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Progreeive Muscle Relaxation Education to Reduce Anxiety in Elderly with Hypertension

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Abstract

Hypertension is one of the diseases that are often suffered by the elderly. Management of anxiety management in the elderly needs to be considered so that the elderly do not fall into psychiatric emergencies, one of which is the provision of progressive muscle relaxation therapy. This community service will be carried out in December 2023 for the elderly using leaflet media containing information about anxiety management and progressive muscle relaxation techniques to reduce anxiety. Health education and demonstrations were conducted to 15 elderly people. The pretest results found 12 elderly (80%) had less knowledge where the elderly did not know the signs of anxiety symptoms and how to reduce anxiety, and 3 elderly (20%) had sufficient knowledge. Post test results found that the elderly have increased knowledge about anxiety. 13 elderly (86.6%) have good knowledge and 2 elderly (13.4%) have less knowledge. The knowledge of the elderly has increased and progressive muscle relaxation can reduce anxiety felt by the elderly and can be implemented every day.

Keywords: Elderly, Hypertension, Anxiety, Progressive Muscle Relaxation

Introduction

The aging process is a condition characterized by a person's failure to maintain balance against physiological anxiety conditions. This failure is related to a decrease in the ability to live and an increase in individual sensitivity (Laka et al., 2018). According to Government Regulation of the Republic of Indonesia Number 43 of 2004, an elderly person is someone who has reached the age of 60 (sixty) years or above. Based on population projection data, it is predicted that the number of elderly people in 2020 (27.08 million), 2025 (33.69 million), 2030 (40.95 million) and 2035 (48.19 million) . The reason the elderly need special attention is because the problems of the elderly are included in the "Big Four" geriatric suffering, namely having complex problems, no simple treatment, decreased independence, and needing help from other people in care (Lani, 2021; Novian, 2014). Older people often experience gradual physical and psychological decline, where this decline in condition can cause anxiety in some elderly people. The impact of anxiety in general, if it cannot be overcome by the elderly, can cause the elderly to experience physical decline. Physical decline occurs because elderly people think about and have bad perceptions of the changes that occur to them. This situation affects the quality of life of the elderly (Lani, 2021). Hypertension is the most common cardiovascular disease in society (Kementrian Kesehatan RI, 2017). Data from the World Health Organization (WHO) estimates that 1.5 billion people will suffer from hypertension in 2025, and an estimated 9.4 million

people die every year due to hypertension and its complications (Kementrian Kesehatan RI, 2017). In the East-South Asia region alone, 1.5 million people die from hypertension (Fadila & Solihah, 2022).

Hypertension or what is more commonly known as high blood pressure is a condition of a person with systolic blood pressure ≥ 120 mmHg and diastolic ≥ 90 mmHg, where hypertension is a trigger for stroke and coronary heart disease which can cause death (Novian, 2014). People with hypertension are more likely to be found in the elderly, at that age many physiological or psychological changes occur, these changes have the potential to affect their physical health (Lani, 2021). The body condition of elderly people who experience hypertension can improve and become stable again, however, the psychological factors of elderly people greatly influence the process of treating hypertension problems. The physical limitations experienced by the elderly, sometimes they experience anxiety because the various illnesses they suffer from do not go away and even get worse, so there is little hope of recovery. Things like this ultimately cause elderly people to experience psychological disorders such as anxiety. Anxiety is a pathological condition, which involves unwanted or unnatural reactions in behavior and neurovegetative (Sutejo, 2019).

According to research conducted by Marmata and Gaol (2021), some elderly people experience moderate anxiety because elderly people with hypertension easily experience anxiety and are also afraid of death due to unstable blood pressure (Hotmarina Lumban Gaol & Br Marmata, 2022). Apart from that, hypertension sufferers become anxious because hypertension tends to require relatively long treatment, there is a risk of complications and can shorten life (Br Marmata, 2022). Anxiety management is a way to overcome anxiety by using adaptive coping strategies(Townsend & Morgan, 2017). Anxiety management is a technique that applies adaptive coping to a person to be able to deal with anxiety. Anxiety management can reduce levels of depression and prevent serious mental problems. The application of several adaptive coping methods to overcome anxiety includes socializing, muscle relaxation, group anxiety management sessions, and meditation (Noorrakhman & Pratikto, 2022).

Regarding anxiety, coping management is needed to deal with anxiety, namely a strategy or way to respond to thoughts and behavior used in solving problems in order to adapt to their problems. One method that can be used is the progressive muscle relaxation technique. Progressive muscle relaxation techniques focus attention on muscle activity by identifying

tense muscles and then reducing tension by performing relaxation techniques to achieve a relaxed feeling. Progressive relaxation is a type of relaxation technique that combines deep breathing exercises and a series of contractions and relaxation of certain muscles (Damayanti Iin, 2020). So progressive muscle relaxation education is needed to reduce anxiety in elderly people with hypertension who are facing degenerative diseases.

Identification of Problems

The anxiety experienced by the elderly is caused by the disease they suffer from, one of which is hypertension. Elderly people with hypertension feel that their disease will never be cured. This indirectly has an impact on the mental health conditions of the elderly, including anxiety. Anxiety in the elderly can be prevented by providing insight and understanding to elderly people with hypertension through counseling or direct health education to elderly people with hypertension regarding techniques to reduce anxiety with progressive muscle relaxation. The formulation of the problem in this community service is whether treating anxiety with progressive muscle relaxation can reduce anxiety in elderly people with hypertension?a. Can education on handling anxiety with deep breathing relaxation reduce anxiety in elderly people with hypertension?.

Implementation Methodology

This form of community service activity is counseling and training on handling anxiety in the elderly using progressive muscle relaxation techniques. The partner in this community service is the Elderly Posyandu around the WCS Rumah Revolusi Mental, Mojogedang. The activity will be carried out in December 2022. The target population for this community service activity is all elderly people with hypertension at the Posyandu for the Elderly. The subjects who participated in this community service were 15 elderly people suffering from hypertension.

The lecture and counseling method aims to provide partners with an understanding of what the aging process is and the physical impact on patients. This counseling and demonstration material is about anxiety and progressive muscle relaxation, including the definition of anxiety, signs of anxiety symptoms and how to relax progressive muscles. The media used in this community service is an LCD projector.

Before community service begins, a pre-test is carried out first and a post-test after training is given. Community service is carried out using lecture, counseling (demonstration) and discussion methods.

Progressive muscle relaxation therapy procedure:

1. Loosen clothes, belts, and take off shoes and socks;
2. Close your eyes gently;
3. Take a deep breath and exhale through your mouth;
4. Make a tight fist (5-10 seconds) then loosen it (20-30 seconds);
5. Straighten your arms and pull your palms towards you for 5-10 seconds;
6. Clench your hands into fists and lift your shoulders;
7. Wrinkle your forehead and eyebrows until you feel the muscles;
8. Close your jaw by biting your teeth;
9. Punch out your lips so that they feel tense in your mouth;
10. Place your hands behind your head then push your head back;
11. Lower your head until it touches your chin;
12. Puff out your chest and tighten your stomach;
13. Hold your leg muscles straight for no more than 5 seconds;
14. Take a deep breath and exhale through your mouth.

Results and Discussion

Health education and demonstrations were carried out for 15 elderly people. The pretest results showed that 12 elderly (80%) had insufficient knowledge, where the elderly did not know the signs of anxiety and how to reduce anxiety, and 3 elderly (20%) had sufficient knowledge. Post test results showed that elderly people had increased knowledge about anxiety. 13 elderly (86.6%) had good knowledge and 2 elderly (13.4%) had poor knowledge.

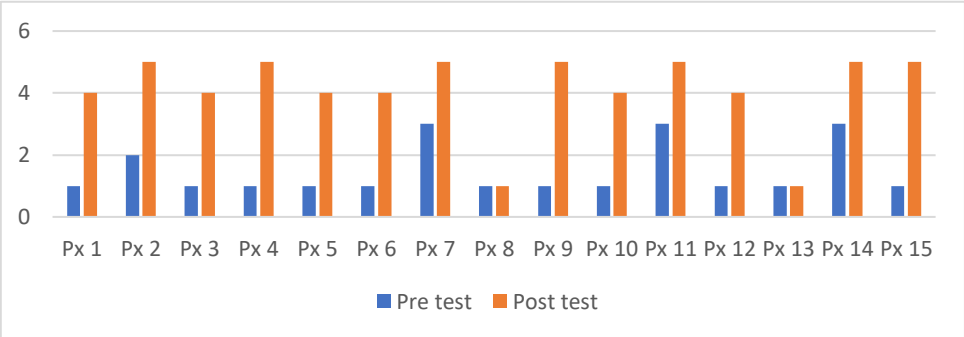

Figure 1. Pretest and Posttest Results of Knowledge Level about Hypertension

Anxiety is a complex emotional state related to feelings of fear, often accompanied by physical sensations such as heart palpitations, shortness of breath or chest pain. Anxiety disorders may also be the result of disorders in the brain that are related to physical disorders or psychiatric disorders(Stuart G. W, Keliat, 2016). For people who are well adjusted, anxiety can be quickly overcome and overcome. For people whose adjustment is poor, anxiety is a large part of their life (Windarwati et al., 2020). There are 2 ways to deal with anxiety, namely pharmacological and non-pharmacological. Non-pharmacological measures include relaxation, distraction, aromatherapy and massage. Progressive muscle relaxation is a non-pharmacological action that can be taken to reduce anxiety in the elderly. Progressive muscle relaxation is a deep muscle relaxation technique that does not require imagination, perseverance, or suggestion. Progressive muscle relaxation techniques focus attention on muscle activity by identifying tense muscles and then reducing tension by performing relaxation techniques to get a feeling of relaxation (Ekaputri et al., 2015).

Physiological relaxation exercises will reverse the effects of anxiety involving the parasympathetic part of the central nervous system. Relaxation will inhibit the increase in sympathetic nerves, so that the hormones that cause body dysregulation can be reduced in number. The parasympathetic nervous system, which has the opposite function to the sympathetic nervous system, will slow down or weaken the work of the body's internal organs. As a result, there is a decrease in heart rate, breathing rhythm, blood pressure, muscle tension, metabolic rate, and the production of hormones that cause anxiety. As levels of anxiety-causing hormones decrease, the entire body begins to function at a healthier level(Ekaputri et al., 2015).

Progressive muscle relaxation exercises involve tensing and relaxing nine muscle groups, namely the hand, foot, forehead, eye, lip, tongue, jaw, chest and neck muscles. Gunawan (2001), Setiadi (2007), and Wibowo (2008), argue that in the upper limbs there are a group of muscles involved in contraction and relaxation, namely the latissimus dorsi muscles, deltoideus muscles, trapezius muscles, biceps brachii muscles, triceps brachii muscles, extensor carpi radialis muscle, extensor carpi ulnsris muscle, pronator teres muscle, palmaris ulnaris muscle, and fexor digitorunt profundus muscle.

In the lower limbs, the types of muscles involved in contraction and relaxation include the illiopsoas muscle, tensor fasciata muscle, rechus femoris muscle, vestus muscle, peroneus muscle, tibialis muscle, extensor digitorum communist muscle, pehinus muscle, gracillis

muscle, saleus muscle, adductor muscle the gluteus maximus muscle, the biceps femoris muscle, and the plantaris muscle. In the head, face and mouth, the muscles involved in contraction and relaxation include the frontalis muscle, occipitalis muscle, ohligeus oculi muscle, orbicularis oculi muscle, levator palpebra muscle, triangularis muscle, orbicularis oris muscle, quadrates labii muscle, buccinator muscle, zygomaticus muscle, masseter muscle, temporalis muscle, pterygoid muscle, genioglossus muscle, and styloglossus muscle.

In the neck and shoulders, the types of muscles involved include the platysma muscle, sternoHeido mastoid muscle, longisimus capitis muscle, deltoid muscle, sub scapularis muscle, supraspinatus muscle, supra infraspinatus muscle, and teres muscle. Meanwhile, in the chest, the muscles involved are the pectoralis major muscle, pectoralis minor muscle, sub clavicle muscle, and serratus anterior muscle. Apart from that, when doing deep breathing, it also involves the abdominal muscles which include the internal abdominal muscles, external abdominal muscles, abdominal oblique muscles, and abdominal trensversus muscles. Muscle contraction and relaxation is controlled by the central nervous system through motor nerve fibers, the attachment point for motor nerve branches is the neuromuscular junction which is a chemical conductor (neuro transmitter) of acetylcholine and adrenaline for excitation of muscle fibers. Nerve impulses arriving at a neuromuscular system will be delivered directly to each sarcomere by a system of transverse tubules that surround the myofibrils. All sarcomeres in the muscle will receive signals to contract so that the muscle can contract as one complete unit. The electrical signal is sent to the sarcoplasmic reticulum, which is a system of vesicles which are membrane in nature and originate from the endoplasmic reticulum which encloses the myofibrils. Kuntarti (2006), and Setiadi (2007). In the relaxed state, the ends of the actin filaments originate from two membranes that are in sequence with each other

Figure 2. Image Display Of Activities

Table 1. List of Activities

No	Implementation	Location	Information
1	Opening: 1.Give greetings 2.Explain the learning objectives 3.Mention the material or subject matter that will be presented Pre test	WCS Rumah Revolusi Mental, Mojogedang	Cooperative Participants
2	1.Explain the definition of Anxiety 2. Explain the goal 3.Training to reduce anxiety with progressive muscle relaxation	WCS Rumah Revolusi Mental, Mojogedang	Cooperative Participants
3	1.Summarize the essence of the extension 2.Briefly deliver the counseling material 3.Give the audience the opportunity to ask questions. Post test	WCS Rumah Revolusi Mental, Mojogedang	Cooperative Participants

Conclusion

Community service through anxiety counseling and progressive muscle relaxation demonstrations carried out on hypertensive elderly people is effective in reducing anxiety, besides this technique is easy to apply, easy to remember and has a calming and relaxing effect so that it feels appropriate for group members who are elderly people. . The results obtained by group members from the intervention process were a decrease in the level of anxiety felt by members of this elderly group. For this reason, elderly people are advised to apply deep breathing relaxation in their daily lives when elderly people experience anxiety.

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