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Comparative Effectiveness of Islamic Spiritual Care and Physical **Relaxation in Controlling Blood Pressure among Hypertensive Patients**

Mayang Novyanti Putry¹, Aris Citra Wisuda², Ardi Dwi Saputra³, Citra Suraya⁴, Ichsan Nur Hamdan⁵ Iis Martilopa⁶, Arif Budiyono⁷, Eli Erpina⁸, Indah Tirta Sari⁹

1,3,7,8,9 Department of Nursing, RSUD Sungai Lilin, Musi Banyuasin Regency, South Sumatra, Indonesia ^{5,6}Department of Medicine, RSUD Sungai Lilin, Musi Banyuasin Regency, South Sumatra, Indonesia ^{2,4}Nursing Study Program, Sekolah Tinggi Ilmu Kesehatan Bina Husada Palembang, Indonesia

Email: putrymayang002@gmail.com, ariscitrawisuda.edu@gmail.com, ardidwisaputra27@gmail.com, citrasuraya.edu@gmail.com, pns.ichsannurhamdan@gmail.com, iismartilopa15@gmail.com, rfbudiyono.ab@gmail.com, elierpina88@gmail.com, indahtirtasari075@gmail.com

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ABSTRACT

Hypertension remains a major public health problem worldwide and is a leading risk factor for cardiovascular morbidity and mortality. Beyond pharmacological treatment, complementary approaches such as spiritual care and relaxation techniques have been increasingly recognized as effective strategies for managing blood pressure. This study aimed to compare the effectiveness of Islamic spiritual care and physical relaxation in controlling blood pressure among hypertensive patients.A quasi-experimental study was conducted at RSUD Sungai Lilin, South Sumatra, Indonesia, from February to April 2025. A total of 120 hypertensive patients were recruited using total sampling and divided into two intervention groups: Islamic spiritual care (n = 60) and physical relaxation (n = 60). The Islamic spiritual care intervention consisted of guided dhikr and prayer-based relaxation, while the physical relaxation group received progressive muscle relaxation training. Blood pressure was measured before and after the 4-week intervention. Data were analyzed using paired and independent t-tests to compare within-group and betweengroup differences. Both interventions significantly reduced systolic and diastolic blood pressure compared to baseline (p < 0.05). However, patients receiving Islamic spiritual care demonstrated a greater mean reduction in systolic blood pressure $(-12.8 \pm 6.4 \text{ mmHg})$ and diastolic blood pressure $(-8.6 \pm 4.7 \text{ mmHg})$ compared with those in the physical relaxation group (-8.3 ± 5.9 mmHg and -5.2 ± 4.1 mmHg, respectively; p < 0.05). Islamic spiritual care and physical relaxation are both effective in reducing blood pressure among hypertensive patients. Nevertheless, Islamic spiritual care appears to provide greater benefits, suggesting its potential as a culturally appropriate complementary intervention in hypertension management.

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Corresponding Author: **Mayang Novyanti Putry** Department of Nursing

RSUD Sungai Lilin, Musi Banyuasin Regency, South Sumatra, Indonesia

Email: putrymayang002@gmail.com

1. INTRODUCTION

Hypertension, commonly known as high blood pressure, remains one of the most pervasive global health challenges. As of 2023, approximately 1.28 billion adults aged 30-79 years are affected worldwide, with nearly twothirds residing in low- and middle-income countries, where control rates are particularly poor fewer than one in five people achieve adequate blood pressure control [1],[2],[3]. This silent condition contributes significantly to cardiovascular morbidity and mortality, with ongoing uncontrolled hypertension accounting for a substantial share of stroke and heart disease worldwide [4].

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In the Asian region Indonesia in particular the prevalence of hypertension has escalated sharply. Data from Indonesia's 2018 Basic Health Survey (*Riskesdas*) indicate that 34.1% of the adult population suffers from hypertension, up from 25.8% in 2013 [5]. This translates to over 70 million Indonesians affected, yet many remain undiagnosed or inadequately managed highlighting critical barriers in awareness, treatment access, and long-term disease control [6]

Hypertension arises through complex pathophysiological mechanisms such as elevated sympathetic activity, endothelial dysfunction, dysregulated baroreceptors, and fluid overload, leading to elevated vascular resistance and target-organ damage [7]. While pharmacotherapy remains the cornerstone of management, there is increasing recognition of non-pharmacological therapies particularly relaxation techniques as beneficial adjuncts. Progressive Muscle Relaxation (PMR), for instance, has been shown to stimulate the parasympathetic nervous system, reduce cortisol levels, and lower blood pressure in stress-prone individuals [8],[9].

Alongside physical relaxation methods, spiritual care especially in predominantly Muslim contexts offers culturally appropriate complementary therapy. Islamic spiritual practices, such as guided *dhikr* and prayer-based relaxation, may promote psychological tranquility and emotional resilience, which could influence physiological parameters like blood pressure. Previous studies, albeit limited, suggest that spiritual interventions improve mental well-being and stress regulation, which are indirectly linked to cardiovascular stability [10],[11].

At RSUD Sungai Lilin in South Sumatra, initial observations by healthcare staff and informal patient feedback indicate that structured religious practices may help patients feel calmer and more centered. Similarly, patients participating in standard relaxation exercises report perceived benefits. However, no formal comparative studies have been conducted at the hospital to assess the relative effectiveness of Islamic spiritual care versus physical relaxation techniques in controlling blood pressure. Therefore, this study aims to address that gap by evaluating and comparing the effectiveness of these two interventions among hypertensive patients at RSUD Sungai Lilin.

2. METHOD

2.1 Study Design

This study employed a quasi-experimental design with a two-group pretest-posttest approach, which is frequently used in clinical and community settings to evaluate the effectiveness of health interventions when randomization is not feasible [12],[13]. This design allowed comparison between two non-pharmacological interventions Islamic spiritual care and physical relaxation on blood pressure reduction among hypertensive patients.

2.2 Study Setting and Period

The research was conducted at RSUD Sungai Lilin, South Sumatra, Indonesia, a secondary-level public hospital that serves a diverse population of patients with chronic illnesses, including hypertension. Data collection took place over a period of three months, from February to April 2025, ensuring sufficient time for participant recruitment, intervention delivery, and outcome measurement.

2.3 Participants and Sampling

The study population consisted of patients diagnosed with hypertension who attended outpatient clinics at RSUD Sungai Lilin. A total sampling technique was applied, recruiting all eligible patients during the study period to minimize selection bias and maximize representativeness [14],[15]. Inclusion criteria were: (1) aged 30–70 years, (2) diagnosed with primary hypertension, (3) receiving stable antihypertensive therapy for at least one month, and (4) willing to participate. Exclusion criteria included severe comorbidities (e.g., stroke, heart failure) and cognitive impairment. A total of 120 patients were enrolled and allocated into two groups: Islamic spiritual care (n = 60) and physical relaxation (n = 60).

2.4 Interventions

The Islamic spiritual care intervention consisted of guided *dhikr* (repetitive remembrance of Allah) and prayer-based relaxation, provided three times per week for four weeks. This approach is rooted in Islamic spiritual practices that have been shown to reduce stress and promote autonomic balance [16],[17],[18].

Meanwhile, the physical relaxation intervention involved progressive muscle relaxation (PMR), which guides patients through cycles of muscle contraction and release to promote relaxation. PMR has been widely applied as a complementary therapy for hypertension management [19],[20]. Both interventions were delivered in small groups, supervised by trained nurses, each session lasting 30–40 minutes.

2.5 Outcome Measurement

Blood pressure was the primary outcome, measured using a standardized sphygmomanometer following the American Heart Association guidelines [21],[22],[23]. Measurements were taken twice at baseline (pretest) and after

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four weeks of intervention (posttest), with the average values recorded to ensure reliability. Both systolic and diastolic blood pressures were assessed as indicators of intervention effectiveness.

2.6 Data Analysis

Data were analyzed using statistical software. Descriptive statistics were employed to summarize demographic and clinical characteristics of participants, providing an overview of the study sample. To examine within-group changes in systolic and diastolic blood pressure before and after the interventions, paired t-tests were conducted. Meanwhile, independent t-tests were applied to compare the mean differences between the Islamic spiritual care and physical relaxation groups. Statistical significance was set at p < 0.05, following conventional thresholds for clinical research. The use of t-tests was justified by their appropriateness for evaluating differences in normally distributed continuous data in intervention studies [13],[24].

2.7 Ethical Considerations

The research has obtained ethical approval from the Medical and Health Research Ethics Commission, Faculty of Medicine, Sriwijaya University, based on ethical certificate 089-2025. Throughout the research process, the researcher adhered to the principles of information ethics, including consent, respect for human rights, beneficence, and non-maleficence.

RESULTS AND DISCUSSION

3.1 RESULT

3.1.1. Sociodemographic Characteristics

Table 1. Sociodemographic Characteristics of Participants (n = 120)

Characteristics	Islamic Spiritual Care (n Physical Relaxatio		p-value
	= 60)	= 60)	
Age (years), mean \pm SD	55.3 ± 9.4	54.7 ± 10.1	0.72
Gender (Male/Female)	24 / 36	22 / 38	0.69
Education (Low/High)	34 / 26	32 / 28	0.81
Duration of Hypertension (<5 / \ge 5 years)	28 / 32	30 / 30	0.74

Table 1 presents the sociodemographic characteristics of hypertensive patients in both groups. The distribution of age, gender, educational level, and duration of hypertension was relatively balanced between the Islamic spiritual care group and the physical relaxation group. The mean age of participants was approximately 55 years, with the majority being female and having completed secondary education. No significant differences were observed in baseline sociodemographic characteristics between the two groups (p > 0.05), indicating comparability for subsequent analysis.

3.1.2. Changes in Blood Pressure Within Groups

Table 2. Pre- and Post-Intervention Blood Pressure Within Groups

Variable	Pre-intervention	Post-intervention	Mean Difference ± SD	p-value
	$(mean \pm SD)$	$(mean \pm SD)$		
Islamic Spiritual Care (n = 60)				
Systolic BP (mmHg)	148.7 ± 12.6	135.9 ± 11.4	-12.8 ± 6.4	< 0.001
Diastolic BP (mmHg)	91.2 ± 7.8	82.6 ± 6.9	-8.6 ± 4.7	< 0.001
Physical Relaxation $(n = 60)$				
Systolic BP (mmHg)	147.5 ± 13.2	139.2 ± 12.1	-8.3 ± 5.9	< 0.001
Diastolic BP (mmHg)	90.7 ± 8.1	85.5 ± 7.2	-5.2 ± 4.1	< 0.001

Table 2 shows the pre- and post-intervention blood pressure values in each group. Both the Islamic spiritual care and physical relaxation groups experienced significant reductions in systolic and diastolic blood pressure after four weeks of intervention (p < 0.05).

3.1.3. Between-Group Comparison of Blood Pressure Reduction

Table 3. Comparison of Blood Pressure Reduction Between Groups

Variable	Islamic Spiritual Care $(n = 60)$	Physical Relaxation $(n = 60)$	p-value
Systolic BP reduction (mmHg)	-12.8 ± 6.4	-8.3 ± 5.9	0.002
Diastolic BP reduction (mmHg)	-8.6 ± 4.7	-5.2 ± 4.1	0.004

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Table 3. illustrates the comparison of mean reductions in systolic and diastolic blood pressure between the two intervention groups. Patients who received Islamic spiritual care demonstrated significantly greater decreases in both systolic and diastolic blood pressure compared with those in the physical relaxation group (p < 0.05).

3.2 DISCUSSION

This study demonstrated that both Islamic spiritual care and progressive muscle relaxation interventions significantly reduced systolic and diastolic blood pressure among hypertensive patients. Notably, Islamic spiritual care using guided *dhikr* and prayer-based relaxation achieved significantly greater reductions in both systolic ($-12.8 \pm 6.4 \text{ mmHg vs.} -8.3 \pm 5.9 \text{ mmHg}$) and diastolic blood pressure ($-8.6 \pm 4.7 \text{ mmHg vs.} -5.2 \pm 4.1 \text{ mmHg}$) compared to physical relaxation. These results highlight the potential of culturally grounded, faith-based approaches to outpace conventional relaxation techniques in managing hypertension.

The observed superiority of Islamic spiritual care may be explained by autonomic modulation. Dhikr and prayer meditation likely suppress sympathetic activity while enhancing parasympathetic tone a mechanism supported by literature showing that recitations in a rhythmic, focused manner reduce neural arousal and promote relaxation [25].. A study exploring Islamic rituals' psychological and neurological impact reported increased heart rate variability (HRV) associated with parasympathetic dominance and reduced sympathetic activity during prayer physiological markers broadly correlated with lowered blood pressure and improved autonomic balance [26].

Supporting evidence from prior research corroborates the beneficial cardiovascular effects of spiritual interventions. A systematic review of *dhikr* and prayer therapy found that repeated spiritual recitation led to consistent reductions in blood pressure, attributing this to the calming effect on the nervous system through spiritual focus [10],[27]. Additionally, psychospiritual *dhikr* interventions have been linked to improved self-efficacy and reduced blood pressure in hypertensive patients, confirming its dual impact on psychological resilience and physiological regulation [16]. Regarding physical relaxation, systematic reviews affirm that techniques like progressive muscle relaxation (PMR) effectively lower stress and blood pressure in short-term contexts (\leq 3 months) [20]. PMR works by discharging muscular tension and activating the parasympathetic system, though its effects tend to be less profound than those achieved via spiritually oriented interventions [19].

From an analytical perspective, the amplified effect of Islamic spiritual care may reflect its holistic nature engaging emotional, cognitive, and spiritual domains alongside somatic relaxation. Spiritual practices offer individuals solace, purpose, and psychological activation of inner resilience, which potentially enhances treatment engagement and overall well-being beyond physiological relaxation alone. In Muslim-majority settings, such spiritually congruent interventions may foster higher acceptance and sustained adherence, reinforcing the therapeutic context.

We further posit that Islamic spiritual care transcends conventional relaxation by addressing existential and emotional dimensions such as gratitude, surrender, and transcendent trust. These factors reduce anxiety, improve sleep, and emotional regulation elements closely tied to blood pressure control. Given its low cost, scalability, and cultural relevance, integrating Islamic spiritual care into routine hypertension management may offer a sustainable complementary strategy particularly where culturally tailored, holistic health models are encouraged. Future research with longer follow-up, multicenter designs, and integration with pharmacotherapy is warranted to validate its long-term efficacy and generalizability.

4. STRENGTHS AND LIMITATIONS

This study has several strengths, including being one of the few comparative investigations that directly evaluated the effectiveness of Islamic spiritual care and physical relaxation in controlling blood pressure, thereby contributing new evidence to integrative and culturally sensitive interventions for hypertension management. The use of standardized procedures enhanced internal validity, while its real-world clinical setting increased ecological validity and relevance to nursing practice. The inclusion of participants with diverse sociodemographic characteristics also improved representativeness. However, some limitations should be acknowledged. The relatively small sample size and single-center design may restrict generalizability, and the short follow-up period limited the ability to assess long-term effects. Reliance on self-reported adherence outside clinical sessions may have introduced recall or compliance bias, and the absence of blinding could have influenced participant expectations. Additionally, potential confounders such as lifestyle modifications, dietary patterns, and medication adherence were not fully controlled, which may have affected the observed outcomes.

5. CONCLUSION AND SUGGESTIONS

The findings of this study demonstrate that both Islamic spiritual care and physical relaxation are effective in

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reducing systolic and diastolic blood pressure among hypertensive patients, with Islamic spiritual care showing a significantly greater impact. These results highlight the potential of integrating faith-based spiritual approaches alongside conventional and non-pharmacological strategies in hypertension management, particularly within populations where religion and spirituality are central to daily life. Given the cultural relevance and accessibility of Islamic spiritual practices, they may serve as a cost-effective, sustainable, and holistic complement to existing treatment options. However, the short intervention duration and single-center design limit the generalizability of these findings. Future research should employ larger, multicenter randomized controlled trials with longer follow-up periods to evaluate the long-term effects of spiritual care interventions, while also controlling for lifestyle factors such as diet, exercise, and medication adherence. Healthcare providers, especially nurses, are encouraged to incorporate culturally appropriate spiritual care into patient education and management programs, thereby addressing not only physiological outcomes but also patients' psychological and spiritual well-being.

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CONFLICT OF INTEREST

The author declares no conflict of interest.

REFERENCES

- P. K. Whelton et al., "2023 ACC/AHA/AAPA/ABC/ACPM/AGS/APhA/ ASH/ASPC/NMA/PCNA [1] Guideline for the Prevention, Detection, Evaluation, and Management of High Blood Pressure in Adults," Hypertension, vol. 71, no. 6, pp. E13–E115, 2023, doi: 10.1161/HYP.00000000000000055.
- [2] I. J. Johanis and I. A. T. Hinga, "Risk Factors For Hypertension, Smoking and Age on the Incidence of Coronary Heart Disease," Media Kesehat. Masy., vol. 16, no. 1, pp. 116-126, 2020, doi: ISSN: 2772-0265.
- E. Oktaviani, T. Noor Prastia, and E. Dwimawati, "Factors Associated with Hypertension Incidence in Pre-[3] Elderly at Bojonggede Health Center in 2021," Promotor, vol. 5, no. 2, pp. 135-147, 2022, doi: 10.32832/pro.v5i2.6148.
- S. Jebari-Benslaiman et al., "Pathophysiology of Atherosclerosis," Int. J. Mol. Sci., vol. 23, no. 6, pp. 1–38, [4] 2022, doi: 10.3390/ijms23063346.
- T. A. Bass et al., "2023 ACC/AHA/SCAI Advanced Training Statement on Interventional Cardiology [5] (Coronary, Peripheral Vascular, and Structural Heart Interventions): A Report of the ACC Competency Management Committee," J. Soc. Cardiovasc. Angiogr. Interv., vol. 2, no. 2, 2023, doi: 10.1016/j.jscai.2022.100575.
- Kemenkes RI, "Survei Kesehatan Indonesia (SKI)," Badan Penelitian dan Pengembangan Kesehatan, 2023. [6] https://www.badankebijakan.kemkes.go.id/hasil-ski-2023/
- C. O. Airhihenbuwa, T. S. Tseng, V. D. Sutton, and L. S. Price, "Global Perspectives on Improving Chronic [7] Disease Prevention and Management in Diverse Settings," Prev. Chronic Dis., vol. 18, no. March 2017, pp. 1-7, 2021, doi: 10.5888/PCD18.210055.
- Y. C. Kai Liu a, A. Wu, and L. P. Lin, Ruzheng, Zaisheng Wang, "Effects of progressive muscle relaxation [8] on anxiety and blood pressure in patients with Hypertension.," Complement Ther Clin Pr., vol. 39:101132, 2020, doi: https://doi.org/10.1016/j.ctcp.2020.101132.
- I. Ozlu, Z. Ozturk, and Z. K. Ozlu, "The effects of progressive muscle relaxation exercises on the anxiety [9] and blood pressure in patients with Hypertension: A randomized controlled study," Perspectuves Psychiatr. Care, 2021, doi: https://doi.org/10.1111/ppc.12750.
- A. C. Wisuda, T. Bin Sansuwito, and C. Suraya, "Islamic Spiritual Care with Murottal for Reducing Anxiety [10] and Depression in Coronary Heart Disease Patients: A Comprehensive Systematic Review," Public Heal. Indones., vol. 10, no. 1, pp. 61–72, 2024, doi: 10.36685/phi.v10i1.776.
- A. C. Wisuda, T. bin Sansuwito, and C. Suraya, "Impact of the ARIS Module (Anxiety and Depression [11] Reduction through Islamic Spiritual Care) on Patients with Coronary Heart Disease.," J. Nurs. Sci. Res., vol.

Vol 4 Issue 4 2025, pp: 704-713 ISSN: 2829-2618 (Online)

- 1, pp. 56–66, 2024, doi: https://doi.org/10.33862/jnsr.v1i2.503.
- [12] C. T. B. Jane Flanagan, "Polit & Beck's Nursing Research; Generating and Assessing Evidence for Nursing Practice," 12th ed., J. Flanagan, Ed. Wolters Kluwer Health, 2024, pp. 356–387. doi: https://www.google.co.id/books/edition/Polit_Beck_s_Nursing_Research/NUUgEQAAQBAJ?hl=id&gbpv= 1.
- [13] E. Weathers, G. Mccarthy, and A. Coffey, "Concept Analysis of Spirituality: An Evolutionary Approach," *Nurs. Forum*, vol. 51, no. 2, pp. 79–96, 2021, doi: 10.1111/nuf.12128.
- [14] J. Vanitha and F. Moses, *Nursing Research & Statistics*, 7th ed. Thakur Publication Private Limited, 2025. doi: https://www.google.co.id/books/edition/Nursing_Research_Statistics/yaNREQAAQBAJ?hl=id&gbpv=1.
- [15] D. Polit and C. Beck, "Nursing Research," 11th ed., Philadelphia: Wolters Kluwer Health, 2019, pp. 284–304.
- [16] M. M. Latif and A. H. Bhatti, "Proximal Analysis of Quran Reading on Physiological, Psychological (Anxiety and Depression), and Nervous Functions in Coronary Heart Disease Patients," *Int. J. Islam. Khazanah*, vol. 14, no. 1, pp. 43–60, 2024, doi: 10.15575/ijik.v14i1.
- [17] I. Ismail, R. Siddiq, and B. Bustami, "The Effectiveness of Health Education Using Audiovisual on the Santri Smokers' Motivation to Stop Smoking and control of blood pressure in patients with Hypertension," *Asian Pacific J. Cancer Prev.*, vol. 22, no. 8, pp. 2357–2361, 2021, doi: 10.31557/APJCP.2021.22.8.2357.
- [18] E. Husna, "Application of Islamic Spiritual Nursing Care to Patients in Hospitals," *Dunia Keperawatan J. Keperawatan dan Kesehat.*, vol. 7, no. 1, pp. 21–27, 2019, doi: 10.20527/dk.v7i1.5614.
- [19] W.-L. Wang and K.-H. Chen, "Effects of progressive muscle relaxation on anxiety and sleep quality in patients with COVID-19.," *Complement Ther Clin Pr.*, vol. 39:101132, 2020.
- [20] A. G. M. Ibrahim Ozlu MD, Zeynep Ozturk PhD, Zeynep Karaman Ozlu PhD, Endal Tekin MD, "The effects of progressive muscle relaxation exercises on the anxiety and blood pressure in patients with Hypertension: A randomized controlled study," *Perspectuves Psychiatr. Care*, 2021, doi: https://doi.org/10.1111/ppc.12750.
- [21] E. Trisnawati, I. Al Azizah, and I. M. Jenie, "Al-Qur'an Murottal Therapy to Reduce Cardiovascular Reactivity to Handgrip in Hypertensive Pre-Elderly Subjects," *Proc. 4th Int. Conf. Sustain. Innov. 2020–Health Sci. Nurs. (ICoSIHSN 2020)*, vol. 33, no. ICoSIHSN 2020, pp. 365–370, 2021, doi: 10.2991/ahsr.k.210115.076.
- [22] S. R. Amalia, A combination of Al-Qur'an murotal, Asmaul Husna, dhikr and muasda aromatherapy in lowering blood pressure, alpha amylase levels and increasing spiritual well-being, First. Kediri, Indonesia: Lembaga Omega Medika, 2022. doi: https://www.google.co.id/books/edition/Kombinasi_murotal_Al_Qur_an_asmaul_husna/tp5wEAAAQBAJ?h l=id&gbpv=0.
- [23] P. S. Nijjar *et al.*, "Randomized Trial of Mindfulness-Based Stress Reduction in Cardiac Patients Eligible for Cardiac Rehabilitation," *Sci. Rep.*, vol. 9, no. 1, pp. 1–11, 2019, doi: 10.1038/s41598-019-54932-2.
- [24] S. K. Grove and J. R. Gray, *Understanding Nursing Research Building an Ecidence-Based Practice*, Seventh. Elsevier Inc., 2019.
- [25] S. & R. Saharuddin, Amir, "Application of the Spiritual-Based Nursing Service Model Viewed from the Aspects of the Spiritual Nursing Care Process at the Faisal Islamic Hospital Makassar," *Hosp. Majapahit*, vol. 10, no. 2, p. 6, 2018.
- [26] N. Azizah, M. Purnomo, and A. Wigati, "Application of Islamic Values Through Caring for Fulfilling Spiritual Needs of Inpatient Prayers," *J. Ilmu Keperawatan dan Kebidanan*, vol. 12, no. 1, p. 109, 2021, doi: 10.26751/jikk.v12i1.886.
- [27] Y. Amir and A. K. Masyhadi, "The Role of Progressive Islamic Values in Shaping Personal Progress," Universitas Muhammadiyah Prof. Dr. Hamka, 2018.