



The Effect of Three Generation Family Caring Program through Community Participation on Quality of Life, Family Functioning and Caregiving Knowledge among Elderly

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Abstract

Background: The transition to an aging society necessitates sustainable care models as aging is commonly associated with physiological decline and increased susceptibility to chronic conditions. **Objective:** This study evaluated the effectiveness of a Three Generation Engagement to Three Generation Family Caring for Elderly Program, developed through Participatory Action Research (PAR) to enhance elderly well-being through community engagement. **Methods:** Utilizing a quasi-experimental design, the study involved 30 elderly participants and 30 family members in Koh Pherd Subdistrict, Chanthaburi Province. Outcomes, including Quality of Life (WHOQOL-OLD), Family Functioning (CFI), and Caregiving Knowledge, were assessed at three-time points: pre-intervention, immediate post-intervention, and a six-month follow-up. Data were analyzed using Multivariate Repeated Measures and One-way ANOVA. **Results:** Significant long-term improvements were observed across all variables at the six-month follow-up compared to baseline. Statistical analysis revealed a significant impact on Quality of Life ($F = 4113.32$, $p < .001$), Family Functioning ($F = 7699.02$, $p < .001$), and General Knowledge of Care ($F = 2660.45$, $p < .001$). Although immediate post-intervention changes were minimal, the sustained engagement of three generations led to substantial gains over time. **Conclusion:** The three generation engagement model effectively strengthens family bonds and improves elderly quality of life. Public health policies should prioritize

scaling this community-participatory model to foster sustainable, home-based long-term care for the elderly in aging societies.

Keywords: Quality of life, Family functioning, Three generation engagement, Elderly, Participatory action research

What was Known

- Thai families are key to elderly care, especially in multigenerational households.
- Most elderly care programs lack active involvement of all three family generations.
- Long-term impacts of family-based care programs were rarely evaluated.

What's New and Next

- This study proved long-term gains in knowledge, family function, and elderly well-being.
- Three-generation engagement enhanced sustainability in home-based elderly care.
- Future studies should explore scaling this model in varied community settings.

Introduction

As of 2023, individuals aged 60 years and older comprised approximately 13.64 million of Thailand's population, representing 19.5% of the national total. This demographic shift has officially positioned Thailand as an "Aging Society," a classification applied when more than 10% of the population is aged 60 and above, or when over 7% are aged 65 and older⁽¹⁾. The growing proportion of older adults presents significant implications for the healthcare system, as aging is commonly associated with physiological decline and increased susceptibility to chronic conditions. These include, but are not limited to, diabetes, hypertension, cognitive impairments, and musculoskeletal disorders such as osteoporosis. Consequently, the need for comprehensive healthcare strategies - encompassing health promotion, disease prevention, rehabilitation, and long-term care - has intensified. Addressing these needs is critical to enhancing the overall quality of life among the elderly population.

The traditional role of the family in providing care for elderly members has evolved in response to shifting economic and social dynamics. Contemporary challenges - such as the trend toward smaller household sizes, the accelerated pace of daily life, and the increasing demands placed on the working-age population - have contributed to a decline in the level of attention and support that some older adults receive. Despite these changes, the family continues to be a foundational social unit, playing a vital role in the care and well-being of both elderly members and

the broader household. A well-functioning family not only fosters individual resilience but also contributes to the strength and stability of society at large. As interconnected systems, families serve as essential environments for socialization and human development, with each member shaped by shared relationships and the broader sociocultural context.

Family life undergoes continual transformation, marked by key transitions across eight recognized developmental stages. These transitions influence the roles, relationships, and responsibilities of family members at each phase. In the Thai cultural context, the extended family remains a predominant structure, often encompassing three generations - grandparents, parents, children, and sometimes grandchildren - within a single household. This multigenerational arrangement gives rise to distinct subfamilies, each tasked with managing both their nuclear and extended familial roles concurrently. When family members effectively fulfill their roles according to their respective stages of development and within the framework of the extended family structure, harmonious intergenerational living becomes possible. Such cohesion not only promotes familial well-being but also enhances the overall quality of life for each individual within the household.

The social support system for elderly care functions on two primary levels: the family and the community. Among these, the family remains the most influential unit, offering comprehensive support across multiple dimensions of an older adult's life⁽²⁾. However, a review of existing literature reveals a notable gap - current elderly care programs have yet to fully integrate active participation from all three generations within families⁽³⁻⁶⁾. Moreover, few programs have been developed with direct reference to the specific needs and contexts of individual communities. Most existing models focus solely on the caregiver-elderly dyad and fail to integrate the active involvement of all three generations. Previous models were often top-down and insufficient because they did not address the evolving social dynamics of smaller households and the increasing demands on the working-age population. Furthermore, existing literature shows a notable gap in programs that utilize Community-based Participatory Action Research (PAR) to tailor interventions to specific community contexts. In Koh Pherd Subdistrict, local leaders identified a need for holistic care but lacked the human resources and expertise to execute it. PAR was chosen over other designs because it allowed for a collaborative analysis of these local obstacles, ensuring the program was grounded in the community's actual needs rather than a one-size-fits-all approach.

Materials and Methods

Sample size and sampling procedure

Target Population consisted of elderly families living in Koh Pherd Subdistrict.

The sample size of 30 families (30 elderly and 30 family members) was determined using a power analysis of 0.80 and a large effect size⁽⁸⁾. Participants were selected using a purposive sampling method based on specific inclusion criteria:

- Residing in a household with at least three generations.
- Elderly participants aged 60 years and older with ADL scores of 12–20 (indicating independence).
- Family Participants aged 18 years and older who co-reside with the elderly participants.

Exclusion Criteria were inability to fully participate in all research procedures and having mental and/or physical health issues that hinder participation in the study activities.

Withdrawal criterion was the participant becomes ill and requires hospitalization during the research period, rendering them unable to continue with the research procedures.

Methods

The overarching framework of this study utilized Participatory Action Research (PAR), moving beyond a linear design by employing iterative Look-Think-Act-Reflect cycles to engage the community in every phase of program development. The process was conducted in four stages: Step 1 involved a one-week rapport-building and recruitment phase to establish trust within the Koh Pherd community. Step 2 focused on community-led problem identification, where local leaders and the research team collaboratively identified caregiving gaps. Step 3 involved designing the program grounded in Friedman's Structural and Functional Theory, specifically tailored to the local context through community workshops. Step 4 consisted of a six-week practical execution and a six-month longitudinal evaluation of the model, building upon prior research into the community's elderly care needs, "The Needs of Care for the Elderly and Their Caregivers in the Community,"⁽⁷⁾ aiming to translate identified needs into practical strategies and interventions.

The intervention comprised eight sessions over six weeks, involving 30 families. To ensure active community participation, a trained community core team acted as facilitators and advisors throughout the process. Family members from three generations- elderly, parents, and children- engaged in joint health planning and reciprocal care tasks. Actual activities included building intergenerational relationships, managing age-appropriate nutrition, providing personal hygiene care, administering medications, managing chronic health problems, and ensuring home safety to prevent

accidents. The total study duration spanned from March to October 2024, including baseline assessments, immediate post-tests, and a six-month follow-up to measure sustained effectiveness.

Measurement instruments

The research instruments were divided into two parts:

1. Experimental Instrument: The three-generation program for elderly care through community participation developed by the research team was based on Friedman's structural⁽⁹⁾ and functional theory of the family, as well as a review of relevant literature and research related to family structure and functions.

2. Data Collection Instruments consisted of the following:

2.1 Personal Information Questionnaire included information on age, gender, marital status, height, weight, education, occupation, income, underlying diseases, regular medications, and household members.

2.2 Quality of Life Questionnaire for Older Persons was based on the World Health Organization Quality of Life for Older Persons (WHOQOL-OLD), developed by Mick Power, Kathryn Quinn, and Silke Schmid which adapted from the Thai translation⁽¹⁰⁾. This instrument evaluates sensory abilities, autonomy, and social participation. Each item is scored on a 5-point Likert scale. Higher composite scores reflect a superior quality of life.

2.3 Family Functioning Questionnaire was the Chulalongkorn Family Inventory (CFI)⁽¹¹⁾: This 36-item scale assesses family dynamics across multiple dimensions, including problem-solving, communication, and roles, based on the McMaster Model of Family Functioning. Items are rated on a 4-point Likert scale (1 = strongly disagree to 4 = strongly agree). Total scores range from 36 to 144, with higher scores indicating healthier family functioning.

2.4 General Knowledge Test on Home-Based Elderly Care: This 20-item instrument was developed by the research team to assess caregivers' understanding of geriatric health promotion and disease prevention. This is a true/false assessment. Each correct answer receives 1 point, and incorrect answers receive 0 points, yielding a maximum possible score of 20.

The program and the questionnaires were reviewed by three experts, each validated for content (IOC > 0.50). To confirm there was no contamination, the 20 pilot test participants were recruited from a neighboring subdistrict in Laem Sing District, which shared similar demographic characteristics with Koh Pherd but was geographically distinct. The reliability yielded a Cronbach's alpha coefficient of no less than 0.80.

Data Analysis

Collected data were reviewed for completeness, accuracy, and validity. Incomplete questionnaires were excluded. The results were derived from a longitudinal quantitative assessment.

1. Personal information and quality of life by domain were analyzed using descriptive statistics, including frequency, percentage, mean, level, and standard deviation.

2. Comparisons of mean scores for quality of life and family functioning were conducted at three-time points: pre-intervention, post-intervention, and six months after the intervention analyzed by Multivariate Repeated Measures and One-way ANOVA to assess changes over time.

Results

Table 1: Demographic Characteristics of Elderly Participants (n = 30)

Characteristics	Number (n)	Percentage (%)
Gender		
Female	21	70.00
Male	9	30.00
Age (years) Mean = 72.57, Range = 60–87		
Marital Status		
Married	12	40.00
Single/widowed	12	40.00
Others	6	20.00
Education Level		
Primary education	28	93.33
Others	2	6.67
Monthly Income (Thai Baht) Mean = 4,087.50, Range = 600–15,000		
Primary Source of Income (15 participants were currently employed)		
Elderly welfare allowance	28	93.33
Others	2	6.67
Household Composition		
3 - 4 family members	13	43.33
More than 4 family members	17	56.67

A total of 30 elderly individuals participated in the Three-Generation Family Program. The participants had an average age of 72.57 years (range: 60–87 years). The majority were female (70.00%). Regarding marital status, the proportions of married and single/widowed participants were equal (40.00% each). Most participants had completed primary education (93.30%), and 50.00% were currently unemployed. The average monthly income was 4,087.50 Thai Baht (range: 600–15,000 Baht). The primary source of income for 93.00% of participants was the elderly welfare allowance. In terms of household composition, 56.67% lived with more than 4 family members (Table 1).

Table 2: Comparison of Mean Scores of Elderly Quality of Life, Family Functioning, and General Knowledge of Elderly Care Across Three Time Points (n = 30)

Variable	Pre-Program (M ± SD)	Post-Program (M ± SD)	6-Month Follow-up (M ± SD)	F	p-value
Quality of Life of the Elderly	76.47 ± 2.03	76.90 ± 1.93	90.90 ± 1.74	4113.324	< .001
Family Functioning	109.83 ± 1.99	109.23 ± 1.66	123.60 ± 3.43	7699.024	< .001
General Knowledge	13.33 ± 0.47	13.40 ± 0.43	15.63 ± 0.48	2660.446	< .001

The quality of life of the elderly showed a significant increase over time ($F = 4113.324$, $p < .001$), rising from a mean score of 76.47 (SD = 2.03) at baseline to 90.90 (SD = 1.74) at the six-month follow-up. Although only a slight increase was observed immediately after the program ($M = 76.90$, SD = 1.93), a substantial improvement was evident at follow-up. Similarly, family functioning demonstrated a significant improvement ($F = 7699.024$, $p < .001$). The mean score slightly decreased from 109.83 (SD = 1.99) at pre-program to 109.23 (SD = 1.66) post-program. However, it increased markedly to 123.60 (SD = 3.43) at the six-month follow-up, suggesting delayed program effects. In addition, general knowledge of elderly care significantly improved over time ($F = 2660.446$, $p < .001$). The mean score increased from 13.33 (SD = 0.47) at baseline to 15.63 (SD = 0.48) at follow-up, with only a minimal increase observed immediately after the program ($M = 13.40$, SD = 0.43) (Table 2).

Discussion

The essence of this research lies in the transition from a traditional caregiver-elderly dyad to a three-generation engagement model. Based on Friedman's structural and functional theory, this was hypothesized that engaging all household generations-grandparents, parents, and children would create a more resilient interconnected system. This approach is particularly critical in Thai aging societies where the extended family remains a predominant, yet often underutilized, social unit.

The Plan - Act - Observe - Reflect cycle was integral to the program's success. In particular, the Reflect phase enabled the research team and the Koh Pherd Subdistrict Committee to recognize that initial gains in knowledge were insufficient without corresponding behavioral adaptation. Concurrently, active community participation during the Act phase where children, working-age adults, and older persons engaged in reciprocal care-fostered a nurturing environment that strengthened intergenerational bonds over time. This is consistent with the development of elderly care models through participatory networks, which suggests that engaging local networks facilitates the exchange of knowledge and experiences, leading to diverse activities that benefit both the elderly and the wider community⁽¹²⁾. This collaborative analysis ensured that the program effectively addressed context-specific constraints, such as limited human resources, by empowering the family unit as the primary mechanism of care. The effectiveness of this model was further bolstered by the capacity building of the core team, which enhanced their ability to serve as advisors and facilitators. This aligns with previous findings that promoting community engagement through structured training significantly increases the knowledge and participation levels of local volunteer⁽¹³⁾.

The evaluation of the program's effects revealed changes in elderly quality of life, family functioning, and general knowledge about elderly care, assessed at three time points: prior to program implementation, one month after completion, and six months after completion. The results showed no statistically significant difference in quality of life between the pre-program stage and post-program. However, a statistically significant improvement in quality of life was observed six months after program completion, compared to both the pre-program and post-program assessments. These findings suggest that the program's impact on quality of life became more evident over time, highlighting the importance of sustained community participation and ongoing support in elderly care initiatives. Programs incorporating community participation may require time to produce clearly observable outcomes. The participatory planning phase ensured that the program remained flexible and aligned with local constraints. Such a collaborative approach has been shown to drive the

development of sustainable long-term care systems and lead to impactful health policy outcomes at the community level⁽¹⁴⁾. Although no statistically significant changes were detected in the short term (post-program), long-term assessment at six months post-program revealed significant improvements across all measured aspects. The observed enhancements in elderly quality of life, family functioning, and knowledge related to elderly care suggest that the delayed impact may be attributed to the time needed for family and community members to internalize, adapt, and effectively apply the knowledge and skills acquired during the program.

These findings reinforced the perspective enhancing the quality of life among older adults was a continuous process, significantly strengthened by sustained family and community engagement. The sustained improvement in Quality of Life (QoL) observed at the six-month follow-up suggests that the PAR process facilitated the progressive adaptation of family roles over time. Grounded in Friedman's (1998) Structural and Functional Theory, the program reconfigured the household into an interconnected system in which caregiving responsibilities were distributed across children and parents. This finding contrasts with the individual-centered outcomes reported by Promla and Ukkakimaphan⁽¹⁵⁾, as our results indicate that effective family functioning, as reflected in CFI scores, constitutes a critical precondition for the sustained well-being of older adults. This is consistent with the participatory community-based model for bedridden elderly, which demonstrated that enhanced caregiver knowledge and skills through community engagement ultimately elevate the quality of life for older individuals⁽¹⁶⁾. Furthermore, consistent with the Ban Pho model, our findings affirm that community-participatory approaches are associated with high levels of healthcare practices (73.48%) and a moderate level of quality of life (62.88%)⁽¹⁷⁾. The retention of knowledge at six months (mean = 15.63) further highlights the effectiveness of three-generation engagement in cultivating a nurturing environment that upholds and supports the dignity of older adults. This suggests that the intervention was effective in enhancing the knowledge and skills of caregivers and family members critical components in promoting the health and quality of life of older adults. The improvement in knowledge contributed to greater caregiver confidence and improved capacity to address emerging challenges, ultimately leading to more effective and efficient care.

The participation of family members in elderly care played a critical role in enhancing overall family functioning. Evidence from the program indicated that when family members acquired essential knowledge and skills in elderly care, they were better equipped to address the needs of older adults. Such training and capacity building efforted not only improve the quality of care provided but also

strengthen family relationships, reduced caregiver stress and anxiety, and bolstered caregiver confidence. Therefore, programs that focus on empowering family members with the competencies required for elderly care are vital in promoting effective and sustainable caregiving within the family context.

Conclusion

The findings demonstrate that the Three-Generation Engagement Program, developed through a Transformative Participatory Action Research (PAR) approach, catalyzed a substantive shift in family caregiving dynamics. The evidence indicates that, although short-term effects were minimal, significant improvements in older adults' Quality of Life, family functioning, and caregiver knowledge became evident at the six-month follow-up. This delayed yet substantial impact suggests that the PAR process extended beyond the transmission of knowledge, facilitating structural transformations within both family systems and the broader community, and thereby fostering a sustainable and inclusive care environment. Collectively, these findings support the integration of three-generation engagement models into public health policy as a strategic response to the complexities of population aging.

Limitations: We acknowledge the small sample size ($n=30$) and the specific cultural context of Koh Pherd, which may limit generalizability to non-extended family structures.

Implications for Practice: This model offers a transferable framework for aging societies with comparable cultural contexts, demonstrating that leveraging existing three-generation family structures represents a cost-effective and sustainable alternative to institutionalized care systems.

Future studies should explore scaling this model in varied community settings such as urban environments or regions with different socio-economic profiles to evaluate its adaptability. Furthermore, while this study included elderly participants with relatively high independent functioning (ADL 12–20), future research should examine the model's impact on families caring for the bedridden or those with cognitive decline. Lastly, longitudinal studies extending beyond six months would be valuable in determining the permanent sustainability of these transformative community behavioral changes.

Ethical Approval Statement

This study was approved by the Human Research Ethics Committee of Chanthaburi Province/Health Region 6 with ethical approval code no.003/66.

Author Contributions

Conceptualization and methodology, MB, RA and CV; Investigation, MB, RA and CV; Formal analysis, OB; Visualization and writing - original draft, MB, RA and OB; Writing - review and editing, MB and RA. All authors read and approved the manuscript prior to submission for publication.

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Conflicts of Interest

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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