



INCREASING THE PRODUCTIVITY OF ACTIVE AGEING-BASED ELDERLY IN OVERCOMING PHYSICAL PROBLEMS THROUGH GYMNASTICS

Iwanda Theza Vadesma^{1*}, Aranssa Dwiveronikca Rajagukguk², Nadia Aprilia³, Irvan Setiawan⁴, Mikha Anggitama Setyomurti⁵, Marjam Desma Rahadhini⁶

^{1,2,3,4,5,6} Universitas Slamet Riyadi Surakarta

*¹iwandatheza00@gmail.com, ²aranssadvr@gmail.com, ³nadiaprilias2020@gmail.com, ⁴ifan09381@gmail.com, ⁵mikha.setyo17@gmail.com, ⁶rahadhininew@gmail.com

ABSTRACT

Aging is a natural process for people aged 60 years and above. Physical and mental decline is the process of aging. Therefore, the PKM-PM team of Universitas Slamet Riyadi Surakarta conducted guided activities through physical gymnastics and brain exercises. The purpose of this service is to help increase the productivity of the elderly through active aging at Widhi Asih Surakarta Nursing Home. The problem-solving approach in the PKM program is training and guidance on active aging, especially physical gymnastics and brain exercises. After this empowerment event, it is hoped that the elderly at Panti Wreda Widhi Asih Surakarta can be empowered to age actively and become creative, healthy, and happy elderly.

Keywords: *Elderly, Gymnastics, Active ageing*

INTRODUCTION

The older population is known as the elderly, as they experience a gradual decline in physical endurance and become more susceptible to diseases that can lead to death. Law No. 13 of 1998 on the Welfare of the Elderly considers people aged 60 years and above as elderly. Public health and longer life expectancy have increased as a result of social and economic progress, as well as advances in science and technology. As a result, more and more people are getting older. The proportion of the elderly population in Indonesia continues to increase every year, according to the Central Statistics Agency (BPS, 2020). In 2020, the proportion of the elderly population reached 9.92% or around 26.82 million people. Indonesia has the highest proportion of elderly in DI Yogyakarta (14.71%), Bali (11.58%), East Java (13.38%), Central Java (13.38%) and other regions. According to the World Health Organization (WHO), Indonesia's elderly population will increase by 41.4% by 2025, reaching the highest growth rate

worldwide. Physical, psychological, and social deterioration lead to this dependency, which can be described in four stages: frailty, functional limitations, incapacity, and barriers that are often experienced as people age. The increasing dependency of older people is a major impact of the increase in the elderly population (Nuraeni et al., 2019). The aging process is not a disease. Elderly is synonymous with the decline of all kinds of health conditions, especially physical health. As they age, their health continues to decline, impacting on their productivity. With age, many diseases, decline in physical function, body balance, and risk of falls increase. Reduced health of the elderly goes against their desire to stay healthy, independent, and able to perform daily activities such as bathing, dressing, and doing activities on their own. In Surakarta, the elderly still face problems such as families and communities not respecting the rights of the elderly who are considered a burden on the family. In terms of social interaction, the elderly cannot socialize as they did when they were younger, and in some cases become dependent on others. Their health conditions require them to always be accompanied when doing activities outside or inside the house. Psychologically, the elderly often feel lonely and their memory function is affected. This is because the concept of active ageing has not been applied in nursing homes in Surakarta. Active ageing is the process of aging to stay healthy and in the best condition physically, socially and mentally so that the elderly can thrive throughout life and participate in improving the quality of life as members of society. Widhi Asih Surakarta Nursing Home is one of the nursing homes in Surakarta that has not implemented active ageing. Widhi Asih Surakarta Nursing Home is a foundation that serves the elderly in Surakarta. The problem that occurs in the elderly at Widhi Asih Surakarta Nursing Home is the decline in physical strength which results in the elderly becoming weak and less able to adapt. Social roles cause anxiety and loneliness in life, and are not in the best condition to develop economic business. Based on the existing problems, the elderly at Widhi Asih Nursing Home must apply the concept of active ageing to be more productive in their daily lives.

Active ageing is the process of optimizing opportunities for health, participation, and safety to improve the quality of life of the elderly as they age. Active ageing focuses on the functioning of the elderly in their environment and encourages the creation of active elderly by improving their health, safety and participation in society. According to the National Commission on the Elderly in 2010, a person's health and safety does not only include physical aspects; it also includes emotional, intellectual, social, vocational, and spiritual aspects.

Our service team focused on physical skills in this journal article because we have completed physical activity activities when this article was written. Any body movement that is made by skeletal muscles and requires energy is referred to as physical activity. Physical activity helps the elderly stay active. Gymnastics is one of the physical activities that are beneficial for the elderly. Gymnastic movements in the elderly that include legs, arms and core muscles increase muscle contractions thereby increasing muscle strength and maintaining body balance.

IMPLEMENTATION METHODS

The implementation method used is direct elderly assistance. Gymnastics training with the *Range of Motion* (ROM) therapy method, which can then affect *Activity of Daily* (ADL) performance. One type of physical exercise that can affect the fitness level of the elderly is gymnastics. Specifically, the stages used in the service are as follows:

1. Physical Gymnastics Activities

On Tuesday, August 08, 2023, the service team held physical exercise activities. Physical gymnastics was attended by the elderly. This activity aims to build strong bones, improve heart work, and help remove free radicals from the body. Gymnastics in the elderly is light, easy to do and does not pose many obstacles for the elderly. The blood pressure of older people can be reduced by exercising regularly. This is because exercise can reduce body fat associated with high blood pressure (Fatmah, 2013). Blood pressure is a description of a person's hemodynamic situation at that time (Yunding et al., 2021) This activity is divided into 2, namely:

1. Sitting Physical Gymnastics

Gymnastics is done sitting because the elderly have limitations if they stand for too long. The elderly warm up before the gymnastics begins. The goal is to prepare the function of body parts so that they can receive movements when doing gymnastics. Warming up is done with light movements, namely moving your hands up and down. After warming up, the elderly doing basic movements. Basic movements include turning the head left and right, lifting both shoulders towards the ears and then lowering them slowly accompanied by music.

2. Yoga Exercises

One type of exercise is yoga, which combines movement and breathing. Yoga exercises are recommended for people with depression, because yoga exercises combine breathing techniques, relaxation, and meditation as well as stretching exercises (Suhartiningsih, 2021). Yoga is a form of mind-body fitness that involves a combination of muscular activity and an internally directed mindful focus on awareness of the self, the breath, and energy (Woodyard, 2011). Yoga exercises can refresh and calm the mind, body and soul, and can also deal with physical and mental problems. The goal of yoga exercises is to increase the secretion of endorphins. Increased endorphins have been linked to blood pressure, breathing, appetite, memory, and pain. Yoga is focused as an essential form of spiritual discipline based on an extremely subtle science bringing harmony between mind and body.(Syed et al., 2022). Yoga combines physical postures, rhythmic breathing and meditative exercise to offer the practitioners a unique holistic mind-body experience.(Gothe et al., 2019)

2. Brain Gymnastics Activity

On Thursday, August 10, 2023 the service team held a second exercise activity, namely brain exercise. Decreased memory, thinking, behavior, and ability to perform daily activities are symptoms of dementia. The loss of mental abilities caused by dementia affects cognition and personality in addition to memory. Brain exercises are a way to prevent cognitive decline associated with dementia in the elderly. Certain movements help balance the right and left brain. Position the hands in front of the chest and stretch the right palm. Point the index finger of the left hand at the right palm and do the opposite with the index finger of the left hand pointing at the stretched left palm. Do this repeatedly to get faster results.

RESULTS AND DISCUSSION

1. Physical Gymnastics Activities

The service team participated in physical exercise activities on Tuesday, August 8, 2023. The event started at 08.00 WIB and continued with the opening and introduction of team members.

a. **Sitting Physical Gymnastics**

Physical exercise activities effectively maintain and improve the quality of elderly health. Rhythmic and dynamic movements can encourage the body to stay active, improve bone health, because when doing movements and exercises the joints also play an active role and improve mental health. The elderly are encouraged to routinely do physical activity. According to KEMENKES (2020), exercise is a physical activity that includes repetitive body movements with the aim of improving physical fitness. Exercising can help the elderly improve their strength, flexibility and balance. One of the easiest exercises for the elderly to do is gymnastics. Gymnastics can reduce blood pressure, weight loss, and strengthen the heart muscle. Seated physical exercise activities can be seen in figure 1.



Figure 1: Physical exercise training

b. Yoga exercises

In the long run, regular yoga exercises can help the elderly maintain their cognitive function and prevent diseases such as dementia and Alzheimer's disease. These diseases can shorten the life of the elderly. According to Widyantoro in 2010 yoga exercises are used to calm the depressed mind and then direct it in a constructive direction. Yoga exercises are very beneficial for the elderly because they stabilize body functions, increase a sense of comfort and peace, calm emotions, improve attitudes and behavior, increase self-confidence, positive thinking and self-esteem, increase flexibility and endurance, and increase oxygen supply to the brain, relieve fatigue, and increase energy and vitality (Mughtar AF, 2010). In addition, yoga increases the production of endorphins in the bloodstream, which causes the elderly to feel happier. Yoga exercise activities can be seen in Figure 2.



Figure 2: Yoga exercise training

2. Brain Gymnastics Activity

Physical weakness and degenerative diseases caused by aging lead to cellular decline. Cognitive function usually declines as one gets older. Cognition is a person's ability to identify and interpret their environment through attention, language, memory, and decision-making. The elderly lack movement in daily activities resulting in their lifestyle can lead to dementia and other cognitive disorders. One way to prevent cognitive decline in the elderly is to do brain exercises. The brain exercise training activities can be seen in Figure 3.



Figure 3: Brain exercise training

Brain exercises are basic body movements that help balance every part of the brain, and can be done anywhere and anytime. (Kushariyadi, 2011). The purpose of brain exercises is to ensure that the right and left are brain work in balance.

CONCLUSION

The results of the elderly empowerment service activities can increase active ageing in the elderly. In the Sekar Panik program, there are 4 activities, including gymnastics, work, food,

and hydroponics. Elderly gymnastics, on the other hand, is a type of exercise that is light and easy to do. Gymnastics for the elderly consists of physical exercises with the *Range of Motion* (ROM) therapy method and brain exercises. These exercises help the body stay fit, build strong bones, help the heart work properly, and remove free radicals from the body. Through elderly exercises, the elderly become proficient in efforts to train their memory and body balance, with the hope of increasing their independence in the future.

SUGGESTIONS

Based on the results of the training that has been carried out, we provide the following recommendations: First, the importance of understanding active ageing for the elderly in focusing on functioning in their environment and encouraging the creation of active elderly by improving their health, safety and participation in society. Second, it is important to understand why it is necessary to do yoga and brain exercises by the elderly, because this can change the mindset of the elderly that exercise is only a routine and can reduce elderly dementia. Finally, the importance of training assistance to ensure that the elderly continue to do yoga and brain exercises as an increase in productivity.

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