EFFECT OF LAUGHTER THERAPY ON STRESS IN THE ELDERLY

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ABSTRACT
Background: There are several physical and psychological symptoms that are caused by a variety of changes and occur in the elderly, one of which is stress. Elderly people who are stressed out need to be handled with special attention. In addition, due to its perceived ease of use and low cost, laughter therapy is a preferred non-pharmacological treatment that has proven to be significantly beneficial in reducing stress levels. Research Objective: To determine the effect of laughter therapy on the behavioral emergency of stress in the elderly at an elderly social institution. Research Methods: This study was conducted using a quasi-experimental design. The sample in this study consisted of 38 respondents. The instruments used in this study were the DASS (Depression Anxiety Stress Scale) questionnaire and the Laughter Therapy SOP. The data analysis process used the t-test. Results: The results of the paired sample t-test showed a significant difference between the pre- and post-test values, with a significance value (2-tailed) of p = 0.000, <0.05. In this study, H₀ was rejected and Ha was accepted, indicating that there was a significant difference between the stress scores before and after the intervention was given. Conclusion: The findings of this study are expected to provide input for stakeholders so that they can be implemented in a programmatic manner to prevent further negative effects of stress and develop resilient and independent elderly people.

Keywords: laughter therapy, behavioral emergencies, stress, elderly, social institutions
INTRODUCTION

According to the World Health Organization (WHO), individuals aged 60 and older are considered elderly. At this stage, various age-related biological changes occur. Old age is a process of changing body function. This process is marked by a decrease in the ability of tissues to maintain normal function, which has an impact on the body’s ability to defend against infection and repair damage to the body.

The growing elderly population poses a variety of challenges in many aspects of life, including health. According to data from the 2019 Elderly Statistics, about half of elderly people reported having health issues in the past month (BPS-Statistics, 2019). Moreover, hypertension is still in first place among the 10 most common diseases suffered by the elderly (Infodatin-Lansia.Pdf, n.d.). This data is also supported by the 2018 National Basic Health Research (Risksdas) Report, which demonstrates that elderly people have the highest prevalence of hypertension (Agency of Health Research and Development, 2018).

Based on data from the Ministry of Health, the number of elderly people in Indonesia increased from 18 million (7.56%) in 2010 to 25.9 million (9.7%) in 2019, and it is predicted that this trend will continue until 2035, when it will reach 48.2 million people (15.77%). In addition, BPS-Statistics stated in the 2020 Indonesian Population Census that the number of elderly people in Indonesia reached 9.78 percent of the total population, a significant increase compared to the number of elderly people in the previous decade, which only reached 7.59 percent (BPS-Statistics, 2019).

The deterioration in various organ functions and the body’s rising susceptibility to disease attacks that lead to emotional and mental problems are markers of the life cycle. The highest reported prevalence of emotional and mental disorders was stated to be between the ages of 65 and 74 (12.8%) and 75 and older (15.8%) (Agency of Health Research and Development, 2018).

Stress is one of the psychological problems that elderly people face. Moreover, stress is a person’s physical and emotional response to an environmental change that necessitates adaptation (RI, n.d.). The elderly must adapt to various changes, both physical and mental, as well as social. Furthermore, elderly people may experience stress as a result of the numerous changes they have to go through in their lives.

According to data gathered at the Senja Cerah Neglected Elderly Social Service Center, 81.25% of the elderly had symptoms of severe stress, while 18.75% indicated mild stress symptoms (Indriana et al., 2010). In addition, based on the types of stress discovered in prior studies, 84.3% of the elderly experience mild psychological stress, and 92.2% of them reported experiencing mild physical stress (Kaunang et al., 2019).

Stress is experienced by the elderly in social institutions due to a variety of factors, including changes in daily routines, changes in family associations, deaths of spouses and family members, changes in the choice and quantity of sports and recreation, as well as changes in employment (Indriana et al., 2010). According to other sources, the elderly experience stress (stressors) due to a variety of reasons, including changes in lifestyle and financial situation after retirement, caring for grandchildren, caring for sick spouses, the deaths of relatives, spouses, and close friends, deteriorating
physical abilities, and chronic diseases due to fears of not being able to live independently (Geriatri, 2019).

Elderly people who are stressed out need to be handled with special attention. To address this problem, non-pharmacological therapy needs to be provided in addition to pharmacological therapy. Stress levels can be effectively reduced both before and after treatment with laughter therapy. In addition, due to its perceived ease of use and low cost, laughter therapy is a preferred non-pharmacological treatment that has proven to be significantly beneficial in reducing stress levels (Dewi, 2018). According to a different study, laughter therapy has also been proven to be effective at reducing the psychological stress experienced by elderly people living in social institutions (Samodara et al., 2015).

Humor and laughter are used in laughter therapy to reduce the impact of stress on a person, whether it manifests as mental or physical disorders. Laughter therapy will produce a feeling of relief in someone who does it. This is due to the fact that laughter has the ability to naturally change feelings of stress and pain for the better (Winter, 2006). Laughter therapy is a combination of several therapies, such as stretching, breathing exercises, and various laughter techniques. One round of laughter lasts between one and two minutes, whereas a session lasts between twenty-five and thirty minutes (Tirmanto, 2006; Prasetyo, 2011).

According to Drs. Michael Miller (University of Maryland) and William Fry (Stanford), compounds such as beta-endorphins released by the hypothalamus activate receptors on the endothelial surface to release nitric oxide, resulting in dilation of blood vessels. Nitric oxide also has cardioprotective properties, including lowering inflammation and platelet aggregation. Laughter has also been demonstrated to have beneficial effects on other aspects of biochemistry, for example, by causing reductions in stress hormones such as cortisol and epinephrine. While laughing, the brain also releases endorphins, which can relieve physical pain. In addition, laughter increases the number of antibody-producing cells and the effectiveness of T-cells, strengthening the immune system (Winter, 2006).

According to the findings of observations and interviews at the Harapan Kita Elderly Social Institution in Palembang Municipality, more elderly people were sent to the institution by their families with various physical problems. Additionally, the elderly people in the institution experience alienation and a sense of being abandoned, as well as believing that no one any longer loves them. These limitations triggered feelings of sadness, anxiety, fear, and ultimately stress. There were even the elderly, who often stayed silent and cried alone in their rooms. The institution currently has not implemented any psychological therapy measures to address this problem; instead, the focus of treatment has been mostly on physical activity.

The presence of social institutions in Indonesia is a form of government concern for the elderly. The backgrounds and reasons of elderly people living in institutions vary. These circumstances may lead to the emergence of a stressor. The elderly’s stress levels may be impacted by these variations in stressors. In order to address this problem, special treatment must be given. The use of laughter therapy as a non-pharmacological therapy is an option because it has been recognized as effective and efficient. Because of this, the researchers were interested in conducting research on the effect of laughter therapy.
on behavioral emergencies, such as stress in the elderly, at an elderly social institution.

MATERIALS AND METHODS
This study is a non-experimental quantitative study with a cross-sectional approach. This study used a correlation study, which is research to find a relationship between two variables in a situation or group of subjects (Natoatmodjo, 2018).

Population and sample
The population in this study were the elderly who experienced stress at Harapan Kita Elderly Social Institution in Palembang Municipality. The total population was 60 respondents. The sampling technique used the Slovin formula; therefore, a total sample of 38 respondents was obtained.

The instruments used in the study were the DASS (Depression Anxiety Stress Scale) questionnaire and the Laughter Therapy SOP. The research was conducted with a quasi-experimental design. The t-test was used in the process of data analysis to analyze differences in elderly stress.

RESULTS
Table. The Average Age of the Respondents

<table>
<thead>
<tr>
<th>Variable</th>
<th>n</th>
<th>Std. D</th>
<th>Mean</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Usia</td>
<td>38</td>
<td>5.4</td>
<td>64.4</td>
<td>50</td>
<td>75</td>
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</tbody>
</table>

Respondents in this study were 38 people with an average age of 64 years; the youngest age was 50 years, and the oldest age was 75 years.

Table. Elderly Stress Before Given Laughter Therapy

Elderly stress before being given laughter therapy had a mean score of 63.1, a median score of 69.5, and a standard deviation of 20.5. The lowest elderly stress score was 16, and the highest score was 99.

Table. Elderly Stress After Given Laughter Therapy

Elderly stress after being given laughter therapy had a mean score of 32.9, a median score of 32.5, and a standard deviation of 8.6. The lowest elderly stress score was 10, and the highest score was 55.

Table. Differences in Elderly Stress Values Before and After Being Given Laughter Therapy

The results of the paired sample t-test showed a significant difference between the pre- and post-test values, with a significance value (2-tailed) of p = 0.000, <0.05 (Table 5.4). The hypothesis value (H0) in this study was rejected and the alternative hypothesis (Ha) was accepted, indicating that there was a significant difference between the two tests.

DISCUSSION
The results of the research conducted using the DASS questionnaire on 38 elderly respondents at the Elderly Social Institution before being given the intervention showed that, on average, the elderly experienced very severe stress. In addition, there were also several respondents who indicated mild, moderate, and severe stress.

Various changes experienced by the elderly, accompanied by various changes in body functions, made the elderly susceptible to disease, which in turn impacted their mental and emotional condition. Emotional mental disorders are reported to have the highest prevalence at the age of 75 years and older (15.8%) and ages 65–74 years (12.8%) (Agency of Health Research and Development, 2018). This was proven by the data obtained by the researchers, which revealed that the average age of the respondents was 64 years.

Other researchers who conducted research on elderly stress also showed that 81.25% of the elderly showed symptoms of severe stress and 18.75% showed symptoms of mild stress (Indriana et al., 2010). The types of stress found in other studies reported that 92.2% of the elderly experience mild physical stress and 84.3% experience mild psychological stress (Kaunang et al., 2019).

According to Jung’s theory of individualism, human nature is divided into two types: extroverts and introverts. The elderly tend to be introverted and prefer to be alone. Similarly, the disengagement theory asserts that as a person grows older, he or she tends to withdraw from society (Geriatri, 2019).

Stress is experienced by the elderly in social institutions due to a variety of factors, including changes in daily routines, changes in family associations, deaths of spouses and family members, changes in the choice and quantity of sports and recreation, as well as changes in employment (Indriana et al., 2010). According to other sources, the elderly experience stress (stressors) due to a variety of reasons, including changes in lifestyle and financial situation after retirement, caring for grandchildren, caring for sick spouses, the deaths of relatives, spouses, and close friends, deteriorating physical abilities, and chronic diseases due to fears of not being able to live independently (Geriatri, 2019).

Changes in the value of stress on the elderly in the elderly social institution can be seen in the decrease in the average value of stress as measured using the DASS questionnaire after being given an intervention, indicating that the average elderly experienced a decrease in the number from very heavy stress to severe stress. However, there is data demonstrating that respondents no longer experienced stress (normal). Similarly, the maximum stress value following the intervention reduced significantly, although it remained at the very severe stress limit.

Stress management can be overcome by preparing for stressors, such as through laughter therapy, which employs humor or laughter to assist individuals in handling their problems, both physical and emotional, because laughter can naturally reduce pain and stress (Bona Simanungkalit, 2007).

Elderly people who are stressed out need to be handled with special attention. To address this problem, non-pharmacological therapy needs to be provided in addition to pharmacological therapy. Stress levels can be effectively reduced both before and after treatment with laughter therapy. In addition, due to its perceived ease of use and low cost,
Laughter therapy is a preferred non-pharmacological treatment that has proven to be significantly beneficial in reducing stress levels (Dewi, 2018). According to a different study, laughter therapy has also been proven to be effective at reducing the psychological stress experienced by elderly people living in social institutions (Samodara et al., 2015).

The results of this study conducted by the researchers on 38 elderly respondents at a social institution using the DASS questionnaire demonstrated that there was a significant difference between the stress scores before and after being given the laughter therapy intervention.

The results of this study were supported by the results of research conducted by Dewi (2018) which revealed that laughter therapy was proven to reduce stress levels before and after being given treatment. In addition, research conducted by Samodara et al., (2015) asserted that laughter therapy proved effective against the stress of the elderly in social institutions.

The results of another study conducted by Pradeshe et al. (2022) also proved that laughter therapy is effective and contributes to changes in stress in the elderly. Furthermore, laughter therapy can improve the well-being of the elderly. Laughter therapy provides benefits and has been shown to be effective in improving the three psychological pillars of well-being, which are quality of life, mood, and life satisfaction (Cassar et al., 2021).

Laughter therapy is a type of therapy that uses humor or laughter as a method. This therapy aims to assist individuals in solving their problems, both in the form of emotions and psychological disorders (Zajonc, 1984). Humor and laughter are used in laughter therapy to reduce the impact of stress on a person, whether it manifests as mental or physical disorders.

Laughter therapy will produce a feeling of relief in someone who does it. This is due to the fact that laughter has the ability to naturally change feelings of stress and pain for the better (Winter, 2006).

Laughter assists in reducing stress levels while also releasing balancing hormones that are produced when someone is stressed. When the body is stressed, it produces hormones that suppress the immune system, and laughter assists in balancing the stress hormones to a certain degree (Bona Simanungkalit, 2007).

Laughter is a normal and natural physiological response to certain stimuli. Laughter is a powerful weapon for controlling stress, pain, and conflict. Moreover, laughter therapy can reduce physical tension, stress, and muscle tension. This therapy will increase blood flow, which in turn can help prevent cardiovascular disease (Article, 2019).

Laughter is a physiological response to a stimulus. Laughing causes the release of hormones that balance stress hormones in the body, resulting in smoother blood flow and a more relaxed state. This situation will have an impact on changes in stressful conditions experienced by individuals, including the elderly. Laughter therapy is a normal condition that anyone can spontaneously perform without spending money and can be carried out anywhere and anytime. Thus, it is expected that this therapy will be one of the main options that can be provided to the elderly, particularly those in social institutions.

CONCLUSION AND SUGGESTION

Conclusion
Based on the results of the study about the effect of laughter therapy on stress in...
the elderly, the following conclusions can be drawn:

1. The average age of respondents who experienced stress was 64 years, with the youngest age being 50 years and the oldest age being 75 years.
2. The stress value of the elderly before being given laughter therapy had a mean score of 63.1, a median score of 69.5, and a standard deviation of 20.5. The lowest elderly stress score was 16, and the highest score was 99.
3. The stress value of the elderly after being given laughter therapy had a mean score of 32.9, a median score of 32.5, and a standard deviation of 8.6. The lowest elderly stress score was 10, and the highest score was 55.
4. The significant difference between the pre- and post-test values had a significance value (2-tailed) of p = 0.000, <0.05. The hypothesis value (H0) in this study was rejected and the alternative hypothesis (Ha) was accepted, indicating that there was a significant difference between the two tests.

SUGGESTION

It is hoped that the government, especially the Health Office (through the public health centers), will conduct a comprehensive health program for the elderly, addressing both physical and psychological health. Public health centers can implement health programs for the elderly, including those in social institutions, through the integrated healthcare center for the elderly by focusing on the psychological aspects of the elderly with hypertension to prevent future problems. In addition, this study can be used as reference material for further research that can be used as a basis for implementing nursing interventions.

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CONFLICT OF INTEREST

No potential conflict of interest was reported by the researchers.

THANK YOU NOTE

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