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Problems and needs of the older adults and their families infected with COVID-19 in the community of Northeastern Thailand: a qualitative study

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ABSTRACT

Introduction: The COVID-19 pandemic has severely impacted older adults, particularly those with chronic illnesses, due to their heightened vulnerability and limited access to care. In Northeastern Thailand, many older adults live alone and face multifaceted health and social challenges. This study aimed to explore the problems and needs of older adults and their families infected with COVID-19 within the social and cultural context of this region.

Methods: A qualitative content analysis was conducted using data collected through observations, in-depth interviews, focus group discussions (FGDs), field notes, and participant observations in community settings. A total of 48 informants were purposively selected, including representatives from public and community organizations, health service units, local administrative organizations, local leaders and village headmen, and older adults and their family members who had been infected with COVID-19.

Results: The study identified five key themes reflecting the problems and needs of older adults and their families affected by COVID-19. Socially, participants experienced isolation and limited access to support networks. Economic challenges included income loss and insufficient financial assistance. Environmental issues involved inadequate housing and restricted access to essential services. Health-related problems encompassed physical decline and limited healthcare access. Politically and administratively, delays in assistance and ineffective coordination among agencies were reported.

Conclusions: Older adults and their families infected with COVID-19 encounter complex and multidimensional challenges. Community nurses play a vital role as health system managers in addressing these needs and ensuring accessible and appropriate primary health care services.

Keywords: community care, COVID-19, emerging diseases, older adults, problems and needs

Introduction

Coronavirus disease (COVID-19) is a highly contagious respiratory disease (World Health Organization, 2020). It can spread so rapidly that the World Health Organization has declared it a pandemic (Li et al. 2020; Rahimi, Dastyar, & Rafati, 2021). The disease can be transmitted from person to person through respiratory droplets from coughs, sneezes, nasal discharge, and saliva within approximately 1-2 meters

(droplets transmission) (Ilgili & Kutsal, 2020), or through contact with contaminated surfaces and then touching the mouth, nose, or eyes (contact transmission) (World Health Organization, 2020). COVID-19 has adversely affected healthcare systems worldwide, and this has impacted all aspects of human life, primarily the global economy, from manufacturing to the service industry (Nicola *et al.*, 2020). Public health must control the outbreak, treat infected patients, and be prepared for



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the increasing number of new patients or infections (Legido-Quigley et al., 2020). The impacts on the population include health-related issues such as infections leading to medical expenses, and ultimately death. There is a lack of participation in social activities, which impacts employment, results in loss of income, and leads to changes in population structure with deaths and migrations (Phonpirun, 2020). The COVID-19 outbreak has caused changes in communities and families, including employment, financial insecurity, mental health, student education, and the wellbeing of family members (Gayatri & Puspitasari, 2023). The outbreak has changed the routines of people in the community, especially families with young children, people with disabilities, people who have had a stroke, and older adults (Reid et al., 2021). To prevent the spread of the virus, many countries have implemented lockdowns (Fauk et al., 2022). It is evident that COVID-19 has affected people of all age groups, particularly the older adults and those with chronic health conditions (Bhaskaran et al., 2021), studies from the World Health Organizations, China, and Italy (World Health Organization, 2021), have found similar data showing that the older adults are at a higher risk of severe infection and death from COVID-19, with the risk increasing with age (Onder et al., 2020).

Currently, the world is facing demographic changes with an increasing number of older adults. The population aged 60 and above is expected to increase from 1 billion in 2020 to 1.4 billion by 2050. The number of people aged 80 and above is expected to triple from 2020 to 2050, reaching 426 million. (World Health Organization, 2022). In Southeast Asia, the population aged 60 and above is 76 million, making up 11.4% of the total population. In Thailand in 2021, out of a population of 66.7 million, there were 12.5 million people aged 60 and above. It is projected that by 2040, the older adult's population will almost double from 12 million to 20.5 million, increasing from 18% to 31.4% (Thai Gerontology Research Institute Foundation, 2021). The older adults are at increased risk of contracting COVID-19 (Cocuzzo, Wrench, & O'Malley, 2022; United Nations, 2020). Additionally, it has been found that the older adults are affected by infection prevention measures, such as lockdowns, which are safety measures that lead to changes in daily life and lack of social support leading to psychological problems, anxiety, isolation, loneliness and depression (Martins Van Jaarsveld, 2020; Richter, & Heidinger, 2021; Hailu et al. 2024).

Older adults' populations are particularly vulnerable due to a decline in immune function and an increase in comorbidities, resulting in higher morbidity and mortality. Therefore, caring for older adults during the COVID-19 pandemic is very important because they are at higher risk of infection, especially older adults with chronic conditions, who are more susceptible to severe illness and potential life-threatening complications.

Therefore, the healthcare system should emphasize the preparedness of healthcare services that can cater to the older adults, who are a vulnerable health group (Su & Jin, 2023).

In community operations model in Thailand, there is collaboration among four leading organizations including: 1) Local Administrative Organizations and Early Childhood Development Center, 2) Government sectors such as subdistrict health promoting hospital, hospitals and school; 3) Local government such as village headmen and village committee; 4) The public sectors include citizens, social groups, community organizations, and other civil society actor (Nuntaboot et al., 2019). The surveillance, prevention, and control of COVID-19 in community areas is self-reliant and relies on the cooperation of the leading organizations.

The northeast region is an area where the older adult population has been continuously increasing between 2013 and 2023. There are older adults living alone without a job or older adults who must take care of themselves (Khon Kaen Provincial Statistical Office, 2024). From the data, it is evident that the older adults living in the community are a group in need of care due to complex health conditions and the social context in which they live alone. A good process for community health emphasizes care that directly addresses the problems and needs, taking into account social, cultural, and community contexts. Therefore, the knowledge gap in care for older adults within the community during the COVID-19 pandemic requires the design of work and activities to address issues by studying the problems and needs to meet the basic essential requirements. This leads to the adjustment of the public health care model to keep up with the continuously changing situation through the process of developing awareness and adaptation. (Wu, 2020). Families with older adults are among the highrisk groups for COVID-19 infection, especially during community outbreaks. The extended family structure increases the likelihood of virus transmission from working-age individuals or youth to older adults.

As a nurse, the researcher is interested in studying the problems and needs of older adults and their families infected with COVID-19 in the community. Since nurses play a crucial role in caring for older adults at the individual, family, and community levels, they work in an integrated manner with partners to care for older adults and families infected with COVID-19. This qualitative study explored the problems and needs of older adults and their families about their socio-economic conditions, cultural norms, and local beliefs. Conducted in a naturalistic setting, the study offers contextual insights to guide strategies for reducing risks of severe complications and hospitalization.

Materials and Methods

This was a descriptive qualitative research study. Participants were selected using purposive sampling from the population of older adults and their families in a sub-district in Central Thailand. A total of 48 participants were recruited, including older adults, family caregivers, health volunteers, community health nurses, and village headmen. The study aimed to explore the problems, needs, and experiences related to health and caregiving among these groups within the community. Data was collected using multiple methods, including observation, in-depth interviews, and Focus Group Discussions (FGDs). In addition, secondary data were used to provide background and context for the study. These secondary data included community health reports, demographic statistics, and service records from health service units. The secondary data were obtained from the district public health office and the community health promotion hospital. These documents were reviewed and analyzed to support the interpretation of primary data and to triangulate the findings. The FGDs, on the other hand, were conducted as a separate primary qualitative method to explore the community's perspectives, needs, and experiences. Findings from the FGDs were analyzed thematically and integrated with other primary and secondary data to form a comprehensive understanding.

The interview questions are designed to explore the personal experiences of each participant in depth. For example, a guiding question might be: "How did COVID-19 affect the physical and mental health of older adults in your community?" (FGDs) were conducted in a group setting where several participants were encouraged to share their opinions, exchange ideas, and compare their experiences. The questions used in FGDs were intended to stimulate interactive dialogue and to highlight both commonalities and differences in perspectives among group members. For example, a relevant question could be: For example, a pertinent question could be: "How did these financial changes affect your ability to care for the older adult(s) in your family?"

This study was conducted within the philosophical framework of interpretivism, which emphasizes understanding the subjective meanings and experiences of individuals within their social and cultural contexts. Participants were purposively selected based on their expertise, prior engagement, community roles, and recommendations from trusted local stakeholders. The selection process aimed to ensure that participants had relevant knowledge and experience related to elderly care and the COVID-19 response. The researcher engaged in consultations and meetings with community leaders and officials who possessed direct expertise in elderly care and the COVID-19 response. These consultations facilitated a deeper contextual understanding and supported the planning of data collection activities. The research team comprised nursing and public health

professionals with extensive expertise in qualitative research methodologies. Notably, the researchers did not have any prior personal relationships with the participants before data collection, thereby maintaining objectivity throughout the research process.

Data collection

This study employed multiple qualitative data collection methods to ensure the richness and comprehensiveness of the findings. Data were collected using four qualitative methods: in-depth interviews, focus group discussions (FGDs), structured observations, and secondary data review. These methods were used to explore experiences, challenges, and care strategies for older adults during the COVID-19 pandemic. In-depth interviews were conducted with 25 older adults, family caregivers, health volunteers, and community health staff to explore care experiences, access to services, COVID-19 impacts, and support systems. Interviews took place at homes or workplaces, lasted 45-60 minutes, and were audio-recorded and transcribed. Five FGDs (5-8 participants per group) were held with local leaders, volunteers, and SAO representatives to explore community care strategies, service barriers, and potential improvements. Each session lasted 60-90 minutes and was recorded for transcription and analysis. Structured observations were conducted during approximately 10-15 home visits and community events to document caregiving practices, living conditions, and service delivery. A checklist and field notes guided observations. Secondary data, including health reports, demographic statistics, and COVID-19 records, were reviewed to provide context and support triangulation. Data from all sources were triangulated to validate findings, allowing cross-verification comprehensive and understanding of older adult care during the pandemic.

The researcher personally collected data by visiting various community settings, including homes, village halls, the Subdistrict Administrative Organization (SAO), and the Subdistrict Health-Promoting Hospital (SHPH). The researcher collected data through site visits to various community settings to ensure contextual relevance and participant comfort. In-depth interviews with older adults and caregivers were conducted at their homes to allow for privacy and observation of daily care environments. Interviews with community health nurses and health volunteers were held at the Subdistrict Health-Promoting Hospital (SHPH), where service delivery and care coordination were also explored. Focus group discussions took place at village halls and meeting Administrative rooms within the Subdistrict Organization (SAO), involving local leaders and volunteers to discuss community strategies and service barriers. Additional observations were conducted during home visits, outreach activities, and health promotion events, allowing for direct assessment of care practices and community engagement.

Before participation, all informants were provided with detailed study information and signed informed consent forms. Initial contact was made through gatekeepers, followed by direct coordination with referred individuals to arrange interviews and FGDs. Secondary data included health records, community demographic reports, daily logs, and statistical data obtained from the SHPH and local community information systems. Secondary data from SHPH and community databases such as patient records, demographic data, volunteer activity records, and COVID-19 statistics were used to confirm interview and FGD findings regarding health status, service access, and caregiving. This data also provided context and supported the triangulation of qualitative results. This data supports and complements findings from both the in-depth interviews and FGDs, providing context for understanding participants' health status and care needs. Table 1 presents key health data on chronic illnesses such as diabetes mellitus and hypertension among older adults, based on information gathered from participants in in-depth interviews and focus group discussions.

Data Analysis

Data was analyzed using conventional content analysis, which is well-suited for identifying themes and patterns in qualitative data (Holloway & Galvin, 2017). All interviews and FGDs were audio-recorded and transcribed verbatim. The researcher thoroughly reviewed the transcripts multiple times to develop an indepth understanding of the content and identify meaningful units of analysis. The coding process included open coding, categorization, and the development of emergent themes. Themes and categories were derived from the data collected through interviews and FGDs, meaning they emerged directly from the participants' responses rather than being based on preconceived theoretical frameworks. Codes were inductively from the data and then grouped into broader conceptual categories. Themes were refined through iterative comparison and validation across datasets.

To ensure analytical rigor, the researcher consulted with experts in qualitative research, public health, and community development identified through recommendations from gatekeepers and community leaders. These experts reviewed the coding framework and provided feedback to ensure that the analysis accurately reflected the research objectives. Reflexivity was maintained throughout the analysis process. The research team, which included nursing and public health professionals with qualitative expertise, held regular debriefing sessions to reflect on assumptions, reduce bias, and strengthen credibility. Techniques such as member checking, peer debriefing, and maintaining internal audit trails were applied to enhance the dependability and confirmability of the findings (Lincoln & Guba, 1985). Secondary data, including health records

and community statistics, were used to triangulate and support the primary conclusions derived from interviews, FGDs, and observations. The results were synthesized by weaving together narrative descriptions and direct participant quotations to convey rich, contextual insights.

Trustworthiness

To ensure the trustworthiness of the study, Lincoln and Guba's criteria of credibility, dependability, transferability, and confirmability were applied. The researcher paid particular attention to data verification, especially in terms of confirmability (Lincoln & Guba, 1985). Triangulation was employed through the use of multiple data collection methods, including observation, in-depth interviews, and field notes. Additionally, member checking was conducted to verify the accuracy of the interview data by consulting key informants for clarification as needed. The researcher observed daily routines, health-related practices, interactions among family members, and responses to challenges posed by COVID-19. Special attention was given to behavioral expressions, emotional reactions, and environmental factors that influenced the experiences of older adults and their caregivers.

Then the analysis results were submitted to three qualitative research experts to verify the accuracy of the data. A peer briefing was used to verify the content accuracy of data interpretation, focusing on alignment with participants' responses, namely 2 nurse lecturers experienced in qualitative research and 1 expert in community health nursing. The researcher evaluated the quality and credibility of the study using Lincoln and Guba's criteria by examining the quality and credibility of the results in terms of data reliability and confirmation, then summarizing the main point after each interview was completed (Lincoln & Guba, 1985). The data from indepth interviews that were summarized after the transcription were given to the informants to confirm the accuracy (member checking). Then the analysis results were submitted to three qualitative research experts to verify the accuracy of the data. A peer briefing was used to verify the content accuracy of the data interpretation, focusing on consistency with participants' responses rather than technical aspects such as language or writing.

Ethical consideration

This research project was approved by the Human Research Committee of Mahidol University, approval number 2022/014.0202, on February 2, 2022. The researcher prioritized ethical issues at every stage of the study by adhering to three key principles: respecting individuals by explaining the objectives of the study before beginning the research; ensuring beneficence by protecting participants from harm and allowing them to withdraw from the study at any time without

repercussions; and maintaining justice by carefully selecting a specific sample group.

Results

The findings indicated that older adults infected with COVID-19 encountered multidimensional challenges. Socially, prolonged isolation intensified loneliness and emotional distress. Economically, many experienced a loss of income and lacked sufficient financial assistance. Environmental issues included unsuitable housing conditions for quarantine and caregiving. Health-related problems involved limited access to essential healthcare services and rehabilitation. Politically, the study identified that inconsistent communication and awareness of the creation of fake news were issues.

Participant characteristics

This study involved a total of 48 participants, divided into five groups based on their roles and relevance to the research context.

The first group comprised 25 participants, including 10 older adults (aged 62-84 years, all female) and 15 family members of these older adults (aged 23-56 years). Among the older adults, the majority were married (n = 8)80%) and the remainder divorced (n = 2; 20%). Their health status varied: one participant (10%) was in good health, four (40%) had chronic diseases, six (60%) were classified as high-risk, two (20%) had disabilities, and four (40%) had previously been infected with COVID-19. One participant (10%) also served as a caregiver. Several participants experienced overlapping health conditions. The family members were primarily female (n = 14; 93.3%) and married (n = 12; 80%). In terms of health status, five participants (33.3%) were healthy, three (20%) were considered high-risk, and seven (46.7%) had previously contracted COVID-19.

The second group consisted of 3 local administrative organization officials, all female (aged 52 years), and married (n = 3; 100%). All participants reported being in good health. The third group comprised 5 village heads

Participant ID	Gender	Age	Marital status	Health status	Position
OA1	Female	74	Divorce	High risk and caregiver	Older Adults 1
OA2	Female	62	Married	Infected and chronic disease	Older Adults 2
OA3	Female	84	Divorce	High risk and disability	Older Adults 3
OA4	Female	63	Married	High risk and chronic disease	Older Adults 4
OA5	Female	62	Married	High risk and disability	Older Adults 5
OA6	Female	71	Married	High risk and contact infection	Older Adults 6
OA7	Female	62	Married	Infected and chronic disease	Older Adults 7
OA8	Female	75	Married	High risk and chronic disease	Older Adults 8
OA9	Female	74	Married	Healthy	Older Adults 9
OA10	Female	71	Married	Infected and chronic disease	Older Adults 10
FM1	Female	40	Married	Healthy	Family Member 1
FM2	Female	50	Married	Healthy	Family Member 2
FM3	Female	53	Married	Healthy	Family Member 3
FM4	Female	51	Married	Healthy	Family Member 4
FM5	Female	52	Married	Healthy	Family Member 5
FM6	Female	50	Married	High risk	Family Member 6
FM7	Female	30		High risk	Family Member 7
	Female	58	Single Married		•
FM8		38 48		High risk	Family Member 8
FM9	Female		Married	Infected	Family Member 9
FM10	Female	25	Married	Infected	Family Member 10
FM11	Male	35	Married	Infected	Family Member 11
FM12	Female	23	Single	Infected	Family Member 12
FM13	Female	56	Married	Infected	Family Member 13
FM14	Female	56	Married	Infected	Family Member 14
FM15	Female	29	Married	Infected	Family Member 15
HA1	Male	45	Married	Healthy	Head of village 1
HA2	Male	57	Married	Healthy	Head of village 2
HA3	Male	56	Married	Healthy	Head of village 3
HA4	Male	58	Married	Healthy	Head of village 4
HA5	Male	52	Married	Healthy	Head of village 5
SAO1	Female	52	Married	Healthy	Subdistrict Administrative Organization
SAO2 Member	Female	52	Married	Healthy	Subdistrict Administrative Organization
SAO3 Member	Female	52	Married	Healthy	Subdistrict Administrative Organization
CHN1	Female	45	Single	Healthy	Community Health Nurse 1
CHN2	Female	55	Married	Healthy	Community Health Nurse 2
PHS1	Male	45	Married	Healthy	Public Health Staff 1
PHS2	Female	40	Single	Healthy	Public Health Staff 2
HV1	Female	59	Single	Healthy	Health volunteer 1
HV2	Female	59	Married	Healthy	Health volunteer 2
HV3	Female	43	Married	Healthy	Health volunteer 3
HV4	Female	55	Married	Healthy	Health volunteer 4
HV5	Female	65	Married	Healthy	Health volunteer 5
HV6	Female	61	Married	Healthy	Health volunteer 6
HV7	Female	42	Married	Healthy	Health volunteer 7
HV8	Female	53	Married	Healthy	Health volunteer 8
				•	
HV9	Female	45 50	Married	Healthy	Health volunteer 9
HV10	Female	59	Married	Healthy	Health volunteer 10
HV11	Female	43	Married	Healthy	Health volunteer 11

(aged 45–58 years), all male and married. All participants in this group reported being in good health (n = 5; 100%). The fourth group included 4 personnel from local health service units, including community health nurses and public health staff. Participants were aged between 40 and 55 years. The majority were female (n = 3; 75%), with two participants married and two singles. All were in good health (n = 4; 100%). The fifth group consisted of 11 community health volunteers, all female (aged 42–65 years), most of whom were married. All reported being in good health (n = 11; 100%).

The study findings indicated that during the COVID-19 pandemic, older adults and their family members infected with COVID-19 experienced problems and needs were organized in five themes 1) Social problems and needs of older adults and their families infected with COVID-19, 2) Economic problems and needs of older adults and their families infected with COVID-19, 3) Environmental problems and needs of older adults and their families infected with COVID-19, 4) Health problems and needs of older adults and their families infected with COVID-19 and 5) Political and administrative problems and needs of older adults and their families infected with COVID-19.

Theme 1: Social problems and needs of older adults and their families infected with COVID-19

1.1 Dying in isolation

When the older adults were infected with COVID-19 and needed to be hospitalized during the severe outbreak, measures were in place to prohibit visits. Consequently, relatives of the older adults could not visit them. As their condition worsened, the older adults and their families were unable to meet or say goodbye, and the older adults ended up dying alone in the hospital room.

"It was very sad. Normally, when someone dies, their body is brought home for a funeral. But in this situation, we just received a phone call informing us that our grandmother had passed away. No relatives were allowed to be near her. She died alone, with no one by her side." (FM1)

1.2 Lack of comprehensive welfare support

During the pandemic, people in the community helped each other by fundraising and collecting supplies. However, due to the ongoing outbreak, many people were in distress, resulting in older adults and their families not receiving adequate assistance.

"We did not receive any welfare assistance. After a member of our household tested positive for COVID-19, we were informed that food would be provided for individuals in quarantine. Initially, food was delivered, but the support was later discontinued." (OA1)

1.3 Older adults, people, and children needed continuous learning

In situations where there is no outbreak, the community has provided a space for the older adults to learn skills and knowledge, enabling them to develop their potential and stay aware of rapid changes in society through non-formal and informal education, whether it be within family, temple, school, or community. When the outbreak occurred, gathering at organized venues had to be suspended, disrupting the learning of older adults. For children, school was suspended, transitioning to online learning and home visits.

"During the COVID-19 outbreak, children wanted to attend school; however, some of their friends had contracted the disease. Consequently, the teacher instructed my grandchild to stop attending school. Although the children did not go to class, the teacher conducted home visits instead." (OA3)

1.4 Family members stigmatized as potential spreaders of the virus

The outbreak of a new disease has caused fear and paranoia in society. When a family member of an older adult was infected, there were mentions or connections made between the infected and the spread of the disease, leading to expressions of concern or disgust. During the pandemic, society did not accept a person with COVID-19, causing those who were stigmatized to experience stress and pressure. Some of the infected did not dare to leave their homes.

"When our grandmother contracted COVID-19, we were required to quarantine. Members of the community were fearful of us, believing that we might spread the virus. They instructed us to stay at home and avoid going anywhere. Despite this, community members remained fearful and showed signs of disgust. They warned that we posed a risk of infection and urged others to keep their distance from us." (FM1)

1.5 Avoid gathering in groups and doing religious activities

Due to outbreak measures, religious sites such as tem ples, churches, mosques, and shrines, where people gather for social activities, were closely monitored. To prevent these places from becoming sites for virus transmission, activities including parties, gatherings, or ceremonies related to festivals, traditions, or religious ceremonies were halted.

"Since the pandemic, I have not been able to go out much. During merit-making ceremonies or funerals, I did not feel inclined to attend. Recently, I have mostly been staying at home." (OA4)

Theme 2: Economic problems and needs of older adults and their families infected with COVID-19

2.1 Family members were unemployed, lacked income, and experienced reduced earnings.

As part of the lockdown measures, everyone was required to stay at home to stop the spread of the virus. However, some people could not work from home. When people had no jobs, there was no income, which led to reduced earnings. This affected families' ability to cover daily living expenses and provide financial support for their family members.

"Everyone was affected by the pandemic. My siblings had to work daily at construction sites to earn a living. When the pandemic occurred, I lost my job. Employment opportunities were not guaranteed." (HA1)

2.2 An increase in living expenses

Group gatherings during the pandemic situation could increase the risk of infection. School-aged children had to stop attending in person. The problem was adjusted with online learning. This required children's families to purchase additional learning equipment, such as iPads or mobile phones.

"During the COVID-19 pandemic, my grandchild had to participate in online learning. I was required to purchase iPads for her studies, which incurred significant expenses and increased our household costs." (Focus group discussion of Health Volunteer)

2.3 An increase in debt

People were in debt due to reduced income. Those with debt would borrow money to support their daily living expenses, especially farmers. Their income was uncertain, so they had to borrow money from loan sharks, especially those without a permanent job and older adults.

"We lacked sufficient funds to send my grandchild to school, so we borrowed money from relatives to support her continued education. Additionally, the village headman provided assistance." (Focus group discussion of Health Volunteer)

Theme 3: Environmental problems and needs of older adults and their families infected with COVID-19

3.1 Ineffective waste management, no clear waste separation system

In the area, there was no separation of infectious waste before disposal. Waste was improperly disposed of, with contagious waste, wet waste, and plastic waste all mixed in one bag. This improper waste disposal did not meet standards, making it difficult for responsible agencies to manage the waste correctly.

"Red bags were provided for waste separation; however, when it was time for disposal, community members still mixed

various types of waste—including face masks and food scraps—tied the bags and placed them in the municipal garbage truck." (FM8)

3.2 Unsuitable environment for quarantine

Some people suspected of being infected had to quarantine at home, a method known as home isolation. However, the environment was not conducive, as some houses lacked separate bedrooms or dining rooms. Many family members were living together. Additionally, there was community isolation. However, due to a large number of infected people, the environment was not suitable.

"The conditions in the community quarantine facility were poor. Individuals who did not know each other were placed together in the same space. The environment was crowded, noisy, and unsanitary, with accumulated garbage present." (Infected Person 2)

3.3 Lack of proper disposal methods for infectious waste

Infectious waste came in many forms, each requiring different disposal methods. In the community, infectious waste included items contaminated with bodily fluids, such as masks and tissues, but they were often found mixed in a single bin.

"Concerns arose regarding waste management due to the absence of designated bins for infectious waste in the village. For instance, Village 8 was piloting a program for source separation of infectious waste. In our community, we made every effort to manage infectious waste effectively; however, other villages have yet to implement proper procedures." (PHS2)

3.4 Family members having to return to their hometowns because they had no place to stay during the quarantine

The community is characterized as rural. Working-aged people living in the area generally have low incomes. They often travel to work in Bangkok and other provinces, and their accommodations at these work locations are temporary. These people usually work in the service sector, specifically in hotels and restaurants. During the COVID-19 pandemic, many of them were laid off or had their hours reduced. They couldn't handle the cost of living in the city, so they had to return to their hometowns.

"Some individuals contacted their family members to inform them that they had tested positive for COVID-19 and required a place to quarantine due to the risk of transmission. They were unable to find suitable quarantine facilities in Bangkok, and when available, the rental fees were prohibitively expensive. With hospitals operating at full capacity, they were compelled to return to their hometowns." (PHS1)

Theme 4: Health problems and needs of older adults and their families infected with COVID-19

4.1 Insufficient knowledge in managing health concerning emerging diseases

COVID-19 was a new infectious disease; the symptoms, prevention and control methods, treatment, and research were still insufficient. Information about the disease hadn't been disseminated to the public quickly or made easily accessible. This led to people not knowing the correct ways to take care of themselves, and health personnel needing additional training to handle the disease.

"Since my birth, this is the first time I have encountered this disease. As a village health volunteer, I received training on hand hygiene and social distancing. Some older adults in the community took good care of themselves by wearing masks and frequently asked us, the village health volunteers, numerous questions regarding proper self-care, the reasons behind the prohibition of gatherings, and appropriate waste disposal methods." (HV1)

4.2 Lack of continuous care for the older adults and bedridden patients

During the pandemic, health staff were not allowed to visit the older adults due to fears of spreading the virus. Therefore, the older adults stayed at home. If any problems arose, health staff would see and treat according to the symptoms. For follow-up visits at the hospital, there is an appointment to pick up medicine or use Drug Grab for medicine delivery to reduce travel time.

"During the COVID-19 pandemic, visits to older adults and bedridden patients were prohibited due to concerns about transmitting the virus to this vulnerable group. Consequently, family members had to provide care for them independently." (HV2)

4.3 Fear of death from vaccination

Due to the pandemic situation, the government campaigned for vaccination to build immunity in people. Some people was afraid due to a lack of understanding about how vaccines work and their benefits in disease prevention, married with negative past experiences with vaccines. Dissemination of incorrect information or rumors about vaccine efficacy has contributed to fear. Health service units emphasized vaccination to reduce infection among the population, but some people remain fearful.

"An older adult reported that his close neighbor, with whom he chewed betel nut daily, went to receive a COVID-19 vaccination and returned home unable to walk, resembling a disabled person. He did not understand the cause of this condition, which caused him to feel frightened. He also heard rumors that vaccination could cause a desire to die, leading him to refuse vaccination. Additionally, due to the need for

multiple doses, many older adults in the community were reluctant to get vaccinated." (HV3)

4.4 Infections contracted from descendants and spread within the family

Most older adults stayed home while family members went to work, leaving the house in the morning and returning in the evening. Traveling outside the home could introduce the risk of bringing the virus back to family members, especially children and older adults. When older adults got infected, they tended to have more severe symptoms than other age groups.

"My son worked outside at the canal irrigation. He left in the morning and returned in the evening. His colleague at work became infected; my son contracted the virus from them, and then I was infected by my son." (OA6)

4.5 Delayed treatment processes

In the early stages of the COVID-19 outbreak, there were processes for disease investigation and data collection to inform disease control measures. During that period, many people were infected with the disease. At certain times, hospitals might limit the number of patients they admit to reduce the spread of the virus or the shortages of medical equipment. Therefore, some patients in the treatment process had to wait for a place to receive treatment, resulting in delays in care.

"Upon diagnosis of infection, the treatment process involved taking a medical history, assessing symptoms, and waiting for placement in a treatment facility. For example, I tested positive on Tuesday but was admitted to the arranged treatment facility only on Sunday." (FM3)

4.6 Stress and anxiety

The pandemic changed how we live in society. For the working-age population, there were some changes in working methods. Some people had to shift from traditional ways of working to working from home, some got laid off, and others had to leave their jobs and experience reduced incomes. Social distancing was necessary. Some family members could not return home because they were afraid of spreading the virus to the older adults. All these issues impacted family members, leading to anxiety and stress. Adjusting to new ways of living caused anxiety about various situations.

"According to the stress assessment, older adults and their families experienced significant stress and anxiety due to unemployment, reduced incomes, and, in some cases, complete loss of income. Additionally, social distancing measures prevented some individuals from meeting their family members, necessitating substantial adjustments to their lifestyles." (CHNI)

Theme 5: Political and administrative problems and needs of older adults and their families infected with COVID-19

5.1 The need for information about the spread of the disease

COVID-19 left older adults unsure of how to take care of themselves during the pandemic. Some older adults sought information from health personnel or searched for information online for prevention and healthcare advice, and to reduce the risk of further spreading of the disease.

"The older adults appeared to be proactive regarding their health. They sought information shared via the Line application and consulted with nurses or health volunteers. Health staff provided guidance on healthcare practices and recommended avoiding group gatherings temporarily." (Community Health Nurse 2)

5.2 Inconsistent communication

Due to the COVID-19 pandemic, many people wanted to enter the community. Public announcements required travelers to provide travel information in advance. This allowed community leaders to plan health care and quarantine measures. However, some people entering the community claimed they were unaware of the need to notify.

"Occasionally, communication issues arise, resulting in misunderstandings. For instance, announcements over loudspeakers requested that individuals entering the area provide advance notice. However, they failed to inform authorities prior to their arrival and only notified them afterward, which caused confusion and miscommunication." (Village Headmen 3)

5.3 Awareness of the creation of fake news

During the COVID-19 outbreak, information spread rapidly through online channels. Anyone could present various pieces of information online. This rapid expansion of information and reception of diverse sources led to confusion and uncertainty. So, people asked health staff or village health volunteers for their opinion on whether the information was reliable or actionable.

"Due to the rapid dissemination of information, some news was accurate while other reports were false. Verification required time. We issued warnings to villagers to await official information from us and to refrain from accepting news prematurely." (Subdistrict Administrative Organization)

Discussions

The spread of the COVID-19 infectious disease has had severe impacts on individuals and families. Older adults people and family members infected with the disease faced the following problems and needs in various aspects, including: 1) Social problems and needs of older

adults and their families infected with COVID-19, 2) Economic problems and needs of older adults and their families infected with COVID-19, 3) Environmental problems and needs of older adults and their families infected with COVID-19, 4) Health problems and needs of older adults and their families infected with COVID-19 and 5) Political and administrative problems and needs of older adults and their families infected with COVID-19 as follows:

Social problems and needs of older adults and their families infected with COVID-19

During the pandemic, many older adults died alone in isolation without the chance to say goodbye to family members, leading to feelings of loneliness and separation (Bloom et al., 2022). Lockdowns and infection control measures limited participation in social and community activities, contributing to isolation and reduced wellbeing (Derrer-Merk et al., 2023; Fauk et al., 2022; Tomaz et al., 2021). School closures also impacted intergenerational interactions (Lowe et al., 2024). Social stigma toward infected older adults and their families was common, driven by fear and misinformation, discouraging disclosure and healthcare-seeking (Sotgiu and Dobler, 2020; Chew et al., 2021; Nxumalo et al., 2023).

Future preparedness should support virtual engagement (e.g., online senior clubs), promote antistigma campaigns, and improve access to essential services through mobile clinics and telehealth. Despite limited aid (Rotenberg et al., 2021; Waelveerakup et al., 2022), needs remained unmet. The enduring impact underscores the need for integrated care addressing physical, emotional, and social well-being, with emphasis on caregiver training, volunteer networks, and tailored emergency response plans.

Economic problems and needs of older adults and their families infected with COVID-19

This study revealed that families with older adults faced significant economic hardship during the COVID-19 pandemic. Many family members lost jobs or had reduced income due to lockdowns, while household expenses increased, especially for children's online learning devices and infection prevention supplies like masks and sanitizers. These burdens often led to informal debt. The findings align with those of Satchanawakul et al. (2023) and Kostyál et al. (2021), who reported similar financial stress and employment challenges among multi-generational households. Daily expenses for disease prevention and caregiving also rose. (Waelveerakup et al., 2022) confirmed the necessity of infection prevention equipment, while (Nuntaboot et al., 2019) emphasized the financial burden of caregiving, including medication and daily living costs. These findings highlight the economic vulnerability of households with older adults. To address this, targeted financial support is essential—alongside the promotion

of income-generating activities and caregiver training to strengthen family resilience.

Future preparedness should emphasize enhancing financial literacy and caregiver training for families, developing community-based medical waste management systems, and incorporating economic vulnerability indicators into emergency response plans.

Environmental Problems and Needs of Older Adults and Their Families Infected with COVID-19

This study found that communities lacked effective waste management systems, especially for infectious waste such as used masks. Waste was often mixed and disposed of improperly, increasing the risk of infection. This is consistent with the findings of (Ouhsine et al., 2020) and (Chowdhury et al., 2022), who reported poor management of medical waste during the pandemic, raising public health concerns. Quarantine conditions were also inadequate. In the northeastern region, shared family spaces made isolation difficult. Overcrowding, limited space, and insufficient food provision contributed to stress among infected individuals. These findings align with (Ndejjo et al., 2021) and (Davis et al., 2022), and (Sookhom & Krivart, 2022), who noted that insufficient housing and infrastructure forced many to return to their hometowns due to business closures and lack of healthcare access.

Future preparedness should focus on educating families about home isolation and infection prevention, establishing designated waste zones in collaboration with the health authority for safe disposal, and integrating environmental and housing conditions into emergency response plans while supporting rural infrastructure development.

Health Problems and Needs of Older Adults and Their Families Infected with COVID-19

The study found that older adults and their families had limited knowledge about self-care during the COVID-19 pandemic, receiving only basic guidance from village health volunteers. They lacked detailed health information, especially for managing chronic conditions. This aligns with (Lim et al., 2024), who found that older adults had basic knowledge but needed further support. Older adults with chronic diseases experienced treatment delays, such as canceled appointments or postponed surgeries (Bloom et al., 2022). Some feared vaccine side effects, leading to vaccination hesitancy, consistent with (Fadda, Suggs, and Albanese, 2021; Herry et al., 2023). Stress, fear, and low immunity, combined with close contact with infected family members, increased their infection risk (Rezende et al., 2022; Teramura et al., 2022). Those with chronic diseases were especially vulnerable to severe illness (Rotenberg et al., 2021; Waelveerakup et al., 2022). Many required medical supplies and assistance from the sub-district health

promotion hospitals (Yodsuban, & Nuntaboot, 2021; Yodsuban et al., 2023).

Future preparedness should include promoting mental health support by encouraging stress management and emotional care for older adults and caregivers, building community capacity through training village health volunteers to provide accurate information and monitor chronic conditions, and strengthening integrated care systems via collaboration among hospitals, local health centers, and volunteers to ensure continuity of care.

Political and Administrative Problems and Needs of Older Adults and Their Families Infected with COVID-19

The study found that family caregivers actively sought health information to support care decisions, aligning with (Waelveerakup *et al.*, 2022) and (Hu et al.,2023). Support from health professionals boosted caregiver confidence. However, communication challenges, including inconsistent messages and misinformation, confused older adults, consistent with (Lim *et al.*, 2024). Many addressed this by verifying information through multiple sources, such as health volunteers and professionals.

Future preparedness should focus on promoting health literacy and critical evaluation of information from trusted sources, training health volunteers as key communicators to combat misinformation, and developing crisis communication plans that include proactive outreach, tailored messaging for older adults, and the use of both digital and traditional media.

This study employed a gatekeeper-based sampling approach by involving key community figures to recruit participants within the selected subdistrict. Consequently, participant selection may have been influenced by the gatekeepers' social networks and subjective views, potentially limiting data diversity and representativeness. This contextual limitation should be considered when interpreting the findings. To address this, researchers emphasized inclusive recruitment and cross-validated the data with secondary sources and community profiles to enhance credibility.

Conclusion

The findings of this study have significant implications for nursing practice, education, research, and policy. Community health nurses should enhance service accessibility through integrated systems and telemedicine and collaborate with relevant sectors to address the specific needs of older adults and their families affected by COVID-19. Nursing curricula should be revised to equip students with competencies in both physical and mental health care. Further research should focus on holistic care models, while nursing practice

guidelines should be updated to reflect these emerging needs.

Nurses play a vital role in supporting older adults during the COVID-19 pandemic by providing tailored care and ensuring access to essential health resources, particularly in rural areas. They need to enhance communication strategies and engage in health education. Additionally, nurses should support family caregivers by equipping them with knowledge and skills to manage health challenges during the pandemic. The findings of this study provide important insights into the problem and needs of older adults during the COVID-19 pandemic. This information was gathered from the experience of LAO, community leaders, public sector officers, civil groups, older adults, and family caregivers. The findings can be used as a reference and provide suggestions for nursing practice, educational research, and health policy.

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Availability of data and materials

The datasets generated and/or analyzed during the current study are available from the corresponding author on reasonable request. Some data contain sensitive information and may require permission from the ethics committee or participating institutions for access.

Authors' contributions

Bualun Hinkaew: Contribution to this Manuscript: writing the background of the problem, designing the research methodology, collecting and analyzing data, interpreting and discussing the study findings, drawing conclusions, and preparing the reference list;

Pairin Yodsuban: Contribution to this Manuscript: writing the background of the problem, designing the research methodology, interpreting and discussing the study findings, drawing conclusions.

Weha Kasemsuk: Contribution to this Manuscript: designing the research methodology, interpreting and discussing the study findings.

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Declaration of Interest

The authors declare that they have no competing interests.

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