

## Health Education (Demonstration) Quadriceps Setting for Preventing Knee Pain in the Elderly Group of The Foundation's Foundation Area Princess of Love

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### ABSTRACT

As we get older, changes arise as a result of the aging process, one of which is changes in musculoskeletal function, namely changes in joint function. One example of a change in joint function due to aging is knee osteoarthritis which occurs after 60 years of age. The purpose of carrying out this activity in the elderly community in the area of Putri Kasih Tambakmayor Foundation, Surabaya is so that the elderly in this community are able to do Quadriceps Settings and be able to understand the purpose of doing Quadriceps Settings. The methods used in this activity are lectures and demonstrations using media in the form of mics, speakers and flipcharts. The health education carried out begins with giving a questionnaire to the elderly in the community. After the questionnaire and health education have been completed, the next step is a question and answer session which will be followed by a questionnaire at the end of the activity. After all stages have been completed, the presenter collects data from the questionnaire that has been carried out at the beginning and end of the event. Based on the activities that have been carried out, the results obtained were that the elderly who had good knowledge before getting health education were 31%, while after the health education, the elderly who had good knowledge increased to 71%. This shows that a person's knowledge can be increased through health education with demonstration methods the presenter collects data from the questionnaire that has been carried out at the beginning and end of the event. Based on the activities that have been carried out, the results obtained were that the elderly who had good knowledge before getting health education were 31%, while after the health education, the elderly who had good knowledge increased to 71%. This shows that a person's knowledge can be increased through health education with demonstration methods the presenter collects data from the questionnaire that has been carried out at the beginning and end of the event. Based on the activities that have been carried out, the results obtained were that the elderly who had good knowledge before getting health education were 31%, while after the health education, the elderly who had good knowledge increased to 71%. This shows that a person's knowledge can be increased through health education with demonstration methods

**Keywords:** *Demonstration, Quadriceps Setting, Knee Osteoarthritis*

### INTRODUCTION

Growing old is a natural process characterized by the gradual loss of the ability of the body's organ tissues to repair themselves or replace themselves in maintaining their normal structure and function, which will be experienced by all living things. Along with increasing age, changes arise as a result of the aging process. One of them is changes in musculoskeletal function, namely changes in joint function.

One example of changes in joint function due to the aging process is knee osteoarthritis. Osteoarthritis (OA) is a degenerative disease that is chronic and slowly progressive in which the

entire joint structure will undergo pathological changes (Wibowo et al, 2017). Problems that arise from osteoarthritis of the knee joint are pain in the knee area, limitation of motion in the knee joint and muscle weakness in the knee joint area (Kowalak, 2011), as well as the inability to get up from sitting, up and down stairs, walking and the inability to participate with the environment (Gross, 2011). , 2009).

In the elderly group of the Putri Kasih Tambakmayor Foundation, Surabaya, there are 45% of the elderly who have complaints of knee pain. The disease process does not only affect the knee joint cartilage but also affects the entire knee joint such as muscles and nerves so that clients who suffer from osteoarthritis will feel pain in the knee joint which is achy due to cartilage degeneration and bone pressure, stiffness in the morning and after exercise, crepitus. in the knee joint during movement, decreased range of motion of the knee joint due to pain and stiffness.

If the above complaints are not treated properly, the possible impacts will be irreversible changes in the knee joint, subluxation of the knee joint, decreased range of motion of the knee joint, pain at an advanced stage which can lead to an inability to move or participate in the environment and loss of life. independence in activities of daily living such as sitting to standing (Kowalak, 2011).

To overcome these problems as a form of implementing the Tri Dharma of Higher Education, we will conduct health education to prevent and reduce knee pain with knee exercises called Quadriceps Setting for the elderly in the elderly community in the Putri Kasih Tambakmayor Foundation, Surabaya. Quadriceps Setting exercise is an isometric exercise and this type of exercise is a muscle contraction exercise without any change in muscle length and is not followed by a change in joint motion. This type of isometric exercise is often referred to as static contraction (Wibowo et al, 2017). The purpose of this activity is so that the elderly in the Regional Elderly Community fostered by the Putri Kasih Tambakmayor Foundation, Surabaya are able to do Quadriceps Setting and understand the purpose of Quadriceps Setting.

## **METHOD**

The target of this activity is the elderly in the elderly community assisted by the Putri Kasih Foundation which is located in the Tambakmayor Elderly community assisted by the Putri Kasih Foundation, Surabaya. The methods used in this activity are lectures and demonstrations using media in the form of mics, speakers and flipcharts. After receiving a letter from the caretaker of the local elderly community assisted by the Putri Kasih Foundation, the head of LP3M followed up. Then the head of the community service program makes a proposal for a plan for providing health education activities. After the proposal was approved by the head of LP3M and the Head of STIKES St. Vincentius A Paulo Surabaya, a letter of assignment will be issued. After getting a letter of assignment, then the activities of providing health education are carried out

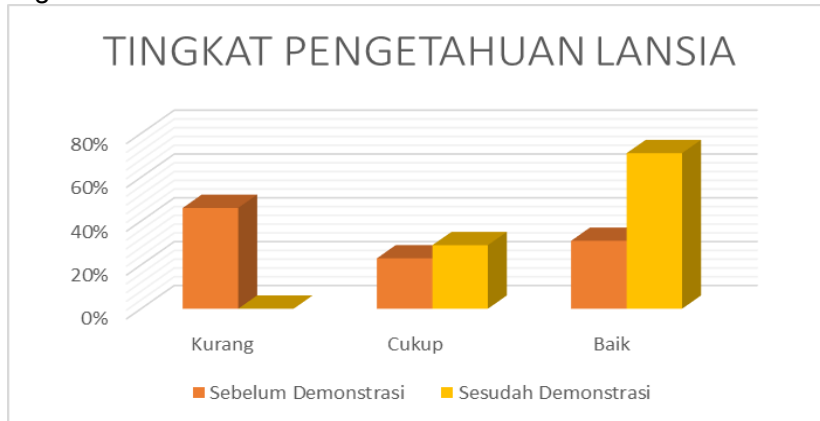
Before the counseling program started, the extension worker gave a questionnaire to find out the elderly's knowledge about knee exercises after that followed by a demonstration. The instructor gives an example of the correct Quadriceps Setting movement. The instructor asks the participants to do the exercise and make corrections to the movements made. After the demonstration was over, it was followed by a question and answer session.

The elderly who want to ask questions are welcome and will be answered by the presenter. After the question and answer session, the elderly were given a questionnaire about knee pain and knee exercises. The results of the pre and post health education questionnaires were then processed so that the results of the level of knowledge before and after being given health education were obtained.

## **RESULTS AND DISCUSSION**

Based on the activities that have been carried out, it was found that from 35 respondents who took part in counseling using the demonstration method, 46% of the elderly had a low level of knowledge, 23% of the elderly had a sufficient level of knowledge and 31% of the elderly had a

good level of knowledge. Meanwhile, after the activity was carried out, the results also showed that as many as 29% of the elderly had sufficient knowledge and as many as 71% of the elderly had good knowledge.



**Figure 1.** The results of the level of knowledge of the elderly before and after the demonstration

The counseling activities carried out in the elderly community assisted by the Putri Kasih Foundation, Surabaya were attended by 35 elderly people, most of whom still had a low level of knowledge about knee exercises. Therefore, counseling was carried out using the demonstration method where the instructor gave an example of the Quadriceps Setting movement. After the instructor gave an example of the correct movement, the elderly who were in the elderly community at the Putri Kasih Foundation, Surabaya participated in the exercise.

The results obtained after counseling using the demonstration method were as many as 71% of the elderly had a good level of knowledge of the Quadriceps Setting knee exercise. In this case, the knowledge of the elderly regarding the Quadriceps Setting knee exercise has increased significantly compared to before the counseling using the demonstration method was carried out. This is in accordance with research (Aeni et al, 2018) that in the demonstration method educators can guide participants towards the same thinking in the same line of thought so as to reduce errors when compared to just reading or listening because participants get a clearer picture. from what has been observed. If the elderly get a clearer picture and understanding, the complaints of knee pain felt by the elderly in the Tambakmayor Elderly Community assisted by the Putri Kasih Foundation, Surabaya can decrease. The elderly in the elderly community assisted by the Putri Kasih Foundation can apply the correct Quadriceps Setting exercise every day to reduce complaints and reduce the risk of knee pain.



**Figure 2.** Elderly doing Quadriceps Setting

Increased knowledge of the elderly about the quadriceps setting knee exercise is also influenced by certain supporting factors, namely the learning method carried out using the demonstration method according to the material and study subjects where the majority of the

elderly. So that demonstrations that are carried out directly using examples of teaching aids and ways of interacting make the learning process clearer and concrete and more interesting.

Quadriceps Setting, isometric strengthening exercise performed for 5 weeks 2 sets every day with 1 set of exercises for 10 repetitions and contraction resistance for 5 counts can increase the strength of the Quadriceps muscle and improve functional status (Pratama A, 2019). This is able to expand the ability of the knee LGS and minimize complaints of knee pain when the elderly group does activities that involve knee joint movement

### CONCLUSIONS AND SUGGESTIONS

The level of knowledge of the elderly in the elderly community assisted by the Putri Kasih Tambakmayor Foundation, Surabaya after the demonstration produced significant results, namely as many as 29% of the elderly had a sufficient level of knowledge and as many as 71% of the elderly had a good level of knowledge. This shows that a person's knowledge can be increased through health education with the demonstration method. The elderly in the Elderly Community fostered by the Putri Kasih Tambakmayor Foundation, Surabaya are expected to maintain health by preventing elderly diseases, one of which is knee pain by doing Quadriceps Setting Exercise regularly

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