

THE EFFECT OF A WELL-BEING PROMOTION PROGRAM ON DEPRESSION AMONG OLDER ADULTS IN THE COMMUNITY

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Abstract

This study aimed to: (1) evaluate the effect of a well-being promotion program on depressive symptoms among older adults in the community; (2) compare depression scores before and after the intervention in the experimental group; and (3) examine differences in depression score changes between the experimental and control groups. A quasi-experimental design with a pretest–posttest control group was employed. The sample consisted of 66 older adults. Research instruments included the 9-Item Depression Screening Questionnaire (9Q) and the Thai Geriatric Depression Scale (TGDS). Data were analyzed using descriptive statistics and independent and paired t-tests. The results indicated a significant reduction in depression levels, with greater improvement observed in the experimental group compared to the control group. These findings suggest that the well-being promotion program is effective in reducing depressive symptoms among older adults. The program may be applied as an alternative intervention in community mental health settings.

Keywords: well-being, depression, older adults, community-based intervention, positive psychology

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Introduction

Global population aging has accelerated as a result of declining birth rates and increasing life expectancy. The World Health Organization projects that the number of older adults will reach 1.4 billion, accounting for approximately 21% of the global population by 2030 (World Health Organization, 2023). In Thailand, older adults constituted 18% of the total population in 2020, and the country officially entered an aged society in 2022. It is further projected that Thailand will become a super-aged society by 2031, with older adults comprising more than 28% of the population (Thai Gerontology Research and Development Institute, 2022).

Older adults represent a high-risk group for depression. Globally, the prevalence of depression is estimated at 4.4%, with higher rates observed in Asian populations (World Health Organization, 2017). In Thailand, the prevalence of depression among older adults ranges from 10% to 15%, and has reached as high as 19.47% in certain regions (Department of Mental Health, 2020; Office of the Inspector General, 2023). The COVID-19 pandemic has further exacerbated depressive symptoms, with reported prevalence rising to 25.61% in community hospital settings (Thai Gerontology Research and Development Institute, 2020). At the local level, Nakhon Pathom Province, particularly Mueang District, has experienced a notable increase in its older adult population (Nakhon Pathom Provincial Statistical Office, 2021, 2022).

Depression among older adults is influenced by a complex interplay of biological, psychological, and social factors. These include age-related physiological changes, chronic illnesses, loss of social roles, limited family support, social isolation, and economic hardship. Previous evidence suggests that happiness and life satisfaction tend to decline with age, reaching their lowest levels in late adulthood (Population Studies Center, Chulalongkorn University, 2017). These findings highlight the need for structured and effective interventions to enhance psychological well-being in this population.

A review of the literature indicates that social, cultural, and cognitive-based interventions are effective in reducing depressive symptoms among older adults. In particular, interventions grounded in positive psychology have demonstrated significant potential to enhance well-being and alleviate depression. These interventions operate

by promoting positive emotions, strengthening interpersonal relationships, fostering a sense of meaning in life, and enhancing emotional resilience. Among these approaches, Seligman's PERMA model provides a comprehensive theoretical framework consisting of five core components: positive emotion, engagement, relationships, meaning, and accomplishment are the five core components of the PERMA model. These components collectively contribute to improved psychological well-being and have been empirically associated with reductions in depressive symptoms and enhancements in quality of life.

Based on this theoretical foundation, the well-being promotion program developed in this study was designed to incorporate key elements of the PERMA model through structured group activities. The program includes activities that promote positive emotional experiences (e.g., gratitude and positive reflection), facilitate social interaction and support (e.g., group sharing), enhance personal meaning (e.g., life review), and encourage goal setting for accomplishment. These components are expected to function synergistically to reduce depressive symptoms by improving emotional regulation, strengthening social connectedness, and fostering a sense of purpose among older adults.

Although prior studies have demonstrated the effectiveness of positive psychology interventions, there remains a gap in culturally tailored, community-based programs specifically designed for Thai older adults. Existing interventions have often lacked integration with local cultural values and real-life contexts. In particular, the application of the PERMA framework in combination with culturally relevant activities, such as life-story sharing rooted in Thai social and cultural norms, has not been sufficiently explored.

Therefore, this study aims to develop and examine the effects of a culturally adapted, PERMA-based positive psychology program for Thai community-dwelling older adults. By integrating theoretical principles with culturally relevant practices, the program is expected to enhance psychological well-being, reduce depressive symptoms, and improve the overall quality of life among older adults. Research Objectives 1) To compare depression scores before and after the intervention within

the experimental group. 2) To compare changes in depression scores between the experimental and control groups following the intervention.

Research Framework

The conceptual framework of this study is grounded in the principles of positive psychology, particularly Seligman's PERMA model, which comprises five core components of psychological well-being: positive emotion, engagement, relationships, meaning, and accomplishment (Seligman, 2011). Positive emotion enhances mood and reduces depressive tendencies, while engagement facilitates the use of personal strengths through meaningful activities. Relationships emphasize supportive interactions that foster a sense of belonging and emotional security. Meaning involves perceiving life as purposeful, thereby strengthening motivation and resilience, whereas accomplishment focuses on goal attainment and self-efficacy. Together, these components facilitate emotional regulation, enhance life satisfaction, and reduce depressive symptoms. Empirical evidence suggests that sustained positive affect is associated with neurobiological processes that support mood regulation (Nanjon, 2015). Therefore, the application of the PERMA framework represents a promising approach to enhancing psychological well-being and reducing depression among older adults. The conceptual framework of this study is illustrated in Figure 1.



Figure 1 The framework.

Materials and Methods

This study employed a quasi-experimental design, specifically a two-group pretest–posttest control group design, to examine the effects of a well-being promotion program on depressive symptoms among community-dwelling older adults.

The study sample consisted of 66 older adults who met the inclusion criteria. Participants had no diagnosed cognitive impairment, were able to communicate effectively, and were willing to participate in the study. Individuals with a history of

major psychiatric disorders or severe medical conditions that could interfere with participation were excluded. Depressive symptoms were assessed using the 9-Item Depression Screening Questionnaire (9Q), with scores ranging from 13 to 24, indicating mild to moderate levels of depression.

A simple random sampling method was employed based on predetermined inclusion criteria. A total of 66 older adults were recruited for the study. The sampling and recruitment procedures were conducted as follows:

(1) A research assistant performed simple random sampling by drawing lots to select one subdistrict from the 25 subdistricts in Mueang District, Nakhon Pathom Province.

(2) Older adults aged 60–69 years residing in the selected subdistrict were identified. Eligible participants were screened using health records obtained from the Subdistrict Health Promoting Hospital in accordance with the study's inclusion criteria.

(3) Depression screening was conducted using the 9-Item Depression Screening Questionnaire (9Q). Older adults with scores ranging from 7 to 18, indicating mild to moderate depressive symptoms, were included in the study. Individuals with scores below 7, reflecting a normal emotional state, were excluded. Participants scoring 19 or higher, indicative of severe depression, were excluded and provided with preliminary counseling. They were also referred to a physician or mental health professional for further evaluation, diagnosis, and appropriate treatment.

(4) The intervention was administered by the principal investigator in collaboration with a research assistant, who jointly facilitated the activities and provided continuous support to participants throughout the study. Data collection involved the administration of questionnaires and non-participant observation of participants' behaviors and environmental context, without direct involvement in their activities.

Research Instruments

Three research instruments were used in this study:

1. 9-Item Depression Screening Questionnaire (9Q)

The 9Q is a standardized screening instrument used to assess depressive symptoms among older adults. It was administered to both the experimental and control groups prior to the intervention to determine baseline levels of depressive symptoms.

2. Well-being Promotion Program

The well-being promotion program was developed by the researcher in consultation with experts in gerontology and positive psychology. The program consisted of five structured activities designed for community-dwelling older adults. It was implemented over a period of five weeks, with one session per week, and each session lasting approximately 90 minutes.

3. Thai Geriatric Depression Scale (TGDS)

The TGDS (Department of Mental Health, 1994) is a standardized and validated instrument used to assess depressive symptoms among Thai older adults. Following the completion of the intervention, both the experimental and control groups were reassessed using the TGDS to determine post-intervention depression levels. The TGDS was developed based on a review of relevant literature and was evaluated by three experts. The content validity index (CVI) was 1.00, and the reliability coefficient (Cronbach's alpha) was 0.80, indicating acceptable reliability.

Development of the Well-being Promotion Program (Phase 1)

The well-being promotion program was developed based on a comprehensive review of the literature and expert consultation. The program comprised five activities grounded in positive psychology principles:

1. Enhancing positive emotions and reducing negative emotions
2. Promoting mind-body harmony through gentle physical activity
3. Strengthening interpersonal relationships and social support
4. Cultivating a sense of meaning in life
5. Fostering personal accomplishment and goal attainment

The program also included follow-up components designed to reinforce behavioral changes and sustain psychological well-being among participants.

Program Testing (Phase 2)

The effectiveness and feasibility of the program were evaluated through a pilot study using a pretest-posttest design. Data were collected using structured questionnaires. The well-being promotion program was pilot-tested with 30 older adults who exhibited characteristics similar to those of the target population and met the inclusion criteria but were not included in the main study sample.

Upon completion of all five activities, the researcher reviewed implementation-related issues and refined the program in consultation with the research advisor. This process ensured that the intervention was comprehensive, feasible, and appropriately adapted prior to its implementation in the main study.

Data Analysis

Data were analyzed using the Statistical Package for the Social Sciences (SPSS), version 23. Descriptive statistics, including mean, percentage, and standard deviation, were used to summarize demographic characteristics and baseline variables. Within-group changes in depression scores were analyzed using paired t-tests, whereas differences in change scores between the experimental and control groups were examined using independent t-tests. Statistical significance was determined using a two-tailed alpha level of .05.

Research Ethics

The research protocol was reviewed and approved by the Institutional Review Board (IRB) / Ethics Committee of Nakhon Pathom Rajabhat University (Approval No. 010/2568). Written informed consent was obtained from all participants prior to data collection. Participants were assured of confidentiality, voluntary participation, and their right to withdraw from the study at any time without penalty.

Results

Phase 1: Program Development

The well-being promotion program was developed through a comprehensive review of relevant literature and consultations with experts in gerontology and positive psychology, with the PERMA framework serving as the guiding conceptual model. The development process consisted of five key stages aligned with the five components of the PERMA model (Seligman, 2011): (1) positive emotion, (2) engagement, (3) relationships, (4) meaning, and (5) accomplishment.

The structured program was designed to ensure continuity within community settings and to effectively integrate positive psychology principles. It comprised five core activities corresponding to each PERMA component. The results indicated that the mean depression score of the experimental group after the intervention ($M = 6.12$, $SD = 1.08$) was significantly lower than the mean score before the intervention ($M = 13.85$, $SD = 1.22$), with statistical significance at the .05 level ($t = 27.98$, $p < .05$), as detailed below.

Activity 1: Positive Emotion

This activity aimed to enhance positive affect by encouraging older adults to recognize and cultivate emotions such as joy, contentment, hope, and calmness. The activity, titled *“Enhancing positive emotions by reducing negative emotions,”* incorporated guided breathing, relaxation techniques, and soft music to promote mental calmness and attentional focus. From a neuropsychological perspective, this activity is supported by the role of the limbic system in emotional processing and the prefrontal cortex in emotional regulation. Relaxation techniques contribute to neurotransmitter balance and stimulate the release of mood-enhancing hormones, thereby facilitating emotional regulation and cognitive clarity (Wongpiromsarn, 2017; Chutamas, 2015). In addition, guided meditation and group discussions enhanced emotional awareness, promoted positive cognitive reframing, and improved mood. These findings are consistent with previous studies demonstrating that positive psychology-based interventions can effectively reduce depressive symptoms (Seligman, 2011; Chaves et al., 2019).

Activity 2: Engagement

The activity, titled *“Promoting physical and mental well-being through group exercise,”* aimed to foster engagement through physical movement and culturally relevant dance activities. Participants took turns leading simple exercise movements, followed by group dancing to a familiar local song. Physical activity has been shown to stimulate key neurotransmitters, including serotonin, dopamine, and endorphins, while reducing inflammatory cytokines and increasing brain-derived neurotrophic factor (BDNF). These physiological responses contribute to improved mood and reduced depressive symptoms (Xie et al., 2021). Furthermore, the use of enjoyable and culturally familiar dance activities enhanced participant motivation, leadership, and group interaction. These findings are consistent with systematic reviews indicating that dance-based interventions can significantly reduce depression and anxiety among older adults (Prudente et al., 2024; Dauwan et al., 2015), as well as improve overall mental health and quality of life (Soong et al., 2025).

Activity 3: Relationships

The activity, titled “*Strengthening interpersonal relationships and social harmony*,” aimed to enhance interpersonal connectedness among participants. Participants shared personal information, including their names, strengths, and sources of happiness, followed by an interactive name-card activity designed to promote recognition and group bonding.

These interactions fostered trust, openness, and group cohesion, thereby enhancing therapeutic factors within the group process (Marmarosh et al., 2022; Yalom, 1995). Improved interpersonal relationships are also associated with increased oxytocin release, a neurochemical linked to social bonding, positive affect, and reduced loneliness, thereby supporting emotional well-being (Xie et al., 2021).

Activity 4: Meaning

The activity, titled “*Cultivating meaning in life*,” encouraged participants to explore personal strengths, self-worth, age-related changes, and adaptive coping strategies. Through structured dialogue, self-reflection, and the use of motivational video materials, participants were supported in accepting physical decline and reframing challenging life experiences.

This process enhanced existential meaning and emotional resilience, thereby reducing factors associated with depressive symptoms (Sardareh et al., 2024). In addition, group discussions facilitated shared storytelling and mutual encouragement, consistent with evidence indicating that life-review and reminiscence-based interventions improve psychological well-being and reduce depression among older adults (Al-Ghafri et al., 2024; Seligman, 2011).

Activity 5: Accomplishment

The activity, titled “*Fostering personal accomplishment and self-efficacy*,” focused on goal setting, recognition of past achievements, and reinforcement of self-efficacy. Participants reflected on meaningful life accomplishments and discussed strategies for managing depressive symptoms and age-related challenges. A positive problem orientation combined with structured problem-solving has been shown to reduce depressive symptoms and enhance perceived self-efficacy (Wu et al., 2023).

Furthermore, recalling personal successes may stimulate serotonin release, contributing to improved mood and reduced negative affect (Xie et al., 2021).

Consistent with the principles of behavioral activation, repeated engagement in meaningful and achievable activities enhanced personal mastery and reduced depressive symptoms (Saber et al., 2024), thereby fostering a sustained sense of competence and self-worth (Seligman, 2011).

Conclusion of Findings

In summary, the findings of this study indicate that the well-being promotion program was effective in reducing depressive symptoms among community-dwelling older adults. The program integrates key elements of positive psychology and provides a structured, culturally relevant intervention that enhances emotional regulation, social connectedness, and sense of purpose. These findings suggest that the program may serve as an alternative or complementary therapeutic approach for health professionals seeking to alleviate depressive symptoms and promote psychological well-being among older adults in community settings.

Phase 2: Program Effectiveness Evaluation

To evaluate the impact of the well-being promotion program on depressive symptoms, a pretest–posttest design was employed.

1. General Characteristics of Participants

Table 1 presents the demographic characteristics of participants in both the control and experimental groups (n = 66). The majority of participants were female and aged between 60 and 64 years, indicating a predominance of early older adults. Most participants had completed primary education and identified as Buddhist. More than half were married and engaged in daily wage labor or agricultural work. The majority reported having sufficient income to meet their daily needs, with income primarily derived from themselves or their children. Most participants reported having no primary caregiver, and more than half had at least one chronic illness. In addition, most participants lived with family members, had no or limited history of COVID-19 infection, and were current or former members of elderly clubs. Overall, the demographic characteristics were comparable between the control and experimental groups.

Table 1 General Information of the Control and Experimental Groups (n = 66).

Demographic Information	Control Group Number (n = 33)	Percentage (%)	Experimental Group Number (n = 33)	Percentage (%)	χ^2	p- value
Gender					.66 ^a	.42
- Male	10	30.3	7	21.2		
- Female	23	69.7	26	78.8		
Age (years)					.002 ^b	1.00
- 60 – 64 years	23	69.7	20	60.6		
- 65 – 69 years	10	30.3	13	39.4		
Educational Level					1.714 ^a	.788
Primary education	29	87.9	27	81.8		
Secondary education	3	9.1	4	12.1		
Diploma/Vocational Certificate	1	3.0	2	6.1		
Religion					33 ^a	.22
Buddhist	33	100	33	100		
Marital Status					3.702 ^a	.448
Single	8	24.2	3	9.1		
Married	21	63.6	19	57.6		
Widowed/Divorced/ Separated	4	12.1	11	33.3		
Occupation					4.231 ^a	.645
Government employee	0	0	1	3.0		
Daily wage worker	19	57.6	16	48.5		
Self-employed	4	12.1	1	3.0		
Farmer	10	30.3	15	45.5		
Income Sufficiency					12.648 ^a	.179
Insufficient	4	12.1	5	15.1		
Sufficient to make ends meet	22	66.7	22	66.7		
Sufficient with savings	7	21.2	6	18.2		
Source of Income					12.095 ^a	.208
Self	16	48.5	15	45.5		
Siblings	1	3.0	3	9.1		
Children	13	39.5	6	18.2		
Government welfare	3	9.1	9	27.2		

Table 1 General Information of the Control and Experimental Groups (n = 66). (cont.)

Demographic Information	Control Group Number (n = 33)	Percent age (%)	Experimental Group Number (n = 33)	Percentage (%)	χ^2	p-value
Primary Caregiver					3.626 ^a	.163
No	20	60.6	21	63.6		
Siblings	13	39.4	11	36.4		
Chronic Illness					.638 ^b	.424
Yes	21	63.6	19	57.6		
No	12	36.4	14	42.4		
Number of Family					5.915 ^a	.206
Living alone	6	18.2	2	6.1		
1–3 persons	15	45.5	12	36.4		
4–6 persons	12	36.4	19	57.5		
History of COVID-19					2.583 ^b	.630
Never infected	19	57.6	17	51.5		
Infected 1–2 times	14	42.4	16	48.5		
Membership in Elderly Club					5.334 ^a	.255
Current member	19	57.6	17	51.5		
Former member	14	42.4	16	48.5		
Non-member	0	0	0	0		

Remark a = Chi-square test, b = Fisher's exact test

2. Comparison of Pre- and Post-Intervention Depression Scores in the Experimental Group

An analysis of the mean and standard deviation of depression scores in the experimental group indicated a substantial improvement following participation in the well-being promotion program. Prior to the intervention, the mean depression score was 13.85 (SD = 1.22), reflecting a relatively high level of depressive symptoms. After the intervention, the mean score decreased markedly to 6.12 (SD = 1.08). A paired-samples t-test revealed that the reduction in depression scores was statistically significant ($t = 27.98$, $df = 32$, $p < .05$). This finding indicates that the intervention had a significant positive effect on reducing depressive symptoms among older adults.

In summary, the results demonstrate that the well-being promotion program was effective in significantly reducing depression levels in the experimental group, highlighting its potential as an effective approach for enhancing emotional well-being among older adults (Table 2).

Table 2 Comparison of Pre- and Post-Intervention Depression Scores in the Experimental Group.

Experimental Group	Depression Score			
	Mean (S.D.)	t	df	p-value
Pre-intervention	13.85 (1.22)	27.98	32	.000
Post-intervention	6.12 (1.08)			

Remark SD = standard deviation. $p < .05$ indicates statistical significance.

3. Comparison of Pre- and Post-Intervention Depression Scores in the Control Group

An analysis of depression scores in the control group revealed no statistically significant changes between the pre-intervention and post-intervention periods. Prior to the intervention, the mean depression score was 13.97 (SD = 1.10). After the same period without receiving the well-being promotion program, the mean score slightly increased to 14.48 (SD = 1.12). A paired-samples t-test indicated that this difference was not statistically significant ($t = 1.00$, $df = 32$, $p = .325$). These findings suggest that depressive symptoms in the control group remained relatively stable over time.

In summary, without the intervention, no meaningful change in depression levels was observed among older adults in the control group (Table 3).

Table 3 Comparison of Pre- and Post-Intervention Depression Scores in the Control Group.

Control Group	Depression Score			
	Mean (S.D.)	t	df	p-value
Pre-intervention	13.97 (1.10)	1.00	32	.325
Post-intervention	14.48 (1.12)			

Remark SD = standard deviation. $p < .05$ indicates statistical significance.

4. Comparison of Mean Differences in Depression Scores Between the Experimental and Control Groups

A comparison of depression scores between the experimental and control groups before and after the intervention revealed a significant difference in outcomes between the two groups. At baseline, both groups demonstrated comparable levels of depression, with mean scores of 13.85 (SD = 1.22) in the experimental group and 13.96 (SD = 1.10) in the control group. Following the intervention, the experimental group showed a substantial reduction in depression scores, decreasing to 6.12 (SD = 1.08). In contrast, the control group exhibited a slight increase in depressive symptoms, with a post-intervention mean score of 14.48 (SD = 1.12).

An independent-samples t-test demonstrated a statistically significant difference in mean change scores between the two groups ($t = 26.95$, $p < .001$). This finding indicates that the well-being promotion program had a significant positive effect on reducing depressive symptoms among older adults in the experimental group, whereas no comparable improvement was observed in the control group.

In summary, the intervention was effective in reducing depression levels, with a significantly greater magnitude of change observed in the experimental group compared to the control group (Table 4).

Table 4 Comparison of the Mean Difference in Depression Scores Between the Experimental and Control Groups Before and After the Intervention.

Depression Score	Experimental Group			Control Group			t	p-value
	M (S.D.)	$\bar{D}_1$	S.D.	M (S.D.)	$\bar{D}_2$	S.D.		
Pre-intervention	13.85 (1.22)			13.96 (1.10)				
		7.73	1.59		.52	.76	26.95	.000
Post-intervention	6.12 (1.08)			14.48 (1.12)				

Remark SD = standard deviation. $p < .05$ indicates statistical significance.

Conclusion

This study demonstrates that a structured, group-based well-being promotion program significantly reduces depressive symptoms among community-dwelling older adults. The program is culturally responsive, grounded in positive psychology principles, and represents a cost-effective, non-pharmacological intervention. Community nurses, mental health professionals, and aging service providers should consider adopting and adapting this program to local contexts. Training facilitators and integrating the program into primary care and community health systems may enhance accessibility and scalability. Policymakers should consider supporting funding for psychosocial interventions targeting older adults. Future research should include more diverse populations, incorporate long-term follow-up, and examine potential mediating and moderating factors to further refine program components.

Discussions

The findings indicate that participants in the experimental group experienced a significantly greater reduction in depressive symptoms compared to those receiving standard care. This effect can be attributed to the well-being promotion program, which is grounded in positive psychology and guided by Seligman's PERMA model, encompassing positive emotion, engagement, relationships, meaning, and accomplishment (Seligman, 2011). The promotion of positive emotions, personal strengths, supportive relationships, life meaning, and goal attainment has been shown to enhance psychological resilience and reduce depressive symptoms (Chaves et al., 2019; Yalom, 1995; Al-Ghafri et al., 2024).

Although the present study did not analyze the effects of individual program components separately, it is plausible that certain elements contributed more substantially to the observed outcomes. In particular, activities that promote positive emotions (e.g., gratitude exercises and positive reflection) and interpersonal relationships (e.g., group sharing and social interaction) may have had the strongest impact. These components likely enhanced emotional support, reduced loneliness, and fostered a sense of connectedness—key protective factors against depression among older adults. Furthermore, activities related to meaning and accomplishment,

such as goal setting and life reflection, may have contributed to improved psychological well-being by reinforcing a sense of purpose and self-worth.

These findings are consistent with both national and international studies demonstrating the effectiveness of positive psychology-based interventions in reducing depression among older adults (Anantapitivat & Phengsengiam, 2016; Anantapitivat, 2017; Chaves et al., 2019). Using a quasi-experimental pretest–posttest design, this study confirms that a five-week intervention was more effective than standard care in enhancing positive emotions, facilitating acceptance of age-related changes, and promoting adaptive cognitive processes, resulting in significantly lower post-intervention depression scores in the experimental group.

However, several limitations should be considered. First, outcomes were assessed only in the short term (immediately post-intervention), and the long-term effects remain unclear. Second, the sample consisted of older adults with mild to moderate depressive symptoms, which may limit generalizability to individuals with more severe depression. Therefore, caution is warranted when applying these findings to populations with different levels of symptom severity.

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