Effectiveness of Simulation-Based Psychoeducational Intervention for Family Caregivers of Older Adults with Disability and Chronic Illnesses: A Quasi-Experimental Study

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Abstract: Family caregivers of older adults with disabilities confront multifaceted challenges that often lead to significant physical, emotional, and psychological distress, severely impacting their quality of life. Traditional single interventions are inadequate in addressing these complex demands of caregiving, highlighting the need for more effective support strategies. This study involved 30 family caregivers from a tertiary hospital in eastern Thailand. Participants were purposively selected and completed data collection first (control group, n = 15), then other participants were purposively selected for the experimental group (n = 15). Data were collected using the Demographic and Health Data Form, Caregiving Skills Questionnaire, Coping Skills Questionnaire, and Quality of Life Questionnaire. Statistical analyses included descriptive statistics and Chi-square, Fisher's exact tests, the Mann–Whitney U test, and the Friedman test.

Results showed that at pre-discharge and 3-month follow-up, the median scores of caregiving skills, coping skills, and quality of life in the experimental group were significantly higher than at the baseline and those of the control group. In contrast, in the control group, only the median score of caregiving skills improved significantly from baseline, at pre-discharge, and 3-month follow-up, but coping skills and quality of life decreased significantly from baseline at pre-discharge and 3-month follow-up. The findings suggest that the Simulation-Based Psychoeducational Training Program effectively enhances caregiver skills, coping skills, and quality of life, potentially revolutionizing future interventions. However, further study with larger and more diverse populations and multisite is needed.

Keywords: Caregivers, Older adults, Psychoeducational intervention, Roy Adaptation Model, Simulation

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Introduction

By 2050, the global population aged 60 and older is projected to reach 2.1 billion, increasing the prevalence of age-related chronic illnesses and heightening the demand for caregiving.[1] In Thailand, family caregivers (FCGs), often relatives, fulfill filial duties by providing long-term, unpaid care for older adults, including those with disabilities.[2] Caregiving responsibility, particularly when transitioning from hospital to home, leads to chronic stress and adversely affects caregivers' physical and psychological well-being, contributing to higher risks of illness, anxiety, depression, and social isolation due to ineffective response.[3] Consequently, the adaptability of FCGs of older adults with disability plays a pivotal role in this context, and educational and psychological care strategies can improve the health outcomes of these FCGs.[4]

Adequate preparation, including acquiring caregiving knowledge and skills and emotional support, is crucial for alleviating these stresses and improving caregivers' quality of life (QoL) with effective adaptability.[4] The Roy Adaptation Model (RAM) can be considered an appropriate framework for supporting FCG adaptation.[5] Research emphasizes the need for targeted interventions, such as the Family Caregiver Capacity Building Program (FCCBF) and cognitive-behavioral therapy (CBT), which have been shown to improve caregivers' skills and reduce emotional distress because educating and training strategies resulted in effective responses of FCGs.[6-7] Technological interventions, including caregiving simulations, offer valuable training to improve FCGs' knowledge and skills.[8-9] The simulation-based psychoeducational (SimB-PSYED) model, which integrates caregivers' psychological coping skills with educational support, is expected to better prepare family caregivers to improve their capability to manage complex demands, coping abilities, and improve QoL, particularly during the transitions from hospital to home care. This intervention was developed and tested in this study.

Literature Review and Conceptual Framework

The RAM[10] and literature review was used to guide this study. The RAM is a nursing framework that addresses how individuals adapt to various challenges and illnesses.[10] It conceptualizes adaptation as a process that promotes survival, growth, and transformation in interacting with individuals and their environments.[11] The model comprises three key components: stimuli, coping processes, and responses or behaviors. Stimuli are categorized into three types: focal (direct responsibility for caregiving), contextual (interventions or social support), and residual (social roles and background factors).[12]

These stimuli interact with coping processes, which are mediated by two subsystems: the cognator (involving cognitive-emotional channels) and the regulator (physiological channels).[13] Together, these processes generate adaptive responses expressed through four adaptive modes: physiological function, self-concept, role function, and interdependence.[14] Family caregivers often face significant stress due to inadequate knowledge, financial strain, and lack of support, which impacts their ability to manage caregiving effectively.[15]

The RAM is a useful guide for nurses to support caregivers by understanding their physiological and cognitive adaptation needs.[16] The adaptation level is related to coping skills defined in the RAM as the ability to respond positively to stimulants.[16] Caregiving for older adults is one of the stimulants because FCGs cannot adapt to the new caregiving role in caring for older adults with complex problems— the caregiving burden.[15] A previous scoping and a systematic review and meta-analysis have shown that nursing interventions, including educational and psychological support,

significantly improve caregivers' knowledge, skills, and quality of life (QoL).[17,18] The SimB-PSYED program, which incorporates RAM principles, addresses focal stimuli by providing targeted information and skills training for caregivers. A previous study demonstrated that instructor-guided simulation (e.g., a program on tracheotomy care education with low-cost fidelity) can improve tracheostomy care knowledge and experiences for inpatient providers.[19] Likewise, using simulation to train the skills of caregivers of patients with disabilities can improve caregiving knowledge and skills because simulation training is an efficient learning tool for them.[20] A simulation-based education program is an instructional tool or device that engages learners through physical interaction, allowing them to replicate caregiving skills or knowledge for teaching or assessment.[19-20] Not only is a simulation-based education program a learning and training option for caregivers and patients, it can also promote practical knowledge or acquire care skills. Therefore, a simulation-based education program can promote training in technical and nontechnical skills because it can allow practices to be repeated as many times as necessary for caregivers.[20] The SimB-PSYED program helps caregivers manage the demands of caring for older adults from hospital to home, enhancing their coping skills and reducing caregiving strain. The SimB-PSYED program promotes adaptive responses and better QoL for caregivers by improving knowledge, skills, and problem-solving abilities. This study aimed to test the effectiveness of the SimB-PSYED program on the caregiving skill, coping strategy, and QoL among FCGs of older adults with disability and chronic illnesses.

Study Aim and Hypothesis

This study aimed to test the effectiveness of the SimB-PSYED program on the caregiving skill, coping strategy, and QoL among FCGs of older adults with disability and chronic illnesses. The following hypothesis was proposed: the experimental group receiving the SimB-PSYED program would have significantly higher caregiving skills, coping skills, and QoL at pre-discharge and the 3-month follow-up than at baseline and significantly higher than those of the control group.

Methods

Design: We used a two-group, non-randomized controlled trial with a pretest and posttest design. We followed the checklist of Transparent Reporting of Evaluation with Non-randomized Designs (TREND) in writing this report.[21]

Sampling and Setting: This study was conducted in the intermediate unit of a tertiary hospital in eastern Thailand. We determined the sample size through power analysis using G*Power 3.1. A prior study examined the QoL of caregivers of older adults with cancer, and this feasible study indicated an effect size of 0.9 for QoL; thus, the sample size was calculated,[22-23] assuming a statistical power of 80% and a significance level of 0.05. The final sample size was adjusted to include 15 caregivers in each group, totaling 30 participants. The inclusion criteria for FCGs were those over 20 years; living with older adults with disabilities and chronic illnesses; were nonprofessional caregivers; and willing to participate in the study. The inclusion criteria for older adults were having disability and/or chronic illnesses, 60 years and older, and were admitted to an intermediate unit in a tertiary hospital in eastern Thailand. Purposive sampling was employed to recruit participants following the specified inclusion criteria. Firstly, twenty-four FCGs were assessed for eligibility to be in the control group, but nine did not meet the criteria; thus, we ended up with 15 participants. After the completion of the data collection in the control group, the same procedure of recruitment of the participants in the experiment group began. Twenty-two FCGs were assessed for eligibility, but seven did not meet the criteria, so the participants in the experiment group totaled 15. All 30 participants remained during the study, with 15 participants in each group included for analysis.

Ethical Considerations: This study was approved by the Chanthaburi Research Ethics Committee Region 6 (COA no. 010/64). This IRB approval was used in both pilot and actual study. All participants received written and verbal explanations of the study. Before giving written informed content, they were informed of the objectives, methods, risks, benefits, and participants' right to withdraw from this research project at any time without impacting the quality of care provided to them.

Research Instruments: The research instruments had two parts: data collection and the intervention program. Four research instruments for data collection were as follows.

A Demographic and Health Data Form was developed by the principal investigator (PI). It comprises two sections, including FCGs' and older adults' data. FCG's data included age, gender, marital status, relationship with older adults under their care, educational level, average income/month, sufficient income, caregiving assistants, and caregiving experience. Older adults' data included age, gender, and the Barthel index.

The Observational Assessments of Six Caregiving Skills was developed by the PI, and it was applied in the pilot study to evaluate the feasibility of this tool.[23] For characteristics of this tool, there were six observational assessments of caregiving skills: 14 items for wound care, 14 items for suctioning, ten items for feeding, 14 items for tracheostomy care, ten items for bathing, and 12 items for physical examination.[23] Each tool contains two choices; 1 point is given for each correct performance. An example of a wound care skill for FCGs is "Positioning older adults in the appropriate position for wound care." The total score ranges between 0 and 14, with higher scores representing higher caregiving skills. The observational tools were evaluated for content validity index (CVI) by three experts in chronic illnesses, and the CVI of six caregiving skills was between 0.81 and 0.85.[23] The reliability of six observational caregiving tools was tested in the pilot caregiver study among 30 caregivers with similar characteristics in the hospital phase, and intra-observer reliability was between 0.75 and 0.81.[23]

The Thai version of the Coping and Adaptation Processing Scale Short Form (TCAP-SF) was developed by Roy and Chayaput according to the principles of the coping and adaptation process.[24] The TCAP-SF has four domains: resourceful and systematic, physical, positive and knowing strategies, and alert processing. It has 27 items, with a four-point scale where 4 indicates agreement with the statements and 1 indicates disagreement. An example is: "Collecting information to increase solutions." The total score ranges between 27 and 108, with higher scores reflecting better coping skills. The study related to FCGs of people with traumatic brain injury and with disabilities showed that Cronbach's alpha coefficient reliability was 0.85, and that of each domain.[25] For this study, Cronbach's alpha was 0.84.

The Thai version of the World Health Organization Quality of Life Assessment (WHOQOL-BREF-Thai) includes 26 items; 24 items of 4 domains: physical (7 items), psychological (6 items), social relationships (3 items), and environmental (8 items), and two items representing the overall QoL.[26] There were three negative and 23 positive items. The items were rated on a 5-point Likert scale ranging from 1 = disagreement to 5 = the most agreement. The score on three negative items is reversed before the summation of the total score. The score ranges from 26 to 130, with higher scores indicating a higher QoL. The overall Cronbach's alpha reliability of WHOQOL-BREF-Thai was 0.84.[27] For this study, the WHOQOL-BREF-Thai was used to calculate Cronbach's alpha, which was 0.81.

The Simulation-Based Psychoeducational (SimB-PSYED) Intervention

The PI developed the SimB-PSYED intervention based on the RAM, literature review and interviews of 57 FCGs of older adults with chronic illness and disabilities about their problems and needs, which was used to develop the Observational Assessments of Six Caregiving Skills as mentioned in the instrument section.

The finding indicated that these FCGs need to develop six skills: wound care, suctioning, feeding, tracheostomy care, bathing, and physical examination. These skills were included in the intervention for training FCGs. Also, the intervention addressed a focal stimulus (feeling burden in caring for older adults with disability) and the contextual stimuli (interventions or social support). Thus, the SimB-PSYED intervention provided caregiving knowledge, training skills, and psychological support, which are expected to promote positive coping processes leading to effective adaptive responses that increased six caregiving skills, better coping skills, and increased QOL.

The first SimB-PSYED intervention was a 9-session hospital-based intervention: providing caregiving knowledge, training caregiving skills using low-fidelity simulation in training suctioning skills, psychological support, and home simulation (see **Appendix Table 1**). We submitted these sessions of the first SimB-PSYED intervention to the same experts who validated the content validity of the Observational Assessments of Six Caregiving Skills and asked them whether they agreed or disagreed with each session with the additional comments to see if we needed to revise the intervention. The CVI for each session was between 0.79 and 0.83, and the overall CVI of the first SimB-PSYED intervention was 0.83.

We conducted a pilot study of this intervention with 15 FCGs and found that the SimB-PSYED intervention with a hospital-based could improve FCGs' caregiving skills when compared to the control group (n = 15) who did not attend the program.[23] However, the FCGs living in remote areas complained that they had no self-confidence if they needed to care for older adults with disabilities at home. Also, they needed someone to be a consultant. Therefore, we extended the programs to include home-based sessions. These sessions comprised one home visit, and the rest of the ten sessions were telenursing consultations. We invited the same three experts to validate these additional community-based sessions. The CVI of this revised SimB-PSYED intervention was 0.87. Thus, the final SimB-PSYED Program comprised nine hospital-based sessions and two home-based sessions, including home visiting and telenursing every week for 10 weeks. The length of intervention given at each session, the objectives, and the activities of each session are displayed in **Appendix Table 1A**.

Routine care: Nurses provided caregiving knowledge (e.g., diagnosis, signs and symptoms, medications, treatment) and caregiving skills for FCGs about three days before patients were discharged. For training in caregiving skills, patient-caregiver dyads were used in teaching required skills (e.g., suctioning, tracheostomy care, wound care, or feeding).

Data Collection: This study was conducted from October 2021 to February 2022 after the IRB approval. The PI recruited the participants based on the inclusion criteria and then explained the study, the objectives, the benefits, the time spent and the activities they were expected to perform. They were asked to sign the consent form if they were willing to participate in the study. The experimental group received the Sim-PSYED program by the PI in addition to routine care, and the control group received only routine care. For both groups, caregiving skills, coping skills, and QoL were evaluated at baseline, pre-discharge, and the 3-month follow-up. Two research assistants with experience caring for older adults for at least two years were trained to collect the data.

Data Analysis: Demographic and health data were analyzed using descriptive statistics, including frequencies and percentages. Group comparisons were performed using the Chi-square or Fisher's exact test, as appropriate, and the Mann-Whitney U (one-tailed) test because the data were not normally distributed. The Mann-Whitney U (one-tailed) test was also employed to compare caregiving skills, TCAP-SF, and WHOQOL-BREF-Thai scores between groups. Within-group comparisons of all outcomes at baseline, pre-discharge, and the 3-month follow-up were conducted using the Friedman test.

Results

There was no attrition of the participants in both groups. Most of the FCGs in both groups were in middle age, with more females than males. More than half of the experimental group were married (66.67%), while the majority in the control group were single (53.33%). Most caregivers in both groups were family members, and most had at least a high school education. The mean monthly incomes were similar across groups, with the experimental group earning 21,926.67 Baht (approximately USD 623.00, SD = 14,619.00) and the control group earning 21,200.00 Baht (approximately USD 605.00, SD = 14,949.70). Two-thirds of participants in both groups had sufficient income.

For older adult groups, the mean ages in the experimental and control groups were 73.8 years (SD = 8.63) and 77.67 years (SD = 8.10), respectively. Most older adults were female in both groups (60% vs. 53.33%). Almost all older adults were severely dependent persons (80% vs. 93.33%). Demographic characteristics were not significantly different between experimental and control groups in caregivers and older adult groups (see **Table 1**).

Table 1. Comparisons of demographic characteristics of family caregivers and older adults with disability and chronic illnesses between the experimental and the control groups (n = 30)

Variables	Experimental group (n = 15)	Control group (n = 15)	p-value
Family caregivers			
Age (years), mean (SD)	46.00 (12.76)	48.33 (8.65)	0.563**
Gender (n, %)			0.109*
Female	13 (86.67%)	8 (53.33%)	
Male	2 (13.33%)	7 (46.67%)	
Marital status (n, %)			0.598*
Single	5 (33.33 %)	8 (53.33%)	
Married	10 (66.67%)	7 (46.67%)	
Relationship with patients			0.598*
Family members	12 (80.00%)	14 (93.33%)	
Friends	3 (20.00%)	1 (6.67%)	
Educational level (n, %)			0.432*
≤ High school	9 (60.00%)	8 (53.33%)	
> High school	6 (40.00%)	7 (46.67%)	
Income/month (Baht), mean (SD)	21,926.67 (14,619.00)	21,200.00 (14,949.70)	0.894**
Sufficient income (n, %)			0.068*
No	5 (33.33%)	5 (33.33%)	
Yes	10 (66.67%)	10 (66.67%)	
Caregiving assistants (n, %)			0.667*
No	3 (20%)	4 (26.67%)	
Yes	12 (80%)	11 (73.33%)	
Caregiving experience (n, %)			0.121*
No	3 (20%)	8 (53.33%)	
Yes	12 (80%)	7 (46.67%)	

Table 1. Comparisons of demographic characteristics of family caregivers and older adults with disability and chronic illnesses between the experimental and the control groups (n = 30) (Cont.)

Variables	Experimental group (n = 15)	Control group (n = 15)	p-value
Older adults			
Age (years), mean (SD)	73.8 (8.63)	77.67 (8.10)	0.213**
Gender (n, %)			0.432*
Female	9 (60.00%)	8 (53.33%)	
Male	6 (40.00%)	7 (46.67%)	
Barthel index (n, %)			0.419*
Moderately dependent	3 (20%)	1 (6.67%)	
Severely dependent	12 (80%)	14 (93.33%)	

Note. *Fisher's exact test, ** the Mann-Whiney U test

Effectiveness of the SimB-PSYED

As shown in **Table 2 and Figure 1**, the median scores of all three variables, caregiving skills, coping skills, and QoL, were not significantly different between the two groups at baseline. However, the experimental group demonstrated significantly higher caregiving skills, coping skills, and QoL than the control group at pre-discharge (T1) and 3-month follow-up (T2), with all p-values < 0.01. In addition, when comparing the change within groups using the Friedman test, it was found that in the experiment group, the median score of caregiving skills, coping skills, and QoL improved significantly from baseline (T0), pre-discharge (T1), and 3-month follow-up (T2). In contrast, in the control group, only the caregiving skills improved significantly from baseline (T0), pr-discharge (T1), and 3-month follow-up (T2), but coping skills and QoL decreased significantly from baseline (T0), pre-discharge (T1), and 3-month follow-up (T2).

Table 2. Comparison of median scores of caregivers' caregiving skills, coping skills, and QoL at baseline (T0), pre-discharge (T1), and 3-month follow-up (T2) between the experimental and control groups (n = 30)

Variables	Experimental group (n = 15)	Control group (n = 15)	Z	p-value*
	Median (IQR)	Median (IQR)		
Caregiving skills				
baseline	95 (29)	100 (49)	-1.12	0.267
pre-discharge	326 (101)	176 (39)	-4.66	< 0.001
3-month follow-up	337 (20)	200 (41)	-4.66	< 0.001
p-value**	< 0.001	< 0.001		
Coping skills				
baseline	71 (17)	92 (26)	-2.57	0.059
pre-discharge	92 (11)	87 (6)	-1.62	< 0.001
3-month follow-up	104 (4)	80 (24)	-4.32	< 0.001
p-value**	< 0.001	0.005		
QoL				
baseline	88 (15)	102 (35)	-1.64	0.106
pre-discharge	102 (14)	95 (39)	-1.37	0.049
3-month follow-up	114 (16)	90 (14)	-3.48	< 0.001
p-value**	< 0.001	0.043		

Note. Interquartile Range (IQR) * Mann-Whitney U test, ** Friedman test

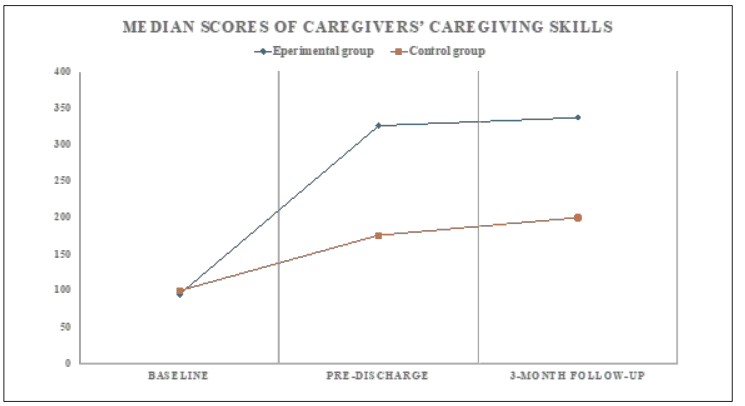

Figure 1. Median scores of caregivers' caregiving skills in the experimental and control groups over time

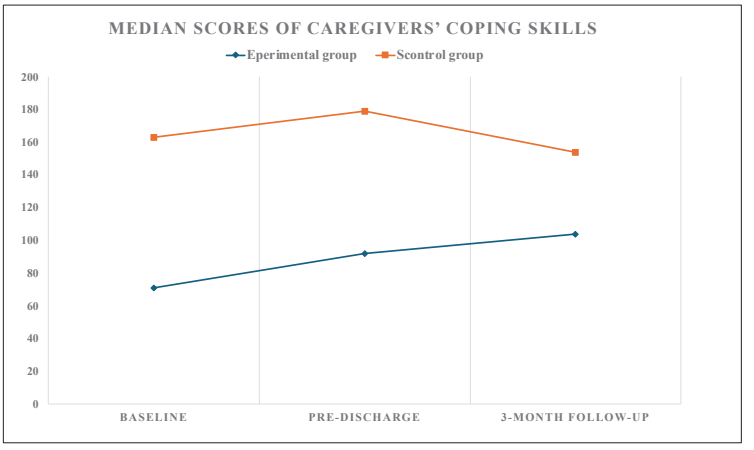

Figure 2. Median scores of caregivers' coping skills in the experimental and control groups over time

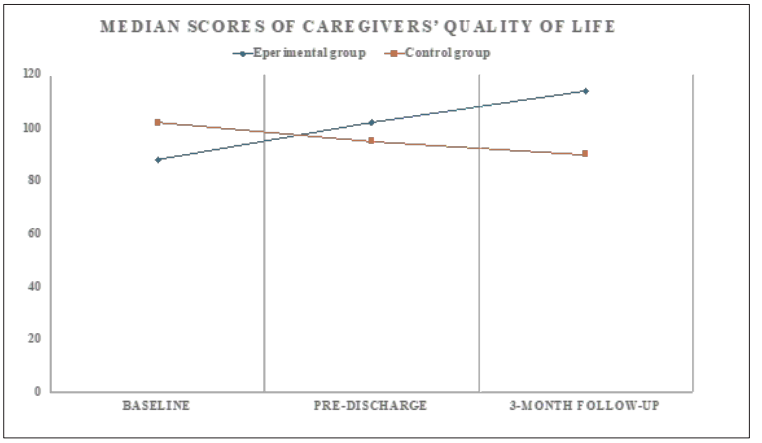

Figure 3. Median scores of caregivers' QoL in the experimental and control groups over time

Discussion

This study indicated the effectiveness of the SimB-PSYED intervention in increasing caregiving skills, coping skills and QoL among FCGs of older adults with disability and chronic illnesses from hospital to home. Since the Program provided specific support based on patient-caregiver dyads' needs (e.g., caregiving knowledge and skill training), FCGs experiencing unmet caregiving needs could improve their confidence with a new role in caring for older adults with disabilities.[28] This finding is consistent with previous studies, which demonstrated that caregiver interventions based on psychoeducational approaches with FCGs were able to increase caregiving skills to carry out the exhausting task of caring for older adults with disabilities in long-term care.[28-29] The program changed perceptions related to their experience as caregivers, and their attitude could be transformed from negative to positive thinking after gaining new knowledge and developing skills.[30] In addition, FCGs could apply new knowledge and skills in daily caregiving situations after receiving educational content on how to care for older adults with disability and to control their behavior.[18] As a result, their response and behavior, including compensatory level, well-being, and QoL, could positively improve while the caregiver role strain is released.[31]

When FCGs tiresomely experience caring for older adults with disability and chronic illnesses, they encounter negative attitudes toward a new caregiving role.[32] The SimB-PSYED intervention would manage exhausting responsibilities to construct positive inspiration among FCGs of people with disability.[33] To produce FCGs' self-confidence and encouragement, the SimB-PSYED program provided educational-supportive needs in a hospital period: educating caregiving knowledge and training necessary skills with effective simulation (e.g., suctioning, tracheostomy care, and home simulation).[34] Likewise, providing home visiting and using telenursing to reboot and maintain FCGs' caregiving skills could promote their confidence in caring for older adults at home. Moreover, the SimB-PSYED intervention encourages psychological support (e.g., problem-solving techniques and stress management) to achieve a positive coping process among FCGs of older adults with disability.[35] Previous RAM studies reported that educational approaches based on a standard model reduced suffering and burden from caregiver role strain in patients and caregivers because training adaptive behavior through the program and psychological support could promote adaptability and QoL in patients and FCGs.[36-37]

For coping skills and QoL, FCGs' caregiving responsibility would be promoted from their positive coping ability to manage and define caregiving resources involving their roles.[32] However, poor adaptation of the FCGs consisted of the physiological modes (e.g., increased blood pressure or worsening of sleep quality), the self-concept mode (e.g., emotional stress or feeling of burden), the role function mode (e.g., caregiving struggle or frustration with responsibility), and the interdependence mode (e.g., low satisfaction with life or family conflicts).[38] The SimB-PSYED program provides both physical and psychological support. It promotes the dimension of independence by fostering adaptive mechanisms that emerge from close relationships, cultivating feelings of love, respect, and value.[31] Additionally, the dimension of dependence encompasses caregiving needs that others must address. In contrast, the independence dimension involves caregiving needs that FCGs of older adults with disabilities can manage independently.[39] Through training and support from the SimB-PSYED program, FCGs of older adults with disabilities could achieve a balance between independence and dependence, thereby maintaining system balance and enhancing overall well-being and QoL. Therefore, the SimB-PYSED program supported the RAM because it promotes a coping mechanism and manages focal stimuli as a contextual stimulant for FCGs of older adults with disability in transitional care from hospital to home.[11]

Limitations

This study had some limitations. It used nonrandomization with unknown confounders that may be presented. As a result, this study may have potential bias that could affect caregiving skills, coping skills, and QoL among FCGs, and it could show overestimated effect sizes. Moreover, the sample size of this study was small, and the generalizability of findings is thus unknown.

Conclusion and Implications for Nursing Practice

The findings revealed that the SimB-PSYED Program is effective in improving care skills, coping skills, and QoL among FCGs who care for older adults with disability and chronic illnesses from hospital to home care. Nurses can apply this program in their practice. However, before this, further study is needed with a large sample size in multisite settings and follow-up for at least six months after discharge.

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Appendix

Table A. The SimB-PSYED intervention

Session	Module	Objective	Activities
Hospital-Based Intervention (session 1-9)			
1 (60 minutes)	Assessing and identifying caregiving difficulties	To evaluate the caregiving challenges of FCGs of older adults with disabilities	- Make relationships with FCGs and family to build their trust in the first meeting - Assess "Who are the major FCGs of older adults with disabilities?" - Interview FCGs' caregiving challenges
2 (60 minutes)	Evaluating FCGs' caregiving need	To evaluate families' perceived needs	- Interview FCGs' perceived needs and required caregiving knowledge or skills based on patients' pathology
3 (30 minutes)	Evaluating FCGs' stress	To evaluate caregiving stressors	- Assess FCGs' caregiving stressors when they care for older adults with disabilities
4 (60 minutes)	Providing psychological support	- To increase problem-solving techniques and stress management for FCGs	- Provide positive appraisals and coping skills - Provide stress management - Practice Buddhism skills (meditation) for alleviating stress
5 (60 minutes)	Delivering educational support	- To increase caregiving knowledge for FCGs	- Inform caregiving roles - Educate about patients' diagnosis, signs and symptoms, and treatment
6 (30 minutes)	Reviewing caregiving knowledge and skills	- To review FCGs' knowledge	- Review FCGs' knowledge based on patients' conditions and FCGs' needs
7 (90 minutes)	Training FCGs' caregiving skills using low-cost fidelity simulation	- To train required caregiving skills based on patients' conditions and caregivers' needs	- Train required caregiving skills based on FCGs' needs and patients' conditions using the low-cost fidelity simulation - Empower FCGs with caregiving capability
8 (30 minutes)	Providing caregiving resources in the community	- To inform useful caregiving resources	- Provide useful caregiving resources related to caring for older adults with disabilities; if FCGs did not have money to buy a bed or suctioning equipment they could borrow them from a caregiving center in the community (no charge).
9 (24 hours)	Providing hospital-home simulation (HHS) room	To increase FCGs' self-confidence in caring for older adults with disabilities before discharge from hospital	- Prepare HHS room: a medical equipment corner, a private bathroom, a bed, a small living space, and a small laundry space - Provide information about how FCGs individually care for older adults with disabilities in the hospital-home simulation room - Offer suggestions or support if FCGs would like to help them while caring for older adults in HHS room by themselves

Table A. The SimB-PSYED intervention (Cont.)

Session	Module	Objective	Activities
Community-Based Intervention (session 10-20)			
10 (60 minutes)	Delivering home visiting	To assess FCGs' caregiving problems and patients' conditions after discharge about one week	- Provide home visits to explore FCGs' actual caregiving situation - Answer FCGs' caregiving questions during caring for older adults with disabilities - Review caregiving skills based on FCG's needs - Inform possible caregiving challenges during caring for older adults with disabilities
11-20 (45 minutes) Every week until completed 3-month follow-up	Providing telenursing	To increase FCGs' self-confidence in caring for older adults with disabilities at home	- Provide telenursing with LINE application to be a communication channel between FCGs and healthcare providers while caring for older adults with disabilities at home - Assess FCGs' caregiving knowledge and skills in caring for older adults with disabilities - Provide caregiving suggestions based on FCGs' needs and patients' conditions as caregiving consultants - Offer empowerment and psycho-motivated support for FCGs and older adults with disabilities

ประสิทธิผลของโปรแกรมการให้ความรู้และส่งเสริมด้านจิตใจโดยใช้สถานการณ์จำลองสำหรับญาติผู้แลผู้สูงอายุที่มีภาวะทุพพลภาพและโรคเรื้อรัง : การศึกษาแบบกึ่งทดลอง

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บทคัดย่อ: ญาติผู้ดูแลของผู้สูงอายุที่มีภาวะทุพพลภาพต้องเผชิญกับความท้าทายที่หลากหลายและซับซ้อน ซึ่งส่งผลให้เกิดความเครียดทางร่างกาย อารมณ์ และจิตใจ และส่งผลกระทบต่อคุณภาพชีวิตของญาติผู้ดูแลอย่างมาก โปรแกรมที่ใช้อยู่ในปัจจุบันที่เป็นรูปแบบเดียวไม่เพียงพอต่อการตอบสนองความต้องการ ที่ซับซ้อนในการดูแลผู้สูงอายุที่มีภาวะทุพพลภาพ โปรแกรมสำหรับญาติผู้ดูแลจึงจำเป็นต้องประกอบด้วยหลายรูปแบบ การศึกษาครั้งนี้ผู้เข้าร่วมวิจัย ประกอบด้วย ญาติผู้ดูแล จำนวน 30 คนจากโรงพยาบาลตติยภูมิแห่งหนึ่งในภาคตะวันออกของประเทศไทย โดยผู้เข้าร่วมวิจัยได้รับการคัดเลือกอย่างจำเพาะเจาะจง และทำการเก็บข้อมูลกลุ่มควบคุม (n = 15) ก่อน จากนั้นจึงเก็บข้อมูลสำหรับกลุ่มทดลอง (n = 15) การเก็บรวบรวมข้อมูลในการศึกษานี้ใช้แบบสอบถาม ซึ่งประกอบด้วย ข้อมูลประชากรและสุขภาพ แบบสอบถามทักษะการดูแล แบบสอบถามทักษะการเผชิญปัญหา และแบบสอบถามคุณภาพชีวิตของญาติผู้ดูแล การวิเคราะห์ทางสถิติประกอบด้วยสถิติพรรณนา การทดสอบไคสแควร์ การทดสอบฟิชเชอร์ การทดสอบ Mann-Whitney U และการทดสอบ Friedman

ผลการศึกษาพบว่า ภายหลังได้รับโปรแกรม ระยะก่อนจำหน่ายและการติดตามผล 3 เดือนหลังจำหน่ายออกจากโรงพยาบาลคะแนนมัฐยฐานทักษะการดูแล ทักษะการเผชิญปัญหา และคุณภาพชีวิตของญาติผู้ดูแลในกลุ่มทดลองสูงกว่าญาติผู้ดูแลในกลุ่มควบคุมอย่างมีนัยสำคัญ ในทางตรงข้ามสำหรับกลุ่มควบคุม ภายหลังได้รับโปรแกรม ระยะก่อนจำหน่ายและการติดตามผล 3 เดือนหลังจำหน่ายออกจากโรงพยาบาลมีเพียงคะแนนมัธยฐานของทักษะการดูแลเพียงอย่างเดียวที่เพิ่มขึ้น ในขณะที่คะแนนมัฐยฐานของทักษะการเผชิญปัญหา และคุณภาพชีวิตกลับลดลง ผลการวิจัยนี้ชี้ให้เห็นว่าโปรแกรมการให้ความรู้และส่งเสริมด้านจิตใจโดยใช้สถานการณ์จำลองมีประสิทธิภาพในการพัฒนาทักษะการดูแล ทักษะการเผชิญปัญหา และคุณภาพชีวิตของ ญาติผู้ดูแลผู้สูงอายุที่มีทุพพลภาพ ใช้เป็นรูปแบบการดูแลญาติผู้ดูแลผู้สูงอายุได้ในอนาคต แต่อย่างไรก็ตาม จำเป็นต้องมีการศึกษาในกลุ่มประชากรที่ใหญ่ขึ้น หลากหลายมากขึ้น และในหลายพื้นที่

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