Life Sciences and Environment Journal 2025; 26(2): 265-278

EFFECT OF THE ENHANCING POSITIVE ASPECTS PROGRAM ON CAREGIVING BURDEN AMONG CAREGIVERS OF PERSONS WITH DEMENTIA

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Abstract

Dementia impairs cognition, memory, and daily functioning, requiring continuous caregiving that often leads to caregiver burden. This quasi-experimental study aimed to examine the effect of a positive aspect enhancement program on caregiver burden among caregivers of persons with dementia. The sample was divided into an experimental group of 15 and a control group of 15, totaling 30 caregivers, aged 20–60 years, of both sexes, who were dementia caregivers providing care to patients during their hospital treatment. The research instruments included: (1) a personal information questionnaire for caregivers of persons with dementia, (2) the Zarit Burden Interview (Zarit & Zarit, 1990), (3) the Positive Aspects of Caregiving Interview (Tarlow et al., 2004), and (4) the Enhancing Positive Aspects Program, which consisted of six sessions, each lasting 60 minutes, conducted twice a week. Data were analyzed using descriptive statistics, the independent samples t-test, and one and two-way repeated measures ANOVA. The study results indicated that caregivers who participated in the Enhancing Positive Aspects Program demonstrated significantly lower caregiver burden scores immediately after the intervention and at four-week follow-up compared to their pre-intervention scores ($p < .05$). Furthermore, the experimental group reported significantly lower caregiver burden scores than the control group receiving standard care, both

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Received: 21 July 2025; Revised: 23 September 2025; Accepted: 24 September 2025

DOI: https://doi.org/10.14456/lsej.2025.20

immediately after the intervention and at four-week follow-up ($p < .05$). The findings suggest that the Enhancing Positive Aspects Program effectively reduced caregiver burden among dementia caregivers, and its implementation is recommended as a supportive intervention in this population.

Keyword: dementia, caregiver burden, positive aspect, informal caregiver

Introduction

Dementia is a progressive neurological disorder that affects memory, cognition, behavior, and the ability to perform daily activities. As the condition advances, persons with dementia become increasingly dependent on others for assistance and care. According to the World Health Organization (2021), more than 55 million people worldwide were living with dementia in 2021, and this number is projected to rise to 78 million by 2030. Approximately 60 to 70 percent of these cases are classified as Alzheimer's disease. In Thailand, data from 2020 indicated that 17.57 percent of the population were older adults, suggesting that over one million people in the country may be living with dementia (Anantadilokrat, 2021).

The disease's progressive nature, caregiving responsibilities become increasingly complex and demanding. In the early stage, patients often remain independent but need support with memory lapses, decision-making, and emotional reassurance. During the middle stage, caregivers provide increasing assistance with activities of daily living, manage behavioral and psychological symptoms of dementia (BPSD), which pose significant challenges and often result in heightened stress and feelings of helplessness. In the late stage, care becomes intensive, involving complete dependence for basic functions (Duangduen & Udomlap, 2018). This creates significant challenges for caregivers in terms of time, physical and emotional health, and social and economic impact (García-Martín et al., 2023).

Most persons with dementia require long-term support from family members who act as informal caregivers. (Alzheimer’s Disease International, 2023). In fulfilling this role, many are forced to dedicate themselves entirely to caregiving, often leaving their jobs, and sacrificing personal goals. Such sacrifices lead to a profound sense of loss of self and autonomy, which intensifies intrapsychic strains such as guilt, sadness, and emotional exhaustion. Over time, these hidden psychological pressures accumulate and severely affect caregivers' mental health, contributing to heightened burden. Recognizing this burden underscores the importance of interventions that target not only practical care needs but also the internal psychological costs of caregiving. (García-Martín et al., 2023).

Caregiver burden is the psychological stress experienced by those providing long-term care for individuals with chronic illness. Pearlin et al.'s (1990) Stress Process Model explains this as the interaction of contextual factors, stressors, and mediating resources such as coping and social support, which together shape caregiver outcomes. Poorly managed, these factors may lead to exhaustion, anxiety, depression, and burnout. Studies show that older age, female gender, low income, and strong emotional ties increase caregiver burden, particularly when dementia patients exhibit behavioral and psychological symptoms (BPSD) such as aggression or delusions (Kim et al., 2021; Wang et al., 2022). Caregivers encounter these challenges but lack structured interventions, highlighting the need for programs that reduce burden and foster positive caregiving experiences.

Positive psychological factors, such as the positive caregiving perspective, can help reduce caregiver burden by fostering self-affirmation and a positive outlook on life (Tarlow et al., 2004). These elements enhance caregivers' sense of competence, resilience, and sustained motivation. A four-week follow-up was chosen for practical and theoretical reasons, as prior studies have shown that short-term follow-up is sufficient to detect initial changes after psychosocial interventions (Cheng et al., 2020; Zhuang et al., 2022). While caregiver burden is a long-term issue, this study focused on short-term effects as a foundation for future extended research.

When integrated Tarlow et al. (2004) with Pearlin's Stress Process Model (1990), the positive caregiving perspective functions as a psychological mechanism that reframes caregiving experiences, reduces stress, and empowers caregivers. Guided by these frameworks, this study developed and evaluated a program designed to strengthen self-affirmation and positive outlook, thereby reducing caregiver burden among dementia caregivers.

Research Objectives

1) Caregivers in the program showed significantly reduced burden scores after the intervention and at four-week follow-up compared to baseline ($p < .05$).

2) The experimental group reported significantly lower burden scores than the control group at both post-test and follow-up ($p < .05$).

Research Framework

This study integrates the Stress Process Model by Pearlin et al. (1990) with the Positive Aspects of Caregiving framework by Tarlow et al. (2004) to explain the psychological burden experienced by family caregivers of persons with dementia. According to Pearlin's model, caregiver burden arises from stressors, particularly secondary stressors such as intrapsychic strains, which refer to the caregiver's internal thoughts, emotions, and self-evaluations in relation to their caregiving role. These strains can increase the sense of burden, especially when caregivers lack a strong positive self-concept. Tarlow's framework highlights two essential components of a positive caregiving aspect: self-affirmation (the recognition of one's value and usefulness in caregiving) and a positive outlook on life. These components serve as internal psychological mechanisms that help foster a positive self-concept, enabling caregivers to appraise their experiences more positively, see meaning in their role, and maintain emotional resilience. When caregivers view themselves as capable, valuable, and emotionally strong, their intrapsychic strain is reduced, leading to a decrease in perceived burden. Based on this integrated framework, the current study developed a six-activity group intervention designed to strengthen self-affirmation and positive outlook, thereby enhancing caregivers' positive self-concept and reducing caregiving burden.

Materials and Methods

This study employed a quasi-experimental design using a two-group pre-test, post-test, and follow-up format (pre-test, post-test, control group design).

Population: Caregivers of persons with dementia attending outpatient departments of provincial hospitals under the Ministry of Public Health.

Sample: Caregivers of persons with dementia attending the outpatient department of a provincial hospital in Lamphun Province.

Sample Size Determination

The effect size was calculated using Cohen's d with the following formula (Glass, 1976)

$$d = \frac{\bar{x}_E - \bar{x}_C}{SD_C}$$

d = effect size

$\bar{x}_E$ = mean score of the experimental group

$\bar{x}_C$ = mean score of the control group

SD_C = standard deviation of the control group

$$d = \frac{42.58 - 39.19}{4.52}$$

$$d = 0.75$$

Using G*Power 3.1.9.7 for an F-test (effect size = 0.75, α = 0.05, power = 0.90), the required sample size was 27. Allowing for a 10% dropout rate (Jiamjarasrangsi, 2016) the final sample was set at 30 samples. They were equally assigned to the experimental group (n = 15) and the control group (n = 15) through purposive sampling and matched-pair randomization based on caregiver burden scores.

The following inclusion criteria:

1. Aged between 20 and 60 years
2. The primary caregiver had a familial relationship with the person with dementia and did not receive any financial compensation for caregiving.
3. Providing care for the person with dementia for at least six months.
4. The Positive Aspects of Caregiving Questionnaire (PACQ) score of less than 40, developed by Tarlow et al. (2004) and translated into Thai by Pankhong (2016)
5. The Zarit Burden Interview (ZBI) was developed by Zarit & Zarit (1990) more than 20, with a Thai version by Pankhong et al. (2004)
6. Was able to communicate effectively and possessed the ability to listen, speak, and read in Thai.
7. Voluntarily agreed to participate in the study.

Exclusion Criteria

Caregivers who had joined other caregiver burden reduction programs.

Research Instruments

Part 1: Screening and Monitoring Tools

1. Positive Aspects of Caregiving Questionnaire (PACQ): Developed by Tarlow et al. (2004) and translated into Thai by Pankhong (2016), the PACQ consists of 9 items measuring two dimensions: self-affirmation and positive outlook on life. Responses are rated on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). For this study, caregivers with scores below 40 were eligible for the simple. The reliability of the instrument was assessed using Cronbach's alpha coefficient, yielding a value of 0.849.
2. Zarit Burden Interview (ZBI): Originally developed by Zarit & Zarit (1990) and translated into Thai by Pankhong et al. (2004), the ZBI contains 22 items assessing the impact of caregiving on caregivers' lives. Responses are rated on a 5-point scale. The reliability of the instrument was assessed using Cronbach's alpha coefficient, yielding a value of 0.821.

Part 2: Data Collection Instruments

1. Caregiver Demographic Questionnaire: This form collected information on caregivers, including age, gender, relationship with the care recipient, educational level, occupation, number of family members, family role, income sources, income sufficiency, and average daily caregiving hours.
2. Zarit Burden Interview (Thai version): The ZBI was also used as a primary outcome measure to assess caregiver burden at baseline, post-intervention, and follow-up. Scoring and interpretation followed the criteria described above.

Part 3: Intervention Instrument

1. The Enhancing Positive Aspects Program was developed based on Pearlin's Stress Process Model (1990) and Tarlow's Positive Aspects of Caregiving framework (2004). The Content Validity Index (CVI) was calculated to be 0.90, indicating a high level of agreement among the experts. then pilot-tested for language clarity with three individuals resembling the target sample at Lamphun Hospital. All samples understood the content well

Development of the Enhancing Positive Aspects Program

The researcher designed the program, which consisted of six sessions, each lasting the content was validated by a panel of six experts 60 minutes, conducted twice a week. The activities are included:

Activity 1 Sharing caregiving experiences: The sample shared positive caregiving experiences such as helping, gratitude, and meaningful moments.

Activity 2 Identifying benefits from positive experiences: Caregivers reflected on past recognition and appreciation.

Activity 3 Enhancing confidence through personal strengths: Samples drew symbols to represent themselves and discussed their strengths in caregiving.

Activity 4 Reflecting on life experiences: Caregivers reflected on both positive and negative caregiving experiences.

Activity 5 Reframing negative thoughts: Word cards with negative emotions were used in group discussions to reinterpret them positively.

Activity 6 Strengthening a positive approach to life and encouraging mutual **support:** The sample learned positive strategies (goal setting, appreciation, gratitude) and engaged in group singing.

Data Collection

After receiving approval from the Institutional Review Board (IRB), Eligible caregivers of individuals with dementia were approached, informed about the study, and those who consented were enrolled. Samples were then assigned into the experimental and control groups using matched-pair randomization.

Data were collected by the researcher using standardized self-administered questionnaires, following strict protocols to minimize bias and ensure reliability. The experimental group received the Enhancing Positive Aspects Program, delivered in six sessions over three weeks, while the control group continued to receive standard care without exposure to the program. To prevent contamination between groups, sessions were conducted separately, and samples were asked not to share program content with others. Data were collected at three points: before the intervention (baseline), immediately after, and four weeks post-intervention, using standardized instruments.

At the conclusion of the study, once the program was shown to be effective, the researcher offered the intervention to the control group to ensure fairness and equality.

Data Analysis

Descriptive statistics were used to summarize samples' demographic data, including frequency, percentage, mean, and standard deviation. The Kolmogorov-Smirnov test confirmed normal distribution of the data. One-way repeated measures ANOVA was used to analyze within-group differences in caregiver burden over time. Two-way repeated measures ANOVA was conducted to examine the interaction effects between group (experimental and control) and time (pre-test, post-test, and four-week follow-up).

Research Ethics

The research proposal and instruments were reviewed and approved by the Research Ethics Committee of the Faculty of Nursing, Chiang Mai University (Approval No. 082/2567), and by the Ethics Committee of Lamphun Hospital, Lamphun Province (Approval No. 8383 (7)/3196).

Result

This study included 30 samples, with 15 assigned to the experimental group and 15 to the control group. Prior to the intervention, there were no statistically significant differences between groups in demographic characteristics. Both groups consisted of 73.33% females and 26.67% males (p = 1.000). The experimental group was primarily aged 25–35 years (40.00%), while the control group was evenly distributed across the 25–35 and 46–55 age ranges (26.67%) (p = 0.870). Most samples in both groups held a bachelor's degree (80.00% in the experimental group, 66.67% in the control group; p = 0.568).

In terms of relationship to the person with dementia, the experimental group primarily consisted of children (20.00%), while the control group mostly comprised parents (33.33%) (p = 0.224). Households with three members were most common in both groups (p = 1.000). The most frequent occupation in both groups was general labor (26.67%; p = 0.765). The experimental group reported a higher monthly income (10,001–15,000 THB; 46.67%), while the control group mainly earned less than 10,000 THB

(60.00%) (p = 0.145). Most samples in both groups spent 6–12 hours per day providing care (p = 1.000).

Prior to conducting the Two-Way Repeated Measures ANOVA, assumption checks were performed. Box's Test indicated equality of covariance matrices (Sig. = .547, p > .05). Mauchly's Test confirmed the assumption of sphericity (Sig. = .100, p > .05), allowing interpretation under sphericity assumed. Levene's Test showed equality of error variances across all time points (p > .05). These results demonstrated that the data met the necessary assumptions for valid ANOVA analysis.

Table 1 presents the comparison of mean caregiver burden scores at three time points: pre-intervention, post-intervention, and four-week follow-up, in both the experimental and control groups. Repeated Measures ANOVA was used to examine within-subjects effects.

	Mean (SD)				
Caregiver burden scores	**Pre-intervention**	**Post-intervention**	**Four-week Follow-up**	**F**	**P-value**
Experimental (n=15)	56.40 (12.12)	38.60 (13.88)	35.27 (14.07)	10.809	<0.001*
Control (n=15)	57.73 (10.67)	53.60 (12.22)	53.33 (11.91)	0.676	0.514

Remark *P< 0.001

The experimental group that received the positive aspect enhancement program demonstrated a statistically significant reduction in caregiver burden across all three measurement points (P < 0.001). The mean caregiver burden score decreased from 56.40 at baseline to 38.60 immediately post-intervention and further declined to 35.27 at the four-week follow-up. These findings indicate that the program was effective in sustainably reducing caregiver burden over time. In contrast, the control group, which received no intervention, showed only a slight decrease in mean caregiver burden scores, with no statistically significant differences observed across the three time points. These results support the research hypothesis that the positive perspective aspect program contributes to a significant reduction in caregiver burden among caregivers of persons with dementia. Pairwise comparisons using the Least Significant Difference (LSD) method confirmed the significant differences observed within the experimental group.

Table 2 Analysis of Mean Percentage Comparison between Intervention Method and Experimental Period on the Average Caregiver Burden Scores among Dementia Caregivers.

Source of Variation	SS	df	MS	F	P-vale
Between Groups					
Positive Aspect Enhancement Program	2958.400	1	2958.400	9.630	0.004*
Error term 1	8602.089	28	307.217		
Within Groups					
Measurement Time	2864.956	2	1432.478	17.462	<0.00*
Time × Group Interaction	1190.467	2	595.233	7.256	0.002*
Error term 2	4593.911	56	82.034		

Remark *p<0.05, **p<0.001

The Positive Aspect Enhancement Program significantly reduced caregiver burden among dementia caregivers. The experimental group reported lower burden scores than the control group ($F_{1,28}$ = 9.630, p = 0.004), with significant improvements over time ($F_{2,56}$ = 17.462, p < 0.001) and a notable group–time interaction ($F_{2,56}$ = 7.256, p = 0.002). These results indicate the program’s effectiveness and sustained impact in alleviating caregiver burden.

Table 3 Comparison of Mean Caregiver Burden Scores Among Caregivers of Persons with Dementia at Pre-Test, Immediate Post-Test, and 4-Week Follow-Up Between the Experimental and Control Groups Using Independent Samples t-test.

Time Point	Group	n	Mean	SD	Mean Difference	t	df	p-value
Before the intervention	Experimental	15	56.40	12.12	-1.33	-0.320	28	0.752
	Control	15	57.73	10.67				
After the invention	Experimental	15	38.60	13.88	-15.00	-3.142	28	0.004*
	Control	15	53.60	12.22				
Follow-up (4 weeks)	Experimental	15	35.27	14.07	-18.06	-3.796	28	0.001*
	Control	15	53.33	11.91				

Remark *p<0.05

The experimental and control groups showed no significant difference in caregiver burden at pre-test, confirming baseline comparability. However, at both the immediate post-test and 4-week follow-up, the experimental group reported significantly lower burden scores than the control group ($p < 0.05$), indicating the positive aspect enhancement program was more effective in reducing caregiver burden.

Discussions

This quasi-experimental study confirmed the effectiveness of a positive perspective program in alleviating caregiver burden among dementia caregivers. Caregivers who participated in the intervention reported significantly lower burden scores both immediately after the program and at the four-week follow-up, compared with their baseline levels and with the control group.

The intervention emphasized positive appraisal, self-affirmation, and reframing of negative thoughts, consistent with Pearlin's Stress Process Model (1990). These strategies strengthened coping resources and enabled caregivers to construct more meaningful perspectives on their role, thereby reducing stress. The findings are consistent with previous studies, such as those by Zhuang et al. (2022), who reported improved caregiver satisfaction and reduced burden, and Abdollahpour et al. (2018), who found an inverse relationship between positive perceptions and caregiver burden. Thai studies (Choupolsat et al., 2016; Hemthanon & Naosuwan, 2019) also confirm the protective role of self-worth and a positive outlook. This study extends those findings by showing *how* the program reduced burden: by enhancing self-affirmation and reframing caregiving as meaningful, caregivers built psychological resilience and experienced less emotional strain. These mechanisms explain why the intervention group reported significantly lower burden scores than the control group. Although no significant difference was found between post-test and follow-up scores, the sustained reduction over four weeks suggests that strengthening positive aspects can provide lasting benefits. These results indicate the value of integrating positive aspect enhancement programs into standard caregiver support services. Further research with larger samples and extended follow-up is warranted to assess the sustainability and generalizability of the intervention's effects.

Conclusion

This quasi-experimental, two-group pretest–posttest study examined caregiver burden among individuals caring for persons with dementia.

Hypothesis 1 predicted that caregivers receiving the intervention would report lower burden scores after the program and at the four-week follow-up compared to baseline. This hypothesis was supported, as burden scores in the experimental group significantly declined post-intervention and remained reduced at follow-up ($p < .05$). These results suggest that the program enabled caregivers to reframe their experiences through self-affirmation and positive appraisal, consistent with Pearlin's Stress Process Model (1990) and Tarlow's concept of Positive Aspects of Caregiving (2004).

Hypothesis 2 proposed that caregivers in the intervention group would report lower burden than those receiving standard care. This was also confirmed, with significantly lower burden scores in the experimental group at both time points ($p < .05$). These findings are consistent with Zhuang et al. (2022) and Abdollahpour et al. (2018), who showed that positive-focused interventions enhance emotional well-being and reduce burden.

In summary, strengthening positive aspects of caregiving was effective in reducing perceived burden and enhancing coping capacity. The program may represent a practical and culturally adaptable strategy to support dementia caregivers. After the study concluded, the Enhancing Positive Aspects Program was also offered to the control group to ensure fairness and uphold ethical standards in intervention-based research.

Limitation

1. Future studies should consider examining caregiver burden at different stages of dementia progression, as the nature and intensity of caregiving responsibilities are likely to vary across the disease trajectory.
2. Although the intervention was primarily designed to enhance the positive aspects of caregiving, the study mainly measured outcomes in terms of burden reduction. This reflects an indirect assumption that strengthening positive aspects reduces burden, but future research should also include direct measures of positive aspects (e.g., PACQ) to capture the intended effects more comprehensively.
3. Future studies should use trained research assistants to ensure objectivity.

Acknowledgements

This thesis was made possible through the guidance of Assistant Professor Dr. Chalinee Suwannayos and Dr. Hansa Setthabuppha, to whom I extend my deepest gratitude for their invaluable support and advice. I also sincerely thank the experts who evaluated the Positive Aspect Enhancement Program and the thesis examination committee for their constructive feedback and contributions to improving this work.

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