

Gymnastics Assistance for the Independent Elderly: Service in Efforts to Prevent Dementia in Bulak Village, Surabaya

¹Bedjo Utomo^{ID}, ²Liliek Soetjatie^{ID}, ³Heru Sulistijono, ⁴Nurul Hindaryani

Departement of Medical Engenering Poltekkes Kemenkes Surabaya, Nursing Department, Poltekkes Kemenkes Surabaya, Departemen of Nutritional Poltekkes Kemenkes Surabaya

Corresponding author: (e-mail: lilik06@poltekkesdepkes-sby.ac.id)

ABSTRACT Degenerative diseases are infections that almost occur in the elderly, with a decrease in physiological function will have an impact on several chronic diseases, such as hypertension, diabetes, osteoarthritis, Alzheimer's, heart disease, kidney failure, therefore, to prevent the occurrence of these diseases, it is necessary to seek promotive, preventive, and rehabilitative measures. One of the efforts made is to do community service in the form of assistance for the elderly so that they can live independently and have a good quality of life. The purpose of this community service is to aid in learning to live independently to prevent degenerative diseases. This community service was carried out in RW 2 Bulak Village in the form of counseling, health checks, education on nutrition fulfillment and gymnastics for the elderly. The results of educational counseling about degenerative diseases and their prevention have shown a good understanding level of 90%, and the elderly have high enthusiasm to participate in gymnastics movements and carry out health tests. Furthermore, the continuation of this activity is expected to be followed up by improving effective communication between health center officers, elderly cadres so that the elderly program can run optimally.

INDEX TERMS Degenerative Diseases, Elderly, Health check-ups and elderly gymnastics

1. INTRODUCTION

Regulation of the Minister of Health of the Republic of Indonesia number 67 of 2015 concerning the implementation of elderly health services in community health centers that to keep the elderly healthy and productive socially and economically in accordance with human dignity, it is necessary to make health maintenance efforts for the elderly. In this Ministerial Regulation, what is meant by: Elderly is someone who has reached the age of 60 (sixty) years and over. WHO categorizes the elderly age range from 76 years to 90 years. While in the Ministry of Health, the elderly in the range above 65 years.[1] The final stage of human life is when a person enters old age. Old age with healthy and happy conditions is everyone's dream. Based on Riskesda data in 2013, the most common diseases in the elderly for non-communicable diseases include: hypertension, dental problems, joint diseases, oral problems, diabetes mellitus, heart disease and stroke[2]. Infectious diseases include ARI, diarrhea, and pneumonia. In addition to non-communicable and communicable diseases, the elderly are at risk for nutritional problems, especially more nutrition, mental emotional disorders, depression, and dementia. In general, Dementia is a term for senility, which is a brain disorder that impacts a person's ability to communicate and perform daily activities. Some activities and lifestyles that can prevent senility include consuming healthy foods, not smoking, maintaining ideal body weight, doing physical activity and

sports or gymnastics, carrying out hobbies such as reading, singing, solving crossword taka etc., and interacting with healthy, religious communities etc. From data from the Central Statistics Agency in 2022, Life Expectancy (AHH) in Indonesia is at the age of 73 years, it was reported that it experienced an increase of about 0.28 years from the previous year[3]. This good news immediately received a response from various parties, both the government and the community, to improve the quality of life of the elderly by playing an active role in supporting government programs to realize independent and prosperous elderly. One of the efforts made by several lecturers of Poltekkes Kemenkes Surabaya is to implement the Tri Dharma of Higher Education through Community Service in the City of Surabaya, one of the areas in Surabaya where the elderly population suffers from degenerative diseases with socioeconomic conditions that require assistance for elderly services is in the Bulak Village Area. In Bulak Village, there are around 315 elderly people in 7 RWs. Diseases that many elderly suffer from are Hypertension, Blood Sugar, Uric Acid and Cholesterol. Data obtained from the head of the Elderly Posyandu is that the participants are 80% from poor families. The most elderly in the elderly posyandu are in RW 2, so this time Community Service with some limitations, was carried out in RW 2. Through this Community Service, assistance is carried out to prevent senility through the prevention of degenerative diseases, counseling on nutritious food, health checks and

elderly gymnastics, so that later it can provide education on degenerative diseases and their prevention, efforts to check blood pressure, blood sugar, cholesterol and uric acid and food counseling for the elderly who can prevent senility and elderly exercise. This Community Service targets the elderly in the Bulak Village area, to apply the results of research and community service, namely: Nutrition and Health Counseling and making healthy juices for the elderly to keep looking healthy and cheerful by Sus Widayati and Bambang Triatma, Abdimas Journal. P ISSN 1410-2765[4] and by Budiarti, Ira Sri, and Rista Nora (2020). entitled The Effectiveness of Brain Gymnastics on Cognitive Function in the Elderly with Dementia at the Tresna Werdha Sabai Nan Aluih Siring Social Institution Padang Pariaman[5]. Based on the results of research that has been done shows that brain gymnastics provides effective changes in cognitive function in the elderly. Before brain gymnastics there was a 4.45% decline in cognitive function and then After research on brain gymnastics made cognitive function increase by 2.5%. One effort to prevent decreased function in the elderly is to do brain gymnastics[6]

II. METHOD

The method used in assisting the elderly by preventing senility and elderly gymnastics towards an independent and prosperous elderly in the Bulak sub-district of Surabaya city is conducting training, monitoring, and evaluation, as well as empowering health cadres which include [7], [8]:

1. Identify the level of knowledge about degenerative diseases, nutritional fulfillment, elderly gymnastics, effective communicative and health checks[9], [10].
 2. Development of a pattern of cooperation between health cadres and puskesmas in fostering elderly cadres[11].
- This mentoring activity involved several 40 elderly cadres and nursing, nutrition and electromedical students of the Departemen of health Poltekkes Kemenkes Surabaya.

IV. IMPLEMENTATION

A. PREPARATION

The activity began with a proposal in July 2022, data collection, location permits for community service activities between the managers of Bulak village posyandu cadres and the Departemen of health Poltekkes Kemenkes Surabaya.

B. ACTIVITIES AND SCHEDULE

The training will be held in the Hall Room of Posyandu RW 2, Bulak sub-district.

V. RESULT

A. Counseling on Degenerative Diseases in the Elderly

The purpose of this counseling is to provide information, education, and support to the elderly so that they can understand the importance of preventing degenerative diseases and can adopt a healthy lifestyle Participants' Knowledge[12]. Evaluation of participants' knowledge using pretest and post-test.

Vol. 3 No. 2, June 2024, pp:

Homepage: ficse.ijahst.org

FIGURE 1 Results of counseling on degenerative diseases in the elderly broadly speaking, participants can understand what is meant by degenerative diseases, the main risk factor in causing the onset of degenerative diseases in the elderly[13], that is, 90% of the elderly can answer, among others, the main risk factors include age, genetic factors, unhealthy lifestyles (such as smoking, high-fat foods, and lack of physical activity) then what the elderly do to prevent degenerative diseases, 90% of the elderly answer to maintain a balanced diet, exercise regularly, do not smoke, avoid excessive alcohol, and undergo regular health checks at the



Figure 1. Counseling Activities for the Elderly about the introduction of degenerative diseases

Puskesmas [14].

B. Health Check

Health examination activities involve nursing students which include sphygmomanometer, blood sugar and kholesterol examination.

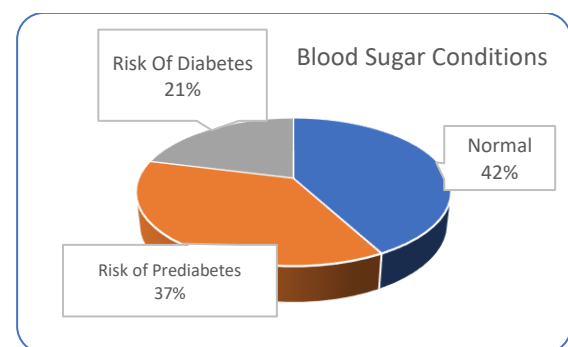


Figure 3. Blood Test Results of Elderly Cadres of Bulak Village, Surabaya

CADRES OF BULAK VILLAGE, SURABAYA

FIGURE 2 The results of blood sugar examination show that the elderly who have a risk of diabetes as much as 21% (8 individuals), the risk of prediabetes as much as 37% (15 individuals) and normal as much as 42% (17 individuals). This shows that the elderly still have a risk of almost 58% suffering from diabetes, so it is necessary to socialize degenerative disease counseling.

Furthermore, the results of sphygmomanometer examination before training showed a high tendency of around 76% (30 org) ($>130/80$ mmHg) and a normal tendency of around 24% (10 org) ($<120/80$ mmHg).

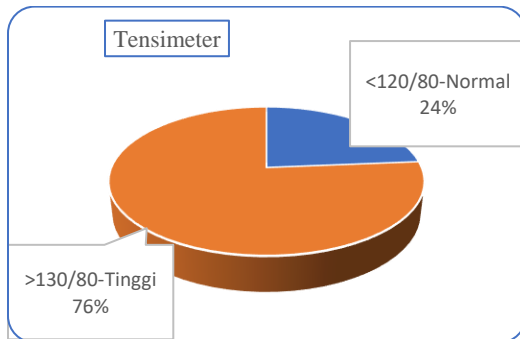


Figure 4. Results of Sphygmomanometer Examination of Elderly Cadres of Bulak Village, Surabaya

FIGURE 4 shows the potential for tension above $>130/80$ indicates a high risk for hypertension of about 76%). Furthermore, the results of examination of the elderly BMI were obtained with a BB of about 66% (26 org), Normal around 34% (14 org)

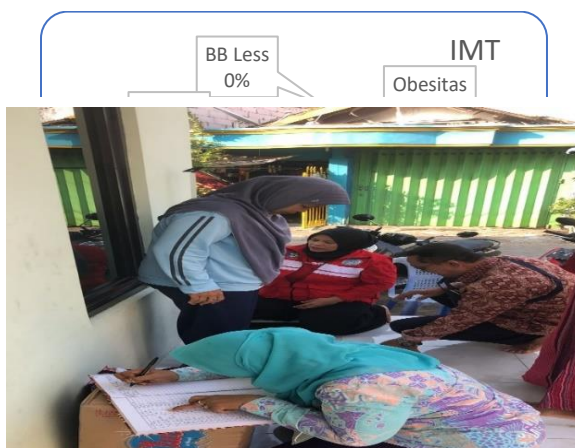


Figure 6. BMI Examination Activities for Elderly Cadres of Bulak Village, Surabaya

FIGURE 5 shows more than 66% of the elderly have more weight, but do not tend to obesity, here are the results of weighing the elderly **FIGURE 6**

IV. DISCUSSION

Advanced age is often associated with decreased cognitive function and the risk of neurodegenerative diseases such as Alzheimer's[15] besides that it is also characterized by a decrease in physiological abilities so that it can cause various degenerative diseases (diabetes, hypertension). Elderly gymnastics is one of the non-pharmacological interventions that has proven effective in improving the physical and mental health of the elderly, including cognitive function and counseling efforts in the elderly can also increase knowledge about degenerative diseases and their prevention. Another effort is to do elderly gymnastics

to establish effective communication between the elderly. [16], [17]

Elderly gymnastics that are done regularly will improve physical fitness, so that indirectly gymnastics can improve heart function and lower blood pressure and reduce the risk of fat accumulation on the walls of blood vessels so that it will maintain elasticity, besides that elderly gymnastics can also improve the quality of sleep. About 50% of elderly people have difficulty sleeping, sleep disturbances exert a significant negative influence on physical and mental health, especially in elderly people[18]. Sleep disorders in parents can be acute or chronic, this is caused due to intrinsic factors or primary or secondary sleep disorders due to other diseases, psychological or physical disorders, environmental factors and drug side effects. Sleep disorders can affect the quality of life in the elderly, reduce immunological status, hormonal and endocrinological disorders, and decline in cognitive function.

V. CONCLUSION

The purpose of assisting the elderly towards the Independent Elderly and the prevention of degenerative diseases through counseling efforts carried out by the community service team of lecturers and students of the Poltekkes Kemenkes Surabaya increases the motivation of the elderly to the spirit of life, this is shown by the results of the quiz after counseling by 90%. And coupled with the benefits of gymnastics guidance and education on making nutritional drinks. Furthermore, to improve the quality of life of the elderly, it is hoped that cooperation will be established between puskesmas and elderly cadres on an ongoing basis.

REFERENCES

- [1] BPS, "Statistik Penduduk Lansia 2017," Jakarta, 2017.
- [2] R. I. Riskesdas, "Riset Kesehatan Dasar," Jakarta: Kemenkes RI, 2013.
- [3] B. BPS, "Badan pusat statistik," Direktorat Jendral Peternakan dan Kesehatan Hewan, Kementan, 2020.
- [4] S. Widayani and B. Triatma, "Penyuluhan Gizi Dan Kesehatan Serta Pembuatan Jus Sehat Untuk Lansia Agar Tetap Tampil Sehat Dan Ceria," *Jurnal Abdimas*, vol. 17, no. 1, pp. 53–60, 2013.
- [5] I. S. Budiarti and R. Nora, "Efektifitas Senam Otak (Brain Gym) Terhadap Fungsi Kognitif Pada Lansia Dengan Demensia di Panti Sosial Tresna Werdha Sabai Nan Aluih Sicincin Padang Pariaman," *Jurnal Amanah Kesehatan*, vol. 2, no. 2, pp. 92–101, 2020.
- [6] E. F. Putra and S. Suharyana, "Model senam lansia untuk kebugaran jasmani dan fungsi otak," *Jurnal Keolahragaan*, vol. 6, no. 2, 2018, doi: 10.21831/jk.v0i0.20626.
- [7] S. Hamzah, S. N. Hikma Saleh, and H. B., "UPAYA PENINGKATAN PENGETAHUAN MASYARAKAT TENTANG HIPERTENSI MELALUI METODE PENYULUHAN," *Jurnal Pengabdiaan Masyarakat Kasih (JPMK)*, vol. 3, no. 2, 2022, doi: 10.52841/jpmk.v3i2.234.
- [8] N. Israyati, Y. Ardihiyanti, and A. Triana, "PENYULUHAN TENTANG HIPERTENSI PADA

- LANSIA DAN PELATIHAN SENAM LANSIA,” *Prosiding Hang Tuah Pekanbaru*, 2021, doi: 10.25311/prosiding.vol1.iss2.93.
- [9] A. A. Pradana, R. Rohayati, and C. Casman, “Improving Nurse’ Knowledge about Elder Abuse,” *MITRA: Jurnal Pemberdayaan Masyarakat*, vol. 6, no. 2, 2022, doi: 10.25170/mitra.v6i2.3192.
- [10] M. S. H. Wahyuningsih, D. A. A. Nugrahaningsih, and P. Probosuseno, “Increasing knowledge about nutrition and health in the elderly and cadres in Banguntapan Village, Bantul,” *Journal of Community Empowerment for Health*, vol. 3, no. 1, 2020, doi: 10.22146/jcoemph.44880.
- [11] V. Bampoh *et al.*, “Nursing practice and global refugee migration: initial impressions from an Intergovernmental-Academic Partnership,” *Int Nurs Rev*, vol. 67, no. 3, 2020, doi: 10.1111/inr.12588.
- [12] N. L. P. E. Diarthini, I. M. Sudarmaja, I. K. Swastika, and N. L. Ariwati, “Peningkatan Kualitas Hidup Lansia Melalui Pelayanan Kesehatan dan Edukasi Kesehatan Secara Personal Pada Lansia di Desa Melinggih Payangan Gianyar Bali,” *Talenta Conference Series: Tropical Medicine (TM)*, vol. 19 Nomor 4, no. 1, 2020.
- [13] J. Harahap and L. S. Andayani, “Pola Penyakit Degeneratif, Tingkat Kepuasan Kesehatan dan Kualitas Hidup pada Lansia (Lanjut Usia) di Kota Medan,” *Talenta Conference Series: Tropical Medicine (TM)*, vol. 1, no. 1, 2018, doi: 10.32734/tm.v1i1.35.
- [14] Y. Wahyuni, R. Dewi, and T. P. Utami, “Upaya Preventif Penyakit Degeneratif Melalui Pemeriksaan Lemak Viseral Masyarakat Di Wilayah Pesantren Asshiddiqiyah Jakarta Barat 2017,” *Jurnal Abdimas*, vol. 4, 2017.
- [15] T. Parimon, B. Cusack, I. M. Rea, and A. Carvalho, “Physical activity and cognitive function in individuals over 60 years of age: a systematic review,” *Clin Interv Aging*, vol. 9, no. PMC3990369, p. 661, Apr. 2014, doi: 10.2147/CIA.S55520.
- [16] S. Septi Fandinata and I. Ernawati, “Management terapi pada penyakit degeneratif,” *Mengenal, mencegah, dan mengatasi penyakit degeneratif (diabetes melitus dan hipertensi)*, 2020.
- [17] R. Dewi, M. Meisyaroh, and Kassaming, “Penyuluhan Kesehatan Terhadap Pengetahuan Lanjut Usia Tentang Penyakit Degeneratif Di Wilayah Kerja Puskesmas Baranti,” *Jurnal Inovasi dan Pengabdian Masyarakat*, vol. 1, no. 1, 2021.
- [18] B. Nurdianingrum and Y. Purwoko, “Pengaruh Senam Lansia Terhadap Kualitas Tidur Pada Lansia,” *Diponegoro Medical Journal (Jurnal Kedokteran Diponegoro)*, vol. 5, no. 4, 2016.