

SCREENING AND PHYSIOTHERAPY SERVICES FOR MUSCULOSKELETAL COMPLAINTS IN THE ELDERLY DURING THE COVID-19 PANDEMIC AT TRESNA WERDHA WANA SOCIAL ORIGINAL SERAYA

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Abstract

The number of elderly people in Indonesia from year to year continues to increase. With the increasing amount of elderly, it is followed by an increase in musculoskeletal complaints. The outbreak of Covid-19 has resulted in limited and disrupted physical activity and health services for the elderly. The elderly are a group at risk of death if infected with Covid-19 because there is a degenerative process and there are co-morbidities. Community service activities carried out at the Tresna Werdha Wana Seraya Social Home in Ketalunggu Village aims to provide health services so that during the Covid-19 pandemic the quality of life for the elderly will be better. Activities carried out using blood pressure screening methods and examination of musculoskeletal complaints as well as providing physiotherapy services related to musculoskeletal complaints such as exercise and infrared therapy for free to the elderly. The participation in this community service activity was 34 people with the most aged 66-70 years. The results of this activity are the presence of the elderly, and the results of blood pressure screening and services for musculoskeletal complaints in the elderly at the Tresna Werdha Wana Seraya Social Institution during the Covid-19 pandemic.

Keywords: elderly, musculoskeletal disorders, screening, physiotherapy, pandemic, Covid-19.

INTRODUCTION

In 2021, the population in Indonesia will enter an aging structure marked by the number of elderly reaching 10.82%. This number shows that Life Expectancy has increased and Healthy Life Age has also increased. With the increasing life expectancy of the elderly, access to health services for the elderly needs to be improved so that the elderly can get good health services so that their quality of life becomes better^[1]. Based on the 2018 Ministry of Health's Basic Health Research, it was shown that the most common diseases in the elderly were non-communicable diseases. However, along with the decline in the immune system, the elderly are also a group that is susceptible to infectious diseases. With increasing age, the body will experience various declines due to the aging process, in which almost all organ and movement functions experience a decrease and are followed by a decrease in immunity as a body protector^[2].

At the end of 2019, there was an outbreak phenomenon caused by a virus, namely Covid-19 which attacks the human immune system. Signs and symptoms caused when exposed to this virus such as fever, flu, cough, and shortness of breath result in death ^[3]. A weakened immune system coupled with the presence of chronic/comorbid diseases can increase the risk of being infected with Covid-19 in the elderly. Based on research by Margarini (2021) and Lisdahayati, et.al (2022) stated that 44% of the elderly group died due to decreased body resistance and comorbidities during the Covid-19 pandemic ^{[4][5]}.

Musculoskeletal complaints are complaints of skeletal muscles or skeletal muscles that are felt by someone where the nature of the complaint is very mild to severe, causing limitations in daily activities. This complaint is often felt by the elderly because of the degenerative process and a decrease in the immune system. Musculoskeletal complaints are usually characterized by muscle stiffness, loss of movement, pain in muscles and bones, and signs of inflammation, which in turn causes the elderly to experience limitations in physical activity. Based on research by Mutmainah (2017), musculoskeletal complaints are the highest disease in Indonesia with a percentage of 49% which is dominated by the elderly ^[6].

Tresna Werdha Wana Seraya Social Home is a forum for the elderly with poor and neglected conditions both from their families and from the community with increasingly complex social problems. With this orphanage, the elderly get guarantees and protection as well as health and social welfare services. The outbreak of Covid-19 in Indonesia in 2020 resulted in limited mobility of the community, especially the elderly, to get access to health services because the elderly were very susceptible to being infected with Covid-19 so during the Covid-19 pandemic, musculoskeletal disorders experienced an increase.

A physiotherapy is a form of health service aimed at individuals and or groups to develop, maintain and restore body movement and function throughout the life cycle. The scope of physiotherapy services includes promotive, preventive, curative, and rehabilitative. With the presence of physiotherapy in blood pressure screening and health services for the elderly, it is hoped that it can help improve the quality of life of the elderly due to musculoskeletal complaints during the Covid-19 pandemic so that they can carry out daily activities safely and comfortably.

IMPLEMENTATION METHOD

The implementation method in this community service consists of several stages. The preparation stage starts with obtaining activity permits, coordinating with orphanages in carrying out activities, as well as sharing perceptions in activities. At the implementation stage, data collection on the elderly is carried out which includes name, gender, and age. In addition, blood pressure checks and physiotherapy services were also carried out for the elderly with musculoskeletal complaints with physiotherapy modalities such as exercise and infrared therapy. In the implementation of this elderly service, 34 elderly people are targeted to take part in this activity, both directly and in the treatment room. Evaluation is the last stage in this community service. Evaluation of activities is seen based on the presence of the elderly, the results of blood pressure examinations and the handling of musculoskeletal complaints, and the types of musculoskeletal complaints in the elderly.

RESULTS AND DISCUSSION

The community service activity was carried out on May 27, 2022, located at the Tresna Werdha Wana Seraya Social Home, Ketalanggu Village, located at Jalan Gunitir No. 6 Kesiman Kertalangu Denpasar. Tresna Werdha Wana Seraya Social Home is an orphanage that can provide guarantees and protection as well as social welfare services, especially for the elderly who experience problems of poverty and neglect. This orphanage can accommodate 50 elderly residents and is managed by the Social Service UPTD of the Bali Province Social Service with 16 employees (administration, cook, laundry, driver, security guard, and volunteers).

Community service is carried out utilizing science and technology to improve people's welfare and educate the nation's life. The Physiotherapy study program carries out community service activities by screening blood pressure and examining musculoskeletal complaints as well as providing physiotherapy services related to musculoskeletal complaints such as exercise and infrared therapy.



Figure 1. Blood Pressure Data Collection and Screening



Figure 2. Physiotherapy Health Services

The results of the health screening which include age, gender, blood pressure, and musculoskeletal complaints are presented in the table below.

Table 1. Age and Gender

Category	Frequency	%
Age		
1. 60-65	7	20,6
2. 66-70	8	23,5
3. 71-75	2	5,9
4. 76-80	7	20,6
5. 81-85	4	11,8

6. 86-90	5	14,7
7. 91-95	1	2,9
Gender		
1. Man	16	47,1
2. Woman	18	52,9
Total	34	100

Indonesia has entered an aging population structure. This condition is characterized by the proportion of the population aged 60 years and over which has exceeded 10% of the total population, increasing life expectancy by 71.5 years, healthy life age by 62.7 years, and older women being more than elderly men (52.32). percent versus 47.68 percent)^[1]. Based on the community service activities, the data in table 1 shows that there are 7 elderly people aged 60-65 years, 8 people from 66-70 years old, 2 people from 71-75 years old, 7 people from 76-80 years old, 4 people from 81-85 years old. people, 86-90 years as many as 6 people, and 91-95 years as many as 1 person. As for the sex of men as many as 16 people and women as many as 18 people.

Table 2. Blood Pressure

Category	Frequency	%
Blood pressure		
1. Normal	10	29,4
2. Pre Hypertension	17	50,0
3. Hypertension Grade 1	7	20,6
Total	34	100

The probability of the occurrence of hypertension between men and women during the Covid-19 pandemic is the same and in general, the factors for increasing blood pressure are caused by various problems, namely physical activity, stress, psychological, social, sleep quality, and family support ^[7]. Based on community service activities, the data in table 2 shows that there are 10 elderly people with normal blood pressure, 17 people with pre-hypertension, and 7 people with grade 1 hypertension.

Blood pressure is an important factor in the circulatory system of the human body where blood pressure can change every second. Blood pressure can also detect how a person's heart condition, especially the elderly. Changes in blood pressure in the elderly are caused by thickened and stiff heart valves, decreased elasticity of the heart muscle, and decreased heart pumping. With these physiological conditions, blood pressure in the elderly quickly changes, besides that the degenerative process and a decrease in the body's immune system greatly affect changes in blood pressure so that during this pandemic the elderly are easily infected with Covid-19 ^{[8][9]}.

Table 3. Musculoskeletal Complaints

Category	Frequency	%
Low Back Pain	15	44,1
Osteoarthritis Genu	10	29,4
Frozen Shoulder	8	23,5
Hemiparese	1	2,9
Total	34	100

With increasing age, it is followed by a decrease in function. This occurs in the elderly where the decreased function begins to appear. The most consistent and obvious decline in function is a decrease in the function of the musculoskeletal system, causing various complaints that disrupt the quality of life of the elderly. Decreased function of the musculoskeletal system includes muscle atrophy, decreased muscle flexibility, decreased muscle strength, poor postural stability, changes in gait patterns, and the presence of musculoskeletal pain ^[10]. Based on the results of the examination of community service activities, the results in table 3 show that elderly data based on musculoskeletal complaints are 15 people for the low back pain category, 10 people for the osteoarthritis genu, 8 people for frozen shoulder, and 1 person for hemiparesis. The presence of musculoskeletal complaints in the elderly during the Covid-19 pandemic needs special attention so that the quality of life becomes better. With this condition, the elderly need physiotherapy health services so that their quality of life becomes better.

Physiotherapy is a form of health service aimed at individuals and or groups to develop, maintain and restore body movement and function throughout the life cycle with manual handling, movement improvement, modalities, function training, and communication. Physiotherapy plays an active role in contributing to efforts to achieve optimal health status in preventing, intervening, and recovering functional movement disorders through the physiotherapy process ^[11]. Physiotherapy services provided in community service activities are in the form of providing modalities, namely infrared therapy, and exercise to 34 elderly people. In the provision of physiotherapy services has carried out several physiotherapy service processes which include physiotherapy assessment, physiotherapy diagnosis, physiotherapy intervention planning, and physiotherapy intervention. The provision of infrared therapy and exercise is adjusted to musculoskeletal complaints which are carried out for approximately 10-15 minutes. In the elderly with complaints of low back pain, osteoarthritis genu, frozen shoulder, and hemiparesis, they are given infrared therapy and exercise which aims to increase blood vessel vasodilation so that the body's metabolic system becomes better.

This creates a feeling of comfort and relaxation and reduces pain due to muscle tension. Besides, it can increase the tensile strength or extensibility of soft tissue. While the provision of exercise has the aim to improve or prevent impaired body function and improve disability as well as prevent or reduce risk factors for health problems so that the immune system increases and the quality of life of the elderly are better.

CONCLUSION

Community service activities were carried out to coincide with the HLUN (National Elderly Day) located at the Tresna Werdha Wana Social Home, Seraya Village, Ketalunggu Village, Kesiman Kertalangu Village, and Denpasar. The results of this activity can be seen from the enthusiasm of the elderly because during the Covid-19 pandemic the elderly really need health checks/screening, especially blood pressure, and get services, especially physiotherapy so that their quality of life is better. Besides that, this activity is very good and is expected to run continuously and continuously so that the elderly are aware and care about the importance of health.

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