Empowerment of Elderly Medical Emergency Response

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Abstract. Old age or degenerative diseases are included in the category of non-communicable diseases that often require prompt treatment before being taken to the nearest health facility. Currently the number is increasing and is a frequent cause of death and disability throughout the world. Cardiovascular diseases such as stroke, cancer, chronic lung disease, and diabetes mellitus are the most common types of degenerative diseases. If degenerative diseases are treated as early as possible, then the disease can be prevented and does not worsen. This community service method was in the form of counseling on early detection, training, and practice of handling medical emergencies for degenerative diseases that require immediate assistance before being taken to a health facility. This community service was attended by 18 members of the elderly group assisted by PKU Kotagede Yogyakarta Hospital, which is located in Kotagede. The elderly group consisted of 8 women and 10 men, aged over 60 years. Prior to counselling and training, a pre-test was conducted to explore initial knowledge and a post-test to monitor the development of knowledge was given after the counselling and training. The results of the average pre-test score demonstrated a value of 7 while the results of the post-test indicated an average value of 9. The output of the service was in the form of an early recognition pocket book and handling medical emergencies in the elderly.

Training on early detection and emergency degenerative diseases in the elderly can increase the knowledge and insight of the elderly to be more aware of worsening disease and provide first aid before being taken to the hospital.

Keywords: emergency response, health, first aid

1 Introduction

Aging is a natural process that occurs in humans which is unavoidable and irreversible. Aging in a person can be identified through changes in characteristics and physical appearance and function of organ systems. According to a 2015 United Nation report, the elderly population aged 60 years and over will double in the next 35 years with the oldest age being over 80 years. An increase in the number of elderly people accompanied by degenerative diseases that occur every year will certainly become a global urgency.

Old age or degenerative diseases are included in the category of non-communicable diseases. Early recognition of disability in daily life is urgently needed for old age. Currently, the number of elderly people is increasing and is a frequent cause of death and disability throughout the world. Cardiovascular disease, cancer, chronic lung disease, and diabetes mellitus are types most degenerative diseases. If degenerative diseases are treated as early as possible, then the worsening of the disease can be prevented and inhibited. The end of degenerative diseases such as cancer usually causes cardiac arrest which requires the help of cardiopulmonary resuscitation. According to the 2018 Basic Health Research,
Degenerative diseases include non-communicable diseases such as cancer, stroke, kidney disease, joint disease, diabetes mellitus (DM), heart disease, hypertension, and obesity which continue to increase significantly compared to reports in 2013. Older people are also at risk for experiencing malnutrition and anemia.

Aging is a risk factor for many non-communicable diseases. Aging is associated with a decrease in physical ability which will increase the risk of illness and death. In a study in Italy, older patients received more number and types of drugs that could be harmful because older people experience cognitive decline and mobility, and many do not have assistance. The non-communicable diseases that occur in respective elderly are different. The risk of neurodegeneration is the most common risk in the elderly as a person ages. The most common examples are Alzheimer's and Parkinson's disease.

In old age, assistance programs are needed for physical activity, transportation, and proper housing because many aged people suffer from diseases such as decreased hearing, vision, osteoporosis and cardiovascular. It is also necessary to make groups of elderly patients based on the severity of the disease. According to the Global Burden of Disease, degenerative diseases are also caused by the risk of a person's habits such as a lack of intake of nutrients from fruits and vegetables, high levels of body mass index, smoking habits, consumption of alcoholic beverages, and lack of physical activity. A pilot study found that training in volunteers improved the ability to manage chronic diseases in elderly patients.

Degenerative diseases can be recognized, easily diagnosed, and can be treated. This disease is chronic and is often recognized when complications have occurred. The ability of the elderly to carry out their daily activities must be evaluated carefully considering the large number of elderly people who have various kinds of chronic diseases. Evaluation of the condition of the elderly would have an impact on the accuracy of pain assessment if a disease accompanied by pain occurs, and the efficacy of the treatment that may be given. In the elderly, treatment that can be given in an effective process is needed while still prioritizing the safety of the elderly so that a therapeutic solution can be obtained, so are health interventions and smoking cessation guidance.

![Picture 1. RSIA (Mother and Children Hospital) PKU Muhammadiyah Kotagede](image)

**2 Methodology**

This community service took place at a group member's house in Kotagede Yogyakarta, using counselling/lecture methods, practice or demonstrations, blood sugar level screening to find early signs of disease in the elderly group. The counselling was conducted by expert doctors and lecturers from UMY as the partners, and doctors from RS PKU Muhammadiyah Kotagede for 18 participants. Before being given the training, the participants were given a pre-test and the vital signs were examined in the form of blood pressure, pulse, and blood sugar levels. The data obtained is then analysed and routinely
monitored at every meeting of the elderly with cadres. Elderly who were recorded to have a disease and must be treated were then consulted to the health facility of RSIA PKU Muhammadiyah Kotagede for further examination. The partner of community service is the PKRS of RSIA PKU Muhammadiyah Kotagede team, with the service participants being the PKRS RSIA PKU Muhammadiyah Kotagede elderly group.

3 Result and Discussion

This community service was attended by 18 members of the elderly group assisted by RS PKU Muhammadiyah Kotagede Yogyakarta. The elderly group consisted of 8 women and 10 men, aged over 60 years. Prior to counselling and training, a pre-test was carried out to explore initial knowledge and a post-test to monitor the development of knowledge was given after the counselling and training. The results of the average pre-test score revealed a value of 7 while the post-test results demonstrated an average value of 9 (Table 1).

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<tr>
<td></td>
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<td>8 (44.4%)</td>
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<td>2</td>
<td>Mean values</td>
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<tr>
<td></td>
<td>Pre-test</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>Post-test</td>
<td>9</td>
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</table>

From the results of the pre-test and post-test, it can be concluded that the elderly in Kotagede was generally aware of degenerative diseases and aging. Regarding the emergency management and disease prevention, many elderly people were still unaware of them, thus, continuous training on the topic of emergency management and daily care were still needed. The research revealed that the elderly still needed emergency training in a simple way according to age factors and physical abilities that are different from other adults.

The follow-up plan for this training is an advanced training on cardiac arrest assistance in the elderly. Cardiac arrest assistance in the elderly is carried out using a cardiopulmonary resuscitation (CPR) mannequin, which will be held at the next routine meeting.

4 Conclusion

Training on early detection and emergency degenerative diseases in the elderly can increase the knowledge and insight of the elderly to be more aware of worsening disease and provide first aid before being taken to the hospital.

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