Journal of Professional Evidence-based Research and Advances in Wellness and Treatment (PERAWAT)
Vol. 03, No. 3, September 2026, 46-63
***e*-ISSN 3064-4453**

The Effect of Music Therapy on the Level of Depression in the Elderly in Tresna Werdha Social Institution

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Article Information
Received: July 08, 2026
Revised: August 14, 2026
Online: September 13, 2026

Keywords
Depression, Elderly, Music Therapy

ABSTRACT

Depression is a common mental health problem among the elderly due to physical, social, and psychological changes associated with aging. Its prevalence tends to be higher among elderly living in nursing homes than those living with their families because of feelings of loss, loneliness, and limited social support. Music therapy is a non-pharmacological intervention that nurses can provide to reduce depression and improve psychological well-being. This study aimed to determine the effect of music therapy on the level of depression among elderly at the Tresna Werdha Social Institution Sabai Nan Aluih Sicincin. This quantitative study used a quasi-experimental one-group pretest-posttest design. The population consisted of all elderly residents at the institution, with 30 participants selected using purposive sampling based on inclusion criteria. Depression levels were measured using the Geriatric Depression Scale (GDS) before and after the intervention. Music therapy was provided directly by nurses in six sessions, twice a week for three weeks. Data were analyzed using univariate analysis and the Paired Sample T-Test. The mean depression score decreased from 9.73 before therapy (moderate depression) to 5.46 after therapy (mild depression), with p=0.000 (p<0.05). Thus, music therapy significantly reduced depression levels among the elderly. Nurses are encouraged to implement scheduled music therapy as part of gerontic nursing care.

***Keywords**: Depression, Elderly, Music Therapy*

INTRODUCTION

The world's elderly population continues to increase, and along with it the risk of mental health disorders in this age group also increases significantly. The World Health Organization (WHO) reports that the prevalence of mental disorders in the elderly globally reaches 61.6%, a

http://doi.org/10.69855/perawat.v3i3.711
https://gpijournal.com/index.php/perawat

figure that shows how vulnerable the elderly group is to psychiatric problems. This condition is aggravated by various factors such as decreased physical function, changes in social roles, and reduced support from the surrounding environment. This high prevalence confirms that the mental health of the elderly needs to be given equal attention to their physical health (Setyarini et al., 2022).

Among the various mental disorders experienced by the elderly, depression is the most common and a major contributor to the global burden of disease in the elderly group. The prevalence of depression in the elderly internationally is estimated to range from 10-20%, depending on the location and living conditions of the elderly. This figure places depression as one of the public health priorities that needs to be addressed systematically. Such high prevalence also indicates the need for interventions that can be widely and sustainably applied to the elderly population (Zenebe et al., 2021; Wang, M., Wu, J., 2023).

The increase in the elderly population also occurred significantly in Indonesia. Data from the Central Statistics Agency shows that the percentage of the elderly population in Indonesia will reach 11.75% in 2023. This increase indicates that Indonesia is entering a transition phase towards an aging population structure, a phenomenon that is also experienced by many other developing countries in the world. This demographic condition demands the readiness of health services, including gerontic nursing, in anticipation of the growing physical and mental health needs of the elderly. The increasing proportion of the elderly in the national population structure also has implications for the increasing burden of long-term health services, both at the family, community, and institution levels such as social institutions (Central Bureau of Statistics, 2023).

In line with the growth of the elderly population, the prevalence of depression in this age group in Indonesia also shows the numbers that need to be watched out for. The results of the Indonesian Health Survey (SKI) showed that the elderly aged 75 years and over had a prevalence of depression of 1.9%, making it the group with the second highest prevalence of depression nationally after the young age group. This high rate is of particular concern because depression in the elderly is often not detected early due to symptoms that are often considered a natural part of the aging process. In addition, limited access to mental health services in a number of areas contributed to many cases of depression in the elderly are not handled optimally. This condition confirms that the treatment of depression in the elderly needs to be part of a sustainable national mental health Priority (Health Development Policy Agency, Ministry of Health, 2024).

The prevalence of depression in the elderly who live in social institutions or long-term care institutions tend to be higher than the elderly who live in the middle of the family. One study reported an average prevalence of depression in the elderly at 13.5% globally, a figure that shows that this problem is cross-border and not just a local problem. This high prevalence is thought to be related to the lack of social interaction, loss of role in the family, and drastic changes in the living environment after the elderly settle in institutions. Differences in demographic and sociocultural characteristics in each country also affect the variation in prevalence rates reported in various studies. This condition confirms the need for special attention to the mental health of the elderly

living in social institutions, especially through early detection programs and scheduled interventions (Sulistyowati et al., 2024).

Various factors also influence the high risk of depression in the elderly, especially those living in institutional settings. A study in the elderly at a government social care institution in Sabah, Malaysia, found a prevalence of depressive symptoms of 60.9%, with male gender, perceptions of poor health, and loneliness as significant independent risk factors. These findings indicate that the risk factors for depression in institutional elderly are multidimensional, including biological, psychological, and social aspects simultaneously. Loneliness in particular was found to be one of the strongest predictors, given that elderly people living in foster homes often lose their previously owned social support network in the family environment. The combination of various risk factors is what makes the elderly in social institutions a group that requires special attention and psychosocial intervention from health workers (Sajali et al., 2021).

Depression in the elderly in social institutions can have an impact on reducing the quality of life and worsen physical health conditions that have decreased due to the aging process. Prolonged symptoms of depression can affect appetite, sleep quality, and the ability of the elderly to carry out daily activities independently. This condition is increasingly difficult to detect because symptoms of depression in the elderly are often considered a natural part of the aging process so they rarely get timely treatment. If left without intervention, mild to moderate depression has the potential to develop into a more severe condition and disrupt the psychological function of the elderly as a whole. Therefore, early detection efforts and appropriate non-pharmacological interventions are needed so that depressive conditions in the elderly do not develop into more serious (Rusman & Aminuddin, 2020).

One of the efforts to treat depression in the elderly that is safe and easy to implement is through a non-pharmacological approach, considering the use of antidepressant drugs in the elderly is at risk of side effects due to decreased organ function with age. A study with a quasi-experimental design in 15 depressed elderly people, using the Wilcoxon test, showed that the administration of classical music therapy significantly reduced the level of depression with a value of $p = 0.001$. This kind of non-pharmacological approach is considered more cost-effective and can be applied without the need for special medical skills, so it is very suitable to be applied by nurses in social institutions. In addition, non-pharmacological therapies such as music therapy are also minimal risk of side effects compared to the use of psychotropic drugs in the elderly population. These results are one of the important bases for the development of music therapy-based nursing interventions in the elderly with depression (Yani & Iskandar, 2022).

Music therapy works through the stimulation of rhythms and melodies that are able to influence the emotional and psychological state of the listener. Music is proven to be able to calm the Mind, Raise the spirit, and provide a positive influence on a person's mood through stimulation of cognitive and emotional aspects. In addition, music therapy is also flexible because it can be applied to various age groups without the need for specific health criteria or complicated medical equipment. This simple and easy-to-apply characteristic makes music therapy widely

used, both in individuals and groups, in various health care settings. These characteristics are what make music therapy one of the ideal non-pharmacological interventions to be applied to the elderly in social institutions (Amelia & Aryaneta, 2022).

The effectiveness of music therapy in reducing the level of depression in the elderly has been proven through various types of music and research settings in Indonesia. One study that applied gamelan playing therapy to the elderly at Pstw Abiyoso Yogyakarta reported a significant reduction in depression levels after routine intervention. The use of traditional music in this study shows that the type of music that is close to the local culture can also provide a good therapeutic effect, no less than the more common Western classical music studied earlier. The elderly's emotional closeness to music that is familiar to them is thought to help strengthen the relaxation effect felt during therapy sessions. These findings reinforce evidence that music therapy can be adapted to the local cultural context without reducing its effectiveness (Rohman, Mulyanti, & Santoso, 2022).

Evidence of the effectiveness of music therapy was also reinforced by a study applying keroncong music therapy to the elderly at Yayasan Rumah Ceria Repok Cianjur, which showed a significant change in depression levels after the intervention. Keroncong music was chosen because it is one of the traditional music genres that is familiar to the ears of the elderly generation of Indonesia, so it is considered more easily accepted and enjoyed by respondents. The consistency of the results of various types of music, both classical music, gamelan, and keroncong, further strengthens the position of music therapy as a nursing intervention that deserves to be widely applied to the elderly population. This makes music therapy an applicable intervention option for nurses in various social institutions, including in the West Sumatra region (Wulandari & Wisnusakti, 2023; Dhippayom, T. et al, 2022).

One of the social institutions in West Sumatra that accommodates the elderly with various physical and psychological health conditions is the Tresna Werdha social institution Sabai Nan Aluih Sicincin located in Padang Pariaman Regency. A study conducted directly at the institution found that the phenomenon of emotional disorders in the elderly is largely influenced by the physical and psychological conditions that accompany old age. As one of the PSTWS with a considerable number of residents in West Sumatra, this orphanage has a great responsibility in maintaining the psychological well-being of the elderly who live permanently in it. The condition of the elderly who are separated from their families for a long time makes this institution potentially experience a high incidence of emotional disorders, including depression, if not balanced with adequate psychosocial programs.

A preliminary survey conducted at Sabai Nan Aluih Sicincin found that most of the elderly in the institution experienced various mental health complaints that required special attention from local health workers. Although several studies have been conducted in this institution, studies that specifically evaluate the effect of music therapy by nurses on the level of depression in the elderly are still very limited. This gap shows that there are important research opportunities to be carried out, given the characteristics of orphanage residents who are prone to depression due to

loss of social and family roles. This condition is a strong basis for the need for further research on the effectiveness of music therapy in these locations.

Based on the description above, the researchers were interested in conducting research on the effect of music therapy by nurses on the level of depression in the elderly at the Tresna Werdha social institution (Pstw) Sabai Nan Aluih Sicincin. This interest is based on the high prevalence of depression in the elderly in nursing homes, the importance of the role of nurses as non-pharmacological care providers who are safe and easy to apply, and the limited number of similar studies conducted directly at the site. Researchers hope that the results of this study can provide useful scientific evidence for nurses and nursing home managers in developing psychosocial intervention programs based on music therapy on a scheduled and ongoing basis. In addition, this study is also expected to be the basis for the development of mental health care policies for the elderly in other social institutions with similar characteristics.

METHODS

This study aims to determine the effect of music therapy by nurses on the level of depression in the elderly at the Tresna Werdha social institution Sabai Nan Aluih Sicincin. This type of research is quantitative with a Quasi-experimental design using the design of one group pretest-posttest design, where the measurement of the level of depression was carried out before (pretest) and after (posttest) the intervention without using a comparative control group. This research was conducted at Pstw Sabai Nan Aluih Sicincin, Padang Pariaman Regency. The population in this study is the elderly who live in Pstw Sabai Nan Aluih Sicincin, with a sample of 30 people selected using purposive sampling techniques based on inclusion and exclusion criteria that have been set. Inclusion criteria in this study include the elderly 60 years old, experiencing mild to moderate depression based on initial screening using GDS instruments, have good hearing function, cooperative and able to communicate well, and willing to be a respondent to the study. The exclusion criteria included the elderly with severe cognitive impairment (dementia), hearing loss, being in acute pain, or refusing to follow the entire series of interventions until it was completed.

Data collection was conducted using a short version of the Geriatric Depression Scale (GDS) questionnaire instrument (15 items) that has been tested for validity and reliability to measure the level of depression in the elderly, which was filled by respondents at the pretest stage before the intervention and posttest after a series of music therapy sessions were completed. Music therapy was given directly by nurses as many as 6 intervention sessions, with a frequency of 2 times a week for 3 weeks. Each music therapy session is conducted for approximately 30 minutes, which consists of the preparation stage, music Administration, and evaluation of the respondent's response after therapy. Data analysis consisted of univariate analysis to describe the frequency distribution of respondent characteristics and levels of depression before and after the intervention, and bivariate analysis using Paired Sample T-Test to determine the difference in the average score of depression before and after music therapy, with the degree of significance $p<0.05$.

Before the data is tested using the parametric test, first performed data normality test using Shapiro-Wilk test to ensure the data is normally distributed. This study has met the principles of research ethics, where each prospective respondent is given an explanation of the objectives, benefits, and procedures of the study, then asked to sign a consent sheet (informed consent) as proof of willingness to participate voluntarily.

RESULTS

1. Frequency Distribution Characteristics of Respondents

Univariate analysis was conducted to describe the characteristics of the respondents and the frequency distribution of depression levels in the elderly before and after being given music therapy by nurses at Pstw Sabai Nan Aluih Sicincin. The results of the univariate analysis are presented in the following table.

Table 1. Frequency Distribution of Respondent Characteristics (n=30)

Characteristics	Categories	Frequency (f)	Percentage (%)
Age	60-74 years old (elderly)	19	63.3
	75-90 years old (old)	11	36.7
Gender	Men	12	40.0
	Girls	18	60.0
Education	No school / elementary school	20	66.7
	Junior High School	10	33.3
Total		**30**	**100**

Based on Table 1, most of the respondents are in the age range of 60-74 years (63.3%), female (60.0%), and the majority of low-educated (not School/Elementary School) as much as 66.7%.

2. Frequency Distribution of Depression Levels Before and After Music Therapy

Table 2. Frequency Distribution of Depression Levels Before and After Music Therapy

Depression Levels	Pretest (%)	Posttest (%)
Not Depressed (0-4)	0 (0,0)	9 (30,0)
Mild Depression (5-8)	8 (26,7)	17 (56,7)
Moderate Depression (9-11)	16 (53,3)	4 (13,3)
Severe Depression (12-15)	6 (20,0)	0 (0,0)
Total	**30 (100)**	**30 (100)**

Based on Table 2, before being given music therapy, most of the respondents were in the moderate depression category (53.3%) and none of the respondents were in the non-depression

category. After being given music therapy, there was a significant shift in distribution, where the majority of respondents shifted to the category of mild depression (56.7%) and as many as 30.0% of respondents were even in the non-depressive category, while there were no more respondents in the category of major depression.

3. Differences in Mean Depression Scores Before and After Music Therapy

Bivariate analysis was conducted to determine the difference in average depression scores before and after the administration of music therapy by nurses. Before the difference test, the data is first tested for normality using the Shapiro-Wilk test and stated to be normally distributed ($p>0.05$), so that the Paired Sample t-Test parametric statistical test can be used. The results of bivariate analysis are presented in the following table.

Table 3.Differences in Mean Depression Scores Before and After Music Therapy

Variable	Mean	SD	SE	Mean Difference	95% CI	p-value
Depression Score Before (Pretest)	9,73	2,15	0,39	4,27	3,58 – 4,96	0,000
Depression Score After (Posttest)	5,46	1,98	0,36			

Based on Table 3, obtained the average score of depression before being given music therapy is 9.73 (moderate depression category) with a standard deviation of 2.15, while the average score of depression after being given music therapy decreased to 5.46 (mild depression category) with a standard deviation of 1.98. There was a decrease in the mean depression score by 4.27 points between before and after the intervention. The Paired Sample T-Test showed a value of p-value = 0.000 ($p<0.05$), which means there is a statistically significant difference in the average depression score between before and after music therapy.

DISCUSSION

1. Frequency Distribution of Depression Levels Before and After Music Therapy

The results of this study showed that before being given music therapy, most respondents were in the moderate depression category with a percentage of 53.3%, and none of the respondents were in the non-depression category. This condition illustrates that almost all elderly people living in social institutions experience mood disorders in varying degrees, ranging from mild to severe. The absence of respondents in the non-depression category indicates that the social institution environment has certain characteristics that contribute to the emergence of depressive symptoms in its residents. These preliminary findings are an important basis for looking at the extent to which non-pharmacological interventions such as music therapy can provide changes in the psychological condition of the elderly.

The high proportion of moderate depression in the elderly in social institutions is in line with various studies that state that the elderly who live in care institutions tend to have a higher risk of depression than the elderly who live with their families. This condition is closely related to

changes in social roles, loss of autonomy, and lack of interaction with the nuclear family, which is usually the main source of emotional support for the elderly. In addition, the aging process, which is accompanied by a decrease in physical and cognitive functions, also exacerbates the psychological vulnerability of the elderly to new environmental stressors in the institution. Such factors cumulatively form psychosocial conditions that facilitate the appearance of depressive symptoms in the institutional elderly population (Zenebe et al., 2021; Sajali et al., 2021).

Institutional characteristics of social institutions are also a factor that cannot be ignored in explaining the high rate of moderate depression in respondents. The elderly who live in a home generally experience separation from the family environment and the community of origin, resulting in a prolonged feeling of loss, loneliness and social isolation. The monotony of life routines and the limitation of meaningful activities in the home also reinforce feelings of helplessness and loss of purpose in the elderly. This kind of condition is consistently reported as an important determinant of depression in the elderly living in social service institutions (Novayanti et al., 2020; Rusman & Aminuddin, 2020).

Demographic characteristics of respondents such as work history, education level, and gender also influenced the degree of depression experienced by the elderly in social institutions. Seniors with a history of low education and no previous productive activity tend to have more limited coping skills in the face of psychological stress in old age. In addition, the unpreparedness to face the transition period from an active social role to a passive role in the orphanage also exacerbated the psychological burden felt. This reinforces the importance of paying attention to aspects of individual characteristics in understanding variations in the level of depression in the elderly in the institutional environment (Setiawati & Ismahmudi, 2020; Septianawati et al., 2022).

Researchers assume that the high proportion of elderly people with moderate depression before being given the intervention is due to the accumulation of unresolved feelings of loss, whether the loss of a life partner, family role, or personal independence. The unavailability of activities that stimulate positive emotions on a regular basis in nursing homes is thought to strengthen the emergence of feelings of emptiness and depression in most respondents. Researchers also suspect that the lack of Pleasant psychosocial stimulation is one of the reasons why none of the respondents were in the non-depressive category before the intervention was given. This assumption is the basis for researchers to assess the importance of interventions that are able to provide positive emotional stimulation in a structured manner for the elderly in social institutions.

The phenomenon of high prevalence of depression in the elderly found in this study is also in line with national-scale data showing an increase in the proportion of mental health problems in the elderly in Indonesia. The year-on-year increase in the elderly population contributes to the increasing burden of mental health problems in this age group, including depression. Screening Data using standard instruments such as the Geriatric Depression Scale also shows that the proportion of mild to moderate depression is still dominant in the elderly population in various regions in Indonesia. This condition confirms that the findings in this study are not a stand-alone

case, but part of a broader pattern of elderly mental health at the national level (Central Bureau of Statistics, 2023; Sulistyowati et al., 2024).

After being given music therapy, the results showed a shift in the distribution of depression levels are quite real in the respondents. The majority of respondents who were previously in the category of moderate depression, shifted to the category of mild depression with a proportion of 56.7%. In addition, as many as 30.0% of respondents have even been in the category of not depressed, while the category of major depression is no longer found at all in respondents. This change in distribution illustrates the trend of improvement in the psychological condition of the elderly after being given music therapy intervention on an ongoing basis.

The positive changes that occur after the administration of music therapy can be explained through the neurobiological and psychological mechanisms that musical stimulation generates in the central nervous system. Music is known to affect the activity of the limbic system, which plays a role in the regulation of emotions, so it can lower stress hormone levels and increase feelings of calm in individuals who listen to it. The relaxing effects of music can also decrease sympathetic activity related to anxiety and negative mood. A large-scale systematic review even confirmed that music therapy exerts clinically meaningful effects in reducing anxiety symptoms and mood disorders in various age groups, including the elderly (de Witte et al., 2025).

The findings of a decrease in depression levels after music therapy in this study are also consistent with various previous studies that used classical music as a form of intervention in the elderly. Classical music with a slow tempo and regular harmony is known to create a relaxing effect that helps lower psychological tension in the elderly. Giving classical music therapy repeatedly in a certain period was also shown to be able to significantly reduce depression scores in the elderly group studied. The congruence of these findings with previous studies reinforces the belief that classical music has consistent therapeutic potential in lowering depression rates in the elderly (Anwar et al., 2024; Yani & Iskandar, 2022).

In addition to classical music, various types of traditional music of the archipelago have also been shown to be effective in reducing the level of depression in the elderly through an approach that is closer to the cultural background of respondents. Keroncong music and Javanese style campursari, for example, proved to be able to reduce the level of depression in the elderly because of the emotional closeness and nostalgia generated by this type of music. Similarly, dangdut music therapy and gamelan games are reported to be able to provide a significant depression reduction effect on the elderly in social institutions. Cultural appropriateness between the type of music given and the background of the respondents is thought to be an important factor that strengthens the effectiveness of music therapy in reducing symptoms of depression (Wulandari & Wisnusakti, 2023; Utami et al., 2022)).

The effectiveness of music therapy in reducing negative psychological symptoms has also been demonstrated in other clinical populations outside the elderly, which further reinforces the generalization of the therapeutic benefits of music. Studies in patients undergoing invasive medical procedures have shown that the administration of music therapy is significantly able to

reduce anxiety levels during the procedure. The calming effect elicited by music in such contexts has a similar underlying mechanism to the depression-reducing effect found in the elderly in this study. The similarity of these mechanisms suggests that music works through psychophysiological pathways that are universal in relieving emotional distress in various health conditions (Apri Budianto et al., 2026).

Researchers assume that the shift in the distribution of depression levels from moderate to mild and non-depressive categories occurs because music therapy provides a pleasant sensory experience and is able to distract the elderly from negative thoughts that have dominated. Researchers also suspect that giving music therapy on a regular and scheduled basis creates a sense of anticipation and a new positive routine for the elderly, which indirectly rebuilds a sense of purpose in their daily lives in the orphanage. Interaction between respondents during music therapy sessions is thought to strengthen the sense of community and reduce feelings of loneliness that were previously felt. Thus, the improvement in the level of depression observed is suspected not only from the direct effect of music on the brain, but also from the social and emotional dimensions that accompany the process of administering such therapy.

The disappearance of the category of major depression after the administration of music therapy is a finding that is particularly interesting to discuss, as it shows that this intervention is able to reach even the elderly with the most severe degree of depression. Theoretically, the relaxing effect produced by music can decrease the activity of the hypothalamic-pituitary-adrenal axis that plays a role in the chronic stress response, thus helping to stabilize the mood of feelings in individuals with symptoms of major depression. This decrease in the physiological activity of stress in turn makes room for a gradual improvement in the effect even if the intervention is non-pharmacological. The consistency of these findings with the results of a large-scale systematic review of the effectiveness of music therapy reinforces the belief that music can be an important component in the management of depression in the elderly of varying degrees of severity (de Witte et al., 2025).

These findings have important practical implications for the management of the mental health of the elderly in social institutions, particularly in the prevention and treatment of depression in a non-pharmacological manner. An understanding of the emotional profile of the elderly living in nursing homes needs to be the basis for health workers and workers in designing activity programs that support the psychological well-being of their residents on an ongoing basis. A regularly scheduled music therapy Program can be an inexpensive, easy-to-implement, and minimal-risk intervention strategy compared to pharmacological approaches. The integration of regular emotional monitoring with the provision of therapeutic activities such as music is expected to reduce the prevalence of emotional problems in the elderly in social institutions more thoroughly.

Overall, the results of univariate analysis in this study showed a tendency to improve the level of depression in the elderly after music therapy, which is reflected in the shift in the distribution of respondents towards the category of depression that is milder and not even

depressed. This picture provides an early indication that music therapy has the potential to be a useful intervention in reducing the level of depression in the elderly in social institutions. Nevertheless, the changes observed in this descriptive analysis cannot yet be the basis for concluding the existence of a statistically meaningful relationship between the administration of music therapy and a decrease in the level of depression. Therefore, further testing through bivariate analysis is needed to confirm the scientific significance of such changes.

2. The Effect of Music Therapy on the Level of Depression in the Elderly

Based on the results of the study presented in the previous section, it is known that the average depression score of the elderly before being given music therapy was 9.73 with a standard deviation of 2.15, which belongs to the category of moderate depression. The standard deviation values indicate a fairly diverse variation in depression scores among respondents before the intervention. This condition indicates that most of the elderly in Pstw Sabai Nan Aluih Sicincin experienced significant emotional disturbances before getting non-pharmacological intervention. This initial picture is an important basis for seeing the changes that occur after the administration of music therapy at a later stage.

The high score of early depression in the elderly who live in social institutions is in line with the characteristics of the institutional elderly population who are more prone to psychological disorders than the elderly who live with their families. The elderly who live in social institutions are at higher risk of depression because they feel they do not have a trusted person to share their grievances than the elderly who live with their families. Institutional factors such as lack of social support, limited activity, loss of a life partner, and social isolation contribute to the high rate of depression in the elderly in nursing homes. Results of a meta-analysis conducted by Wang et al. (2021) found that the prevalence of depression in nursing home residents in various countries reaches 60-70%, with most being at mild to moderate levels. Pretest findings in this study strengthen the evidence, that the social care environment is a risk factor for the emergence of depression in the elderly (Wang et al., 2021).

After music therapy, the elderly's average depression score decreased to 5.46 with a standard deviation of 1.98, meaning the depression category shifted from moderate to mild. A decrease in the average score of 4.27 points indicates a considerable change in the relatively short time after the intervention. The narrowing of the standard deviation value from 2.15 to 1.98 also indicated that the elderly's response to music therapy became more homogeneous than before the intervention. These Data serve as preliminary quantitative evidence that music therapy has a positive impact on reducing the level of depression in the elderly studied.

The decrease in depression scores after the administration of music therapy can be explained through the relaxation mechanism that musical stimuli generate in the nervous system. Listening to music can affect the autonomic nervous system, both sympathetic and parasympathetic, resulting in a relaxation response that improves behavior and psychological symptoms in depressed elderly people. This relaxation response plays an important role in

lowering emotional tension that previously contributed to high depression scores. Research by Sari (2021) on the elderly at the Tresna Werdha Kasih Sayang Ibu social institution also showed a significant effect of classical music therapy on reducing elderly depression, which strengthened the relaxation mechanism as the basis for the success of this therapy (Sari, 2021).

Neurobiologically, the effect of decreasing depression due to music therapy is closely related to changes in hormone levels in the body. Music therapy can reduce cortisol levels, which is a stress hormone, and stimulate the release of endorphins that have a calming effect and increase feelings of happiness, as explained by Apri Budianto et al. (2026). In addition, the neurobiological and neuroendocrine mechanisms of music therapy also work through decreased activation of the amygdala as well as increased activity of the prefrontal cortex, which has been clinically shown to effectively decrease symptoms of anxiety and mood disorders based on a systematic review by De Witte et al. (2025). It is this decrease in cortisol and an increase in endorphins that physiologically explains why elderly depression scores can decrease significantly after music therapy is routinely administered. This mechanism reinforces the scientific basis that music therapy is not simply an entertainment activity, but rather an intervention that has real biological effects on mood (De Witte et al., 2025).

The results of the Paired Sample t-Test in this study showed the value of p-value = 0.000 ($p<0.05$), which means there is a statistically significant difference in the average depression score between before and after the administration of music therapy. This significance value indicates that the decrease in depression scores does not occur by chance, but is a real effect of the intervention provided. Thus, the hypothesis of research that states the influence of music therapy on reducing the level of depression in the elderly in Pstw Sabai Nan Aluih Sicincin acceptable. These findings form a strong basis for concluding that music therapy is effective as a non-pharmacological intervention in reducing depression in the elderly living in social institutions.

The findings of this study are consistent with a number of similar studies conducted in various social institutions in Indonesia. Sari's research (2021) at the Tresna Werdha Kasih Sayang Ibu social institution showed a significant influence between classical music therapy on depression in the elderly with a p-value = 0.000 ($p < 0.05$). Accordingly, the research of Utami et al. (2022) in the elderly at Mulia Dharma elderly rehabilitation social institution, West Kalimantan, using dangdut music therapy also obtained a value of $p = 0.00$ (<0.05) which showed the effectiveness of music therapy against depression reduction. The consistency of the results of both studies, despite the use of different types of music and research designs, reinforces the external validity of the findings that music therapy in general is effective in reducing depression in the elderly in social institutions (Primasari. Et al, 2022; Utami et al., 2022).

The effectiveness of music therapy in reducing depression is also influenced by the type of music used and its compliance with the preferences of the elderly. The selection of the type of music that is familiar and preferred by the elderly, such as traditional music or music that has been popular in its time, is believed to provide a more optimal relaxation effect than music that is unfamiliar to them. Cultural aspects and emotional closeness to certain types of music also

influenced how much of a therapeutic effect respondents felt. This is also illustrated from the research of Utami et al. (2022) which uses dangdut music, a genre familiar to Indonesians, and still shows statistically significant results. Therefore, the adjustment of the type of music with the cultural background and age of the elderly is an important consideration in the application of music therapy in social institutions (Utami et al., 2022).

In addition to the aspect of physiological relaxation, music therapy also works through psychological mechanisms in the form of distraction against negative thoughts that are often experienced by depressed elderly people. When seniors listen to music, their attention shifts from feelings of sadness, loneliness, or loss to Pleasant auditory experiences. This process of distraction helps break the cycle of negative thinking that contributes to the appearance of more severe symptoms of depression. The scientific evidence cited in the review of De Witte et al. (2025) showed that music therapy can lower anxiety and improve emotional state through the effects of psychological distraction and relaxation simultaneously. It is this mechanism of distraction and relaxation acting simultaneously that explains the considerable decrease in depression scores in this study (De Witte et al., 2025).

The decrease in depression levels due to music therapy also has implications for improving the overall quality of life of the elderly. The increasing incidence of depression in the elderly is feared to have an impact on reducing the quality of Health and quality of life of the elderly, as found by Novayanti (2020) in her research on the level of depression of the elderly living in social institutions. Elderly people who experience decreased symptoms of depression generally show increased interest in daily activities and social interactions in the home environment. The improvement in mood resulting from music therapy can encourage the elderly to more actively participate in activities provided in social institutions. Thus, music therapy not only has an impact on the emotional aspect, but also has the potential to improve the social functions of the elderly more broadly (Novayanti, 2020).

The results of this study confirm the importance of the role of nurses in providing non-pharmacological interventions for the elderly with psychological disorders. Music therapy is a form of nursing intervention that does not require large costs, minimal risk, and can be applied independently by nurses in social institutions. The application of this therapy also does not require complicated medical tools or skills, so it can be routinely carried out as part of gerontic nursing care, in line with the concept of non-pharmacological intervention described in the study of Hole et al. (2021) regarding the use of music therapy to decrease pain, anxiety, and the need for analgesics in patients. The active role of nurses in designing and implementing consistent music therapy is the key to successfully reducing the level of depression in the elderly in social institutions (Hole et al., 2021).

Based on the results of the above analysis, the researchers assume that the decrease in standard deviation from 2.15 to 1.98 after music therapy showed that almost all respondents experienced relatively uniform psychological improvement, not just some specific respondents. This indicates that music therapy provides benefits fairly evenly in the elderly with varying

degrees of early depression. Researchers also assume that the success of this intervention can not be separated from the consistency of the implementation of music therapy provided in a structured manner by nurses during the study. In addition, the comfortable and supportive atmosphere of therapy implementation is thought to contribute to the level of acceptance of the elderly to the interventions provided.

The duration and frequency of music therapy is also a factor that affects the magnitude of the depression reduction effect obtained. Sari research (2021) uses a one group pretest-posttest design with the implementation of classical music therapy at a certain time range, and still shows significant statistical test results. Primary research et al. (2022) also carried out dangdut music therapy in scheduled sessions with control and intervention groups, the results of which consistently showed effectiveness despite the limited duration of implementation. The consistency of the results over these various duration ranges shows that music therapy has a fairly quickly detectable effect although ideally it should still be given on an ongoing basis for more optimal and lasting results (Sari, 2021; Utami et al., 2022).

The researchers assumed that individual characteristics of the elderly, such as level of independence, history of chronic illness, and quality of social relationships within the home, also influenced the variation in depression scores among respondents, although overall the results showed a consistent downward trend. Seniors with better social support in the orphanage are thought to benefit from music therapy that is more optimal than the elderly who tend to withdraw socially. Researchers also suspect that the active involvement of the elderly during therapy sessions, such as the enthusiasm of listening to and responding to music, plays a role in determining the magnitude of the perceived depression reduction effect. Therefore, an individual approach to the implementation of music therapy needs to be considered so that its benefits can be felt to the maximum by every elderly person.

Overall, the results of this study reinforce the empirical evidence that music therapy has a significant effect on reducing the level of depression in the elderly in social institutions, in line with the findings of previous studies as well as theories of underlying neurobiological and psychological mechanisms. The decrease in depression score from moderate to mild category, supported by the value of p-value = 0.000, confirms that music therapy can be used as one of the effective and applicable non-pharmacological nursing interventions in social institutions. Researchers assume that this success can be replicated in other social institutions with similar characteristics of the elderly, as long as the implementation is carried out consistently and adapted to the musical preferences of the local elderly. Thus, the results of this bivariate discussion provide scientific contributions as well as practical recommendations for nurses and managers of social institutions in an effort to improve the mental health of the elderly through music therapy approaches.

CONCLUSIONS

This study aims to determine the effect of music therapy on the level of depression in the elderly in the Social Care Tresna Werdha (PSTW) Sabai Nan Aluih Sicincin, using quasi-experimental quantitative design through the design of one group pretest-posttest design on 30 respondents who were selected by purposive sampling according to inclusion criteria. Data collection was conducted using a Geriatric Depression Scale (GDS) questionnaire measured before and after music therapy for several sessions, then analyzed univariate to see the frequency distribution and bivariate using a Paired Sample T-Test. The results showed that the average depression score before music therapy was 9.73 (moderate depression category) and decreased to 5.46 (mild depression category) after music therapy was given, with a difference of 4.27 points decrease and p value = 0.000 ($p<0.05$). These findings prove statistically that there is a significant difference between depression scores before and after the intervention, so it can be concluded that music therapy has been shown to be effective and significantly meaningful in reducing the level of depression in the elderly living in social institutions. These results reinforce evidence that music therapy can be used as an alternative to non-pharmacological nursing interventions that are easy, cheap, safe, and applicable to be applied routinely by nurses and nursing home managers in an effort to improve the mental health and quality of life of the elderly.

However, this study has some limitations that need to be considered in interpreting the results where a relatively small sample number, namely 30 respondents, and the use of purposive sampling techniques at one location of social institutions cause the results of this study may not necessarily be generalized to the elderly population in other social institutions with different social characteristics, culture, and levels of early depression. Therefore, further research is recommended to use a study design with a control group, increase the number of samples, extend the duration of the intervention, and perform follow-up measurements in order to obtain a more comprehensive picture of the effectiveness and sustainability of the benefits of music therapy to reduce depression in the elderly.

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