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Effectiveness of the Prolanis Program in Controlling Blood Pressure among Hypertension Patients at Doktor Fuzti Clinic

Fuzti Fauzia[1], Dadi Hamdani[2]
[1]Bantarsari Public Health Center, Tasikmalaya, Indonesia
[2]Department of Nursing, STIKes Muhammadiyah Ciamis, Ciamis, Indonesia

Correspondence author: Dadi Hamdani
Email: dihamni92@gmail.com
Address: Jln. KH. Ahmad Dahlan No. 20 Ciamis, West Java, Indonesia
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ABSTRACT

Introduction: Chronic health conditions caused by genetic, physiological, and environmental factors are common among individuals with Non-Communicable Diseases (NCDs). Hypertension is one of the most prevalent chronic NCDs. If left untreated, it may lead to serious complications such as heart disease, stroke, and kidney failure. Effective management strategies are crucial to control blood pressure and prevent further health risks.
Objective: This study aimed to evaluate the effectiveness of the Chronic Disease Management Program (Prolanis) as a healthcare initiative to control blood pressure in patients with hypertension.
Methods: A quantitative one-group pre-test and post-test design was employed. A total of 25 participants diagnosed with hypertension were selected using purposive sampling based on predefined inclusion criteria. Blood pressure was measured before and after participation in the Prolanis program. The data were analyzed using the paired sample t-test.
Results: The analysis showed a statistically significant reduction in mean systolic blood pressure from 154 mmHg to 136 mmHg after the intervention. The paired sample t-test yielded a p-value of 0.001 ($p < 0.05$), indicating that the observed reduction was significant.
Conclusion: The findings suggest that the Prolanis program is effective in controlling blood pressure among hypertensive patients. Integrating structured chronic disease management programs like Prolanis into routine healthcare services can contribute to improved patient outcomes and reduced risk of complications associated with hypertension.

Keywords: blood pressure, hypertension, prolanis

Introduction

Indonesia is currently facing a double burden of disease, characterized by the simultaneous rise of non-communicable diseases (NCDs) and infectious diseases. NCDs are a leading cause of morbidity and mortality, accounting for 59% of all deaths and contributing to 69.9% of the total disease burden in the country (Kemenkes RI, 2018). Between 2013 and 2018, the prevalence of NCDs and their associated risk factors in Indonesia increased significantly, ranging from 23% to 90% (Kemenkes RI, 2018). Globally, low- and middle-income countries bear a disproportionate share of premature deaths, with 82% of all such deaths attributed to NCDs. Of these, 73% are caused by NCD-related complications, resulting in approximately 43 million deaths, including 18 million individuals under the age of 70 (WHO, 2024).

Chronic diseases, which fall under the category of NCDs, are long-term conditions caused by a complex interaction of genetic, physiological, behavioral, and environmental factors (Maulidati & Maharani, 2022). According to the National Council on Aging (NCOA), approximately 94.9% of individuals aged 60 years and older suffer from at least one chronic disease, and 78.7% experience two or more. Among this population, 42% are diagnosed with conditions such as hypertension, diabetes, heart disease, or cancer (NCO, 2024).

Hypertension is one of the most prevalent and critical NCDs in Indonesia and is ranked as the top cause of death nationwide. Its prevalence has risen from 25.8% in 2013 to 34.1% in 2018 (Kemenkes RI, 2018). If left unmanaged, hypertension may lead to severe complications such as heart disease, stroke, kidney failure, vision loss, and peripheral vascular disease. Beyond its physiological impact, poorly managed hypertension imposes a substantial economic burden on families and the national healthcare system due to the requirement for lifelong treatment (Eleonora et al., 2021; Setiawan et al., 2018).

To address this issue, the Indonesian government has introduced the Program Pengelolaan Penyakit Kronis (Prolanis), a chronic disease management initiative led by the Health Social Security Administration Agency (BPJS Kesehatan). Prolanis aims to improve the quality of life (QoL) of individuals living with chronic illnesses, particularly those with hypertension and type 2 diabetes mellitus, by preventing complications and promoting optimal disease control (BPJS Kesehatan, 2016).

The program emphasizes curative, promotive, and preventive strategies, including individual health counseling, health screenings, and group activities, in line with Presidential Regulation No. 12 of 2013 concerning National Health Insurance. Health counseling serves as a platform to enhance patients' knowledge about disease management and healthy lifestyle behaviors, while screenings aim to detect risk factors and prevent complications through early intervention (Nurmansyah & Kilic, 2017; Ariyanto et al., 2020; Alkaff et al., 2020a).

Prolanis services include regular consultations, medical check-ups, supporting laboratory tests, medication access, and group education activities (BPJS Kesehatan, 2016). Given the growing burden of hypertension in Indonesia, this study seeks to assess the effectiveness of the Prolanis program in reducing blood pressure among hypertensive patients.

Objective

This study aimed to evaluate the effectiveness of the Chronic Disease Management Program (Prolanis) as a healthcare initiative to control blood pressure in patients with hypertension.

Method

The respondents in this study were hypertensive patients who visited the clinic of Dr. Fuzti Fauzia. A purposive sampling technique was employed with the following inclusion criteria: (a) patients diagnosed with hypertension; (b) systolic blood pressure >140 mmHg and/or diastolic pressure >90 mmHg; (c) willingness to participate in the study; and (d) age over 18 years. Exclusion criteria included: (a) patients with serious complications resulting from hypertension, and (b) patients with diagnosed mental health disorders. The minimum sample size was determined using Federer's formula, resulting in a total of 25 respondents. The study was conducted over the period of April 2–30, 2025.The instruments used in this study included a calibrated Omron sphygmomanometer for measuring blood pressure, a body height measuring device, a weight scale, and an observation checklist. Blood pressure was measured before and after the intervention.

Univariate analysis was performed to describe the frequency and percentage distributions of respondent characteristics, including gender, age, family history of hypertension, and level of education. To evaluate the effectiveness of the Prolanis program in controlling blood pressure among hypertensive patients, bivariate analysis was conducted. Normality of the blood pressure data was assessed using the Shapiro-Wilk test, which confirmed that the data were normally distributed. Subsequently, a paired sample t-test was applied to compare mean blood pressure values before and after the Prolanis intervention.

Result

Table 1. Respondent Characteristics and the Effect of the Intervention

Variables	N	% / r	Mean (SD)	P-value
Age	25	r = -0.152	46 (not specified)	0.416
Sex				0.524
Male	11	44%	1.11 (0.352)	
Female	14	56%	1.15 (0.413)	
Family History of Hypertension				0.617
Yes	16	64%	1.24 (0.335)	
No	9	36%	1.27 (0.452)	
Education Level				0.632
Primary School	3	12%	1.22 (0.411)	
Junior School	5	20%	1.31 (0.423)	
High School	10	40%	1.46 (0.362)	
Bachelor	7	28%	1.19 (0.374)	
Blood Pressure (mmHg)				
Pre-Test	25		154	0.001*
Post-Test	25		136	

*Note: A paired sample t-test was used to analyze pre- and post-test blood pressure. A p-value < 0.05 is considered statistically significant.

Table 1 presents the characteristics of the 25 respondents, the effect of the Prolanis program on their blood pressure, and the statistical analysis of the intervention’s impact. The

majority of the participants were female (n = 14; 56%), while 11 (44%) were male. A total of 16 participants (64%) reported a family history of hypertension, while 9 participants (36%) did not. Regarding educational background, most respondents had completed high school (n = 10; 40%), followed by bachelor's degree holders (n = 7), junior school graduates (n = 5), and primary school graduates (n = 3).

The average systolic blood pressure before the intervention was 154 mmHg (SD not specified), which decreased to 136 mmHg after the intervention. A paired sample t-test revealed a statistically significant reduction in blood pressure following the Prolanis program ($p = 0.001$, $p < 0.05$), indicating the program's effectiveness in managing hypertension among the participants.

Discussion

The findings of this study indicate that the Prolanis program has a significant positive impact on controlling blood pressure in hypertensive patients. This aligns with previous research conducted by Manninda (2021), which emphasizes the comprehensive role of Prolanis through its curative, promotive, and preventive interventions in blood pressure management (Manninda, 2021; Boru Gultom, 2023; Febriawati, 2022).

Data from this study show that the majority of Prolanis participants presented with stage 2 hypertension, consistent with Alkaff et al. (2020), who also reported Prolanis as an effective program for blood pressure control in chronic hypertensive patients. The chronic nature of hypertension underscores the importance of programs like Prolanis in preventing disease progression and complications. Furthermore, hypertension's role in increasing uric acid levels, which can lead to vascular obstruction and kidney impairment, further supports the necessity of continuous monitoring and intervention offered by Prolanis (Alkaff et al., 2020; Yuningsih, 2022; Hamdani & Fauzia, 2019).

The curative aspect of Prolanis involves the administration of antihypertensive drugs in accordance with national guidelines, including ACE inhibitors, ARBs, diuretics, and calcium channel blockers. This pharmacological approach, supported by the Joint National Committee (JNC) VIII guidelines, aims for lifelong blood pressure stabilization to reduce morbidity and mortality related to target organ damage (Chairunnisa & Fani, 2020; Ariyanto et al., 2020; Hamdani et al., 2022). Medication adherence plays a critical role, with evidence showing that 80% compliance is required for effective normalization of blood pressure, while lower adherence results in suboptimal control.

Preventive efforts through regular physical activity, such as group gymnastics promoted by Prolanis, have also been shown to contribute to blood pressure reduction. Exercise enhances cardiovascular receptor sensitivity, improves cardiac function, and increases systemic blood flow, which are beneficial for maintaining cardiovascular health.

Promotive activities within Prolanis focus on increasing patient knowledge and awareness. This educational component is crucial as research by Kristianto et al. (2021) demonstrated a direct correlation between patient knowledge and adherence to treatment protocols. Patients who are well-informed about their condition and medications tend to have better adherence and self-management capabilities (Kristianto et al., 2021; Raudlatul Fitri et al., 2023; Syikir et al., 2021; Hamdani, 2024; Daryanti, 2020; Patria, 2023; Maulidati & Maharani, 2022). Increased patient autonomy and satisfaction with therapy further contribute to positive health outcomes (Abdul Malik et al., 2021; Hairunisa, 2014).

In conclusion, the Prolanis program's multifaceted approach, combining curative treatment, preventive exercise, and promotive education, effectively supports hypertension management. These findings suggest that continuing and expanding Prolanis activities could enhance patient outcomes by promoting better blood pressure control and overall cardiovascular health.

Conclusion

The implementation of the Prolanis program, encompassing rehabilitation, promotion, and prevention activities at Dr. Fuzti Fauzia's clinic, demonstrates effectiveness in controlling blood pressure among hypertensive patients. Although this study provides preliminary evidence supporting Prolanis, further research with a control group and a larger sample size is necessary to strengthen the findings. Nevertheless, the current results illustrate that the Prolanis program can be successfully applied to manage hypertension in primary healthcare settings.

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Authors' contribution

Each author contributed equally in all the parts of the research. All authors have critically reviewed and approved the final draft and are responsible for the content and similarity index of the manuscript.

Conflict of interest

This research has no conflict of interest from planning, data collection, analysis, to publication. Respondents in this study were kept confidential and obtained consent by signing an informed consent sheet.

Ethical consideration

Not applicable.

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References

1. Abdul Malik, A., Wiarsih, D., Rosmawati, A., Sulistiani, D., Fithriani, A., Rostantia, B., & Fikri Aulia, A. (2021). The Relationship Of Sleep Quality With Stress Level Among Hypertension Patients. Genius Journal, 2(2), 48–53. Https://Doi.Org/10.56359/Gj.V2i2.23
2. Alkaff, F. F., Sukmajaya, W. P., Intan, R. E., & Salamah, S. (2020a). Effectivity Of Indonesia Chronic Disease Management Program (PROLANIS) To Control Hypertension And Its Comorbidities At Primary Health Care. Open Access Macedonian Journal Of Medical Sciences, 8(E), 224–227. Https://Doi.Org/10.3889/Oamjms.2020.4583
3. Ariyanto, H., Andika Abdul Malik, Widianti, W., & Oktavia, W. (2020). Prevalence And Correlation Of Knowledge Levels With The Physical Activity Of Hypertension Patients. Genius Journal, 1(2), 45–49. Https://Doi.Org/10.56359/Gj.V1i2.9

4. Boru Gultom, E. R., Ariesti, E., Sipollo, B. V., & Sutiyarsih, E. (2023). The Impact Of Group-Based Ergonomic Exercise On Blood Pressure Among Individuals With Hypertension. Genius Journal, 4(2), 322–328. Https://Doi.Org/10.56359/Gj.V4i2.303
5. BPJS Kesehatan. (2016). Panduan Praktis Prolanis (Program Pengelolaan Penyakit Kronis).
6. Chairunnisa A S, & Fani T. (2020). Literasi Kesehatan Pasien Diabetes Mellitus Peserta Prolanis Di Wilayah Kerja Puskesmas Kedungmundu Tahun 2020.
7. Daryanti, E., Gita H, R., Marlina, L., & Sulastri, M. (2020). Prolanis Terhadap Tingkat Penurunan Tekanan Darah Dan Diabetes Mellitus Di Bungursari, Tasikmalaya. ABDIMAS: Jurnal Pengabdian Masyarakat, 3(2), 292–297. Https://Doi.Org/10.35568/Abdimas.V3i2.851
8. Eleonora Anindya Tiara Dewi, Yulia Sofiatin, & At All. (2021). Analysis Of JKN Non Capitation Financing For Hypertension Patients At West Java FKTP 2015-2016. Jurnal Kebijakan Kesehatan Indonesia : JKKI, 10(2), 78–85.
9. Febriawati, H., Siral, S., Yanuarti, R., Oktavidiati, E., Wati, N., & Angraini, W. (2022). Pelaksanaan Program Pengelolaan Penyakit Kronis (Prolanis). Citra Delima Scientific Journal Of Citra Internasional Institute, 6(2), 105–110. Https://Doi.Org/10.33862/Citradelima.V6i2.296
10. Hairunisa. (2014). Hubungan Tingkat Kepatuhan Minum Obat Dan Diet Dengan Tekanan Darah Terkontrol Pada Penderita Hipertensi Lansia Di Wilayah Kerja Puskesmas Perumnas I Kecamatan Pontianak Barat. Jurnal Mahasiswa PSPD FK Universitas Tanjungpura, 1(1), 1–25.
11. Hamdani, D., & Fauzia, F. (2019). Relationship Of Mobilization With Fecal Impact Events In Post Laparatomy Patients. Jurnal Vnus (Vocational Nursing Sciences), 1(2), 45–51. Https://Doi.Org/10.52221/Jvnus.V1i2.157
12. Hamdani, D., Firmansyah, A., & Setiawan, H. (2024). The Effect Of Administration Of Solanum Lycopersium Var Cerasiforme On Changes In Blood Pressure In Hypertension Patients. Jurnal Ilmiah Ilmu Keperawatan Indonesia, 14(01), 44–50. Https://Doi.Org/10.33221/Jiiki.V14i01.3119
13. Hamdani, D., Roslianti, E., Fitriani, A., & Andriansyah, D. (2022). Case Study Of Intervention Using Mint Leaf Aroma Therapy In Bronchial Asthma Patients. Jurnal Vnus (Vocational Nursing Sciences), 4(1), 22–30. Https://Doi.Org/10.52221/Jvnus.V4i1.317
14. Kemenkes RI. (2018). Laporan Nasional Rsikesdas. Badan Penelitian Dan Pengembangan Kesehatan.
15. Kristianto, F. C., Sari, D. L., & Kirtishanti, A. (2021). Pengaruh Program Penanggulangan Penyakit Kronis (PROLANIS) Terhadap Kadar Gula Darah Pasien Diabetes Melitus Tipe 2. Comphi Journal: Community Medicine And Public Health Of Indonesia Journal, 2(1), 8–14. Https://Doi.Org/10.37148/Comphijournal.V2i1.36
16. Manninda, R., Anggriani, Y., & Sari, A. K. (2021). Analisis Dampak Program Pengelolaan Penyakit Kronis (Prolanis) Dalam Meningkatkan Outcome Klinis Pasien Diabetes Melitus Tipe 2 Di Puskesmas Jakarta, Indonesia. Jurnal Ilmu Kefarmasian Indonesia, 19(2), 237. Https://Doi.Org/10.35814/Jifi.V19i2.1107
17. Maulidati, L. F., & Maharani, C. (2022). Evaluate Program Pengelolaan Penyakit Kronis (Prolanis) Pada Masyarakat Pandemi Covid-19 Di Puskesmas Temanggung. Jurnal Kesehatan Masyarakat, 10(2), 233–243. Https://Doi.Org/10.14710/Jkm.V10i2.32800

18. NCO. (2024, May 30). The Top 10 Most Common Chronic Conditions In Older Adults. National Council On Aging. Https://Www.Ncoa.Org/Article/The-Top-10-Most-Common-Chronic-Conditions-In-Older-Adults/
19. Nurmansyah, M. I., & Kilic, B. (2017). The Impact Of National Health Insurance Policy To The Implementation Of Health Promotion Program On Public Health Center In Indonesia. Kesmas: National Public Health Journal, 11(3). Https://Doi.Org/10.21109/Kesmas.V11i3.1262
20. Patria, D. K. A., Eka, N., & Maulana, M. (2023). Relationship Between Exercise With Blood Pressure Stability Among Hypertension Elderly. Genius Journal, 4(1), 229–236. Https://Doi.Org/10.56359/Gj.V4i1.244
21. Raudlatul Fitri, A., Yuningsih, A., & Hertini, R. (2023). Analysis Of Elderly Group Community Nursing Practices With Education Innovation Interventions Of LSM (Lansia Sehat Merata) Among Elderly With Hypertension. Genius Journal, 4(1), 200–206. Https://Doi.Org/10.56359/Gj.V4i1.247
22. Setiawan, H., Suhanda, S., Rosliati, E., Firmansyah, A. and Fitriani, A., 2018. Promosi kesehatan pencegahan hipertensi sejak dini. *ABDIMAS: Jurnal Pengabdian Masyarakat*, *1*(2), pp.41-45.
23. Syikir, M., Dewi, T. W., Adiatman, A., & Irfan, I. (2021). Giving Boiled Celery Leaves To Reduce Blood Pressure In Elderly People With Hypertension. JURNAL VNUS (Vocational Nursing Sciences), 3(2), 79–87. Https://Doi.Org/10.52221/Jvnus.V3i2.400
24. WHO. (2024, December 23). Noncommunicable Diseases. World Health Organization. Https://Www.Who.Int/News-Room/Fact-Sheets/Detail/Noncommunicable-Diseases
25. Yuningsih, A. (2022). Case Study Of Nursing Care For An Elderly Family With Hypertension Problems. JURNAL VNUS (Vocational Nursing Sciences), 4(2), 81–87. Https://Doi.Org/10.52221/Jvnus.V4i2.411