Journal of Multidisciplinary Healthcare

Dovepress
open access to scientific and medical research

Open Access Full Text Article

ORIGINAL RESEARCH

Integrated Community-Based Care for Dependent Older People Community Participation in Preparation for Recurrent Outbreaks of COVID-19

Supichaya Wangpitipanit[1], Sangduen Piyatrakul[1], Thida Tongvichean[2]

[1]Division of Community Health Nursing, Ramathibodi School of Nursing, Faculty of Medicine Ramathibodi Hospital, Mahidol University, Bangkok, Thailand; [2]Faculty of Nursing, Shinawatra University, Pathum Thani, Thailand

Correspondence: Sangduen Piyatrakul, Division of Community Health Nursing, Ramathibodi School of Nursing, Faculty of Medicine, Ramathibodi Hospital, Mahidol University, 270 Rama VI Road, Thung Phaya Thai, Bangkok, 10400, Thailand, Tel +66914155255, Email sangduen.tan@mahidol.ac.th

Video abstract

Point your SmartPhone at the code above. If you have a QR code reader the video abstract will appear. Or use: https://youtu.be/ZrDu7Vfc764

Background: The coronavirus disease 2019 (COVID-19) pandemic has significantly impacted family caregivers of older dependents, leading to fatigue, anxiety, depression, and financial burdens, which in turn diminish their quality of life. This study investigated the integration of community participatory systems in older care to address potential COVID-19 recurrence and develop policy proposals for the integrated care of dependent older people.

Methods: An explanatory sequential design was used, with stratified random sampling across six provinces, resulting in a sample of 440 family caregiver dyads and 154 full-time community stakeholders (October 2021–May 2022). Five validated tools were employed, with a content validity of 0.91 and a Cronbach's alpha of 0.69. The data analysis included descriptive statistics and thematic analysis.

Results: Among the 440 primary caregiver households, 42.73% of the older people had moderate dependence, 30.00% had severe dependence, and 27.27% had complete dependence, with common health issues, including chronic illness and comorbidities. Most older adults lived with their children/grandchildren, had insufficient income, and were informed about COVID-19 prevention measures. Family caregivers, predominantly female (average age 54), had multiple underlying conditions and provided an average of 37 hours of care per week, primarily communicating via phones or apps. The 154 stakeholders included public health volunteers and professional nurses, with an average age of 55 years, and were predominantly female (74.55%). They adhered strictly to COVID-19 precautions during their caregiving duties. This study highlights the impact of trust and COVID-19 perceptions on older care, emphasizing the need for specific forms of care, community support, and resources. Perceptions of "trust", "stay home", "self-care", and "distance" significantly influenced care for dependents. The findings will inform health and social workers' planning, operation, and training, addressing the specific care needs of dependent older adults.

Conclusion: This study recommends policy interventions such as budget allocations for essential equipment, better compensation for community work, and the fostering of expertise in elder care. Emphasis is placed on fostering collaborative community agreements.

Keywords: community-based care, participation, dependent older people, recurrent, outbreaks, COVID-19

Introduction

Coronavirus disease 2019 (COVID-19) has rapidly evolved into a global crisis characterized by its increasing severity and widespread transmission, particularly affecting vulnerable populations. The virus spreads primarily through respiratory droplets generated during activities such as talking, coughing, and sneezing, facilitating dissemination in crowded settings and through close personal contact. This mode of transmission often results in severe pneumonia and can be fatal, contributing to the increasing morbidity and mortality rates observed worldwide.[1] According to data from the World Health Organization (WHO), as of May 24, 2024, the cumulative number of COVID-19 cases had surpassed 775 million, with over 7 million associated deaths.[2] Notably, older people have been disproportionately affected, with the average age of deceased individuals reported to be 75.34 years (SD = 9.55), indicating their heightened vulnerability to

Received: 8 July 2024
Accepted: 12 September 2024
Published: 27 September 2024

severe outcomes from COVID-19.[3] In addition to direct health impacts, aging presents multifaceted challenges that extend to individuals, families, and the psychosocial impact of social structures.[1,4] As individuals age, they become more susceptible to illness, with COVID-19 exacerbating existing physical and mental health vulnerabilities. This age-related decline often manifests as limitations or loss of functionality across various bodily systems, including the muscular, skeletal, vascular, and nervous systems.[1,4,5]

Consequently, older people may experience difficulties performing daily activities independently, leading to increased reliance on caregivers and heightened levels of disability and dependency. This underscores the broader impact of aging on individuals' well-being and highlights the urgent need for comprehensive strategies to address the unique needs of aging populations in the context of the COVID-19 pandemic. This often results in limitations or loss of functionality, including muscular, skeletal, vascular, and nervous system deterioration. This decline renders individuals unable to perform daily activities independently, leading to disability and dependency.[5,6] Despite numerous efforts to mitigate the spread of COVID-19, the number of new patients continues to increase. Significant gaps in adherence to epidemic prevention measures at the individual, family, and community levels have been reported. Older people who are dependent are fragile and at high risk of infection, especially if their children bring germs back from outside.[5,6] There needs to be more comprehensive standards for caring for older people in this group. This study's importance arises from the need to develop appropriate and adequate standards of care for dependent older people so that care can be provided more thoroughly, safely, and with quality care.[6–8] The low implementation of coronavirus prevention measures highlights the importance of many studies. Therefore, this study aimed to develop proper and adequate care standards for older people, ensuring that their care is thorough and safe.[9]

The study addressed existing gaps by developing and implementing comprehensive care standards for dependent older people to ensure thorough, safe, and high-quality care. It focused on integrating community participatory systems and evaluating effective care models to increase preparedness for future COVID-19 outbreaks. The findings are expected to significantly contribute to national policy recommendations to improve the quality of life for older people. To maximize the impact of these standards, effective caregiving for dependent older people during the COVID-19 pandemic requires securing resources, compensating caregivers for extended duties, and enhancing their skills in critical areas. Establishing community agreements and enforcing protective measures are crucial for sustainable pandemic responses. The research team highlighted how these strategies informed policy recommendations to maximize their impact. This approach ensures that standards address immediate needs and long-term improvements in community-based care.[4,6–8] By doing so, this study contributes to preventing and controlling the impacts of COVID-19 and the practical care of older people in the community. This research examined the integration of community participatory systems in elderly care to address potential COVID-19 recurrence and to develop policy proposals for the comprehensive care of dependent older people.

Methods

Study Design, Setting and Period

This mixed-method cross-sectional study utilized an explanatory sequential design, incorporating both quantitative and qualitative approaches. Stratified random sampling was employed across six provinces in Thailand, namely, Bangkok, Chiang Mai, Nakhon Ratchasima, Phra Nakhon Si Ayutthaya, Phuket, and Samut Prakan. The data collection period spanned from October 1, 2021, to May 31, 2022.

Population and Sample Size Determination

The study population comprised dependent older people, primary caregivers, stakeholders such as public health officials, nurses, public health technical officers, and trained public health volunteers involved in caring for older people. This research focused on providing care within long-term care systems in communities that experienced significant COVID-19 outbreaks during A.D. 2021–2022 in Thailand.

Sample Size Determination and Sampling Technique

Sample size calculation was performed via Taro Yamane's[9] method, which is based on the number of older people receiving care in the long-term care system in 2020, totaling 256,565 individuals.[10] Below is a mathematical illustration of the Taro Yamane method: $n = N/1+Ne^2$. The above formula was used to determine the sample size of a given population.

n = required sample size

N = population size (256,565 individuals)

e = margin of error (0.05)

The initially calculated sample size of 399.38 was increased by approximately 10% to account for potentially incomplete data,[11] resulting in an increased sample size. An additional sample of 20 individuals was included in this research, resulting in 440 participants. A multiple-sampling plan is utilized.

This study aimed to obtain a representative from visible cluster meetings of outbreak areas and COVID-19 patients, meticulously stratified by region across six provinces, ensuring comprehensive coverage of diverse geographical and socioeconomic contexts. The stratification process involved a multistage random sampling approach, beginning with the selection of 11 districts within each province, ensuring a proportional representation of urban and rural areas. Each province contributed approximately 74 pairs of dependent older people and their primary caregivers, who were chosen through simple random sampling to minimize selection bias. The research team carefully selected the provinces—Bangkok, Samut Prakan, Phra Nakhon Si Ayutthaya, Chiang Mai, and Phuket—on the basis of regional diversity and their unique demographic, economic, and health-related characteristics. Specific sampling was used in Bangkok, which targets four districts, Bang Sue, Ratchathewi, Phaya Thai, and Lat Krabang, to reflect the urban context. In these districts, dependent older people and their primary caregivers were randomly selected from those who volunteered to participate, totaling 74 pairs (148 people) per province. Additionally, ten health volunteers from each province were randomly selected to enhance the representation of the local caregiving landscape.

The inclusion criteria were as follows: dependent older people who were 60 years or older, limited in at least one physical or mental aspect, unable to perform daily activities independently, and required continued care from family or community caregivers. They must have a Barthel ADL Index score of 11 or less[12] and be able to communicate verbally in Thai. Primary caregivers must be 18 years or older, responsible for caring for dependent older people, and able to communicate verbally in Thai. Stakeholders from public health volunteers (PHVs) involved in elderly care must have completed the relevant training, be responsible for dependent older people, and be able to communicate verbally in Thai. The exclusion criteria included individuals who moved from the designated area on the appointed day or who had a severe illness that prevented them from providing information.

Operational Definition/Definition of Terms

Dependent older people: Individuals aged 60 years and over with limitations or loss of ability in at least one area (physical, mental, or intellectual) to the extent that they cannot independently perform daily activities. They require long-term continuous care from primary caregivers in families and communities. This score is evaluated by a Barthel Index of Activities of Daily Living (ADL) score of 11 or less.[12]

Family Caregivers: Individuals aged 18 years and over who are the primary caregivers. This includes both formal and informal caregivers. Formal caregivers are trained, have no personal relationship with the care recipient, and receive wages or compensation for their services. They provide care to dependent elderly people through employment and are constantly with them. Informal caregivers assist in daily life activities, have personal relationships with dependent older people, and play a primary role in providing long-term care and assistance.

Public health volunteers: Individuals who volunteer to care for health behaviors in the community. They act as public health reporters, disseminate knowledge, participate in planning and coordinating public health activities, promote health, prevent and surveil diseases, refer patients for rehabilitation services, assist in consumer protection, and have the authority to dispense essential medicines and medical supplies within the scope specified by the Ministry of Public Health.

Integration of Care for Older People with Community Participation: This refers to integrated care guidelines that connect dependent elderly care from self-care to receiving assistance from primary caregivers in family and community resources. This system ensures consistent and coordinated care.

Caring for older people by families during the COVID-19 outbreak: This encompasses care or services provided to dependent elderly people by family and community members, utilizing public health and social services to meet the care needs of elderly individuals with chronic illnesses or those unable to perform daily activities. This includes official forms of care under government supervision in public health or social services and informal care provided by family, neighbors, or public health volunteers.

Community Participation: The process of carrying out activities to prevent COVID-19 in the community, aimed at increasing the capabilities of individuals, families, and the community to ensure efficiency and sustainability in preparing for potential repeat outbreaks. Preparing for a repeat outbreak: Preparing individuals, families, and the community to effectively and sustainably prevent and manage recurrent outbreaks of COVID-19.

Data Collection Instrument and Quality Control

In this study, five sets of instruments were employed. The first set assessed the ability to perform daily activities among older people with dependency via the Barthel Index of Activities of Daily Living (ADL), which includes ten questions covering tasks such as eating, dressing, and mobility, scored from complete dependence to no dependency. The second set consisted of a personal information questionnaire for dependent older people, comprising 16 questions addressing demographics, health, and COVID-19 knowledge. The third set included an 18-question health assessment form for dependent older people who that evaluated physical health indicators and conditions. The fourth set comprised a personal information questionnaire for caregivers of dependent older people, collecting details on demographics, caregiving roles, and COVID-19 awareness. Finally, the fifth set included a personal information questionnaire for individuals caring for dependent older people who investigated caregiving dynamics and needs. These instruments underwent rigorous development and validation processes, including expert review and stakeholder feedback, ensuring high accuracy and reliability for data collection. Five validated tools were utilized, with a content validity of 0.91 and a Cronbach's alpha of 0.69.

Data Collection Procedure

The research project leader and team developed a research outline focusing on integrated care for dependent older people with community involvement while considering recurring COVID-19 outbreaks. Approval was obtained from the Human Research Ethics Committees and the Human Research Review Committees. Upon approval, equipment inspection follows, and data testing occurs with 10 qualified individuals in other provinces, adjusting questions as needed. With protocol approval, a nursing professional and coordinator are subsequently appointed in each district for organizing meetings, conducting interviews, and facilitating community engagement. Meetings are held to ensure team clarity and volunteer rights regarding participation. Announcements are disseminated through LINE applications and community posters. Volunteers who met the inclusion criteria were interviewed, and consent was obtained either at home or during monthly group meetings. Data collection involved home visits and group discussions, with subsequent analysis and report preparation.

Data Processing and Analysis

The data analysis and presentation followed a two-part structure tailored to the collected data. The quantitative analysis covered personal demographics such as age, gender, education, marital status, residence details, congenital conditions, and familial roles. Descriptive statistics such as the frequency distribution, percentage, mean, and standard deviation were calculated. Qualitative analysis involves interpreting group discussion content to address study objectives. The research team distills insights, analyzes critical messages, and emphasizes significant findings such as caregiving models for dependent older people. Furthermore, both qualitative and quantitative findings are cross-referenced to ensure thorough analysis. Triangulation in qualitative research involves verifying findings through multiple sources or methods and bolstering reliability and validity by corroborating information from diverse perspectives or sources.

Ethical Considerations

Ethical clearance and approval were obtained from the Human Research Ethics Committee, Faculty of Medicine Ramathibodi Hospital, Mahidol University (COA.MURA2021/209). The official letter received from the responsible person was also sent to each setting and allowed to carry out the study. After the educational objectives were explained, informed consent for participation and the publication of anonymous responses were received from each participant. The respondents had the right not to participate or withdraw from the study at any stage. Furthermore, the anonymity and confidentiality of all the data were maintained. The study methods were performed under the Declaration of Helsinki.

Results

Demographic Characteristics of the Respondents

The studies were divided into three groups according to the results. Group 1 included 440 older people with dependency, predominantly female (68.64%), with an average age of 78 years. Most had moderate (42.73%) to severe (30.00%) dependency. Common health issues included hypertension, hyperlipidemia, diabetes, stroke, and knee deterioration. Most lived with children or grandchildren (78.64%) and had insufficient income (78.64%). Over half (59.29%) were aware of COVID-19, receiving information primarily from children, caregivers, radio, and television and practicing preventive measures such as mask-wearing, frequent hand washing, social distancing, and carrying alcohol-based sanitizers. Health problems among these older people included malnutrition (17.27% underweight), obesity (13.18% level 1, 19.77% level 2, 7.95% level 3), hypertension (30.20%), cognitive impairment (63.86%), hearing problems (47.27%), dental issues (44.55%), vision problems (49.09%), osteoporosis (63.18%), joint deterioration (45.23%), depression (14.09%), high risk of falls (81.14%), incontinence (67.27%), and sleep problems (41.36%). Medications for chronic diseases such as hypertension, diabetes, high cholesterol, blood thinners, diuretics, and supplements are common.

Group 2 included 440 family caregivers, predominantly female (74.55%), with an average age of 54 years (SD=13.17), ranging from 18–86 years. Many were elderly, with 36.59% aged 60 and over and 4.09% aged over 75. Caregivers were a mix of formal (trained, paid) and informal (relatives, neighbors) caregivers. The majority were relatives of the older people they cared for, including children (71.36%), spouses (15.45%), siblings (6.36%), and in-laws (2.73%). Most had a primary education (41.36%), were married (60.61%), and were Buddhist (97.05%). Common health issues among caregivers included hypertension, hyperlipidemia, diabetes, osteoarthritis, and cataracts. Health insurance coverage was primarily universal (65%), with civil servant rights (21.59%) and social security (8.86%). They used 1--84 hours of caregiving per week, with an average of 37 hours (SD=13.17). Most caregivers (90.91%) used phones to contact relatives, and 72.05% used various mobile devices.

Group 3 consisted of 154 communities of care providers, primarily public health volunteers (79.19%), and other professionals, such as nurses, public health academics, Thai traditional medicine doctors, and dental health professionals. The participants had an average age of 55 years (SD=10.25), were predominantly female (74.55%), and 25.97% held bachelor's degrees. Most were married (50%) or Buddhist (97.40%). Common health issues include hypertension, hyperlipidemia, diabetes, thyroid disease, knee problems, Alzheimer's disease, and chronic kidney failure. Communication with the relatives and older people they cared for was carried out mainly via telephone to follow up on symptoms and implement COVID-19 preventive measures. The study emphasized the context of integrated care for dependent older people, highlighting the role of community participation and the necessity of preparedness for re-emerging COVID-19 outbreaks. Table 1 presents the characteristics of the quantitative respondents, including dependent older people (n = 440), family caregivers (n = 440), and stakeholders (n = 154).

Qualitative Results

The results of the study, obtained from in-depth interviews and focus group discussions with older people, caregivers, and health team personnel, can be summarized in two main parts: (1) the context and situation of integrated care for dependent older people with community participation to prepare for another outbreak of COVID-19 and (2) models and guidelines for families and communities to provide integrated care for dependent older people during a potential future outbreak. It was found that dependent older people and their caregivers often lacked knowledge about COVID-19,

Table 1 Characteristics of Quantitative Respondents: Dependent Older People (n = 440), Family Caregivers (n = 440), and Stakeholders (n = 154)

Variables	Frequency of Dependent Older People		Frequency of Family Caregivers		Frequency of Stakeholders	
	Number	Percent	Number	Percent	Number	Percent
Name of the Town						
Bangkok	69	15.68	69	15.68	25	16.23
Chiang Mai	76	17.27	76	17.27	34	22.08
Nakhon Ratchasima	74	16.82	74	16.82	37	24.03
Phra Nakhon Si Ayutthaya	74	16.82	74	16.82	22	14.29
Phuket	74	16.82	74	16.82	25	16.23
Samut Prakan	73	16.59	73	16.59	11	7.14
Gender						
Female	300	68.18	329	74.77	144	93.51
Male	140	31.82	111	25.23	10	6.49
Age of Respondents						
< 20 years	–	–	4	0.91	–	–
20–29 years	–	–	17	3.86	5	3.25
30–39 years	–	–	41	9.32	15	9.74
40–49 years	–	–	93	21.14	12	7.79
50–59 years	–	–	124	28.18	66	42.86
60–69 years	96	21.82	109	24.77	56	36.36
70–79 years	137	31.14	48	10.91	–	–
80–89 years	143	32.50	4	0.91	–	–
90–99 years	62	14.09	–	–	–	–
≥ 100 years	2	0.45	–	–	–	–
Marital Status						
Single	36	8.18	109	24.77	40	25.97
Married	158	35.91	268	60.91	77	50.00
Widowed	226	51.36	37	8.41	26	16.88
Seperated	12	2.73	10	2.27	8	5.19
Divorced	8	1.82	16	3.64	3	1.95
Education Level						
Not schooling completed	63	14.32	8	1.82	–	–
Primary education	327	74.32	182	41.36	23	14.94
Secondary education	37	8.41	150	34.09	71	46.10
Postsecondary education	4	0.91	32	6.82	15	9.74
Bachelor's degree	9	2.05	62	14.09	40	25.97
Higher than bachelor's degree	–	–	8	1.82	5	3.25
Religion of Respondents						
Buddhist	420	95.45	427	97.05	150	97.40
Christ	12	2.73	7	1.59	3	1.95
Islam	8	1.82	6	1.36	1	0.65
Living Situation						
Alone	23	5.23	–	–	–	–
With spouse only	29	6.59	–	–	–	–
With Family in own Home	370	84.09	–	–	–	–
With Family & Paid Caregivers	8	1.81	–	–	–	–
With Nonrelatives Caregivers	10	2.28	–	–	–	–

(*Continued*)

Table 1 (Continued).

Variables	Frequency of Dependent Older People		Frequency of Family Caregivers		Frequency of Stakeholders	
	Number	Percent	Number	Percent	Number	Percent
Sufficiency of Income						
Enough, have money saves	42	9.55	–	–	–	–
Enough, no money saves no debt	127	28.86	–	–	–	–
Enough, no money saves, debt	83	18.86	–	–	–	–
Not enough, no debt	128	29.09	–	–	–	–
Not enough, have debt	60	13.64	–	–	–	–
Degree of Dependency (Barthel ADL Index 0–20 points)						
Complete dependency (0–4)	120	27.27	–	–	–	–
Severe dependency (5–8)	132	30.00	–	–	–	–
Moderate dependency (9–11)	188	42.73	–	–	–	–

especially those who were bedridden or had vision or hearing problems, cognitive impairment, dementia, or limited mobility. Most of these older individuals had completed only primary school, limiting their ability to understand emerging diseases. They relied on family members, neighbors, community leaders, and health personnel for information about the disease, its control, prevention measures, and self-care. The spread of COVID-19 in communities has affected the care of dependent older people, with many cases arising unexpectedly and rapidly. Caregivers and family members were crucial in preventing infection, even if the older individuals stayed home. Problems included self-care abilities and understanding of disease prevention among older people, caregivers, and families. The outbreak significantly affected their daily lives, creating challenges in self-care and requiring adaptations for long-term living during the pandemic. Many older people find life more difficult and must be more cautious. The quality of health care for dependent older people depends heavily on family and caregivers, who face challenges related to communication and understanding.

The impact of the COVID-19 outbreak on the lifestyles of dependent older people and their families has been significant. The study indicated that the pandemic has led to substantial changes in daily life, presenting problems and obstacles in self-care. This finding was supported by key informants. “Daily life has become more difficult” or “Lifestyles have become more challenging”. Despite the general view that staying home has kept older people safe, increased caution has been needed. The quality of self-care and the care provided by family members and caregivers has been affected by ongoing changes and challenges. Effective care management involves collaboration among government agencies, community leaders, citizens, and families to provide accurate, up-to-date knowledge and social measures to prevent infection. This integrated approach ensured that dependent older people could live safely during the COVID-19 outbreak. Caregivers had to adapt to the situation and seek help from community organizations, government agencies, and the private sector, including local government organizations, subdistrict health promotion hospitals, and social development offices, to support dependent older people, whether bedridden or housebound, with knowledge and human resources.

This study highlights the impact of trust and COVID-19 perceptions on older care, emphasizing the need for specific forms of care, community support, and resources. Perceptions of “trust”, “stay home”, “self-care”, and “distance” significantly influenced care for dependents. The findings will inform health and social workers’ planning, operation, and training, addressing the specific care needs of dependent older adults. ‘Trust’ is critical for fostering effective communication and collaboration among caregivers, officials, and older individuals, implementing preventive measures, and ensuring adherence to care protocols. Moreover, the emphasis on “stay home” underscores the importance of creating a safe and supportive environment within households where older individuals can receive necessary care while minimizing the risk of exposure to the virus. Additionally, promoting self-care practices among caregivers and older adults is essential for maintaining physical and mental well-being, reducing the burden on healthcare systems, and preventing

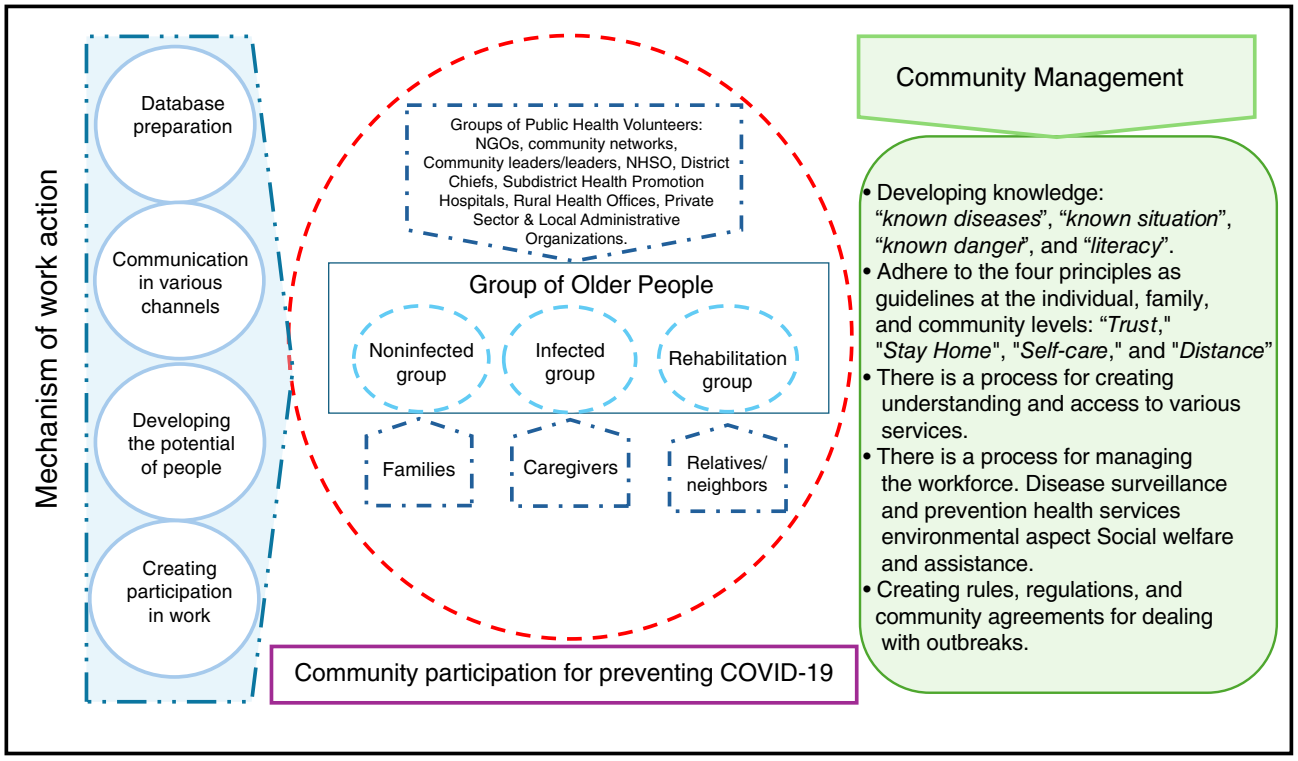

Figure 1 Integrated Care Model Schematic for Dependent Older People Preparing for a Recurrent COVID-19 Outbreak.

infection. Furthermore, maintaining "distance" from potentially infected individuals is crucial for minimizing transmission risks and protecting vulnerable older populations. These insights underscore the importance of tailored interventions and support systems that address the unique needs and challenges of dependent older adults and their caregivers during the COVID-19 pandemic. Proactive measures across all sectors are imperative to address the potential recurrence of COVID-19 or other emerging diseases effectively in the future. The principle of knowledge mentioned, "knowing the disease, knowing about the situation, knowing the danger, knowing in time", succinctly encapsulates the key elements individuals need to be aware of to respond effectively to epidemics and infectious diseases. This approach emphasizes the importance of understanding the disease, being informed about the current situation, recognizing potential dangers, and taking timely action. A focus on strengthening knowledge among these groups is essential for enhancing community resilience and responding to public health challenges. Prevention and surveillance efforts should be prioritized over treatment or health restoration. Consequently, the care model must align with preventive and surveillance activities to safeguard older people, caregivers, families, and communities from COVID-19 infection. The overarching aim of care should be to increase individual, familial, and communal capacities to deliver practical, secure, and sustainable care. An integrated care model designed to address the needs of dependent older people is essential for preparing communities for future COVID-19 outbreaks. The schematic, integrated care model for dependent older people preparing for a recurrent COVID-19 outbreak is detailed in Figure 1.

Discussion

The integrated care of dependent older people, with active community participation, has become crucial in preparation for potential re-emergences of COVID-19. Dependent older people constitute a vulnerable demographic group due to their comorbidities and various congenital conditions, resulting in a multitude of health issues. Consequently, they require constant attention from caregivers. This necessity places a significant burden on caregivers, including family members and primary caregivers, who often experience fatigue and anxiety about the possibility of transmitting the virus to older people in their care. The uncertainties associated with the COVID-19 pandemic, such as lockdowns, quarantines,

and restrictions on routine activities such as shopping, have compounded daily life difficulties for caregivers and older people. This situation aligns with findings from other studies.[4,13] This highlights that the pandemic has been a source of both physical health challenges and mental health issues, along with social and economic problems. The insufficient income and governmental support during the pandemic exacerbated these issues, as people have failed to meet the essential needs of families and individuals. At the community level, there has been notable disarray and uncertainty in providing care for older people within their homes and in the broader community context.

When considering the context of care at the community level, health personnel play a crucial role in providing primary care for dependent older people. Various professionals, including public health volunteers, academics, and registered nurses at primary healthcare providers, evaluate and monitor the system within long-term care services. Numerous studies have shown that these personnel often experience burnout and exhaustion. They face negative attitudes toward their work due to inadequate equipment, long working hours without adequate protection of their rights, and a lack of appreciation and compensation. This situation adversely affects patient care in the community. Research supports the importance of creating and supporting knowledge.[13–16] This period highlights the need for up-to-date knowledge and care practices to prevent COVID-19 infections. Understanding the disease, its symptoms, and potential dangers is essential for prevention and effective care. Consequently, there is a significant need for knowledge dissemination and preventive strategies. Counseling, training, and close guidance are crucial for enhancing caregivers' capacity and ability. Many studies suggest implementing programs for case management and care for older people, which can improve care outcomes and benefit stakeholders at both the family and community levels.[14–18]

The study revealed that overall knowledge and principles for self-protection against COVID-19 are crucial. Emphasizing care at both the individual and community levels is essential. Although the community requires substantial information, it must be clear and well informed, as it is a critical observation point. Addressing, gaining support, and creating networks are essential for fostering knowledge sharing, medicine sharing, and mutual encouragement.[13,15,19] This support network can help maintain resilience during pandemics through various activities.[11] Proactive measures across all sectors are necessary to effectively manage the recurrence of COVID-19 or any future infectious disease. The principles of knowledge, summarized as "know the disease, know the situation, know the danger, know in time", highlight the key elements individuals must understand to respond effectively to epidemics and infectious diseases. Many studies have shown that knowledge is vital for preparing for self-care and preventing COVID-19.[15,16,20] These studies also highlight the importance of addressing misunderstandings about the disease, its existence, its significance, and the effectiveness of control systems. Observing and following up on these factors, along with addressing the needs of caregivers, can lead to the development of a belief in a self-control system against diseases.[15,21]

Leveraging technological innovation and promoting health through health insurance is essential for developing practical guidelines for community-based patient care. Training and knowledge dissemination are crucial, whether for healthcare personnel or caregivers.[21–23] Providing advice on financial management and training to enhance knowledge aligns with previous research findings.[13,14,17] However, the study highlights that knowledge alone is insufficient; training personnel and caregivers on infection prevention is equally important. During the outbreak, many infections were traced to travel, caregiving activities, or communication, including all types of transportation. Consequently, older people are exposed to infection, leading to significant health problems. Effective elderly care requires caregivers to practice excellent self-protective behaviors. In addition to providing policy resources, social media and technological tools can facilitate preventive care. For example, lockdowns, quarantine, field hospitals, and home quarantine for periods ranging from 5--14 days have proven beneficial in controlling the spread of infection. Healthcare personnel are satisfied with the use of technology and innovation, such as teletherapy, video conferencing, and social media applications, to communicate and share information. These tools help create trends in protective behaviors at home. Therefore, the use of resources, including various technological devices and social media applications, is crucial for managing outbreak situations effectively. The efficiency, feasibility, and acceptability of these devices must be considered. In conclusion, the participants perceived the usefulness and self-efficacy of COVID-19 prevention measures to be relatively high compared with those of other educational interventions. This study underscores the impact of trust and COVID-19 perceptions on older care, emphasizing the need for specific care strategies, community support, and resources.

Perceptions of "trust", "stay home", "self-care", and "distance" significantly influence the care of dependents. Community engagement is vital to prepare for potential repeated outbreaks of COVID-19.[24–26]

The findings provide crucial insights into national policy recommendations to improve the quality of life of dependent older individuals during the COVID-19 pandemic. The study begins with an analysis of the current situation, identifying key issues such as the need for elderly care and challenges arising from shortages of medical equipment. Based on this analysis, the study develops concrete recommendations, including budgeting for essential supplies, compensating caregivers for extended duties, and enhancing caregivers' skills through targeted training programs. Engaging stakeholders—such as government agencies, nonprofit organizations, and community leaders—is essential for refining these recommendations and ensuring that they meet the community's needs. Three main strategies are critical for effectively caring for dependent older individuals during the pandemic: (1) allocating resources and providing fair compensation for caregivers, (2) developing caregivers' skills through specialized training programs in areas such as physical therapy and mental health assessment, and (3) establishing and enforcing community agreements to promote adherence to preventive practices. Community agreements and protective measures should be supported by legislation to build trust, prevent infection, and ensure the well-being of both caregivers and elderly individuals.

This situation underscores the need for effective COVID-19 prevention measures and integrated care models involving families and communities. The development of policies emphasizing community participation and cross-sector collaboration is essential for preparing for future outbreaks. Innovative technologies should be employed for real-time information updates and knowledge sharing. Community involvement is crucial for providing social support and training and promoting preventive behaviors to protect older people from COVID-19. Enhancing case management programs and strategic policies is vital for improving the health system for older people. These efforts should focus on developing individual potential through information and databases and encouraging participation from various agencies. Despite ongoing COVID-19 challenges and periodic outbreaks, Thai society has generally demonstrated appropriate behavior and mutual assistance. Integrating community efforts to support dependent older people through resources, funds, emotional support, and collective participation will strengthen preventive measures and improve outcomes.

Recommendations

To effectively leverage research insights, it is imperative to provide recommendations for the practical application of information derived from situation analysis. These recommendations should be tailored to specific agencies within each province and region, including Bangkok, to establish a foundational framework for sustained care efforts targeting the older population. Furthermore, academia should prioritize research endeavors to formulate a standardized behavior assessment instrument to mitigate COVID-19 transmission risks among caregivers in domestic and community settings. This initiative promises to fortify data acquisition endeavors within this domain and holds the potential for optimizing preventive strategies. Consequently, it is incumbent upon agencies involved in eldercare to assimilate the insights gleaned from the situation analysis into their strategic planning frameworks. These insights should seamlessly integrate into localized community schemes, ensuring a holistic approach to older patient care provision. Additionally, there is a pressing need to propose supplementary research ventures to complement existing inquiries. These endeavors should encompass investigations into the susceptibility of the elderly population to contracting COVID-19 and mortality, as well as the identification of pivotal factors for preventing COVID-19 transmission among this population. Moreover, concerted efforts should be directed toward the development of tools conducive to assessing behaviors and activities aimed at curtailing COVID-19 transmission rates.

Conclusion

A comprehensive approach involving three key strategies is essential for effectively caring for dependent older people during the COVID-19 outbreak. First, securing budget allocations for essential equipment and supplies is crucial for effective caregiving. This involves advocating for increased funding through government health agencies and collaborating with private agencies or other relevant agencies to address resource needs. Additionally, compensatory measures such as additional or overtime pay for caregivers ensure that they are fairly rewarded for extended duties, which can be supported by reallocating existing healthcare budgets or seeking emergency funding. Second, enhancing caregivers' skills

through targeted training programs in areas such as physical therapy and mental health assessment is imperative. The development of these programs with the help of healthcare providers, educational institutions, and professional associations ensures that caregivers are well equipped to meet the complex needs of older individuals. Finally, establishing community agreements and treaties backed by enforcement laws is essential for promoting adherence to protective measures. Local governments and community leaders should collaborate to create and enforce these agreements, reinforcing protective principles such as trust-building, hygiene practices, and the proper use of personal protective equipment. This comprehensive approach will help minimize infection risk, support caregivers, and ensure the well-being of older people, leading to a more effective and resilient caregiving system during the pandemic. Adherence to protection principles, including trust-building, household hygiene practices, and proper use of personal protective equipment, is paramount for minimizing infection risk and ensuring the well-being of both caregivers and vulnerable individuals.

Abbreviations

ADL, Activities of Daily Living; CG, Care Giver; CI, Community Isolation; COVID-19, Coronavirus Disease 2019; CVI, Content Validity Index; HI, Home Isolation; HSRI, Health System Research Institute; MOPH, Ministry of Public Health; NGOs, Non-Governmental Organizations; NHSO, National Health Security Office; PE, Personal Protective Equipment; SD, Standard deviation; PHVs, Public Health Volunteers; WHO, World Health Organization.

Data Sharing Statement

The data utilized to underpin the discoveries of this investigation can be accessed from the corresponding author upon request.

Acknowledgment

This project is supported by the Health Systems Research Institute. We thank the respondents, nurses, medical health staff, village health volunteers from the Subdistrict Health Promoting Hospital, and the Bangkok Public Health Volunteers for their crucial role in data collection. Special thanks to the Ramathibodi School of Nursing, its faculty, staff, senior community administrators, and all unnamed contributors for their support and cooperation, which were vital in achieving the project's goals.

Author Contributions

All authors significantly contributed to the work reported, including conception, study design, execution, data acquisition, analysis, and interpretation. We participated in drafting, revising, or critically reviewing the article, provided final approval of the version for publication, agreed on the journal to which the article was submitted, and accepted accountability for all aspects of the work.

Funding

This research received financial support from the Health Systems Research Institute (HSRI), Agreement No. HSRI 64–026.

Disclosure

The authors declare that there are no conflicts of interest related to this work.

References

1. World Health Organization. Coronavirus disease (COVID-19); 2023. Available from: https://www.who.int/news-room/fact-sheets/detail/coronavirus-disease-covid-19. Accessed May 28, 2024.
2. World Health Organization. Number of COVID-19 cases reported to the WHO (cumulative total).2024. Available from: https://covid19.who.int/. Accessed May 24, 2024.
3. Department of Disease Control, Ministry of Public Health. Situation of COVID-19 infected People in Thailand; 2024. Available from: https://ddc.moph.go.th/covid19-dashboard/. Accessed May 24, 2024.
4. Dubey S, Biswas P, Ghosh R, et al. Psychosocial impact of COVID-19. *Diabetes Metab Syndr*. 2020;14(5):779–788. doi:10.1016/j.dsx.2020.05.035

5. World Health Organization. Strategic preparedness, readiness and response plan to end the global COVID-19 emergency in 2022; 2022. Available from: https://www.who.int/publications/i/item/WHO-WHE-SPP-2022.1. Accessed May 28, 2024.
6. World Health Organization. Integrated care for older people: guidelines at the community level Interventions to manage declines in intrinsic capacity: geneva; 2017 Available from: https://www.who.int/publications/i/item/9789241550109. Accessed December 22, 2023.
7. Donabedian A. The Definition of Quality and Approaches to Its Management. In: *Explorations in Quality Assessment and Monitoring*. Vol. 1. Ann Arbor, Mich: Health Administration Press; 1980.
8. Donabedian A. The Quality of Care: how Can It Be Assessed? *JAMA*. 1988;260(12):1743–1748. doi:10.1001/jama.1988.03410120089033
9. Yamane T. *Statistics: An Introductory Analysis*. 3rd ed. New York: Harper and Row; 1973.
10. Bureau of Elderly Health, Department of Health, Ministry of Public Health The results of the operation of the long-term care system for the elderly in 2024. Available from: https://eh.anamai.moph.go.th/th/ltc/. Accessed May 30, 2024.
11. Burns N, Grove SK. *The Practice of Nursing Research: Conduct, Critique and Utilization*. 5th ed. St Louis: Saunders Elsevier; 2005.
12. Ministry of Public Health. Guide for screening and evaluating the health of the elderly B.D. 2564. Available from: https://shorturl.at/idQKa. Accessed May 24, 2024.
13. Mahapatra P, Sahoo KC. Desaraju S, et al.Coping with COVID-19 pandemic: reflections of older couples living alone in urban Odisha, India. *Prim Health Care Res Dev*. 2021;22(e64):1–9. doi:10.1017/S1463423621000207
14. Ray S, Mash R. Innovation in primary health care responses to COVID-19 in Sub-Saharan Africa. *Prim Health Care Res Dev*. 2021;22(e44):1–11. doi:10.1017/S1463423621000451
15. Latif R, Rafique N, Asoom LA, et al. Factors Affecting Health Care Professionals' Adherence to COVID-19 Precautionary Measures. *J Multidiscip Healthc*. 2022;15:2121–2128. doi:10.2147/JMDH.S384330
16. Amsalu B, Guta A, Seyoum Z, et al. Practice of COVID-19 Prevention Measures and Associated Factors Among Residents of Dire Dawa City, Eastern Ethiopia: community-Based on the study. *J Multidiscip Healthc*. 2021;14:219–228. doi:10.2147/JMDH.S292409
17. Ganann R, Peacock S, Garnett A, et al. Capacity development among academic trainees in community-based primary health care research: the Aging Community and Health Research Unit Experience. *Prim Health Care Res Dev*. 2019;20(e139):1–4. doi:10.1017/S1463423619000732
18. Sadler E, Khadjesari Z, Ziemann A, et al. Case management for integrated care of older people with frailty in community settings. *Cochrane Database of Systematic Reviews*. 2023;5(5):CD013088. doi:10.1002/14651858.CD013088.pub2
19. Xia X, Zhang Y, Jiang W, et al. Staying Home, Tweeting Hope: mixed Methods Study of Twitter Sentiment Geographical Index During US Stay-At-Home Orders. *J Med Internet Res*. 2023;25(e45757):1–14. doi:10.2196/45757
20. Ayaslıer AA, Albayrak B, Çelik E, et al. Burnout in primary healthcare physicians and nurses in Turkey during COVID-19 pandemic. *Prim Health Care Res Dev*. 2023;24(e4):1–8. doi:10.1017/S146342362200069X
21. Wongrith P, Buakate P, Doylee L, et al. Self-protective behaviors of Thai village health volunteers in community engagement during a COVID-19 outbreak interpretation using the health belief model. *BMC Primary Care*. 2024;25(1):102. doi:10.1186/s12875-024-02346-z
22. Zou C, Harvard A, Qian J, et al. A systematic review of digital health technologies for the care of older adults during the COVID-19 pandemic. *Digital Health*. 2023;9:1–14. doi:10.1177/20552076231191050
23. Izagirre-Olaizola J, Hernando-Saratxaga G, Aguirre-García MS. Integration of health care in The Basque Country during COVID-19: the importance of integrated care management approach in times of emergency. *Prim Health Care Res Dev*. 2021;122(e39):1–11. doi:10.1017/S146342362100044X
24. Karuga R, Dieleman M, Mbindyo P, et al. Community participation in the health system: analyzing the implementation of community health committee policies in Kenya. *Prim Health Care Res Dev*. 2023;24(e33):1–9. doi:10.1017/S1463423623000208
25. Lee J, Kim G. The dark side of social capital: geographic differences in COVID-19 preventive behaviors among older adults in South Korea. *Geriatr Gerontol Int*. 2024;24(S1):377–384. doi:10.1111/ggi.14807
26. Jumnianpol S, Nuangjamnong N, Chimmamee M, et al. Aging society in Thailand during the covid-19 pandemic. In: Caballero-Anthony M, Mine Y, Ishikawa S. editors. *Human Security Empowerment in Asia Beyond the Pandemic*. 2023. doi:10.4324/9781003430742