

Laughter Therapy Card for Sleep Disorder Older Adults in Lubuklinggau City

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Abstract

Introduction: Sleep disorders affecting 40 to 70% of older adults manifest sleep disorders. Compromised sleep detrimentally impacts older adults, leading to daytime sleepiness, heightened fall risks, and cognitive decline. Demonstrates promising therapy in enhancing sleep quality and reducing fatigue through laughter therapy cards.

Objective: The study aimed to construct and test the effect of laughter cards on improving the sleep quality of old adults in Lubuklinggau City, South Sumatra, Indonesia. **Method:** This quantitative study was conducted with a quasi-experimental approach. A total of 32 participants took part in this study, of which 32 participants attended laughter therapies with laughter therapy cards in 1 month by doing activities in laughter therapy four times in 1 month, each 45 minutes, before and after laughter therapies are assessed by PSQI score. The Cronbach's alpha coefficients used were 0.81. The paired t-test was used to determine the data statistically.

Result: Before and after therapies showed different values of PSQI score. PSQI score of older adults before treatments (10.50), became (7.68) after therapies, and had a statistically significant p 0.001. **Recommendation:** Continuous laughter therapies are non-pharmacological therapy for older adults with a sleep disorder.

Keywords: laughter therapy, sleep, older adults, non-pharmacology

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INTRODUCTION

Sleep disorders affect 40 to 70 percent of older adults, according to studies (1,2). The most prevalent sleep disorder in older people is insomnia, with prevalence rates ranging from 20–40% (3).

Sleep apnea, restless legs syndrome, and REM sleep behavior disorder are other prevalent sleep disorders in older adults (4).

The high prevalence of sleep problems in the elderly is linked to an increase in multimorbidity, polypharmacy, sleep-related psychosocial variables, and several primary sleep disorders (1)

Sleep problems may negatively impact older adults's health in several ways. Consistent sleep issues can result in daytime sleepiness, which increases the risk of falls in senior persons, as well as other morbidities such as decreased cognition, disorientation, and delirium (5).

As people grow older, poor sleep can lead to various health issues and lower their quality of life. High blood pressure, weight gain, stroke, heart attack, diabetes, cognitive problems, and even an increased chance of death are all long-term health effects of insufficient sleep (1,2).

Results of a survey conducted by (Hidayat, 2018) show that several situations, including retirement, the loss of a partner, medical treatment, a lack of activity level, discomfort, noise, and pain, can affect how well older adults sleep.

Management of poor sleep quality can be performed by pharmacological and non-pharmacological therapy. However, using sleeping pills has adverse side effects for older people, such as dry mouth, confusion, dizziness, drowsiness the next day, and impaired balance and coordination (6).

Non-pharmacological interventions should be considered. Various non-pharmacological intervention approaches, such as mindfulness and cognitive behavioral therapy, have shown promise in improving sleep quality and health outcomes for older people (7). relaxation techniques, improving sleep hygiene, and cognitive behavioral therapy are effective in managing insomnia for extended periods, even in patients with cognitive impairment

According to Fardianti (2017), non-pharmacological therapy interventions, such as classical music and laughter therapy, have improved sleep quality for older people who get both treatments (8). Laughter therapy is beneficial, cost-effective, does not require high technology, and is an easily accessible intervention that has positive effects on depression, insomnia, and sleep quality in older people (9); laughter therapy is also effective in reducing fatigue and increasing satisfaction with sleep (10)

To make the therapy process easier, appropriate tools are needed. Laughter therapy can be done independently or in a group and can be done by watching funny videos, reading humor books, or participating in laughter classes. Here, researchers will use laughing cards when carrying out laughter therapy.

Laughter therapy cards are a tool to make it easier to carry out laughter therapy. The idea of using a card is because it is easier to store and very cheap, so if older people later forget or lose the card, it is straightforward to recreate it.

OBJECTIVE

The study aimed to construct and test the effect of laughter cards on improving the sleep quality of old adults in Lubuklinggau, South Sumatra, Indonesia.

METHODS

Design

A Research and Development (R&D) design was applied in this study. The R&D research process includes the Research Phase:

1) Identify Goals:

- Define the purpose of the laughter therapy card.
- Study Existing Methods: Research existing laughter therapy techniques, psychological impacts of laughter, and successful therapy card designs or formats.

2) Design & Development:

- Content Creation: Curate or create content or activities promoting laughter.
- Card Structure: Decide on the structure of the card—size, format, visual elements, and whether it's digital or physical.

- Prototype Development: Create a prototype incorporating the chosen content and structure.

3) Testing & Expert Judgment:

- Expert Judgement
- Small User Testing.

4) Evaluation & Finalization:

- Pilot Testing: Conduct a pilot test with a larger group to assess the revised prototype's effectiveness.
- Assessment: Evaluate the pilot test results—measurements could include changes in mood, stress levels, or overall well-being among participants.
- Finalization: Finalize the laughter therapy card design (11).

Sample

This study uses a large group sample for model testing. Sampling This study used a purposive sampling technique with a selection of 32 people. They were selected based on the inclusion criteria: 1) living in a social services nursing home, 2) being more than 60 years old, 3) being willing to participate in research, and 4) taking part in a series of research from the start until finish. The exclusion criteria are 1) bed rest total, 2) getting a score under five on the geriatric depression scale, 3) receiving anti-depressant treatment, 4) having a history of heart disease, and 5) having a hearing problem and not having a hearing aid.

Ethical Consideration

This study was about the research and whether they had the right to participate in this study or not. The researcher assures that the confidentiality of the information will be guaranteed and was conducted according to the guidelines of the Declaration of Helsinki. The Palembang Health Polytechnic Ethics Committee number 0678/KEPK/Adm2/VI/2023 issued ethical approval.

All participants were asked to complete and sign a consent form after receiving the information.

Laughter Cards

Laughter card for sleep disorders in older adults is a term used in psychology and

healthcare, specifically within geriatrics and sleep medicine. It refers to a therapeutic approach that integrates humor, light-heartedness, and positive emotional stimulation to address sleep disturbances and related psychological issues commonly experienced by older adults.

The laughter card method typically incorporates various forms of laughter therapy, including humor-based activities, comedic interventions, and social engagement programs to promote relaxation, stress reduction, and overall emotional well-being. It is designed to counteract the negative impact of sleep disorders, such as insomnia, sleep apnea, and restless leg syndrome, which are prevalent among the elderly population.

The purpose of the laughter card for sleep disorders in older adults is to foster a sense of joy, enhance interpersonal connections, and improve the quality of sleep by encouraging the release of endorphins and the reduction of cortisol levels, thereby contributing to a more restful and rejuvenating sleep pattern. This approach recognizes the significance of laughter and its potential as a non-pharmacological intervention to complement traditional treatments for sleep disorders in older adults. By integrating amusement and social interaction elements, the laughter card technique aims to promote a holistic and enjoyable approach to managing sleep disturbances within the aging population.

Expert Validation

Expert Validation is approximate, based on analysis and logical reasoning by certified researchers of holistic care, non-pharmacology specialists' therapy, and holistic care trainers and experts.

Table 1. Expert Validation

No	Validated aspects	Expert Validation		Properness to use	
		Expert 1	Expert 2	Expert 1	Expert 2
1	Laughter Therapy Card Design	Good	Good	Proper	Proper
2	Visual Laughter Therapy card	Good	Good	Proper	Proper
3	Laughter therapy program	Good	Good	Proper	Proper

RESULTS

Based on expert judgment and review processes within the small group in stage three, improvements were identified by the first specialist judgment to ensure the implementation sources align with the theory, aiming to achieve the therapy's goals.

The activities on this therapy card encompass laughter therapy and physical, emotional, and interconnected activities, as suggested by expert judgment. The second specialist judgment also recommended altering the laughter therapy card's print into a larger format, considering its target audience – elderly individuals.

Pilot Testing: Conduct a pilot test with a larger group to assess the revised prototype's effectiveness. Expert validation aims to determine whether the expert explained the laughter card therapy criteria during the initial interview. We send the laughter therapies we made to test their authority to accommodate sleep disorders in adults. The following are the results of research on the characteristics of the respondents.

Table 1. Respondents Characteristics (n=32)

No	Characteristics	F (n = 32)	%
1.	Sex		
	a. Male	13	40.6 %
	b. Female	19	59.3 %
2.	Age		
	a. 60 – 70	6	18.7 %
	b. 71 – 80	17	53.1 %
	c. > 89	9	28.1 %
3	Religion		
	a. Islam	30	93.7%
	b. Kristen	2	6.3%
4	Length of Stay		
	a. < 6 Months	13	40.6%
	b. six months – 1 Year	8	25%
	c. > 1 Year	11	34.3%

Table 1 shows the sociodemographic characteristics of respondents. A total of 32 older adults contributed to this study. Most of the respondents are female (59,3%), Age 71-80 years old (53.1%), Religion Catholic (31.2%), and length of stay under six months (40,6%).

Table 2. PSQI Score Before and After Giving Therapies

Variable	Before	After	Difference	t	p*
	M ± SD	M ± SD	M ± SD		
PSQI Score	10.50 ± 3.172	7.68 ± 2.84	2.81 ± 1.40	10.67	.0001

*Paired t-Test *

Table 2 reveals a decreasing PSQI score before and after therapies after using laughter card therapies. Furthermore, I had statistically significant p 0.001.

FINAL MODEL

Based on the above process, laughter cards are made to aid in implementing laughter therapy. These laughter cards are made to reduce production costs and are affordable for many older adults, regardless of their ability to use technology.

These laughter cards also meet the requirements and have been checked by experts in the complementary therapy field, namely from the Indonesian Holistic Nurses Association and Complementary Nurse Practitioners.

LAUGHTER THERAPY CARD PRODUCT

The development of these tools of laughter therapy resulted in the production of laughter cards. The shape of laughter cards is simple: rectangular with a size of 10 cm x 15 cm, as shown in Figure 1.

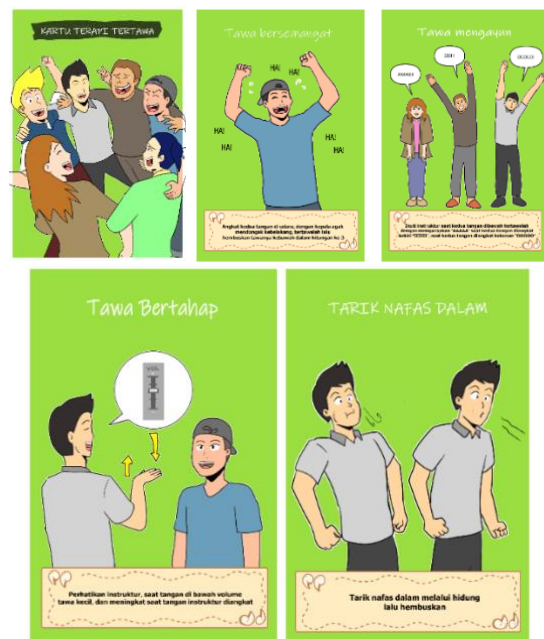


Figure 1. Laughter Therapy Card Model

DISCUSSION

For stress and depression, two common conditions that negatively affect mental health, laughter therapy is a non-invasive, drug-free alternative treatment. It is a cognitive-behavioral treatment that could promote healthy bodily, psychological, and

interpersonal connections, raising quality of life. (14).

To lower anxiety and depression, laughter therapy can physiologically boost the mood-enhancing anti-stress factors while decreasing the mood-lowering pro-stress aspects (15). For mental health and the immune system, laughter therapy has a positive effect (14).

The data in Table 2 shows that after carrying out laughter therapy using the laughter card tool, there was an improvement in the sleep quality of older people; this indicates that the laughter therapy carried out was successful. Success in carrying out laughter therapy also has the impact of using laughter cards so that participants more easily understand what is being instructed by the instructor. Tools can improve learning experiences by making them more interactive and engaging (16).

Studies have revealed that laughter therapy benefits older people's physiological and psychological health; it significantly improves general health, somatic symptoms, insomnia, and anxiety (17). Additionally, endorphins released by laughter might benefit persons who are uneasy or feeling down (14).

Another study found that laughter yoga techniques can help Parkinson's disease patients sleep better and experience less anxiety. By relaxing the body and mind, laughter therapy can also benefit those who initially have problems falling asleep. (18).

In comparison to control groups (no intervention or active control), laughter and humor therapy have positive impacts on immunity, pain, sleep, and depression, according to a systematic review and meta-analysis (19).

Laughter therapy might alleviate sleep issues by lowering stress and anxiety levels, encouraging enjoyment, and elevating mood. To reduce anxiety and depression, laughter therapy can physiologically boost the mood-enhancing anti-stress factors while decreasing the mood-lowering pro-stress aspects (9).

Laughter therapy has been found to have beneficial impacts on those with sleep disorders. Laughter therapy is recognized as an advantageous, accessible, low-cost, and readily available treatment (9,14).

In conclusion, laughter therapy is a successful sleep disorder treatment with scientific backing. To relieve depression and anxiousness, it can physiologically raise the mood-raising anti-stress factors and decrease the mood-lowering pro-stress elements. The immune system and mental wellness both benefit from it. Additionally, endorphins released by laughter benefit those who feel uneasy or melancholy. Studies have indicated that laughter therapy improves the physiological and psychological functioning of seniors, people living with Parkinson's disease, and depressed individuals.

IMPLICATION

This card benefits caregivers by offering a gentle and enjoyable way to reduce stress, create a relaxing bedtime routine, and improve the mood of older adults.

The laughter therapy card will be a fun tool and instrument to connect positively with those they care for while aiding in managing sleep issues without any side effects.

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