

Original article

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Caregivers of Older Adults with Chronic Illnesses and Coping Strategies and Quality of Life: A Convergent Mixed Methods StudyRungnapha Khiewchaum¹, Sarisa Wongprakod², Chanjira Hinkhaw¹,
Yosapon Leungsomnana¹¹Phrapokklao Nursing College, Faculty of Nursing, Praboromarajchanok Institute²Phrapokklao Hospital**Abstract**

Objectives: This study aims to develop a comprehensive understanding of coping strategies, quality of life (QoL), and its associated factors among caregivers of older adults with chronic illnesses. **Methods:** A convergent mixed methods approach was used. This study was conducted in a tertiary level hospital in Chanthaburi province, which is located in the eastern region of Thailand from February 1 to July 31, 2021. In total, 57 patient-caregiver dyads completed the Thai version of coping, and adaptation processing scale-short form (TCAPS-SF) to assess their coping strategies and the World Health Organization Quality of Life Assessment in Thai (WHOQOL-BREF-Thai) to assess their quality of life were measured. A sample of 57 caregivers participated in semi-structured face-to-face interviews. Data were analyzed using qualitative content analysis and correlation analysis. **Results:** The caregivers' mean age was over 40 years. Correlation analysis showed that the coping strategies had a moderate association with quality of life (QoL) ($r = 0.344, p < 0.01$). From qualitative findings, threatening coping factors (including avoidance state and alcohol drinking) and four enhancing coping factors (including community as assistance, self-encouraging activity, religious commitment, and positive perspective) were generated. The mixed analysis confirmed that coping strategies are associated with QoL. **Conclusions:** Caregivers of older adults with chronic conditions experience caregiving challenges resulting from their coping strategies that impact caregivers' QoL. Collaborative efforts are needed to create multifaceted interventions and programs to enhance caregivers' coping strategies as transitional care from hospital to home.

Keywords: Caregivers, Mixed-method designs, Quality of life, Coping strategies, Older adults

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Introduction

The global population aged 60 years or over numbered almost 962 million in 2017, which is more than twice as large as the population in 1980, in which there were 382 million people aged 60 years and older worldwide (United Nations, 2017). In addition, the number of older adults is expected to double again by 2050, which would be about nearly 2.1 billion (United Nations, 2017). The health status of older adults includes healthy and unhealthy persons. Older adults with unhealthy non-communicable diseases (NCD) may become dependent persons because of cognitive and functional impairment. They need to be cared for by family caregivers or non-family caregivers with many responsibilities. Caregiving tasks include assisting the dependent older person with activities of daily living, managing symptoms, providing emotional support, and coordination of care (Sklenarova et al., 2015). The caregivers' needs may be unmet, if caregivers cannot address these caregiving roles. As a result, the caregivers may struggle with caregiving issues and emotional problems (e.g., stress, depression, or anxiety).

One study showed that 69.1% of caregivers who cared for older adults with cancer and 54.1% of cancer patients were screened as positive for distress because of unmet needs of caregivers and older adults' symptoms (Sklenarova et al., 2015). A previous study reported that symptoms of depression were correlated with more unmet needs in both caregivers and older adults (Black, Johnston, Rabins, Morrison, Lyketsos, & Samus, 2013). Studies reported that 33% of caregivers needed help in accessing patients' information (e.g., alternative therapies, diagnosis, treatment, care, and rehabilitation) (Sklenarova et al., 2015; Li, Xia, Wang, Zhang, Liu, & Wang, 2017; Bierhals, Santos, Fengler, Raubustt, Forbes, & Paskulin, 2017). In addition, caregivers' needs are related to caregiving performance of instrumental-support activities (e.g., suctioning, dressing, bathing, toileting, medication care, and transfer), caregivers fear that they are failing their dependent, and financial expenses

(Rodrigues, Marques, Kusumota, Santos, Fhon, & Fabrício-Wehbe, 2013). Especially during the hospitalization period and the first month at home, not only do caregivers faced with sudden life changes, but they must rapidly learn the caregiving roles and how to perform new tasks depending on their dependent's needs (Bakas, Jessup, McLennon, Habermann, Weaver, & Morrison, 2016). After older adults are discharged, the needs of caregivers include emotional and psychological needs, supportive health care resources, and access to health services (Bierhals, Santo, Fengler, Raubustt, Forbes, & Paskulin, 2017).

However, on average, caregivers rated 22.4% of the presented needs as not met. The unmet needs of caregivers led to caregiving challenges (Sklenarova et al., 2015). A previous study reported that symptoms of depression were correlated with more unmet needs in both caregivers and older adults (Black, Johnston, Rabins, Morrison, Lyketsos, & Samus, 2013). Similarly, the needs of caregivers that may not be met include caregivers' limited understanding of diseases, as well as insufficient education, training caregiving tasks, and support in addressing the older adults with impairment (Bakas, Jessup, McLennon, Habermann, Weaver, & Morrison, 2016). The statistics on unmet needs of caregivers showed that 57% of caregivers of cancer patients had caregiving problems about the patients' physical or mental decline. Furthermore, 44.6% of caregivers reported managing concerns about recurrent cancer (Sklenarova et al., 2015). In addition, unmet caregiver needs are related to caregiver preparation, promoting the patient's function, and adapting to a caregiving role (Bakas, Jessup, McLennon, Habermann, Weaver, & Morrison, 2016). When caregivers encounter caregiving issues and unmet needs, they need to use several methods (e.g., coping strategies or problem solving) to maintain the quality of caring for older adults with chronic illnesses.

Caring for an older adult with chronic illness can be stressful and lead to negative emotional impacts for caregivers. Coping

strategies have a mediating role in consequence of caregiving-related stress, and they are used in managing stress for people (Lloyd, Muers, Patterson, & Marczak, 2019). Roy (2008) has defined and categorized different domains of coping strategies. Generally, coping is a behavior being expressed based on physical and psychological processes. Coping strategies used by caregivers when they care for older adults with chronic illnesses are considered caregiving-behavioral expressions. Using emotion-focused coping strategies (e.g., acceptance) has been related to lower levels of depression and anxiety in caregivers who care for persons with dementia (Li, Cooper, Bradley, Shulman & Livingstone, 2012). However, when caregivers use dysfunctional coping strategies, caregivers may feel increased burden and greater impact on their quality of life (QoL) (Lloyd, Muers, Patterson, & Marczak, 2019).

Caregivers are the backbone of the services provided to patients with chronic illnesses. However, caregiving tasks are known to reduce caregivers' QoL because caring for older adults with chronic conditions can be stressful. These responsibilities frequently symbolize a significant long-term burden (Kim, Spillers,

& Hall, 2012). Older adults' disability on hospital admission, length of stay (LOS), and disability and the length of stay in the hospital places undue strain on the caregivers and affects their quality of life. (Cramm, Strating, & Nieboer, 2012). In addition, caregivers' experience with caring for dementia patients is strongly correlated with their QoL (Takai, Takahashi, Iwamitsu, Oishi, & Miyaok, 2011). Similarly, the experience of wife caregivers is identified as a combination of anger, helplessness, guilt, and isolation. Caregivers lose freedom because they have less time for recreational and social activities, which impacts their QoL (Kumar, Matreja, Gupta, Singh, & Garg, 2012). Moreover, female and single caregivers have significantly higher QoL than male and married caregivers, especially if the LOS of older adults with chronic illnesses is shorter than six months (Ogunlana, Dada, Oyew, Odole, & Ogunsan, 2014). Supportive care needs can reduce the caregiving burden and improve the QoL of caregivers (Rha, Park, Song, Lee, & Lee, 2015). Early caregiver interventions directed at older adults' symptoms and caregiver support can also increase caregivers' QoL (Wadhwa, Burman, Swami, Rodin, Lo, & Zimmermann, 2013).

Objectives

To develop a comprehensive understanding of coping strategies and associated factors among older adults with chronic illnesses caregivers. The specific research question included:

- 1) What are the levels of coping strategies and QoL of caregivers of older adults with chronic illnesses? (Quantitative)
- 2) What is the relationship of QoL with coping strategies? (Quantitative)

Materials and Methods

A convergent-mixed method (Qualitative and quantitative) was appropriate to address the research questions. Sufficient weightage was provided to qualitative and quantitative phases as merge data (Creswell, 2015). For this methodology, qualitative and quantitative data were collected and analyzed simultaneously to conclude whether the results

- 3) What factors do caregivers of older adults with chronic illnesses identify as associating with their coping strategies? (Qualitative)

- 4) To what extent do the quantitative data about levels of coping strategies converge with or diverge from the qualitative data about caregivers' perceived factors affecting their coping strategies? (Mixed methods)

from each data source converged with or diverged from the other (Creswell & Plano Clark, 2018). This approach examined the relationships among coping strategies and caregiver factors and then provided context and meaning to the findings from participants' narrative reports of the whole experience of caring for older adults with chronic illnesses.

Setting and sampling

Data were collected in three intermediate care units in Prapokklao hospital Chanthaburi, Thailand, between February and July 2021. Convenience sampling was used to enroll the participants. A trained research assistant described the overview of the research and asked caregivers to participate and about their availability. The inclusion criteria were: a) being family caregivers (e.g., spouse, child, relative, and friends); b) being non-family caregivers who care for older adults with chronic illnesses for at least one month and live with older adults

Data collection procedures

After providing informed consent, relevant caregivers were asked to participate in an individual, face-to-face narrative semi-structured interview (Durante et al., 2021). Qualitative enrollment was suspended after reaching the data saturation (at the 50th interview), which confirmed the Saunders criteria of theoretical saturation (Saunders et al., 2018). Interviews were performed by a

Ethical considerations

This study conformed with the Belmont Report and International Conference on Harmonization in Good Clinical Practice (ICH-GCP). The study was also approved by the Ethical Committee

Data collection instruments

A semi-structured interview guide was developed for an interview. There were two sections based on a literature review about caregivers. Two sections of qualitative questions included: 1) demographic data and 2) caregiving situation (e.g., coping strategies in caring for older adults with chronic illnesses, caregiving problems, and caregiving goals). The content validity index (CVI) of the caregiving-situation tool was used to evaluate the accuracy of the content of a questionnaire. In addition, the questionnaire was assessed by five nursing experts: 1) two senior professional nurses; 2)

at home before data collection; c) being willing to sign the informed consent form; d) no cognitive impairment. The Six-item Cognitive Impairment Test (6-CTT), ranging from 0 to 28 (high values mean cognitive impairment), was used to assess caregivers' cognitive status before interviewing caregivers. Fifty-seven caregivers were interviewed and their data were analyzed: 20, 20, 17 patient-caregiver dyads were from 1st intermediate unit, 2nd intermediate unit, and 3rd intermediate unit, respectively.

trained registered nurse. For the quantitative period, those caregivers who agreed to be interviewed were required to complete the questionnaires. Data were collected according to the time availability of the caregivers. A quiet area where the caregiver could be comfortable was used for the interview.

Prapokklao hospital (COA no. 010/64). The informed consent forms were signed by caregivers before collecting data. Participation in this study was totally voluntary and unpaid.

two professional nurses; 3) an advanced practice nurse (APN). The CVI of this questionnaire was 0.85.

The quantitative variables coping strategies and QoL were measured using valid and reliable data collection instruments. The Thai version of coping and adaptation processing scale-short form (TCAPS-SF) was constructed based on the Roy adaptation model (Roy, 2008) and Roy's nursing model of cognitive processing (Chayaput, 2004; Roy, 2008; Roy & Andrews, 1999). This questionnaire assessed three modes of coping, including physiologic-physical, self-

concept, and interdependence (Chayaput & Roy, 2007). There were 27 items in the questionnaire, which were divided into four domains: 1) resourceful and systematic (eight items), 2) physical and fixed (six items), 3) positive and knowing (seven items), and 4) alert processing (six items). This measurement was used in caregivers who cared for disabled patients. The Cronbach's alpha correlation coefficient of the overall questionnaire in this study was equal to 0.88, and that of each domain ranged from 0.83 to 0.88 (Khiewchaum, Ngmkum, Kittitontkul, 2013)

The World Health Organization Quality of Life Assessment in Thai

Data analysis

We conducted a qualitative content analysis of the interview data using the seven-step process of Mayring (2014). Codes and categories were developed to help discussion among the research team. The structuring analysis of Mayring was completed. The category assignment was addressed before coding the text. The categories were based on those found in literature related to the study topic. Therefore, the outcome of this analysis is found in the conclusion of this article's text. Results were grouped in each category. Coding rules were prepared and combined by a research team.

Results

Demographic information

Demographic information of caregivers who accomplished both interviews and quantitative data and the older adults with chronic illness that they cared for are found in Tables 1 and 2. There were two groups of caregivers, including family caregivers and non-family caregivers. Family caregivers' mean age was over 40 years, and non-family caregivers' mean age was over 50. Half of the

(WHOQOL-BREF-Thai) was developed from WHOQOL-BREF. It includes four domains: 1) physical domain; 2) psychological domain; 3) social relationships; 4) environment. In addition, this questionnaire consists of 26 questions, the lowest score is 26, and the highest score is 130. There are three categories of QoL score: 1) low quality of life (26-60 score); 2) moderate quality of life (61-95 score); and 3) high quality of life (96-130 score). Cronbach's alpha correlation coefficient of the overall questionnaire in this measurement was equal to 0.8406, and reliability was 0.6515 (Mahatnirunkul et al. 1997).

The quantitative data were analyzed in SPSS 24.0 using descriptive statistics (e.g., mean and standard deviation). Pearson's correlation coefficient was used to determine the relationship between factors and outcome variables. In the mixed method analysis, the merging integration technique was used in comparing the qualitative and quantitative data after divided analysis. The quantitative and qualitative data were merged using joint displays to apply mixed meta-inferences (Dickson & Page, 2021).

family caregivers and non-family caregivers were 18-54 years old with no disease. Most of the caregivers were female. More than 60% of the relationship between caregivers and older adults were child-parent relationships. Fifty-seven percent of caregivers reported that they participated often in their religious commitment.

Table 1. Demographic information on family caregivers and non-family caregivers who are caring for older adults with chronic illnesses (n = 57)

Demographic information	Family caregivers (n=53, 97%)	Non-family caregivers (n=4, 3%)
Age (Years), Mean (SD)	44.02 (14.67)	52.75 (2.22)
Gender (n, %)		
Female	44 (83)	4 (100)
Male	9 (17)	0 (0)
Education level (n, %)		
Elementary	1 (1.9)	0 (0)
Junior high school	14 (26.4)	2 (50)
Senior high school	11 (20.8)	1 (25)
Vocational school	9 (17.0)	1 (25)
Vocational Diploma	3 (5.7)	0 (0)
Bachelor's degree	2 (3.8)	0 (0)
Master's degree	12 (22.6)	0 (0)
Doctoral degree	1 (1.9)	0 (0)
Not enough	26 (49)	1 (25)
Marital status (n, %)		
Single	11 (20.8)	1 (25)
Married	36 (67.9)	2 (50)
Widowed/Divorced	4 (7.5)	1 (25)
Separated	2 (3.8)	0 (0)
Religious commitment (n, %)		
Often	30 (56.6)	2 (50)
Intermediate	11 (20.8)	1 (25)
Less	11 (20.8)	1 (25)
None	1 (1.9)	0 (0)
Relationship to patients		
Spouse	6 (11.3)	0 (0)
Sibling	1 (1.9)	0 (0)
Child	33 (62.3)	0 (0)
Relative	13 (24.5)	0 (0)
Other	0 (0)	4 (100)
Caregiving time		
Hour/day, Mean (SD)	12.83 (7.07)	0.5 (1.00)
Day/week, Mean (SD)	6.4 (1.59)	1.75 (3.50)

Table 2. Demographic information on older adults with chronic illnesses that were cared for by family and non-family caregivers (n = 57)

Demographic information	Family caregivers (n=53, 97%)	Non-family caregivers (n=4, 3%)
Age (Years), mean (SD)	75.79 (10.60)	78.75 (9.74)
Gender (n, %)		
Female	21 (39.6)	0 (0)
Male	32 (60.4)	4 (100)
Marital status (n, %)		
Single	3 (5.7)	0 (0)
Married	39 (73.6)	4 (100)
Widowed/Divorced	5 (9.4)	0 (0)
Separated	6 (11.3)	0 (0)
Diagnosis (n, %)		
Pneumonia	13 (24.5)	0 (0)
Respiratory failure	3 (5.66)	0 (0)
Heart disease	7 (13.20)	0 (0)

Demographic information	Family caregivers (n=53, 97%)	Non-family caregivers (n=4, 3%)
Diabetes	3 (5.66)	0 (0)
Stroke	5 (9.43)	1 (25)
Renal failure	1 (1.88)	1 (25)
Plural effusion	1 (1.88)	0 (0)
Multiple conditions	16 (30.18)	2 (50)
Other	4 (7.55)	0 (0)

Quantitative findings

Quantitative descriptive results are presented in Table 3. The mean coping strategies score was 83.47 (SD =1.06), indicating participants had a coping strategy start level in Table 4. The mean score for QoL was 88.70 (SD =1.64), which showed that caregivers had high levels of QoL. Pearson's correlation analysis was performed on a

sample of 57 caregivers in Table 5. The correlation analysis showed that the TCAPS-SF scores (coping strategies) were moderately associated with the WHOQOL-BREF-Thai score, which assessed quality of life ($r = 0.344, p < 0.01$).

Table 3. Quantitative results from questionnaires on coping strategies and quality of life among interviewed caregivers (n=57)

Variables	Mean Score	Median	Minimum	Maximum
TCAPS-SF ¹	83.47	85.00	61.00	103.00
WHOQOL-BREF-Thai ²	88.70	89.00	69.00	116.00

¹Thai version of Coping, and Adaptation Processing Scale-Short Form (TCAPS-SF)

²World Health Organization Quality of Life Assessment in Thai (WHOQOL-BREF-Thai)

Table 4. Level of TCAP-SF and WHOQOL-BREF scores of caregivers of elderly with chronic illness (n=57)

Level	TCAP-SF ¹ (n, %)	WHOQOL-BREF ² (n, %)
High	52 (91.2)	21 (36.8)
Moderate	5 (8.8)	35 (61.4)
Low	0(0)	1 (1.8)

¹Thai version of coping, and adaptation processing scale-short form (TCAPS-SF)

²World Health Organization Quality of Life Assessment in Thai (WHOQOL-BREF-Thai)

Table 5. Pearson correlation coefficient and p-value for correlation between TCAPS-SF and the WHOQOL-BREF-Thai

Variables	TCAPS-SF ¹	WHOQOL-BREF-Thai ²
TCAPS-SF	1	0.344**
WHOQOL-BREF-Thai		1

** $p < 0.01$

¹Thai version of Coping, and Adaptation Processing Scale-Short Form (TCAPS-SF)

²World Health Organization Quality of Life Assessment in Thai (WHOQOL-BREF-Thai)

Qualitative findings

Interviews created 75 pages of transcriptions. The time length of the interviews ranged from 15 to 45 minutes.

Themes

The qualitative data were grouped into two key categories: 1) threatening coping factors, including avoidance state and alcohol drinking, and 2) enhancing coping factors,

including community assistance, self-encouraging activity, religious commitment, and positive perspective.

Threatening coping factors

Avoidance state. When family members need to be caregivers, they have negative caregiving experiences that affect their physical and emotional well-being.

The caregivers feel suffering, frustration, and burden concerning their

family and personal situation. Caring for older adults exceeded their capability to maintain their balance life. One of the caregivers stated that:

"I cannot care for dad because I also need to care for my little daughter. My younger sister is single; she was able to care for dad better than me."

Alcohol drinking. The caregivers have caregiving frustration. They thought that there was no family support, and thus they felt lonely and stressed. Also, they could not address big caregiving challenges. They also could not do

(1st intermediate unit, daughter, 5) anything to balance the circumstance. Consequently, caregivers would like to temporarily stop thinking about caring for their older parents by consuming alcohol.

"I knew it was my duty, but it is a big problem because we have no money to care for my mom. Usually, I drink alcohol; that is my best friend when I could not address mom's problems."

(2nd intermediate unit, son, 10)

Enhancing coping factors

Community obligation. Community obligation is one of the caregiver factors that enabled caregivers to find both physical support (e.g., helping to manage for older adults, and caregivers can take a break) and psychological support (e.g., talking to relieve their stress) to help them care for older adults.

In addition, community assistants (e.g., family members, friends, relatives, neighbor, or healthcare providers) help motivate caregivers and the help of community assistants, the caregiving activity can be more evenly distributed and there is not reliance on only one caregiver

"I am lucky because I have my sibling and family that support me in caring for my dad." (1st intermediate, sibling, 15)

"My older sister supported me by expending money on caring for our dad. I could find out and hire a caregiver to help me care for my mom because I cannot do it by myself."

(3rd intermediate, daughter, 8)

"When I have caregiving issues, I could consult nurses or physicians."

(2nd intermediate, spouse, 11)

Self-encouraging activity.

Caregivers noted that self-comforting activities are a temporary caregiving solution because they take a break from a stressful situation and

they can relax. Trivial or recreation activities included talking with family, watching TV, listening to music, gardening, or fishing.

"When I am stressed, I want to hang out outside my home, such as fishing."

(1st intermediate, daughter, 7)

"I like to listen to songs that help me release my stress, and I feel bored and exhausted when I care for my dad every day. I want a little time to have personal time."
 (3rd intermediate, daughter, 19)

Religious commitment.

Thai caregivers use religious principles when they have a crisis or stressful challenge. Using Buddhist principles could support or guide

caregivers to maintain their lives in caregiving situations.

"I use THAMMA to release my stress because my dad died two years ago, and I don't see my mom die."
 (2nd intermediate, daughter, 9)

"It is a life cycle; if my brother dies, I am ok."
 (3rd intermediate, sibling, 5)

Filial outlook.

In Thai society, caring for older parents is a family responsibility. It is imposed on adult children as a caregiving duty because of a sense of filial values, cultural commitment, and family duty. However, if children ignore caring

for their parents or have no requital activities, they become bad children.

"It is my responsibility because my mom perfectly nurtured me. So, I should reciprocate."

(1st intermediate, daughter, 14)

Mixed methods analysis

Qualitative and quantitative data provided a greater understanding of the factors related to coping strategies. The quantitative findings showed that WHOQOL-BREF scores were significantly associated with coping strategies ($p < 0.05$). The qualitative themes confirmed the quantitative findings and expanded on the

results. Integrated qualitative and quantitative data were produced. There were four confirmed findings and two expanded results. Finally, the quantitative data did not identify complete coping enhancing factors. Table 6 reported a joint display of factors associated with coping strategies based on the integrated analysis.

Table 6. Joint display integrating quantitative and qualitative data to depict factors affecting coping strategies among caregivers (n=57) of older adults with chronic illness

Quantitative	Qualitative	Mixed meta-inferences
WHOQOL-BREF ¹ score had a moderate association with coping strategies score (r = 0.344, p < 0.01)	<p>Community obligation. Caregiving challenges and uncertain situations increase caregivers' hopelessness and powerlessness. Caregivers need to keep community relationships (e.g., friends, partners, neighbors, or healthcare providers) because it could increase their motivation and ability in caring for older adults. Also, community networks' physical, emotional, and financial support could help caregivers maintain their lives in caring for older parents in long-term care.</p> <p>Self-encouraging activity. Caregivers would like to have little personal time to relax from crises leading to negative feelings (e.g., loneliness, powerlessness, fatigue). Self-care and comfortable</p>	<p>Confirmed. Hopelessness, distrust, and financial issues affect their well-being. Continuous fluctuations in caregiving situations could increase both physical and emotional problems for caregivers, impacting older adults. Therefore, effective caregiving maintenance could be supported by community partners to preserve caregivers' physical, emotional, and social well-being and quality of care after older adults are discharged.</p> <p>Confirmed. Caregivers designing self-care and comforting actions (talking to friends, fishing, or cleaning house) by themselves could increase their personal satisfaction during uncertain situations.</p>

Quantitative	Qualitative	Mixed meta-inferences
	<p>activities might relieve their negative emotions.</p> <p>Religious commitment. Thai caregivers use the Four Noble Truths (Dukkha, Samudaya, Nirodha, and Magga) to guide their lives when they experience suffering many times. While they could not avoid or do anything about it, they have to accept the challenges of caregiving and keep going.</p> <p>Filial outlook. In Asian culture, being a child means completed obedience and caring for one's parent for a lifetime. The child needs to take the best possible care of an older parent. Caregiving responsibility might be filial conduct in Thai culture. Therefore, caregivers, especially adult children, accept this responsibility and maintain this duty as a child</p> <p>Avoidance state. Caregivers need to play a caregiving role that is unplanned. They thought caring for older adults with severe chronic conditions was suffering and a burden. They took to escape from difficult thoughts and feelings.</p> <p>Alcohol consumption. When older adults need to have someone caring for them, family members might become caregivers. Caregiving work creates a huge burden. It can also result in physical and emotional problems. their stress. Alcohol consumption was selected to escape and avoid unpleasant problems.</p>	<p>These strategies can help maintain their balance in life and improve physical, psychological, social, and environmental well-being.</p> <p>Expanded. Caregivers experienced overwhelming caregiving issues. Some felt loneliness and powerlessness. Some caregivers would like to find out effective coping strategies that could permanently address their feelings (e.g., depression, anxiety, or fatigue). Using Buddhist principles and meditation could change caregivers' negative thoughts and feelings. Thai caregivers could learn to see that they have or occur difficulties in their own lives. Using Buddhist rules could guide their emotions and control negative thoughts, increasing caregivers' physical and emotional well-being.</p> <p>Expanded. Quantitative data did not include a filial factor related to coping strategies or QoL. However, the qualitative results suggested that a greater sense of filial perspective in Eastern culture promoted coping strategies and increased physical and psychological well-being in caregivers.</p> <p>Confirm. Caregiving situations being uncertain and fluctuating might affect caregiver coping and adaptation due to lack of caregiving experience as novice caregivers. Those caregivers felt caregiving responsibility increased their exhaustion and burden, and they could not address it. They chose negative coping by avoiding their caregiving work. It impacted family relationships. If caregivers often used this strategy, causing social problems.</p> <p>Confirm. Caregivers perceived that the caregiving situation was a crisis. Caring for older adults causes stress and exhaustion. Caregivers would like to relieve their stress. Caregivers drank alcohol because drinking helped to alleviate their negative feelings.</p>

¹World Health Organization Quality of Life Assessment in Thai (WHOQOL-BREF-Thai)

Discussion

This study reported a comprehensive understanding of factors affecting coping strategies of caregivers of older adults with chronic illnesses from the Eastern region of Thailand. The mixed analysis confirmed that

major factors affecting caregivers' QoL were coping strategies which included avoidance state, alcohol consumption, community obligation, self-encouraging activity, religious commitment, and filial outlook.

Both the qualitative and quantitative findings supported these factors. The qualitative results provided an additional understanding of the factors that could not have been accomplished through only quantitative findings.

While caregiving issues increase hopelessness and powerlessness in caregivers, having effective coping strategies helped address caregiving challenges. Previous research has not looked at this complex relationship between many factors: community obligation, self-encouraging activity, religious commitment, filial outlook, avoidance state, and alcohol consumption. Previously, these factors have been insufficiently conceptualized in the coping strategies of caregivers of older adults with chronic illnesses. Therefore, future research could examine and understand the meaning and association of these factors toward coping strategies for elderly with chronic conditions based on the findings of this study. A greater understanding of threatening coping factors could describe the conceptual basis for creating approaches to foster and improve caregiver coping strategies. A previous study demonstrated that caregivers of the elderly with prostate cancer who used avoidance type coping had worse QoL because of behavioral and emotional disengagement (Kumar, Kaur, & Reddemma, 2015; Rodríguez-Pérez, Abreu-Sánchez, Rojas-Ocaña, & Del-Pino-Casado, 2017; Matovu & Wallhagen, 2020). Therefore, there should be a future study to examine how alcohol consumption, which is a negative coping strategy, affects the quality of life of caregivers.

Moreover, our study provided and expanded some understanding about the possible targeted areas to improve coping enhancing factors of caregivers of older adults with chronic illnesses. As positive factors, community obligation related to

Conclusions

Caregivers of older adults with chronic illnesses experienced uncertain and fluctuating situations impacting their coping and adaptation leading to poor QoL. This study demonstrated that threatening coping

social support was studied. A previous study noted that caregivers using socially supportive coping could deal with caregiving situations because social support assisted them with instrumental caregiving tasks (e.g., suctioning, feeding, or dressing) and for emotional reasons (Anjos et al., 2015). Likewise, factors influencing the coping patterns of primary informal dementia caregivers included having domestic assistants was associated with increasing QoL. (Tay, Seow, Xiao, Lee, Chiu, & Chan, 2016; Yuan et al., 2021). A previous study reported that proving spiritual support can improve physical and mental well-being. Yet deprivation of emotional and social support can impact physical and mental health resulting from cultural values and norms (Xie, Cheng, Tao, Zhang, Robert, Jia, & Su, 2016).

However, less research has examined how religious commitment and filial perspective are related to coping strategies of caregivers of older adults with chronic illnesses. Therefore, future research should examine the relationship between religious context and filial attitude with coping strategies in caregivers of older adults with chronic illnesses. Also, the research could emphasize developing and evaluating interventions based on negative and positive coping strategies used by caregivers. Healthcare providers can utilize community networks to prepare and teach caregivers about caregiving instruments, nursing skills, and caregiving knowledge during the transitional period from hospital to home. Current research demonstrated that using telehealth (e.g., telemedicine or telenursing) was beneficial and feasible because increasing caregivers' skills and knowledge can improve coping strategies (Graven, Glueckauf, Regal, Merbitz, Lustria & James, 2021).

factors such as avoidance state and alcohol consumption lead to negative adaptation. However, positive coping factors (including community obligation, self-encouraging activity, religious commitment, filial

outlook) improves caregivers' coping strategies. Future research should build transitional care interventions and program to

improve caregivers' coping strategies and QoL by targeting the factors identified in this study.

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