, accessed 22 April 2020).
[5] Bhala N, Curry G, Martineau A, et al. Sharpening the global focus on ethnicity and race in the time of COVID-19. Lancet 2020;395:1673–6.
[6] Rostila M, Cederström A, Wallace M, et al. Disparities and associated factors among the immigrant populations in COVID-19 pandemic: an innovative, system-level, interdisciplinary approach is needed to improve public health. Scand J Public Health 2020;50:52–60.
[7] Diaz E, Mamelund SE, Eid J, et al., 2021. Learning from the COVID-19 pandemic among migrants: an innovative, system-level, interdisciplinary approach is needed to improve public health. Scand J Public Health;49:804–8.
[8] Diaz E, Nøredam M, Aradhya S, et al. Situational brief: migration and COVID-19 in Scandinavian countries, https://migrationhealth.org/wp-content/uploads/2021/05/lancet-migration-situational-brief-skandinavia-01-en.pdf (2020, accessed 22 April 2020).
[9] Straiton M, Beneflot A and Diaz E. Immigrants’ use of primary health care services for mental health problems. BMC Health Serv Res 2014:341.
[10] Rognerud M, Strand BH and Hesselberg O. The health of disadvantaged groups in Norway: Norwegian country report for the EU project ‘Social Inequalities and Health in Europe’. Oslo, Norway, National Institute of Public Health, 2002.
[11] Herrero-Arias R and Diaz E. A qualitative study on the experiences of southern European immigrant parents navigating the Norwegian healthcare system. Int J Equity Health 2021;20:1–12.
[12] Czapka EA and Sagbakken M. “Where to find those doctors?” A qualitative study on barriers and facilitators in access to and utilization of health care services by Polish migrants in Norway. BMC Health Serv Res 2016;16:460.
[13] Guadagno L. Migrants and the COVID-19 pandemic: an initial analysis, https://publications.iom.int/books/mrs-no-60-migrants-and-covid-19-pandemic-initial-analysis (2020, accessed 22 April 2020).
[14] Greenaway Ch, Hargreaves S, Barkati S, et al. COVID-19: exposing and addressing health disparities among ethnic minorities and migrants, J Travel Med 2020;27:taaa113.
[15] Kjollesdal M, Skyrud K, Gele A, et al. The correlation between socioeconomic factors and COVID-19 among immigrants in Norway: a register-based study. Scand J Public Health;50:52–60.
[16] Platt L and Warwick R. Are some ethnic groups more vulnerable to COVID-19 than others? A qualitative study on barriers and facilitators in access to and utilization of health care services by Polish migrants in Norway. BMC Health Serv Res 2016;16:460.
[17] Madar AA, Strand BH and Meyer HE. Self-reported health and associated factors among the immigrant populations in Norway. J Public Health 2022;30:345–51.
[18] Madar AA, Strand BH and Meyer HE. Self-reported health and associated factors among the immigrant populations in Norway. J Public Health 2022;30:345–51.
[19] Liem A, Wang C, Wariyanti Y, et al. The neglected health of international migrant workers in the COVID-19 epidemic. Lancet 2020;7:e20.
[20] Diaz E, Nøredam M, Aradhya S, et al. Situational brief: migration and COVID-19 in Scandinavian countries, https://migrationhealth.org/wp-content/uploads/2021/05/lancet-migration-situational-brief-skandinavia-01-en.pdf (2020, accessed 22 April 2020).
[21] Straiton M, Reneflot A and Diaz E. Immigrants’ use of primary health care services for mental health problems. BMC Health Serv Res 2014;341.
[22] Rognerud M, Strand BH and Hesselberg O. The health of disadvantaged groups in Norway: Norwegian country report for the EU project ‘Social Inequalities and Health in Europe’. Oslo, Norway, National Institute of Public Health, 2002.
[23] Herrero-Arias R and Diaz E. A qualitative study on the experiences of southern European immigrant parents navigating the Norwegian healthcare system. Int J Equity Health 2021;20:1–12.
[24] Czapka EA and Sagbakken M. “Where to find those doctors?” A qualitative study on barriers and facilitators in access to and utilization of health care services by Polish migrants in Norway. BMC Health Serv Res 2016;16:460.
[25] Guadagno L. Migrants and the COVID-19 pandemic: an initial analysis, https://publications.iom.int/books/mrs-no-60-migrants-and-covid-19-pandemic-initial-analysis (2020, accessed 22 April 2020).
[26] Greenaway Ch, Hargreaves S, Barkati S, et al. COVID-19: exposing and addressing health disparities among ethnic minorities and migrants, J Travel Med 2020;27:taaa113.
[27] Kjollesdal M, Skyrud K, Gele A, et al. The correlation between socioeconomic factors and COVID-19 among immigrants in Norway: a register-based study. Scand J Public Health;50:52–60.
[28] Diaz E, Mamelund SE, Eid J, et al., 2021. Learning from the COVID-19 pandemic among migrants: an innovative, system-level, interdisciplinary approach is needed to improve public health. Scand J Public Health;49:804–8.
[29] Diaz E, Nøredam M, Aradhya S, et al. Situational brief: migration and COVID-19 in Scandinavian countries, https://migrationhealth.org/wp-content/uploads/2021/05/lancet-migration-situational-brief-skandinavia-01-en.pdf (2020, accessed 22 April 2020).
[30] Statistics Norway. Facts on immigrants [Fakta om innvandring], www.ssb.no/befolkning/faktaiside (2020, accessed 22 April 2020).
[31] Madar AA, Strand BH and Meyer HE. Self-reported health and associated factors among the immigrant populations in Norway. J Public Health 2022;30:345–51.
[32] Liem A, Wang C, Wariyanti Y, et al. The neglected health of international migrant workers in the COVID-19 epidemic. Lancet 2020;7:e20.
[33] Diaz E, Nøredam M, Aradhya S, et al. Situational brief: migration and COVID-19 in Scandinavian countries, https://migrationhealth.org/wp-content/uploads/2021/05/lancet-migration-situational-brief-skandinavia-01-en.pdf (2020, accessed 10 May 2021).
[34] FHI. COVID-19 Weekly report – week 42 Wednesday 21. October 2020. Norway: FHI, https://www.fhi.no/contentsets/8a971ce7b0a3c4a06bdf381ab52ed157/vedlegg-andre-halvvar-2020-2020.10.21-ukerapport-uke-42-covid-19.pdf (2021, accessed 30 November 2021).
[35] Bronbøl RLL, Langer Primdahl N, Jensen AMB, et al. “I Just Want Some Clear Answers”: challenges and tactics adopted by migrants in Denmark when accessing health information to Norwegian Somalis. Høyskolen Kristiania, 2021.
[36] Straiton M, Beneflot A and Diaz E. Immigrants’ use of primary health care services for mental health problems. BMC Health Serv Res 2014;341.
[37] Rognerud M, Strand BH and Hesselberg O. The health of disadvantaged groups in Norway: Norwegian country report for the EU project ‘Social Inequalities and Health in Europe’. Oslo, Norway, National Institute of Public Health, 2002.
[38] Herrero-Arias R and Diaz E. A qualitative study on the experiences of southern European immigrant parents navigating the Norwegian healthcare system. Int J Equity Health 2021;20:1–12.
[39] Czapka EA and Sagbakken M. “Where to find those doctors?” A qualitative study on barriers and facilitators in access to and utilization of health care services by Polish migrants in Norway. BMC Health Serv Res 2016;16:460.
[25] Amo-Adjéi J, Nurzhynska A, Essuman R, et al. Trust and willingness towards COVID-19 vaccine uptake: a mixed-method study in Ghana, 2021. *Arch Public Health* 2022;80:64.

[26] Lanyi K, Green R, Craig D, et al. COVID-19 vaccine hesitancy: analysing Twitter to identify barriers to vaccination in a low uptake region of the UK. *Front Digit Health* 2021;3:804855.

[27] Hill Collins P and Bilge S. *Intersectionality*. Polity Press, 2019.

[28] Spitzer DL, Torres S, Zwi AB, et al. Towards inclusive migrant healthcare. *BMJ* 2019;366:14256.

[29] Biernacki P and Waldorf D. Snowball sampling: problems and techniques of chain referral sampling. *Sociol Methods Res* 1982;10:141–63.

[30] Braun V and Clarke V. Using thematic analysis in psychology. *Qual Res Psychol* 2006;3:77–101.

[31] Devakumar D, Shannon G, Bhopal S, et al. Racism and discrimination in COVID-19 responses. *Lancet* 2020;395:1194.

[32] Czapka EA, Gerwing J and Sagbakken M. Invisible rights: barriers and facilitators to access and use of interpreter services in health care settings by Polish migrants in Norway. *Scand J Public Health* 2019;47:755–64.

[33] Mbanya VN, Terragni L, Gele AA, et al. Access to Norwegian healthcare system – challenges for sub-Saharan African immigrants. *Int J Equity Health* 2019;18:125.

[34] Tschirhart N, Diaz E and Ottersen T. Accessing public healthcare in Oslo, Norway: the experiences of Thai migrant masseuses. *BMC Health Serv Res* 2019;19:722.

[35] Park HJ and Lee BJ. The role of social work for foreign residents in an epidemic: the MERS crisis in the Republic of Korea. *Soc Work Public Health* 2016;31:656–64.

[36] Zarocostas J. How to find an infodemic. *Lancet* 2020;395:676.

[37] Abdel-Latif M. The enigma of health literacy and COVID-19 pandemic. *Public Health* 2020;185:95–6.

[38] Wilczek M. Half of Poles believe “foreign powers deliberately spreading coronavirus” and approve government response. https://notesfrompoland.com/2020/04/20/poles-believe-foreign-powers-deliberately-spreading-coronavirus-and-approve-governments-response/ (2020, accessed 10 October 2020).