

## THE IMPACT OF ANGKLUNG ART-BASED INTERVENTION ON THE HEALTH OF SENIOR CITIZENS IN MALAYSIA

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### Abstract

This study explores the therapeutic potential of angklung a traditional bamboo musical instrument as an art-based intervention to enhance the well-being of senior citizens in Malaysia. Despite angklung being commonly played for recreational purposes in group settings, its specific health applications remain underexamined. Thus, this study aims to identify the benefits of angklung as an art-based activity for the elderly and to analyse its impact on their physical, psychological, cognitive, and social well-being. This study employed the qualitative descriptive method, and data were collected through literature review and semi-structured interviews. Participants included angklung experts, medical professionals, caregivers and elderly residents from two care centres in Penang. The Angklung Healing Art Project was used as the primary intervention. The collected data were then analysed thematically using the WHOQOL framework, and purposive sampling was employed to ensure sampling diversity. The findings revealed that angklung activities helped improve the participants' physical and psychological health, independence, social interactions and their overall engagement in daily life. The elderly participants expressed enjoyment, increased motivation, and a sense of accomplishment after being involved in the sessions. Some also reported

reduced anxiety and improved memory recall following the intervention. In this light, despite cognitive limitations faced by some of the participants, most were able to participate meaningfully, demonstrating the angklung's accessibility. The melodic and calming tones of the angklung, along with its lightweight and easy-to-play design, make it a suitable tool for therapeutic and recreational purposes in aged care environments. This study has highlighted the importance of incorporating culturally relevant, low-barrier, and enjoyable musical activities into elderly care programs. It also recommends the development of assistive tools to support angklung use among older adults with physical or cognitive limitations.

**Keywords:** *angklung, elderly, art-based intervention, quality of life, therapeutic benefit*

## INTRODUCTION

The integration of the arts into healthcare often referred to as arts in medicine—has gained recognition for its therapeutic potential. Artistic activities, including literature, visual art, performance, and music, are increasingly employed in hospitals and community settings to support treatment, education, and emotional expression (Anderson et al., 2017; National Organization for Arts in Health, 2017). These non-pharmacological interventions reduce pain, anxiety, and fear while enhancing patient autonomy (El Geziry et al., 2018). Arts-based therapies promote emotional healing, coping, and psychological well-being (Grebe, 2019; World Health Organization [WHO], n.d.). Armstrong (2021) highlights that art not only heals but fosters connection.

Out of these approaches, music stands out as a highly accessible medium for engaging older adults. Music activities have been linked to reductions in stress, pain, and age-related cognitive decline (Howden-Chapman et al., 2017). Román-Caballero et al. (2018) found that early musical practice yields long-lasting neurocognitive benefits, while Mileski et al. (2019) and Chung et al. (2022) suggest music enhances both emotional and cognitive health among the elderly.

Malaysia, like many nations, is experiencing accelerated population ageing. By 2030, the country is projected to become an ageing nation, with over 5.8 million citizens aged 60 and above (Abdullah et al., 2024). This demographic shift poses significant challenges in eldercare, necessitating sustainable, culturally relevant, and engaging interventions. According to Jabatan Kebajikan Masyarakat (JKM) (2023a, 2023b), institutional care services in Malaysia encompass both day-care and residential support. These facilities offer a structured, socially interactive,

and professionally supervised environment, making these settings ideal for innovative arts-based interventions.

Quality of life, as defined by the World Health Organization, encompasses multiple domains: physical, psychological, cognitive, social, and environmental well-being (Polański et al., 2022). Arts-based activities, when applied thoughtfully, have the potential to enhance all these dimensions. One such culturally grounded medium is the angklung—a traditional bamboo musical instrument.

The Perantau, or Indonesian migrant communities in Malaysia, play a significant role in addressing social challenges and maintaining strong ties with their homeland and local community networks (Siswanto et al., 2025). Their cultural practices, including traditional music such as the angklung, have been introduced to Malaysia through these migrant networks, serving as both a medium for cultural preservation and a tool for social cohesion. According to Kosmo Online (2020), angklung was introduced to Malaysia in the 1920s, the angklung is typically made of black bamboo (*Gigantochloa atroviolacea*) and sound is produced through simple shaking movements (Mohd Bakri et al., 2021). It is lightweight, easy to play, and requires no prior musical training, making it highly suitable for elderly individuals with physical or cognitive limitations (Chen & Liao, 2022). Each angklung produces only one note, promoting group cooperation to form complete melodies (Hiranpanthaporn et al., 2022). In Malaysia, figures such as Raja Izzat Akmal (Pak Radja) have played a pivotal role in promoting the angklung culture.

Its therapeutic use has already gained traction in countries such as Thailand and Singapore (Esplanade, 2017), and previous studies have documented its benefits for memory recall, social engagement, and emotional well-being (Komariyah, 2016; Putri, 2017; Tallutondok, 2019). However, despite its growing popularity, academic research in Malaysia has remained limited, with a few studies systematically examining the health benefits of angklung for the elderly. This study seeks to address this gap by investigating the application of angklung as an art-based intervention for older adults in Malaysian care centres.

This study aims to: (1) identify the potential of angklung as an art-based intervention for the elderly, and (2) analyse its impact on physical, psychological, independence, and social interaction domains of health.

## **LITERATURE REVIEW**

### **Angklung in Elderly Care**

Art-based interventions have been widely used to support elderly health and well-being. Music therapy has been shown to improve cognitive function, reduce stress,

and enhance emotional and social health (El Geziry et al., 2018; Grebe, 2019). However, many conventional music therapies rely on instruments that may be physically or cognitively demanding for older adults.

In Southeast Asia, the *angklung*, a traditional bamboo instrument, offers an accessible and culturally meaningful alternative. It is lightweight, easy to play, and encourages group participation, making it well-suited for elderly individuals with varying levels of ability.

### **Angklung as a Music-Based Therapeutic Tool**

The *angklung* has been widely adopted in elderly care programmes across Indonesia and Thailand. It serves as a music-based therapy tool that supports both passive and active engagement. *angklung* music interventions typically involve listening or reminiscence-based sessions. As reported in Komariyah (2016), *angklung* music significantly improved the quality of life in elderly women across physical, emotional, and environmental dimensions. Similarly, Tallutondok (2019) demonstrated that *angklung* activities enhanced emotional recall and cognitive engagement during reminiscence therapy. An *angklung* activity involves active music-making through group play. Putri (2018) found that structured *angklung* activities improved emotional and cognitive function compared to brain training exercises. Likewise, Wattanasoei (2016) confirmed that group-based *angklung* programs enhanced social interaction and emotional satisfaction among elderly participants in Thailand. Collectively, these studies highlight *angklung*'s dual function in stimulating both emotional and motor responses while fostering meaningful social interaction.

### **Angklung Interventions of Technological Enhancement**

Recent studies have explored the integration of assistive technology into *angklung* interventions to improve accessibility for elderly people with cognitive or physical challenges. Phoasavadi (2022), for example, introduced Smart Band technology to support rhythm during *Angklung* sessions and reported notable improvements in the participants' focus and memory. Similarly, Hiranpanthaporn et al. (2022) and Cooharajanone et al. (2022) developed IoT-based *angklung* systems that improved accuracy, coordination, and engagement during music activities in nursing homes. These innovations demonstrate how digital tools can complement traditional instruments, thereby increasing the inclusivity, adaptability and scalability of *angklung* interventions across diverse eldercare settings.

## **Angklung Intervention in Malaysia**

While there are numerous studies on Angklung-based interventions in Indonesia and Thailand, there are still limited studies in the Malaysian context. Studies on the use of angklung as a structured therapeutic tool for aged care in Malaysia are still emerging despite its cultural presence. Past works like Mohd Bakri et al. (2024) presented several preliminary findings but lacked a comprehensive empirical evaluation. Comparative research between Angklung and other music therapies, such as piano or singing, particularly regarding engagement levels, cognitive load, and cultural resonance, is also lacking. This limits the understanding of angklung's unique contribution within broader art-based intervention models. Hence, this study addresses these gaps by evaluating Angklung's effectiveness as an art-based intervention in Malaysia, exploring its role in enhancing the physical, psychological, and social well-being of elderly residents in care centres.

## **Quality of Life**

Quality of Life (QOL) encompasses an individual's overall well-being across physical, psychological, social, and environmental aspects. As defined by the World Health Organization, QOL is an individual's perception of their position in life within the context of the culture and value systems in which they live and in relation to their goals, expectations, standards, and concerns (2012).

This study is grounded on the World Health Organization Quality of Life (WHOQOL) framework, which defines well-being across five domains: physical health, psychological well-being, level of independence, social relationships, and environment (World Health Organization [WHO], 1998, 2012). These domains provide a comprehensive structure to assess the multidimensional impacts of Angklung interventions. By applying WHOQOL as a guiding theoretical model, this study captures how the Angklung Healing Art Project supports holistic well-being among elderly individuals in institutional care. The framework also guides the thematic analysis of interview data, ensuring alignment between research design, intervention outcomes, and quality of life indicators.

## **METHODOLOGY**

### **Research Design**

This study employed a qualitative descriptive design to examine the lived experiences and observable responses of elderly participants engaged in angklung-based activities. This design facilitated an in-depth exploration of the

behavioural, cognitive, and emotional dimensions associated with the intervention, in line with the objective to assess angklung’s therapeutic potential within aged care settings (Chua, 2020). A phenomenological perspective was adopted to capture participants’ experiences as a lived phenomenon, consistent with Creswell’s (2013) suggestion for small, focused samples in qualitative inquiry, which typically range from 3 to 25 participants.

## Sampling

Purposive sampling was employed to recruit elderly residents from two aged care centres in Penang, Malaysia, coming from diverse age groups, gender, and ethnicity. The selection criteria are that participants should demonstrate adequate visual, auditory, and hand mobility, and present with mild to moderate cognitive conditions, as recommended by the care staff (Patton, 2002). Cognitive eligibility was further verified using the Montreal Cognitive Assessment (MoCA) and the Elderly Cognitive Assessment Questionnaire (ECAQ) to exclude individuals with severe dementia. A total of 21 participants were involved in the study. Data were collected from 9 elderly residents and 2 caregivers at Caring Retirement Home Care on 17 June 2023, and from 12 elderly residents and 4 caregivers at Pusat Jagaan Damai Permai, Penang, on July 4, 2023.

## Preliminary

### *Expert demography*

Prior to administering the test, the researcher conducted interviews with subject matters specialists and developed several recommendations, as outlined below,

**Table 1: Overview of interviewed experts**

Gender	Country	Professional role	Field
Male	Malaysian	Angklung musician, academician, angklung author	The Angklung music industry, Education
Male	Indonesian	Angklung maker, angklung entrepreneur	The Angklung music industry
Male	Malaysian	Specialist doctor, public health specialist	Medical
Male	Malaysian	Medical doctor, researcher of art in health	Medical
Male	Malaysian	Specialist doctor in psychiatry	Medical
Female	Malaysian	Medical doctor in psychiatry	Medical

Female	Malaysian	Eldercare service coordinator, Caregiver in care centre	Medical
Female	Malaysian	Caregiver in care centre	Medical
Female	Malaysian	Caregiver in care centre	Medical

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Before administering the Angklung Healing Art Project to elderly residents at the Care Centre, the specialists were consulted to provide comprehensive input and suggestions to optimise the intervention. Participants were required to undergo a cognitive evaluation prior to participating in the activities to ensure suitability. The intervention was designed with the following considerations:

- The angklung was selected for its lightweight construction, ease of play, and suitability for group-based activities, making it ideal for elderly participants.
- Its melodic, soothing, and calming tones have been found to aid memory recovery and promote relaxation.
- Familiar and simple tunes were chosen to accommodate the preferences and cognitive abilities of seniors.
- Group activities were emphasised to foster learning, collaboration, and overall well-being among participants.
- The inclusive nature of angklung ensures that individuals with limited hand, eye, or hearing capabilities can also participate effectively.
- Playing basic angklung exercises prior to more complex pieces, such as those by Pak Radja, helped participants prepare and feel more confident.
- All activities were conducted in a comfortable and supportive environment to meet the needs of the elderly.

### **Material and Intervention**

Lightweight angklung instruments specifically designed for ease of handling in a group setting were used in the core activity. Participants performed the familiar melody “Happy Birthday,” using a simplified visual notation adapted from the Malaysian angklung method developed by Pak Radja. Each 40-minute session was structured as follows:

- **10 minutes:** Introduction and briefing, including instructions on basic angklung handling, hand coordination techniques, and recognition of the adapted visual notation.
- **30 minutes:** Group-based music play, starting with simple practice and gradually progressing to coordinated rhythm exercises under the facilitator's guidance.

Adaptations were made to accommodate participants' varying levels of physical and cognitive ability, ensuring inclusive participation regardless of mild impairments.

**SONG HAPPY BIRTHDAY**

C C D C F E  
Happy birthday to you

C C D C G F  
Happy birthday to you

C C +CA G E D  
Happy birthday dear (name)

A# A# A F G F  
Happy birthday to you

Note : Here "+C" means C chord of next octave



(1)

(2)

**Figure 1: Material Angklung Healing Art Project (1) Notation and (2) Angklung.**

### **Procedure - Data collection**

Primary data were collected through semi-structured interviews with elderly participants and caregivers from two aged care facilities. Interviews were conducted in comfortable, private settings within the care centres, and participants engaged voluntarily with assistance from care staff. Each session lasted between 15 and 30 minutes and was audio-recorded with informed consent. The interviews aimed to explore participants' physical, psychological, level of independence, social relationships, and environment.

The thematic analysis followed the six-phase method proposed by Braun and Clarke (2023), with manual coding employed to identify meaningful patterns and emergent themes. To enhance analytical reliability, the coding process and thematic structure were independently reviewed by a co-author. The analysis was guided by the World Health Organization Quality of Life (WHOQOL) framework, drawing on the WHOQOL instrument and criteria outlined in WHO (1998; 2004). This framework includes five domains: physical, psychological, level of independence, social relationships, and environment. Minor discrepancies in interpretation—particularly in caregiver responses—were resolved through consensus-based discussions.

Ethical approval for this study was obtained from the Universiti Sains Malaysia Human Research Ethics Committee (USM/JEPeM/22100642). Prior to participation, written informed consent was obtained from all participants or their legally authorised representatives. Participation was entirely voluntary, and all individuals were assured of their right to withdraw at any time without penalty. Confidentiality was strictly upheld, with all sensitive data anonymised and securely stored on encrypted, password-protected devices accessible only to the research team.

## RESULTS

### Experiment

#### *Assessment*

To assess their cognitive capacities, the elderly participants were required to complete the Elderly Cognitive Assessment Questionnaire (ECAQ) and the Montreal Cognitive Assessment (MOCA), both of which are widely used instruments for evaluating the cognitive capabilities of older individuals.

**Table 2: Elderly Cognitive Assessment Result**

No	Participant	ECAQ Score: 0 – 4 = Probable, 5 – 6 = Borderline > 7 = Normal	MOCA Score: <i>Normal</i> > 26/30
<b>Pusat Jagaan Damai Permai</b>			
1.	IP1, I, 51	6	8
2.	IP2, M, 52	6	24
3.	IL1, M, 55	6	19
4.	IP3, M, 67	5	25
5.	IP4, M, 80	5	8

6.	IP5, M, 43	8	28
7.	IL2, M, 63	6	11
8.	IL3, M, 64	5	10
9.	IP6, M, 57	6	22
10.	IP7, M, 62	5	7
11.	IP8, M, 81	5	6
12.	IP9, M, 36	8	27

#### Caring Retirement Home Care

13.	IL4, C, 80	5	7
14.	IL5, C, 78	5	7
15.	IP10, C, 89	5	6
16.	IP11, C, 84	5	7
17.	IP12, C, 84	4	5
18.	IP13, C, 84	4	6
19.	IP14, C, 56	5	7
20.	IP14, C, 86	4	6
21.	IP14, C, 87	4	6

Note: IP: Informal Female, IL: Informal Male, M: Malay, I: Indian, C: Chinese

**Table 3: Demographic Profile of Caregivers**

No	Participant Caregiver	Venue
1	ILC1, M, 27	Pusat Jagaan Damai Permai
2	IPC1, M, 20	Pusat Jagaan Damai Permai
3	IPC2, M, 45	Caring Retirement Home Care
4	IPC3, I, 34	Caring Retirement Home Care

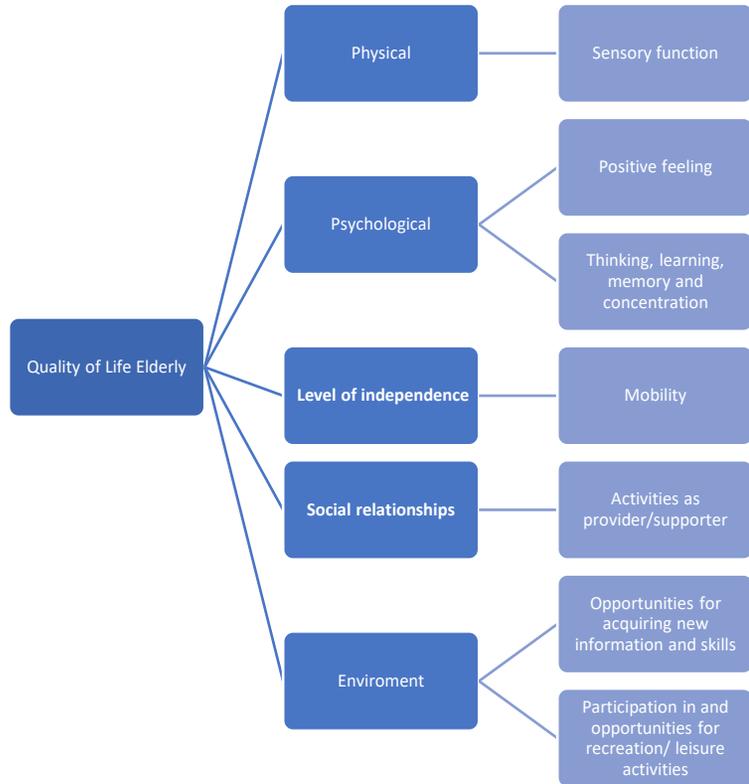
Note: IPC: Informal Female Caregiver, IPL: Informal Male Caregiver

#### *Angklung Healing Art Project*

The findings were examined using thematic analysis following the six-phase approach proposed by Braun and Clarke (2023). The thematic analysis yielded one overarching theme, elderly quality of life, which will be discussed further below.

#### **Elderly Quality of Life**

The results indicate that the overarching theme of this study is elderly quality of life based as shown in Figure 2. Five main themes emerged from the analysis: physical, psychological, level of independence, social relationships, and environment.



**Figure 2: Themes under Elderly Quality of Life**

### **Theme 1: Physical**

#### **Sub-theme: Sensory Function**

The first main theme identified in this study is the *Physical* aspect, with a sub-theme of *Sensory Function*. This theme emphasises the role of physical engagement in enhancing sensory functions. According to the caregivers, angklung instruments are lightweight, easy to play, and well-suited for activities in aged care centres (IPC2, M, 45). During the sessions, participants were required to coordinate hand movements, respond to visual cues from conductors, and manipulate the angklung's lightweight structure. These actions stimulated tactile and visual responses, making the activity particularly accessible and suitable for the elderly.

**Table 4: Interview Thematic Coding Results**

Codes	Sub-themes
“I think, it can be shaken, ... Everyone likes it, but, if possible, don't be too heavy,” said IP2, M, 52	
“I feel comfortable ... But there is a place where the handle needs to be easier to play,” said IP4, M, 80	
“I never knew a musical instrument .... I guess, I never played it but .... I can play easily in good conditions. I like to play ankle in activities at a care centre,” said IL1, M, 55	Sensory functions
“I agree, if the angklung is played by the elderly in activities at the care centre. ... I think angklung can also be used - as an exercise and therapy for the elderly,” said IPC2, M, 45	

## Theme 2: Psychological

### Sub-theme 1: Positive Feelings

The second main theme identified is the *Psychological* aspect, with two sub-themes: *Positive Feeling* and *Thinking, Learning, Memory, and Communication*. Under the sub-theme of *Positive Feeling*, caregivers observed that angklung music provides a calming and soothing listening experience characterised by its soft tonality (IPC3, I, 34). Participants reported enjoyment and emotional stimulation during the sessions and frequently engaged in reminiscence about past experiences. The gentle tonal quality of the angklung appeared to reduce anxiety and enhance the participants’ overall mood.

**Table 5: Interview Thematic Coding Results**

Codes	Sub-themes
“We feel like playing angklung, ... It sounds too, okay,” said IP4, M, 80	
“They like the instrument’s music angklung.... Because - the sound beautiful and not tension,” said IPC3, I, 34	Positive feelings

Sub-theme 2: Thinking, Learning, Memory, and Communication

Under the sub-theme of *Thinking, Learning, Memory, and Concentration*, participants engaged in activities that required cognitive effort, like learning new skills, memory recall, and sustained focus while playing the angklung. As most participants were unfamiliar with the instrument, they were required to organise their tasks to take turns during group performance. The caregivers observed that playing angklung positively helped brain development by encouraging participants to memorise musical notations and maintain visual focus to understand and execute the notations accurately (IPC2, M, 45). These activities posed meaningful cognitive challenges, requiring attention, memory, and coordination.

**Table 6: Interview Thematic Coding Results**

Codes	Sub-themes
"It's hard to memorise notes but.... even the eyes are not clear. My opinion - if you can magnify a little, you'll see. Come again, ... Then zoom in and see," said IP2, M, 52	Thinking, learning, memory and concentration
"At first, not ready and not following instructions or tempo .... Maybe the beginning, maybe many times ....	
Can get it," said IPC3, I, 34	

**Theme 3: Level of independence**

Sub-theme: Mobility

The third theme identified is the *Level of Independence*, with a sub-theme of *Mobility*. Under this sub-theme, participants demonstrated their ability to carry out tasks involving the angklung, despite most of them being unfamiliar with the instrument or how to use it. According to the caregivers, although the participants could not play the angklung perfectly, the activities provided a starting point for their improvement. Over time, many positive changes were observed, and participants became more comfortable using the angklung (IPC3, I, 34). Through repeated practice, the participants gradually developed the motor coordination required to play the angklung. The use of visual aids and simplified notation (e.g., colour-coded alphabets) was suggested to support learning further and enhance participation.

**Table 7: Interview Thematic Coding Results**

Codes	Sub-themes
<p>"I think, I've never played, this is the first time, .... I just saw it on TV .... I played earlier, but we didn't hold the angklung very well, but i can shake it I like it, .... But I'm not very good at playing, .... I mean, when I write the alphabet in notation, I will shake..... In my opinion, if possible, alphabet notation in visual is easier. Colour - needs to be more interesting, more fun because our eyes don't see very well... Instead of learning guitar and piano, it's better to learn and play angklung. In my opinion, if we are digitised, it doesn't matter, it's livelier ...," said IP2, M, 52</p> <p>"I understand how to play, Need a conductor or not, .... Everything is okay. Visual notation should have additional colours such as green, yellow, red and bright. I like it," said IL1, M, 55</p>	<p>Mobility</p>

#### **Theme 4: Social relationships**

##### Sub-theme: Activities as Provider/Supporter

The fourth theme identified is *Social Relationships*, with a sub-theme of *Activities as Provider/Supporter*. This theme highlights the role of angklung activities in fostering cooperation within a group setting. Participants noted that guidance from a conductor was essential for them to follow the instructions and perform effectively (IP2, M, 52). The group-based angklung activities encouraged cooperation, social bonding and mutual support, as participants relied on the conductor for guidance and engaged collectively despite varying sensory limitations. The provision of tailored support (e.g., clearer instructions, visual aids) further improved inclusivity and facilitated meaningful engagement.

**Table 8: Interview Thematic Coding Results**

Codes	Sub-themes
<p>" ... Aunt, eyes can't see very well. Aunty, you can shake... If there is a visual conductor, it's okay... if there isn't it will be difficult, .... Our eyes don't see perfectly," said IP2, M, 52.</p>	<p>Activities as provider/supporter</p>

"I think, ... They can see clearly, ... It's just the beginning which they do not understand, ... Maybe they are Chinese and not true. If you look from the back ... They can't see it clearly, .... May need to be bigger, .... Easier to give instructions by pointing and saying notation," said IPC3, I, 34

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## Theme 5: Environment

### Sub-theme 1: Opportunities for Learning and Skill Acquisition

The fifth theme identified is the *environment*, with two sub-themes: *Opportunities for Acquiring New Information and Skills* and *Participation in and Opportunities for Recreation/Leisure Activities*. Participants shared that they were never exposed to, and had never been given the opportunity to play angklung, although some had expressed an interest in the instrument. In this regard, many of the participants developed a liking for angklung after participating in the activities. The caregivers also observed that while the instrument was novel to the participants, consistent practice could lead to significant improvement in their ability to play (IPC1, M, 20). Their positive responses demonstrated the participants' strong interest, enjoyment and willingness to continue engaging in music-based recreational activities.

### Table 9: Interview Thematic Coding Results

Codes	Sub-themes
"I have never known angklung. After playing, I like and am interested in playing the instrument. I like it, ... I think it wants to be an activity at the care centre," said IP1, I, 51	
"... I think, ... I have never heard angklung. I am very happy to play, ... It sounds good. I feel interested, .... If possible, played in activities at the care centre," said IP4, M, 80	Opportunities for acquiring new information and skills
" I think it's easy for the elderly for me. They can play, it's just a little difficult..... Maybe at first.... And there's a tempo problem. I agree. .... If angklung is played at the care centre," said IPC3, I, 34	

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" I think they played a little less, ... Maybe for the first time. If the game is fixed and the practice is regular, .... It might be better. I agree .... If angklung is played by them in activities at the care centre," said IPC1, M, 20

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### Sub-theme 2: Participation in Leisure Activities

Under the sub-theme of *Participation in and Opportunities for Recreation/Leisure Activities*, most participants expressed enjoyment in engaging with angklung activities, noting that the sessions captured their interest and were well-suited for implementation at the care centre settings. The caregivers confirmed that angklung activities were well-accepted by the participants as a meaningful way to fill their free time (ILC1, M, 27). Participants also found the sessions enjoyable and expressed a desire for more frequent music-based and group activities.

**Table 10: Feedback Results After Being Interviewed According to Code and Theme**

Codes	Sub-themes
"I feel very interested, ... We are not very bored sitting here, there are musical instruments that we can play.... I think, if possible, play every day," said IP2, M, 52	Participation in and opportunities
"I think, angklung is suitable for them.... And can be played as an activity at the care centre," said ILC1, M, 27	for recreation/leisure activities

The Angklung Healing Art Project positively influenced the elderly participants' quality of life across multiple dimensions. Regarding the physical aspect, it encouraged motor use; psychologically, it fostered emotional well-being and level of independence; socially, it fostered cooperation; and in regard to the environment, it provided meaningful opportunities for recreation and engagement. These findings support the integration of structured, culturally relevant musical interventions within aged care settings.

## DISCUSSION

The analysis identified five primary themes that collectively define the quality of life among the elderly: physical, psychological, level of independence, social relationships, and environmental aspects. Findings from the thematic analysis revealed that the elderly participants demonstrated a strong interest in music and

expressed enjoyment when engaged in angklung activities. Playing the angklung involves producing sound through a simple rocking motion and understanding rhythm with the guidance of a conductor. Notably, prior musical experience or talent is not a prerequisite for participation, making angklung an accessible and inclusive activity for the elderly. This observation aligns with Komariyah's (2016) study, which highlights that angklung music significantly enhances the quality of life for elderly women, contributing positively to their physical, psychological, and social relationships, level of independence and environment.

The *Physical* theme underscores the subtheme of *sensory function*, as demonstrated by the player's hand movements when producing the intended sound. Even the wheelchair-bound participants demonstrated the ability to play the angklung, benefiting from prior physical exercises. This shows that the activity contributed to improved motor skills among the elderly as it involved sensory engagement and precise hand movements. Psychomotor function, integrating accurate motor reactions, focused attention, and cognitive problem-solving, plays a crucial role in this process. Research indicates that motor speed tends to decline progressively with age, reflecting lifelong changes in the motor system, where peak performance typically stabilises by the age of 10 (Pila-Nemutandani et al., 2019). Within this context, the angklung, a portable and user-friendly musical instrument, offers accessibility and ease of use for elderly individuals (Putri, 2018).

The *Psychological* theme, with the sub-theme *positive feeling*, highlights the positive impact of angklung activities on the elderly. The traditional, calm, and soft sounds produced by the angklung align with the preferences of older individuals, fostering the sub-theme of positive emotional experiences characterised by fun and happiness. Positive feelings emerge when participants enjoy playing the angklung, listening to its soothing melodies, and appreciating its simplicity. Deswita (2015) reinforced these findings, demonstrating the psychological benefits of angklung activities for the elderly under the theme of positive feelings. The study suggests that playing angklung not only stimulates the motor system in elderly individuals who have experienced falls but also provides psychological relief.

Furthermore, it is aligned with the field of geropsychology, which aims to reduce loneliness among the elderly. Dani, the creator of the angklung, has stated that its soothing melody can alleviate stress, making it a powerful tool for emotional well-being. This remarkable sound quality enhances its appeal and complements the angklung's health benefits.

The sub-theme of *Thinking, Learning, Memory, and Communication* also emerged as participants acquire new knowledge and recall past experiences while engaging in angklung activities. Effective participation required strategies for skill

development, clear communication with conductors, and collaboration with fellow participants in a group setting. These elements collectively enhance the cognitive and social experiences of elderly individuals engaging in angklung-based activities.

The theme of *Level of Independence*, particularly through the sub-theme of *Mobility*, demonstrated that the elderly participants found the activities calming, mood-enhancing, and an enjoyable way to fill their free time. The participants expressed their interest in playing the angklung. Most participants were able to grasp and shake the angklung, and some managed to play in tempo on their first attempt. This is attributed to the angklung's lightweight nature, making it suitable for musical activities tailored to the elderly population. The angklung, a lightweight bamboo percussion instrument, is specifically designed to accommodate the muscular needs of elderly adults, including those affected by sarcopenia—a condition commonly associated with ageing (Maciel et al., 2018). The instrument produces music exclusively through shaking, making it accessible to players without prior musical experience or skill. Its unique feature of producing a single note per instrument further distinguishes the angklung from other musical instruments. Research has shown that using angklung enhances the overall well-being of elderly individuals, as observed in Thailand (Cooharojananone et al., 2022). However, certain challenges remain, such as difficulties in understanding notation instructions and executing the angklung with ease during activities.

The study also identified *Social Relationships* as a subtheme, with the sub-theme of *Activities as Provider/Supporter*. Group-based angklung activities require cooperation among participants, each of whom plays with varying pitches. These sessions were facilitated with the support of caregivers, who assist participants in following the conductor's instructions and coordinating the shaking of the angklung. Such collaborative engagement promotes interactions and communication among the conductor, caregivers, and participants. Supporting this finding, a study by Chandra Dewi (2010) demonstrated a significant reduction in loneliness among participants in the experimental group following angklung activities, with a 95% level of significance. This finding highlights the potential of group angklung sessions to enhance emotional well-being, strengthen social interaction skills and alleviate feelings of loneliness. These benefits are attributed to the sense of comfort, enjoyment, companionship, and meaningful leisure fostered through group-based music activities. Nevertheless, challenges remain in adapting musical notation and instructional guidelines to make the activities more accessible and elderly friendly.

The *Environment Theme* encompasses two sub-themes: *Opportunities for Acquiring New Information and Skills* and *Engagement in and Access to Recreational and Leisure Activities*. Under the first sub-theme, participants who previously lacked opportunities to play the angklung, but expressed interest in the instrument, reported discovering enjoyment and engagement after participating in the activities. This finding aligns with Tallutondok (2019)'s mental activation intervention-angklung, which emphasises the use of music for mental stimulation, and demonstrated that participants enthusiastically engaged in memory-based interventions designed to facilitate the recall of past experiences.

The second sub-theme emphasises the role of angklung activities in providing opportunities for recreation and leisure. These activities enabled participants to occupy their free time while promoting relaxation and enjoyment. Supporting this, Putri (2018) revealed that both GLO exercise therapy and angklung music practice had positive effects on various aspects of quality of life, with each therapeutic programme offering distinct benefits tailored to the needs of participants.

From a methodological perspective, the study employed purposive sampling. However, relatively homogeneous participant profiles posed a limitation to the study. Thus, future research should improve participant and caregiver diversity in terms of age, ethnicity, gender, and caregiving role. Additionally, integrating assistive technologies—such as smart bands, IoT-enabled angklung, or digital notation tools—could better support participants with advanced impairments, improving accessibility and engagement (Phoasavadi, 2022; Cooharajanane et al., 2022).

Future studies could also incorporate stratified sampling techniques to ensure greater inclusivity across cognitive levels, linguistic backgrounds, and physical capabilities. Pilot-testing digital aids, such as rhythm-feedback bands and enlarged visual notations, may help calibrate interventions to accommodate participants' varying ability levels. Training sessions for caregivers on adaptive facilitation techniques, including how to modify tempo and volume based on participant responses, could also be standardised. These efforts would strengthen the reliability and replicability of angklung-based interventions.

In conclusion, the Angklung Healing Art Project contributed significantly to enhancing physical, psychological, social, independence, and environmental aspects of elderly participants in institutional care. Angklung's cultural relevance, ease of play, and therapeutic value make it a promising tool for broader implementation in aged care. Notably, this study revealed challenges faced by the elderly with cognitive and physical impairments, such as difficulty interpreting notation, maintaining rhythm, and handling the instrument. These findings

highlight the pressing need for assistive technologies and adaptive facilitation techniques.

In response, this study proposes the following recommendations: first, at the policy level, angklung-based interventions could be integrated into national aged care strategies as validated, culturally meaningful tools for mental and physical stimulation. Second, at the practical level, caregivers should be equipped with structured training in adaptive facilitation methods, including the use of visual cueing systems and flexible pacing adjustments tailored to diverse functional needs. Third, future research should pursue comparative studies across demographic variables (e.g., gender, ethnicity, cognitive levels) and evaluate emerging innovations such as IoT-enabled angklung instruments and digital visual notation aids. Overall, art-based interventions like the use of angklung hold strong potential for promoting holistic well-being among older adults and should be supported with assistive innovations to maximise inclusivity and participation among elderly individuals, including those with functional limitations.

## **CONCLUSION AND RECOMMENDATIONS**

This study affirms that the Angklung Healing Art Project significantly contributes to the overall well-being of elderly participants, as conceptualised through the WHOQOL framework. Notable improvements were observed across five domains: physical (e.g., enhanced motor coordination), psychological (e.g., positive emotional responses), level of independence (e.g., increased self-efficacy), social relationships (e.g., strengthened peer interaction), and environment (e.g., greater participation in leisure activities).

The significance of this study lies in its interdisciplinary and culturally grounded approach, addressing a clear gap in non-pharmacological interventions for ageing populations in Southeast Asia. By integrating traditional music with structured therapeutic practices, the research offers new perspectives for policymakers, caregivers, and designers seeking innovative, inclusive methods to support eldercare. This aligns with global health priorities promoting culturally relevant and sustainable wellness models.

Notably, the study also revealed challenges faced by older adults with cognitive and physical impairments—such as difficulty interpreting notation, maintaining rhythm, and handling the instrument—highlighting an urgent need for assistive technologies and adaptive facilitation techniques. In response, this study proposes the following recommendations. First, at the policy level, angklung-based interventions could be integrated into national aged care strategies as validated, culturally meaningful tools for mental and physical stimulation. Second, in regard to its practical application, caregivers should be

equipped with structured training on adaptive methods, including visual cueing systems and flexible pacing adjustments tailored to participants with diverse functional needs. Third, future research could pursue comparative studies across demographic variables (e.g., gender, ethnicity, cognitive levels) and evaluate emerging innovations such as IoT-enabled angklung instruments and digital visual notation aids.

By clearly demonstrating its impact on both individual well-being and broader systemic strategies, this research reinforces the importance of culturally adapted therapeutic interventions. It lays the foundation for future scalable models that can meaningfully enhance the quality of life for elderly populations across diverse care settings.

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The authors reported no potential conflict of interest.

## **REFERENCES**

- Abdullah, J. M., Ismail, A., & Yusoff, M. S. B. (2024). Healthy ageing in Malaysia by 2030: Needs, challenges and future directions. *The Malaysian Journal of Medical Sciences: MJMS*, 31(4), 1–13. <https://doi.org/10.21315/mjms2024.31.4.1>
- Anderson, K. G. C., Langley, J., O'Brien, K., Paul, S., & Graves, K. (2017). Examining the artist–patient relationship in palliative care. A thematic analysis of artist reflections on encounters with palliative patients. *Arts & Health*, 11(1), 67–78. <https://doi.org/10.1080/17533015.2017.1413401>
- Armstrong, J. (2021, September 17). The healing power of art. *MoMA Magazine*. <https://www.moma.org/magazine/articles/629>
- Braun, V., & Clarke, V. (2023). Is thematic analysis used well in health psychology? A critical review of published research, with recommendations for quality

- practice and reporting. *Health Psychology Review*, 17(4), 695–718. <https://doi.org/10.1080/17437199.2022.2161594>
- Chandra Dewi, A. (2010). *An angklung music therapy program to reduce the experience of loneliness among older adults*. [Unpublished bachelor's thesis]. Universitas Padjadjaran.
- Chen, C. & Liao, D. (2022). Sarcopenia and falls in older adults. *Aging Pathobiology and Therapeutics*, 4(3), 70-75. <https://doi.org/10.31491/apt.2022.09.092>
- Chua, Y. P. (2020). *Mastering research methods*. McGraw-Hill Education.
- Chung, J., Kim, M., Heo, D. B., Lee, J. B., & Jw, C. (2022). Susceptibility to postoperative changes in music appreciation in elderly cochlear implant recipients. *Journal of Clinical Medicine*, 11(17), Article 5029. <https://doi.org/10.3390/jcm11175029>
- Cooharojananone, N., Phoasavadi, P., Hiranpanthaporn, S., Wongratanapitak, P., & Atchariyachanvanich, K. (2022). A study of using the IoT-based angklung smart band system to support music group activities for the elderly in nursing homes. In *2022 Joint 12th International Conference on Soft Computing and Intelligent Systems and 23rd International Symposium on Advanced Intelligent Systems (SCIS&ISIS)* (pp. 1-6). IEEE. <https://doi.org/10.1109/SCISISIS55246.2022.10001930>
- Creswell, J. W. (2013). *Qualitative inquiry & research design: Choosing among five approaches*. Sage.
- Deswita, R. Y. (2015). Angklung training for elderly women at the soka gakkai foundation, medan. *Grenek: Jurnal Seni Musik*, 6(2), 134-147. <https://doi.org/10.24114/grenek.v6i2.10969>
- El Geziry, A., Toble, Y., Al Kadhi, F., Pervaiz, M., & Al Nobani, M. (2018). Non-pharmacological pain management. In N. A. Shallik (Ed.), *Pain management in special circumstances* (pp. 1-14). IntechOpen. <https://doi.org/10.5772/intechopen.79689>
- Esplanade. (2017, June 16). *Community engagement | Angklung workshop (May 2017)*. [Video]. YouTube. [https://www.youtube.com/watch?v=mm9y-ac\\_IGk&t=1s](https://www.youtube.com/watch?v=mm9y-ac_IGk&t=1s)
- Grebe, A. M. (2019). Healing our heroes: Creating an arts-based intervention. In J. Bopp, A. Grebe, & J. Denny (Eds.), *Healing through the arts for non-clinical practitioners* (pp. 22-43). IGI Global Scientific Publishing. <https://doi.org/10.4018/978-1-5225-5981-8.ch003>
- Hiranpanthaporn, S., Phoasavadi, P., & Cooharojananone, N. (2022). Angklung smart band: An IoT-based system to support music activities for elderly in thailand. In *2022 IEEE European Technology and Engineering Management Summit (E-TEMS)* (pp. 142-147). IEEE.

- Howden-Chapman, P., Siri, J., Chisholm, E., Chapman, R., Doll, C. N., & Capon, A. (2017). SDG 3: Ensure healthy lives and promote wellbeing for all at all ages. In *A guide to SDG interactions: From science to implementation* (pp. 81-126). International Science Council.
- Jabatan Kebajikan Masyarakat (JKM). (2023a, March 16). *Care centre*. <https://www.jkm.gov.my/jkm/index.php?r=portal/left&id=T21VOVlraIhaV3p4SUp5RVJadEREUT09>
- Jabatan Kebajikan Masyarakat (JKM). (2023b, March 18). *Older adults*. <https://www.jkm.gov.my/jkm/index.php?r=portal/left&id=VEpUUXV3THFURkZETmxWNjZpQ1BXdz09#:~:text=Definisi%20Warga%20Emas,On%20Ageing%201982%22%20di%20Vienna>
- Komariyah, L. (2016). The influence of angklung music on the quality of life of older women. *Jurnal Pendidikan Keperawatan Indonesia*, 2(1), 10-15.
- Kosmo Online. (2020, October 27). *Meraut buluh meniti usia senja*. <https://www.kosmo.com.my/2020/10/27/meraut-buluh-meniti-usia-senja/>
- Mileski, M., Brooks, M., Kirsch, A., Lee, F., LeVieux, A., & Ruiz, A. (2019). Positive physical and mental outcomes for residents in nursing facilities using music: A systematic review. *Clinical Interventions in Aging*, 14, 301-319. <https://doi.org/10.2147/CIA.S189486>
- Mohd Bakri, M. A., Surip, S. S., & Sabran, K. (2021). Comparison analysis of sound of through notation 'A' produced by angklung instruments which are made from different species of bamboo. *Kupas Seni*, 9(1), 29-35. <https://doi.org/10.37134/kupasseni.vol9.1.3.2021>
- National Organization for Arts in Health. (2017). *NOAH 2017 White Paper Online Edition*. The NOAH Network. <https://thenoah.net/wp-content/uploads/2019/01/NOAH-2017-White-Paper-Online-Edition.pdf>
- Patton, M. Q. (2002). *Qualitative research and evaluation methods*. Sage Publications.
- Phoasavadi, P. (2022). Smart band technology: A music-based activity for the Thai elderly. *Journal of Urban Culture Research*, 24, 258-71. <https://doi.org/10.14456/jucr.2022.16>
- Pila-Nemutandani, R. G., Pillay, B., & Meyer, A. (2019). Gender and hand dominance on fine motor skills among grade 1-7 learners with attention-deficit hyperactivity disorder. *South African Journal of Psychology*, 50(1), 92-102. <https://doi.org/10.1177/0081246319846076>
- Polański, J., Misiąg, W., & Chabowski, M. (2022). Impact of loneliness on functioning in lung cancer patients. *International Journal of Environmental Research and Public Health*, 19(23), Article 15793. <https://doi.org/10.3390/ijerph192315793>

- Putri, S. T. (2017). Comparison of quality of life among older women engaging in brain movement exercises and angklung music therapy. *Journal of Ners and Midwifery*, 4(1), 28-34. <http://doi.org/10.20884/1.jks.2016.11.2.671>
- Román-Caballero, R., Arnedo, M., Triviño, M., & Lupiáñez, J. (2018). Musical practice as an enhancer of cognitive function in healthy aging - a systematic review and meta-analysis. *Plos One*, 13(11), Article e0207957. <https://doi.org/10.1371/journal.pone.0207957>
- Siswanto, H.A., Arraki, R., & Bustami, M.R. (2025). The role of community learning centres in enhancing higher education access for children of Indonesian migrant workers in Sabah, Malaysia. *JATI-Journal of Southeast Asian Studies*, 30(1), 133-158.
- Tallutondok, E. B. (2019). Childhood activities adults utilizing for the intervention reminiscence-based screening. *IOP Conference Series: Materials Science and Engineering*, 523(1), Article 012044. <https://doi.org/10.1088/1757-899X/523/1/012044>.
- World Health Organization. (1998). *Programme on mental health: WHOQOL user manual*. World Health Organization.
- World Health Organization. (2012, March 1). *The World Health Organization Quality of Life (WHOQOL)*. <https://www.who.int/publications/i/item/WHO-HIS-HSI-Rev.2012.03>
- World Health Organization. (n.d.). *Arts and health*. <https://www.who.int/initiatives/arts-and-health>

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