

Improving the Elderly Health Through Education and Health Assessment in the Rodhiyatan Mardhiyah Nursing Home

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ABSTRACT

Various problems in the social, economic, and health fields will accompany the increasing elderly population. A large number of elderly persons experience stress, sadness, and other illnesses. Rodhiyatan Mardhiyah nursing home is a partner of this community service program located in Batu City. Activities in the nursing home are more focused on religious activities to increase older adults' sense of faith and calm the mind, thus helping to improve psychological health, especially for elderly. However, the elderly's knowledge about health problems is limited, and the nursing home does not have health examination tools. The program was carried out using methods of health education (such as hypertension, diabetes mellitus, and diabetes foot exercises), health assessment, and health examination training, enabling nursing home staff to develop the necessary skills for conducting basic health evaluations of the elderly. All participants were very enthusiastic about attending health education. Therefore, it is necessary to collaborate with the nursing home and implement other health programs in future community service programs.

INTRODUCTION

The World Health Organization (WHO) predicts that in 2050, the number of elderly people worldwide will reach 2.1 billion compared to 2015, which amounted to 900 million (Andrijani, 2019). In 2030, the number of elderly people in Indonesia will almost double or approximately 38 million people (13.2%) of the total population (Andrijani, 2019). The elderly in East Java has now reached 13.57% of the total population, an increase from 13.10% in the previous year. These data indicate that the proportion of elderly in this region is increasing, indicating that East Java is heading towards an aging population structure (Hardiwan, 2022). The increase in the elderly population will be accompanied by various problems in the social, economic, and health (Andrijani, 2019).

Older adults are an integral part of family and community life, and their role in the nation's development cannot be ignored. Attention to the welfare of elderly has been regulated in Law number. 13/1998 concerning Indonesia's Elderly Welfare. This law mandates that the government provide social services and protection for the elderly to have a decent, or even better, quality of life (Hardiwan, 2022; Kemenkes RI, 2016). Elderly is a period that everyone experiences at the end of their life. Even though many people can enjoy their old age, there are quite a few who have to experience pain or even die without experiencing happiness in old age. Even though everyone hopes to spend their old age happily, not all these wishes can be fulfilled. Many elderly people suffer from depression, stress, and various diseases (Kurnianto, 2015).

The decline in the immune system of elderly makes them vulnerable to disease. Based on the NICE Guideline, Multimorbidity: Clinical Assessment and Management 2016, 10 diseases are often found in elderly, including hypertension, arthritis, stroke, diabetes mellitus, coronary heart disease, gout, etc. However, there are three main diseases that elderly need to pay attention to, namely "hypertension, diabetes mellitus, and coronary heart disease" (Andrijani, 2019). According to 2018 Riskesdas data (Riset Kesehatan Dasar), the most common diseases in the elderly are diabetes mellitus 17%, hypertension 69.5%, heart disease 4.7%, and joint disease 18.9%. Hypertension is the dominant disease affecting the elderly population, with a death rate of around 7.5 million or approximately 12.8% of the total number of deaths (Wulandari et al., 2023). Elderly people are at risk of developing diabetes for several main reasons related to physical and metabolic changes that occur with age. Several factors increase the risk of diabetes in elderly, including decreased pancreas function, insulin resistance, and lack of physical activity (Oliveira et al., 2021).

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Additionally, research on the long-term sustainability and real-world application of combined education and assessment programs, especially in low resource settings such as nursing home or community centers, is still limited. Activities at the nursing home are more focused on religious activities to increase the elderly's sense of faith and calm the mind. There is also a lack of standardized methods to measure the direct impact of such interventions on elderly independence, quality of life and health care utilization rates.

Therefore, more comprehensive and integrated studies are needed to explore how combining tailored health education with regular health assessments can effectively improve overall elderly health.

IMPLEMENTATION AND METHODS

This community service activity was conducted in the Rodhiyatan Mardhiyah nursing home from September to October 2024. This community service program was as follows: health examination, health education, and health examination training for nursing home staff so they have the skills to perform basic health assessments for elderly. The health education topic was hypertension, diabetes mellitus, and practice in diabetic foot exercises. Meanwhile, health examination training consists of checking vital signs, body weight, blood sugar, and blood pressure. This training was given to two elderly in the nursing home who were appointed as coordinators.

Through this program, it is hoped that the elderly can increase their health knowledge; thus, they can conduct preventive efforts, and nursing home staff or coordinators have the skills to perform health assessments. These activities aim to improve the quality of life and elderly health in the nursing home.

RESULTS AND DISCUSSION

Approximately 14 participants, including nine elderly and five management members, attended the community service program. The program was conducted in the Rodhiyatan Mardhiyah nursing home in Batu, East Java. The activity began with health education about hypertension and diabetes mellitus. All participants were very enthusiastic about attending health education; this was proven by the participation of all elderly and nursing home staff active in the discussion session and raised many questions such as what is normal blood pressure and blood sugar values, how to regulate diet for diabetes patients, why stress can cause an increase in blood sugar blood, etc. (Figure 1.)



Figure 1. Health education

The following activities were health assessment, diabetic foot exercises, and health assessment training for two coordinators, including checking vital signs, body weight, blood sugar, and blood pressure (Figures 2, 3, and Table 1). We also gave health examination equipment such as first aid equipment, body weight scale, tensimeter, and blood sugar check to the nursing home because the nursing home did not have the equipment. Therefore, coordinators can perform simple health assessments as an early detection or tertiary health effort



Figure 2. Health examination



Figure 3. Health examination training

The results of health assessments or examinations can be seen in Table 1. Five elderly have high random blood sugar levels (>200 mg/dl) was five participants and four elderly have blood pressure >140 mmHg.

Table 1. Result of health examination

No.	Name	Results
1	NI	BB: 72 Kg, GDS: 299 mg/dl , TD: 150/90 mmHg, Nadi: 103 x/mnt
2	SG	BB: 56,2 Kg, GDS: 128 mg/dl , TD: 119/84 mmHg, Nadi: 91 x/mnt
3	SB	BB: 47,3 Kg, GDS: 329 mg/dl , TD: 108/60 mmHg, Nadi: 93 x/mnt
4	NA	BB: 54,6 Kg, GDS: 179 mg/dl , TD: 125/73 mmHg, Nadi: 80 x/mnt
5	RS	BB: 63,2 Kg, GDS: 107 mg/dl , TD: 143/94 mmHg, Nadi: 82 x/mnt
6	NN	BB: 52,1 Kg, GDS: 173 mg/dl , TD: 116/73 mmHg, Nadi: 97 x/mnt

7	ST	BB: 41,8 Kg, GDS: 166 mg/dl , TD: 132/78 mmHg, Nadi: 78 x/mnt
8	MA	BB: 43,3 Kg, GDS: 156 mg/dl , TD: 132/81 mmHg, Nadi: 79 x/mnt
9	EN	BB: 64,9 Kg, GDS: 228 mg/dl , TD: 122/87 mmHg, Nadi: 85 x/mnt
10	SP	BB: 44,9 Kg, GDS: 253 mg/dl , TD: 146/79 mmHg, Nadi: 76 x/mnt
11	LU	BB: 45,5 Kg, GDS: 542 mg/dl , TD: 132/77 mmHg, Nadi: 78 x/mnt
12	GI	BB: 58,6 Kg, GDS: 110 mg/dl , TD: 84/67 mmHg, Nadi: 83 x/mnt
13	MU	BB: 49,1 Kg, GDS: 121 mg/dl , TD: 148/90 mmHg, Nadi: 86 x/mnt
14	GE	BB: 75 Kg, GDS: 128 mg/dl , TD: 117/81 mmHg, Nadi: 94 x/mnt

Note= BB: berat badan, GDS: gula darah sewaktu, TD: tekanan darah.

Health education plays a pivotal role in fostering active aging. The functional capabilities of older individuals are significantly influenced by their engagement in various activities. To maintain the functional capacity of elderly population, it is essential to develop strategies that promote health and address potential complications associated with aging. These approaches should recognize older adults as active participants in their well-being rather than passive care recipients (Mallmann et al., 2015).

We train the elderly in diabetic foot exercises because they are simple, easy to do, and some have joint problems. Diabetic foot exercises offer significant benefits not only for individuals with diabetes but also for healthy elderly individuals. While diabetic exercises are tailored to manage diabetes effectively, their benefits are universal and applicable to healthy elderly individuals. Regular physical activity can improve cardiovascular health, enhanced strength and flexibility, better balance, mental health benefits, and improved quality of life. Therefore, it is highly recommended that elderly individuals – regardless of their diabetic status – incorporate regular exercise into their lifestyle for optimal health outcomes (Colberg et al., 2016; Kanaley et al., 2022).

CONCLUSIONS AND RECOMMENDATIONS

This community service can be implemented well, as evidenced by the enthusiasm of elderly and the nursing home management members. This activity is a promotive and preventive effort that is very useful and can indirectly

improve the health and quality of life of elderly. Therefore, it is necessary to maintain the existing collaboration with the nursing home and implement other health programs in future community service programs. Educational intervention should focus on empowering the elderly with knowledge about chronic disease management, preventive health practices, nutrition and exercise. Concurrently, regular health assessment should be conducted to monitor their physical, mental and functional health status.

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REFERENCES

- Andrijani, P. K. (2019). *10 Penyakit yang sering muncul saat lansia*. Retrieved 17 Juni from <https://www.geriatri.id/artikel/148/10-penyakit-yang-sering-muncul-saat-lansia>
- Colberg, S. R., Sigal, R. J., Yardley, J. E., Riddell, M. C., Dunstan, D. W., Dempsey, P. C., Horton, E. S., Castorino, K., & Tate, D. F. (2016). Physical activity/exercise and diabetes: A position statement of the American Diabetes Association. *Diabetes Care*, 39(11), 2065-2079. <https://doi.org/10.2337/dc16-1728>
- Hardiwan, D. (2022). *Lansia Jatim Meningkat*. Retrieved 17 Juni from <https://kominfo.jatimprov.go.id/berita/lansia-jatim-meningkat-capai-13-57>
- Kanaley, J. A., Colberg, S. R., Corcoran, M. H., Malin, S. K., Rodriguez, N. R., Crespo, C. J., Kirwan, J. P., & Zierath, J. R. (2022). Exercise/physical activity in individuals with type 2 diabetes: A consensus statement from the American College of Sports Medicine. *Med Sci Sports Exerc*, 54(2), 353-368. <https://doi.org/10.1249/mss.0000000000002800>
- Kemenkes RI. (2016). *Buku kesehatan lanjut usia*. Kementerian Kesehatan RI.
- Kurnianto, D. (2015). Menjaga Kesehatan di Usia Lanjut. *Jurnal Olahraga Prestasi* 11(2).
- Mallmann, D. G., Galindo Neto, N. M., Sousa Jde, C., & de Vasconcelos, E. M. (2015). Health education as the main alternative to promote the health of the elderly. *Cien Saude Colet*, 20(6), 1763-1772. <https://doi.org/10.1590/1413-81232015206.02382014>

- Oliveira, R. E. M. d., Ueta, J. M., & Franco, L. J. (2021). Variables associated with adherence to the treatment of type 2 diabetes mellitus among elderly people. *Diabetology International* 13(1), 160-168. <https://doi.org/10.1007/s13340-021-00518-1>
- Wulandari, S. R., Winarsih, W., & Istichomah. (2023). Peningkatan derajat kesehatan lansia melalui penyuluhan dan pemeriksaan. *Pengabdian Masyarakat Cendekia*, 2(2), 58-61.