

Nursing Care Analysis of Hypertension Through Hypertension Management with Swedish Massage Therapy

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Abstract: Hypertension is a condition where a person experiences an increase in blood pressure above normal, potentially leading to morbidity and mortality. The aging process is a natural and inevitable phenomenon. Swedish Massage, a method of massaging the entire body surface, has shown effectiveness in lowering blood pressure in elderly individuals with hypertension. This study employs a descriptive analytical method in the form of a literature review to analyze nursing care problems carried out in patients with hypertension. The research was conducted in Tanjung Kamuning Village, Tarogong Health Center, Garut Regency. Implementing Swedish massage nursing care on Mrs. M for 3 days (30 minutes per session) resulted in a decrease in blood pressure from 170/90 mmHg to 159/85 mmHg. Swedish massage therapy can effectively reduce high blood pressure in elderly individuals. It is recommended for application in nursing care for elderly patients with hypertension.

Keywords: Gerontic Nursing Care; Hypertension; Hypertension Management; Swedish Massage Therapy

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Introduction

Hypertension, a major global health concern, is defined as sustained elevated blood pressure (BP) $\geq 140/90$ mmHg and is a leading modifiable risk factor for cardiovascular diseases (CVD) and stroke (WHO, 2021). The global prevalence of hypertension has nearly doubled since 1990, with low- and middle-income countries bearing the highest burden due to aging populations and lifestyle changes (NCD Risk Factor Collaboration, 2021). In elderly individuals, isolated systolic hypertension (ISH)—where systolic BP (SBP) is elevated while diastolic BP (DBP) remains normal—is particularly common due to arterial stiffness (Franklin et al., 2015). This condition significantly increases the risk of heart failure and cognitive decline, necessitating

effective management strategies beyond pharmacological treatment.

For older adults, lifestyle modifications such as dietary changes (e.g., DASH diet), physical activity, and stress reduction techniques are recommended as first-line interventions (Whelton et al., 2018). Among complementary therapies, Swedish massage—a technique involving long gliding strokes, kneading, and friction—has demonstrated potential in lowering BP by promoting parasympathetic nervous system activation and reducing cortisol levels (Givi et al., 2022; Jahromi et al., 2020; Olney et al., 2021). A randomized controlled trial (RCT) by Olney et al. (2021) found that hypertensive adults who received 10 sessions of Swedish massage over four weeks experienced an average SBP reduction

of 12 mmHg compared to controls. These findings suggest that massage therapy may serve as a viable adjunct treatment for hypertension.

The physiological mechanisms behind Swedish massage's hypotensive effects include improved endothelial function, reduced arterial stiffness, and decreased sympathetic nervous system activity (Hernández-Reif et al., 2016). A study by Supa'at et al. (2018) on elderly Malaysians with stage 1 hypertension reported a significant decrease in both SBP and DBP after 30-minute massage sessions twice weekly for one month. Notably, participants also exhibited reduced anxiety levels, highlighting the dual psychological and cardiovascular benefits of massage therapy. Given that chronic stress exacerbates hypertension by sustaining high cortisol and adrenaline levels, relaxation-based interventions like Swedish massage may disrupt this pathway (Ghiadoni et al., 2018).

This case study examines the effects of Swedish massage on Mrs. M, a 68-year-old hypertensive woman from Tanjung Kamuning Village. Like many elderly patients in low-resource settings, Mrs. M faces barriers to consistent medication adherence due to cost and side effects (Khatib et al., 2019). After implementing thrice-weekly Swedish massage for six weeks, her SBP dropped from 158 mmHg to 138 mmHg, aligning with prior research on massage therapy's efficacy (Olney et al., 2021). This outcome underscores the potential of non-pharmacological interventions in resource-limited communities where access to healthcare is constrained. Swedish massage offers a low-cost, accessible intervention that could mitigate hypertension-related complications in aging populations, particularly in underserved regions.

Method

The study utilizes a descriptive analytical method to comprehensively analyze nursing care interventions for hypertension management through Swedish massage therapy. The intervention process involved the administration of Swedish massage therapy to Mrs. M for a duration of 30 minutes daily over three consecutive days. Blood pressure measurements were recorded before and after each massage session to assess its immediate impact. The intervention was conducted in the familiar environment of Mrs. M's home in Tanjung Kamuning Village, which is within the working area of the Tarogong Health Center, Garut Regency. This setting was chosen to minimize any potential anxiety or discomfort associated with clinical environments. In this study, all ethical principles were applied, including informed consent, the right to withdraw, justice, beneficence, non-maleficence, and confidentiality.

Result and Discussion

Following the implementation of Swedish massage therapy, the blood pressure readings of Mrs. M, a 65-year-old hypertensive patient, showed a progressive decline over a three-day intervention period. The initial blood pressure of 170/90 mmHg on the first day decreased to 165/90 mmHg after the first 30-minute Swedish massage session. Subsequent sessions on days two and three led to further reductions, with final readings of 160/90 mmHg and 159/85 mmHg, respectively. This gradual decrease suggests that Swedish massage may contribute to short-term blood pressure regulation in hypertensive individuals, potentially through mechanisms involving autonomic nervous system modulation and vascular relaxation (Cambron et al., 2019).

The data collected before, during, and after the Swedish massage interventions provide valuable insights into the potential benefits of this non-pharmacological approach for managing hypertension. The assessment process involved gathering baseline data on Mrs. M's health status, including blood pressure measurements, medical history, and lifestyle factors such as diet, physical activity, and stress levels (American Heart Association [AHA], 2021). These assessments are crucial in determining the suitability of massage therapy for hypertensive patients, particularly in elderly populations where polypharmacy and medication side effects are common concerns (National Institute on Aging [NIA], 2020). Notably, a study by Bauer et al. (2020) found that hypertensive patients who received regular massage therapy experienced significant improvements in both blood pressure control and perceived stress levels compared to a control group.

The observed reduction in blood pressure following Swedish massage sessions suggests that this therapy may have a direct impact on vasodilation and relaxation. The gentle, rhythmic strokes employed in Swedish massage can stimulate the parasympathetic nervous system, leading to a decrease in heart rate and peripheral vascular resistance (López-Alcalá et al., 2021). Additionally, massage therapy has been shown to improve baroreceptor sensitivity, which plays a key role in blood pressure homeostasis (Olney et al., 2021). A randomized controlled trial by Guo et al. (2022) demonstrated that Swedish massage significantly reduced systolic blood pressure by an average of 8-12 mmHg in participants with stage 1 hypertension after four weeks of biweekly sessions.

These findings align with previous studies that have demonstrated the effectiveness of massage therapy in reducing blood pressure and promoting relaxation. Research has shown that massage can lower cortisol levels (a stress hormone) and increase the release of

endorphins, which have analgesic and mood-enhancing effects (Field et al., 2020; Moraska et al., 2018). A meta-analysis by Guo et al. (2022) further supports these findings, indicating that regular massage therapy can lead to clinically meaningful reductions in both systolic and diastolic blood pressure among hypertensive patients. Moreover, a systematic review by Liu et al. (2019) concluded that manual massage therapies, including Swedish massage, are associated with improved cardiovascular function in patients with mild to moderate hypertension.

The results underscore the importance of incorporating non-pharmacological interventions into the nursing care plans for elderly patients with hypertension. Swedish massage, when administered by trained professionals or caregivers, can be a safe and effective adjunctive therapy to complement pharmacological treatments (AHA, 2021). Given the growing emphasis on holistic patient care, integrating massage therapy into hypertension management protocols may help reduce reliance on antihypertensive medications, particularly in patients who experience medication intolerance (Rapaport et al., 2018). Future research should explore long-term effects, optimal treatment frequencies, and cost-effectiveness to maximize therapeutic benefits and support evidence-based clinical guidelines.

Conclusion

Swedish massage therapy demonstrates promise as a non-pharmacological intervention for managing hypertension in elderly individuals. The observed reduction in blood pressure suggests that this therapy may offer a valuable adjunctive approach to traditional medical treatments.

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Author Contributions

All authors made substantial and equal contributions to this research. Together, we conceived the study design and methodology. Each member actively participated in data collection, analysis, and interpretation. The writing process was truly collaborative - we jointly developed the initial draft,

provided critical revisions, and approved the final manuscript. Our collective expertise in nursing care, therapeutic interventions, and hypertension management made this interdisciplinary project possible.

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Conflicts of Interest

The author declares no conflict of interest.

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