

Effect of Range Of Motion (ROM) Training in Patients with Physical Mobility Disorders to Increase Muscle Strength in Cibeureum Wetan Village, Sumedang Regency

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ABSTRACT

Mobility or mobilization is a person's ability to move and carry out activities easily, freely and regularly to meet their daily needs, either independently, with the help of others, or only with the help of tools. The factors that affect mobility are starting a lifestyle if the lifestyle is not healthy such as from food, lack of exercise and lack of free movement can affect a person's mobility, age and developmental status if a person's age is increasing and developmental status such as decreased muscle strength can affect mobility in contrast to a young age who has strong energy in moving (Asyifa, 2023). Therefore, the goals we give to the elderly with physical mobility disorders are in the form of an appropriate and effective way to carry out Range Of Motion (ROM) Training, This community service aims to describe the application of ROM exercises in patients with physical mobility disorders. The form of this scientific paper is in the form of a case study on 4 patients who experience physical mobility disorders. The research instrument was in the form of a family knowledge sheet about ROM exercises. This case study was conducted for 4 days with a frequency of 1 time a day with ROM training intervention. The results of the case study showed that the problem of physical mobility disorders experienced by 4 respondents, there were 2 respondents who experienced an increase and 2 respondents who did not experience an increase in muscle strength after doing ROM exercises. The conclusion of therapy (ROM) may increase muscle strength in some respondents. Advice for families is expected to always provide assistance during implementation so that it can be a support system for respondents so that they can help respondents in doing ROM exercises at home.

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INTRODUCTION

Mobility or mobilization is a person's ability to move and carry out activities easily, freely and regularly to meet their daily needs, either independently, with the help of others, or only with the help of tools. Mobilization is the ability of a person to move freely, easily and in an orderly manner that aims to meet the needs of a healthy life. Everyone needs to move, losing the ability to move leads to dependency and requires nursing action. (Putri & Wibowo, 2019).

Physical mobility is the ability of individuals to move freely regularly which aims to meet the needs of activities to maintain health. The factors that affect mobility are starting a lifestyle if the lifestyle is not healthy such as from food, lack of exercise and lack of free movement can affect a person's mobility, age and developmental status if a person's age is increasing and developmental status such as decreased muscle strength can affect mobility in contrast to a young age who has strong energy in moving (Asyifa, 2023).

Physical mobility disorder or immobility is a condition in which conditions that interfere with their movement, such as spinal trauma, severe brain injury accompanied by fractures in the extremities and so on. Not only that, immobility or mobility disorder is a physical limitation of the body, either one or more extremities independently and directed. The prevalence of the elderly based on the World Health Organization (WHO) in 2020 is 8% or around 142 million people. Meanwhile, the number of elderly people in Indonesia in 2018 reached 23 million people and is estimated to increase to 20% between 2018-2050 (Ministry of Health of the Republic of Indonesia,).

METHOD

The type of method carried out by the application of the Community Service journal uses a qualitative description method. The criteria for patients who have muscle weakness in the extremities, are 45-60 years old and are willing to be respondents. Meanwhile, the exclusion criteria are patients or families who are not willing to be respondents in case studies. In this community service activity, (1) Data collection is carried out by looking for patients who experience physical mobility disorders in the Cibeureum Wetan Village environment, (2) Submitting proposals and asking for approval from the Field Supervisor (DPL), (3) Asking permission from RW and local cadres and then conducting door to door visits and asking for permission from patients and their families, (4) Explaining the procedure to the patient and family regarding the action to be taken, (5) Explaining the approval and signing of the information content using leaflet media and delivery using the lecture method, (6) Discussion and question and answer as well as conducting demonstrations of the ROM movement. By using this method, the community can understand the entire counseling activities of the ROM Vulnerable Movement Training from start to finish within 4 days from the observation, implementation and evaluation stages.

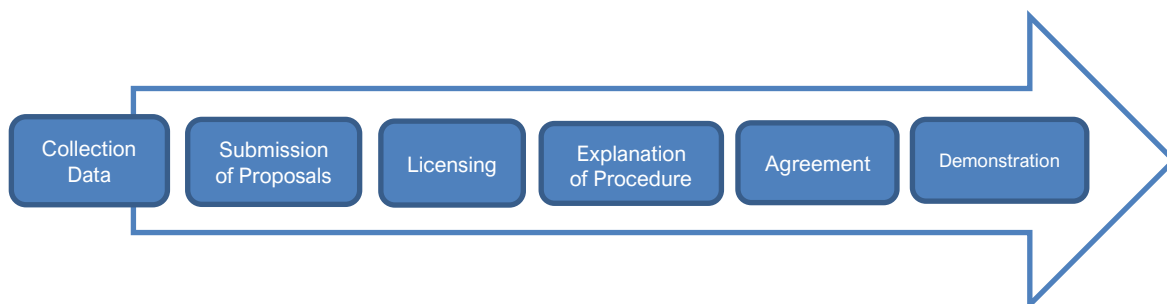


FIGURE 1. Activity chart

RESULTS AND DISCUSSION

1. Results of Patients' Muscle Strength Before & After ROM Counseling Activities on the First Day

TABLE 1. ROM counseling table on the first day

| Patient | Implementation | |
|---------|----------------|-------|
| | Before | After |
| Mrs.H | 2 | 2 |
| Mr.A | 1 | 1 |
| Mrs.A | 2 | 2 |
| Mrs.E | 2 | 2 |

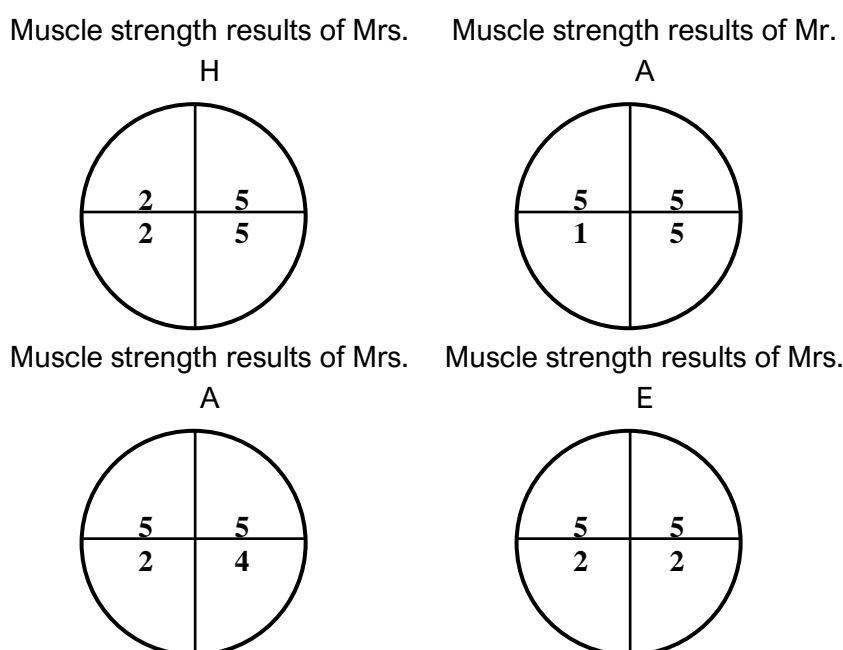


FIGURE 2. Muscle Strength Before ROM Counseling Activities

The results of the first day of implementation on the 4 clients have not increased muscle strength. Both before and after the Rom exercise.the first day of implementation will be carried out on June 11, 2024.

2. Results of Patients' Muscle Strength Before & After ROM Counseling Activities on the Last Day/Evaluation

TABLE 2. ROM counseling table on the last day/Evaluation

| Patient | Implementation | |
|---------|----------------|-------|
| | Before | After |
| Mrs.H | 3 | 3 |
| Mr.A | 1 | 1 |
| Mrs.A | 4 | 4 |
| Mrs.E | 2 | 2 |

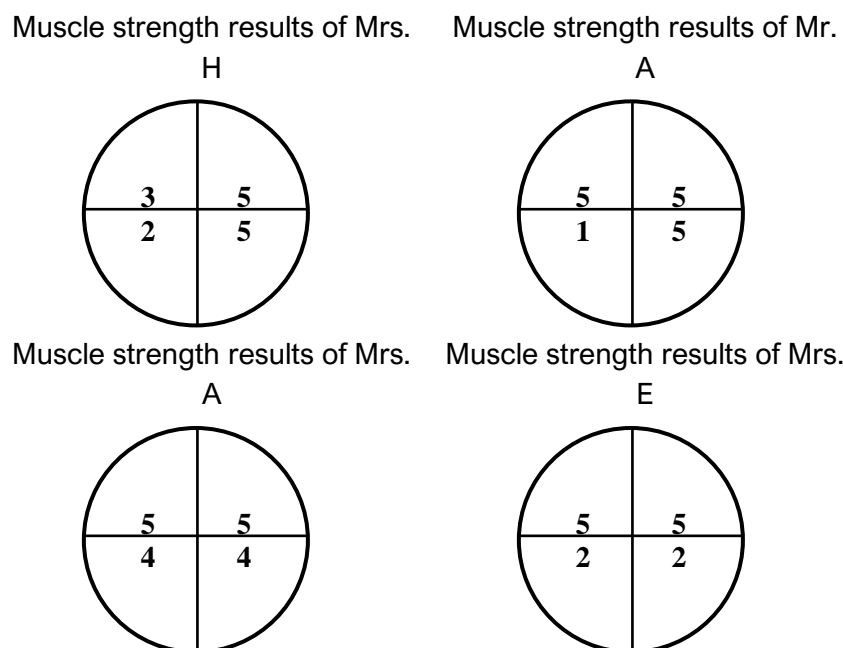


FIGURE 2. Muscle Strength After ROM Counseling Activities

After 4 days of implementation with a frequency of 4x, there was an increase in muscle strength in 2 clients, namely Mrs. H and Mrs. A, and there was no increase in muscle strength in 2 clients Mr. A and Mrs. E, but there was a difference in results between 2 clients in Mrs. H muscle strength of upper extremity of sinistra 3 and extremity of lower sinistra 2, in client Mrs. A of lower extremity of sinistra 4. while on the other 2 clients, namely Mr. A under the 4th day of the Sinistra the result was 1, Mrs. E the second lower extremity the result was 2.

DISCUSSION

This counseling activity was carried out using leaflet media. Participants of this counseling activity were attended by 10 elderly people with mild strokes accompanied by their families. The results of this counseling activity showed that the problem of physical mobility disorders experienced by 7 respondents, there were 4 respondents who experienced an increase and 3 respondents who did not experience an increase in muscle strength after ROM exercises. This counseling was carried out at the target house which was carried out directly (Door to door). The implementation of this activity was carried out for 4 days starting from June 11-14, 2024 with the method of lectures, discussions, and questions and answers. It consists of several stages: The form of activities carried out is a systematic series, including: collaborating with students of Yatsi Madani University and Cibeurem Wetan Village Cadres, in order to organize health counseling. Creating a good and comfortable position and room, Providing ROM material, Demonstrating the ROM movement, Providing opportunities to ask questions (discussions), Establishing follow-ups.

There are similarities and differences found during the implementation of Mrs. H and Mrs. A, namely the provision of passive ROM training which is carried out for 4 days with a frequency of 4 meetings. Once a day, every morning at 10.00 WIB. The similarity found was that there was an increase in muscle strength and range of motion after 3 to 4 days of implementation, the equation found was that there was an increase in muscle strength and range of motion for 4 days of implementation with the results of muscle strength in

Mrs. H there was an increase of 3 and Mrs. A there was an increase in muscle to 4 while the other 2 respondents There were similarities and differences found during the implementation in clients 3 and 4, namely the administration of passive range of motion (ROM) therapy which is carried out for 4 days with a frequency of 4 meetings. Once a day every morning at 09.00 WIB. The similarity found is that there is no increase in strength muscles and range of motion for 4 days were implemented, this was caused by the absence of an increase in the strength of the lower extremities muscles of the sinistra with a frequency of 1 in Mr. A and then with Mrs. E with a frequency of strength of the lower extremities muscles of 2.

In line with the research (Rozana et al., 2022), after the implementation of the Range Of Motion (ROM) implementation, the results of the evaluation of the nursing process obtained were an improvement in balance where after the revalidation of the PSBB test was carried out, namely: the standing test from 1 pt to 3 pt, the walking test from (18 sec = 1 pt) to (8 sec = 2 pt) and the standing test from the chair from completely incapacitated to capable was carried out for 3 times in 23 seconds 1 pt., The strength of the lower extremis muscles is 4 and is able to perform light activities independently such as washing dishes and washing clothes in several pieces. Research (Pranata et al., 2021), also said that there was a significant influence of active ROM training in increasing the muscle strength of the elderly from scale 2 to scale 3 where the elderly could perform movements according to the desired commands.

CONCLUSION

Based on the results of the discussion and the purpose of the case study on community service that has been carried out on 4 clients with physical mobility disorders, the author concludes that there is an effect of providing range of motion therapy on increasing muscle strength in 2 clients and there is no increase in muscle strength in 2 other clients. After the action was carried out for 4 days on the 4 respondents with a frequency of giving 1 time a day with a time between 15 to 20 minutes. The results of muscle strength measurements showed that in the first client Mrs. H the strength of the upper extremities of the sinistra 3 lower extremities of the sinistra 2, in the second client Mrs. A obtained the results of the measurement of the strength of the muscles of the lower extremities of the sinistra 4, in the third client Mr. A the results of the measurement of the extremities muscle strength of the lower sinistra were 1, and the fourth client Mrs. E obtained the strength of the lower extremities muscles 2. But there are also differences, namely in the provision of daily living activities which aim to support range of motion exercises, the first client can do ADL exercises for 2 days starting from the third and fourth days, in the second client the client can do 1 day on the fourth day, while the other two clients cannot do ADL

Based on the results of Community Service in general, activities can be carried out well and get assistance from various parties. The health education activity in Cibeureum Wetan Village received a good response from patients and patients' families, local staff which was realized by providing moral support and knowledge for the real manifestation of the activity.

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APPENDIX



FIGURE 3. Activity documentation