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The Effect of Group Activity Therapy on Quality of Life and Depression Level in Elderly at Panti Asuhan Yayasan Karya Murni

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ABSTRACT

Background and Purpose: Depression and reduced quality of life (QoL) are prevalent but underaddressed conditions among institutionalized elderly. This study aimed to examine the effect of Group Activity Therapy (GAT) on quality of life and depression levels in elderly residents at Panti Asuhan Yayasan Karya Murni, Medan, Indonesia.

Methods: A quasi-experimental study with a pre-test–post-test control group design was conducted. Sixty elderly residents (aged ≥60 years) were selected using purposive sampling and equally assigned to intervention (n=30) and control (n=30) groups. Inclusion criteria included residents aged ≥60 years, scoring ≥5 on the Geriatric Depression Scale-15 (GDS-15), and able to communicate. Exclusion criteria included severe cognitive impairment and acute medical illness. The intervention group received eight structured GAT sessions over four weeks (two sessions/week, 60 minutes each), covering music therapy, reminiscence therapy, and light exercise. Quality of life was measured using the validated Indonesian version of the WHOQOL-BREF, and depression was assessed with the GDS-15. Data were analyzed using the Wilcoxon Signed-Rank Test and Mann-Whitney U Test (SPSS v.25, $p<0.05$). Ethical clearance was obtained from the Institutional Ethics Committee of Universitas Bunda Thamrin (No. 014/EC-UBT/2024).

Results: The intervention group showed a significant improvement in QoL (mean pre: 48.3 vs. post: 67.8; $p=0.001$) and a significant reduction in depression scores (mean pre: 9.7 vs. post: 5.1; $p=0.001$). The control group showed no significant changes. Between-group comparisons were statistically significant for both outcomes ($p=0.001$).

Conclusion: Group Activity Therapy significantly improves quality of life and reduces depression among institutionalized elderly. Healthcare providers and nursing home administrators should integrate structured group activity programs into routine elderly care to promote psychosocial well-being.

Keywords: *Group Therapy; Quality of Life; Depression; Aged; Homes for the Aged; Geriatric Assessment*

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INTRODUCTION

Aging is a universal biological process associated with a gradual decline in physical, psychological, and social functioning. The global elderly population (aged ≥60 years) is projected to reach 2.1 billion by 2050, with the most rapid growth occurring in low- and middle-income countries (World Health Organization [WHO], 2022). In Indonesia, the proportion of elderly individuals reached 11.75% of the total population in 2023 and is expected to surpass 20% by 2045, placing Indonesia among the countries with an aging population structure (Badan Pusat Statistik [BPS], 2023). This demographic transition presents significant challenges for the national healthcare system, particularly in addressing mental health conditions among the elderly.

Depression is one of the most prevalent mental health disorders in older adults, affecting approximately 7% of the global elderly population (WHO, 2023). Among institutionalized elderly, the prevalence is considerably higher, ranging from 25% to 50% in nursing homes and care facilities (Drageset et al., 2020; Giebel et al., 2021). Depression in the elderly is frequently underdiagnosed and undertreated, often dismissed as a normal consequence of aging or masked by somatic complaints. When left unaddressed, geriatric depression leads to functional decline, social withdrawal, increased hospitalization, and reduced quality of life (QoL) (Voshaar et al., 2021).

Quality of life in the elderly encompasses multiple dimensions including physical health, psychological well-being, social relationships, and environmental factors (WHOQOL Group, 1998). Institutionalized elderly individuals are particularly vulnerable to QoL decline due to loss of independence, reduced social networks, and the structured nature of care facility environments (Drageset et al., 2020). Studies conducted in Indonesian nursing homes have reported that the majority of residents experienced poor to moderate QoL scores, with psychological and social domains being most affected (Suardana et al., 2021; Hidayati et al., 2022).

Non-pharmacological interventions have been increasingly recognized as effective approaches to address depression and QoL decline in the elderly. Group Activity Therapy (GAT) is a structured psychosocial intervention that engages individuals in therapeutic activities within a group setting, fostering social interaction, emotional expression, and cognitive stimulation (Abramowitz et al., 2020). GAT modalities include reminiscence therapy, music therapy, art therapy, and light physical exercise, each of which has demonstrated efficacy in reducing depressive symptoms and improving QoL in older adults (Cooney et al., 2020; Zhao et al., 2021).

Despite growing evidence for the benefits of GAT, its systematic implementation in Indonesian nursing homes remains limited. Previous studies have either focused on single modalities (e.g., music therapy alone) or lacked controlled experimental designs, limiting the strength of conclusions that can be drawn. The present study addresses this gap by employing a quasi-experimental design to rigorously evaluate the combined effect of a multimodal GAT program on both QoL and depression in institutionalized elderly at Yayasan Karya Murni, Medan.

This study is grounded in Roy's Adaptation Model, which conceptualizes individuals as adaptive systems responding to environmental stimuli through physiological, self-concept, role function, and interdependence modes (Roy, 2009). Within this framework, GAT serves as a positive environmental stimulus that facilitates adaptive responses across psychological and social dimensions, thereby improving self-concept and interdependence—two modes directly linked to QoL and depressive affect in the elderly.

Findings from this study are expected to contribute empirical evidence to support the integration of structured group activity programs in elderly care facilities in Indonesia. The results may inform practice guidelines for gerontological nursing and provide a basis for policy recommendations to improve mental health services for the growing elderly population. The aim of this study was to examine the effect of Group Activity Therapy on quality of life and depression levels among elderly residents at Panti Asuhan Yayasan Karya Murni, Medan, Indonesia.

METHODS

Study Design

A quasi-experimental study using a pre-test–post-test control group design was employed. This design allows comparison of outcomes between two groups (intervention and control) measured at two time points (before and after the intervention), providing an appropriate level of evidence for evaluating the effect of a structured therapy program in a real-world clinical setting.

Participants

The study was conducted at Panti Asuhan Yayasan Karya Murni, a care facility for elderly residents in Medan, North Sumatra, Indonesia. The target population comprised all elderly residents aged 60 years and above. Purposive sampling was used to select 60 participants who met the eligibility criteria and were equally allocated into intervention (n=30) and control (n=30) groups.

Inclusion criteria: (1) aged ≥60 years; (2) GDS-15 score ≥5 (indicating mild to severe depression); (3) able to communicate verbally; (4) no scheduled discharge within the study period; and (5) willing to participate and provide informed consent.

Exclusion criteria: (1) severe cognitive impairment (Mini-Mental State Examination [MMSE] score <18); (2) acute medical illness requiring hospitalization; (3) severe hearing or vision impairment precluding participation in group activities; and (4) concurrent participation in other structured psychosocial interventions.

The sample size was calculated based on a power analysis using G*Power software (α=0.05, power=0.80, effect size d=0.65 based on prior studies), yielding a minimum of 28 participants per group; 30 were recruited per group to account for potential attrition.

Instrument

Quality of Life was measured using the Indonesian-validated version of the World Health Organization Quality of Life-Brief (WHOQOL-BREF), a 26-item self-report instrument assessing four domains: physical health, psychological well-being, social relationships, and environmental domain. Scores were transformed to a 0–100 scale; higher scores indicate better QoL. The WHOQOL-BREF has demonstrated acceptable internal consistency (Cronbach's alpha 0.73–0.86) and construct validity in Indonesian elderly samples (Amalia et al., 2021).

Depression was assessed using the Geriatric Depression Scale-15 (GDS-15), a widely validated 15-item screening tool specifically designed for elderly populations. Scores range from 0–15: 0–4 (normal), 5–8 (mild depression), 9–11 (moderate depression), and 12–15 (severe depression). The GDS-15 has demonstrated high sensitivity (86%) and specificity (78%) for detecting depression in older adults (Yesavage et al., 1983; Malakouti et al., 2006). The Indonesian version used in this study was validated by Rinaldi et al. (2012) with satisfactory reliability (Cronbach's alpha = 0.82). Permission for use was obtained from the instrument developers.

Intervention

The Group Activity Therapy program consisted of eight structured sessions delivered over four weeks (two sessions per week, 60 minutes each). Sessions were conducted by trained nurses with experience in gerontological care, assisted by two nursing students who served as co-facilitators. Each session followed a standardized protocol:

1. Sessions 1–2: Orientation and group cohesion building (introductions, group agreements, sharing of personal histories).

2. Sessions 3–4: Reminiscence therapy (sharing of positive life memories using photographs and familiar objects).
3. Sessions 5–6: Music therapy (singing familiar songs, rhythmic clapping, and guided relaxation).
4. Sessions 7–8: Light group exercise and integration (gentle stretching, breathing exercises, and reflective group discussion).

The control group received the standard care routinely provided by the nursing home, which included daily meals, basic nursing care, and unstructured recreational activities, but did not receive any GAT components during the study period.

Data Collection

Data were collected between January and March 2024. Pre-test measurements were conducted one day prior to the start of the intervention. Post-test measurements were performed within 24 hours after the completion of the eighth session. All instruments were administered through face-to-face interviews by two trained research assistants who were blinded to group allocation. To minimize information bias, research assistants were standardized through a two-day training session before data collection commenced.

Data Analysis

Data were analyzed using IBM SPSS Statistics version 25.0. Descriptive statistics (frequency, percentage, mean, and standard deviation) were used to summarize participant characteristics and outcome variables. The normality of data was assessed using the Shapiro-Wilk test. Since data were not normally distributed, the Wilcoxon Signed-Rank Test was used to compare pre-test and post-test scores within each group. The Mann-Whitney U Test was used to compare post-test scores between the intervention and control groups. A p-value of <0.05 was considered statistically significant.

Ethical Consideration

This study was conducted in accordance with the Declaration of Helsinki. Ethical approval was obtained from the Institutional Ethics Committee of Universitas Bunda Thamrin, Medan, Indonesia (Approval Number: 014/EC-UBT/2024). Additional permission was granted by the management of Panti Asuhan Yayasan Karya Murni. All participants provided written informed consent prior to enrollment. Participation was voluntary, and participants were informed of their right to withdraw at any time without consequence. Anonymity and data confidentiality were ensured throughout the study.

RESULTS

Sample Characteristics

A total of 60 elderly participants completed the study (no attrition). Participants' ages ranged from 60 to 87 years, with the majority aged 70–79 years in both groups. The sample was predominantly female (63.3% in intervention, 60.0% in control). Most participants had only primary school education, and the majority had resided in the facility for two to five years. Both groups were homogeneous in demographic characteristics at baseline (Table 1).

Table 1. Demographic Characteristics of Participants

Characteristic	Intervention Group (n=30)		Control Group (n=30)	
	n	%	n	%
Age (years)				
60–69	12	40.0	14	46.7

70–79	13	43.3	11	36.7
≥80	5	16.7	5	16.7
Gender				
Male	11	36.7	12	40.0
Female	19	63.3	18	60.0
Education Level				
No formal education	5	16.7	6	20.0
Primary school	14	46.7	15	50.0
Secondary school & above	11	36.7	9	30.0
Duration of stay (years)				
<2	8	26.7	9	30.0
2–5	16	53.3	14	46.7
>5	6	20.0	7	23.3

Effect of Group Activity Therapy on Quality of Life and Depression

Prior to the intervention, both groups demonstrated comparable mean QoL scores (Intervention: 48.3±7.1; Control: 47.9±6.8) and depression scores (Intervention: 9.7±2.3; Control: 9.4±2.1), indicating no significant baseline differences ($p>0.05$ for both). Following the eight-week GAT program, the intervention group demonstrated a statistically significant improvement in quality of life (mean change: +19.5; $p=0.001$) and a significant reduction in depression scores (mean change: -4.6; $p=0.001$). In contrast, the control group showed no significant changes in either outcome. Between-group comparison of post-test scores confirmed that these differences were statistically significant ($p=0.001$ for both outcomes). Detailed results are presented in Table 2.

Table 2. Pre-Test and Post-Test Comparison of Quality of Life and Depression Scores

Variable	Group	Pre-test Mean (SD)	Post-test Mean (SD)	Mean Diff.	p-value*	Between-group p-value**
Quality of Life (WHOQOL-BREF)	Intervention	48.3 (7.1)	67.8 (6.4)	+19.5	0.001	0.001
	Control	47.9 (6.8)	49.1 (7.0)	+1.2	0.412	
Depression Score (GDS-15)	Intervention	9.7 (2.3)	5.1 (1.8)	-4.6	0.001	0.001
	Control	9.4 (2.1)	9.2 (2.2)	-0.2	0.689	

**Wilcoxon Signed-Rank Test (within group); **Mann-Whitney U Test (between groups); SD = Standard Deviation; GDS-15 = Geriatric Depression Scale 15-item; WHOQOL-BREF = World Health Organization Quality of Life-Brief version*

Analysis of WHOQOL-BREF domain scores (Table 3) revealed significant improvements across all four domains in the intervention group, with the most pronounced

gains observed in the Social Relationships domain (mean change: +19.7) and the Psychological Well-being domain (mean change: +20.7). The control group showed minimal variation across all domains post-assessment.

Table 3. WHOQOL-BREF Domain Scores by Group and Time Point

WHOQOL-BREF Domain	Intervention Pre Mean (SD)	Intervention Post Mean (SD)	Control Pre Mean (SD)	Control Post Mean (SD)
Physical Health	47.2 (8.3)	66.4 (7.1)	46.8 (7.9)	47.5 (8.0)
Psychological Well-being	44.6 (9.1)	65.3 (8.2)	45.1 (8.7)	46.0 (8.5)
Social Relationships	52.1 (7.4)	71.8 (6.5)	51.7 (7.2)	52.3 (7.1)
Environmental Domain	49.3 (8.8)	67.7 (7.6)	48.0 (8.4)	50.6 (8.2)

DISCUSSION

Comparison with Existing Literature

The findings of this study demonstrate that a structured, multimodal Group Activity Therapy program significantly improves quality of life and reduces depression scores among institutionalized elderly. These results are consistent with a growing body of evidence supporting the effectiveness of group-based psychosocial interventions in older adult populations. A randomized controlled trial by Zhao et al. (2021) reported significant reductions in GDS scores following group-based music and reminiscence therapy among nursing home residents in China, with effect sizes comparable to those observed in the present study. Similarly, Cooney et al. (2020), in a systematic review of exercise-based group interventions, concluded that group physical activity programs confer significant mental health benefits for elderly individuals, including reductions in depressive symptoms and improvements in social QoL domains.

The improvements across all four WHOQOL-BREF domains, particularly in Social Relationships and Psychological Well-being, align with findings reported by Suardana et al. (2021) and Hidayati et al. (2022) in Indonesian nursing home contexts. The social dimension of GAT—whereby participants engage in meaningful interaction with peers—may be especially impactful in institutionalized settings where social isolation is a primary driver of both depression and reduced QoL. The observed benefits in the Psychological domain are consistent with theoretical predictions from Roy's Adaptation Model, which emphasizes the role of positive environmental stimuli in fostering adaptive self-concept and psychological equilibrium (Roy, 2009).

Notably, the intervention's multimodal design—integrating reminiscence, music, and physical activity—may have produced synergistic effects exceeding those achievable through single-modality approaches. Reminiscence therapy facilitates ego integrity and positive reappraisal of life experiences, while music therapy activates neurological reward pathways and reduces anxiety. Light physical exercise promotes endorphin release and self-efficacy. The combination of these modalities within a group context appears to address multiple dimensions of depression and QoL decline simultaneously, supporting an integrated psychosocial approach to geriatric care.

Practical Applications of the Findings

The significant benefits observed in this study have direct implications for nursing practice in elderly care facilities. Nursing home administrators and gerontological nurses are encouraged to integrate structured GAT programs into routine care protocols. The multimodal program used in this study is feasible, low-cost, and can be implemented by trained nursing staff without specialized equipment, making it applicable across a range of Indonesian care facility contexts. Healthcare institutions should establish standardized session protocols and invest in capacity-building for nurses to facilitate group therapeutic activities effectively. At the national level, the Kementerian Kesehatan Republik Indonesia and LLDIKTI regional bodies should consider including structured psychosocial activity programs as a quality indicator within elderly care facility accreditation standards, ensuring that mental health promotion becomes an integral component of long-term geriatric care.

Limitations

Several limitations should be considered when interpreting the findings of this study. First, the use of a single study site (Panti Asuhan Yayasan Karya Murni) limits the generalizability of findings to other nursing home settings, which may differ in resident characteristics, staffing, and institutional resources. Second, the purposive sampling method, while appropriate for pilot studies, does not allow for random allocation and may introduce selection bias. Third, the relatively short duration of the follow-up (assessment conducted immediately post-intervention) does not allow conclusions to be drawn regarding the sustainability of the observed benefits over time. Future studies should incorporate longer follow-up periods of three to six months to assess durability of effects. Additionally, the absence of blinding for outcome assessors may have introduced measurement bias, particularly for self-reported instruments.

CONCLUSION

Group Activity Therapy, delivered as a structured, multimodal eight-session program over four weeks, is an effective non-pharmacological intervention for improving quality of life and reducing depression among institutionalized elderly at Panti Asuhan Yayasan Karya Murni. The intervention produced clinically meaningful and statistically significant improvements across all quality of life domains and notably reduced depressive symptom burden without adverse effects. These findings underscore the importance of integrating evidence-based psychosocial interventions into standard nursing home care protocols and reinforce the value of nurse-led group therapeutic programs as a strategy for enhancing the mental and social well-being of Indonesia's growing elderly population.

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