

Family nursing care in the family adult age stage with hypertension and anxiety in Gentingan Hall Kelurahan Sidoagung Godean Sleman Yogyakarta

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Abstract

The family nursing process involves a structured approach to addressing problems affecting individuals and families. Family nurses play an important role in implementing research findings and developing health guidelines, particularly in managing hypertension and anxiety through progressive muscle relaxation therapy. Objective: To be able to provide and implement nursing care to patients with hypertension and anxiety with a diagnosis of ineffective family health management in Dusun Gentingan. Method: Observational case study research with a cross-sectional approach design. Results: Assessment to nursing evaluation that Mrs. T has a family nursing problem, namely ineffective family health management. Interventions given to patients with ineffective family health management nursing problems, namely progressive muscle relaxation techniques, were carried out in seven home visits until the patient's hypertension and anxiety decreased. Conclusion: The application of progressive muscle relaxation can help lower the blood pressure of hypertensive patients. So that hypertensive patients can carry out management in controlling blood pressure and reducing anxiety.

Keywords: anxiety; hypertension; progressive muscle relaxation

1. Introduction

Family nursing is the process of providing nursing care based on family needs, encompassing assessment, determining a family nursing diagnosis, intervention, implementation, and evaluation, involving family members. Health services provided to families encompass three preventive measures: primary, secondary, and tertiary prevention (Susanto, 2022).

A family is two or more individuals who are related by blood, marriage, or adoption and live in one household, interact with each other, and in their respective roles, create and maintain culture (Sari, 2023). The main focus of family care is to strengthen the client and families, improving health and increasing the motivation of educators, supporters, case managers, clients, and their families (Harwijayanti et al., 2022).

A current health problem of particular concern is non-communicable diseases (NCDs), which are important health problems worldwide because they cause the most deaths with increasing morbidity and mortality rates. According to (World Health Organization, 2023) an estimated 1.28 billion adults aged 30-79 years worldwide suffer from hypertension, the majority (two-thirds) living in low- and middle-income countries. An estimated 46% of adults with hypertension are unaware that they have the condition. Less than half of adults (42%) with hypertension are diagnosed and treated, about 1 in 5 adults (21%) with hypertension can control it. Hypertension is a leading cause of premature death worldwide. One of the global targets for non-communicable diseases is to reduce the prevalence of hypertension by 33% between 2010 and 2030. Hypertension (high blood pressure) occurs when the pressure in your blood vessels is too high (140/90 mmHg or higher). This condition is common but can be serious if left untreated.

Anxiety is a common family problem; anxiety itself can be triggered by various factors, including economic, psychological, physical, and other factors. According to (World Health Organization, 2023), while anyone can feel anxious, people with anxiety disorders often experience intense and excessive fear and worry. These feelings are usually accompanied by physical tension and other behavioral and cognitive symptoms. These feelings are difficult to control and cause significant distress and can be long-lasting if left untreated. Anxiety disorders can impact daily activities and can affect family life, community life, school, or work. An estimated 4% of the global population currently has an anxiety disorder. In 2019, 301 million people worldwide experienced an anxiety disorder, making anxiety

disorders the most common mental disorder. Although highly effective treatments exist for anxiety disorders, only about 1 in 4 people who need it (27.6%) receive treatment. Barriers to seeking treatment include a lack of awareness that it is a treatable health condition, underinvestment in mental health services, a shortage of trained health care providers, and social stigma.

Progressive muscle relaxation is a relaxation therapy that can help stretch and relax muscles simultaneously. This progressive muscle relaxation is performed for 15-20 minutes, twice daily (morning and afternoon) for three consecutive days. It aims to reduce muscle tension, anxiety, and neck and back pain. It can also lower blood pressure, heart rate, and metabolic rate. Progressive muscle relaxation can also improve concentration, overcome insomnia, and build passive emotions from active ones (Sari, 2022).

2. Methods

2.1. Research Design

This research is an observational case study with a descriptive approach design. cross-sectional.

2.2. Research Subjects

The research subjects in this case study were patients diagnosed with hypertension and anxiety.

2.3. Data Collection Techniques

2.3.1. Primary Data

Observations are carried out by direct observation of respondents to observe general conditions, awareness, vital signs and physical examination.

2.3.2. Secondary Data

2.4. Data Analysis

2.4.1. Data Reduction

Data reduction in the form of interview results with patients and families of research subjects, namely patients with hypertension and anxiety.

2.4.2. Data Presentation

The data is presented in narrative text, consisting of notes from interviews with patients and their families at the Dusun Gentingan Patient Home. Observation and physical examination results serve as structured information that allows for drawing conclusions and verification.

2.4.3. Drawing Conclusions

Conclusions were drawn by identifying the characteristics of patients with hypertension and anxiety. Therefore, the analysis activity represents an interaction between the three data analysis steps and is a cyclical process until the research is completed. In accordance with the research method, the author used descriptive data analysis techniques in this study. Data analysis was conducted by systematically organizing the interview guidelines, nursing care formats, and literature data. Verification was performed by reviewing the data reduction and data presentation.

3. Results and Discussion

3.1. Results

3.1.1. Assessment Data

3.1.1.1. Identity

a. Age

Based on the results of the study on cases managed with Hypertension and Anxiety, the age characteristics of Mrs. T's case, aged 41 years, are included in the middle adult category (Indonesian Ministry of Health).

b. Gender

Based on gender characteristics, the cases were female. This is consistent with research showing that the prevalence of hypertension in women is higher than in men, at 36.85% (Ministry of Health of the Republic of Indonesia, 2019).

3.1.1.2. Main Complaint

From the results of the assessment, it was found that the patient had hypertension with symptoms of dizziness for 3 days in the back of the head and difficulty sleeping, composentis GCS 15 (E4V5M6) sometimes the patient felt anxiety which also resulted in dizziness and Weakness. The patient routinely takes hypertension medication without practicing muscle relaxation because he or she doesn't yet know how to use muscle relaxation techniques to reduce hypertension and anxiety. Therefore, the patient will be given progressive muscle relaxation, and the patient will be able to perform it.

3.1.1.3. Past Medical History

Based on her past health history, Mrs. T has a history of hypertension and vertigo due to genetic factors. The patient is able to perform ADLs independently and carry out normal activities. The patient regularly undergoes monthly hypertension check-ups at the community health center. During a home visit at 4:00 PM, the patient complained of persistent dizziness in the back of her head for three days and was experiencing anxiety about her family.

Hypertension can cause blood vessel damage. Blood vessels supply oxygen and nutrients to body tissues that require blood. Hypertension is asymptomatic, so it is only determined whether it causes organ damage, such as heart or kidney damage (Fatmawati et al., 2022). Anxious patients will experience increased adrenaline levels, which will also increase blood pressure. This condition can be dangerous for those with hypertension. Therefore, hypertensive patients who experience anxiety require proper treatment to reduce their anxiety (Sigit & Winarti, 2021).

3.1.1.4. Vital Signs

a. Blood Pressure and Pulse

Blood pressure examination results were 187/113 mmHg and pulse in cases obtained 76x/minute.

b. Respiration and Oxygen Saturation

The calculation of the respiratory frequency resulted in a result of 20x/minute and an oxygen saturation result of 100%.

c. Respiratory System

The results of the respiratory examination showed that the patient had no additional breath sounds and vesicular breath sounds.

d. Cigarettes and drugs

The results of the assessment showed that Mrs. T had no history of smoking. Mrs. T routinely took hypertension medication from the community health center, namely Amlodipine, to lower blood pressure when Mrs. T experienced dizziness. Amlodipine, an oral dihydropyridinecalcium blocker, exhibits a dilating effect by inhibiting tension-dependent L-type calcium channels. This campaign inhibits the first calcium channel invasion, distinguishing it in its pharmacological class. With a half-life of 30-50 hours, unlike its alternatives, amlodipine ensures that it is administered once daily. The role of amlodipine in relieving stable angina pectoris includes reducing secondary effects due to vasculitis and blood pressure-lowering properties. Reducing postload reduces myocardial oxygen requirements for all levels of activity, because It doesn't have to work as hard to pump blood throughout the body. Amlodipine also relieves angina pectoris or variant angina by blocking coronary spasm and restoring coronary blood flow (Kishen G. Bulsara, 2024).

3.1.2. Nursing Diagnosis Analysis

In the case of the diagnosis that emerged were Readiness to Improve Family Processes, Ineffective Family Health Management, Acute Pain and Sleep Pattern Disturbances. The diagnoses taken have been adjusted to the nursing diagnosis guidebook according to the Indonesian Demographic and Health Survey (IDHS) based on definitions, characteristic limitations, and etiology. Based on the case of a patient with hypertension and anxiety, the author prioritized the problem of Ineffective Family Health Management as a priority diagnosis that corresponds to the main complaint by the patient. Ineffective Family Health Management is a pattern of organizing and integrating the handling of family health problems into daily living habits that is not satisfactory to achieve the expected health status. The characteristic limitations of this diagnosis include: difficulty in following the treatment regimen, lack of knowledge about the disease or health condition, failure to manage risk factors, and economic or social problems that hinder health management. Related factors include: the complexity of the health care system, the complexity of the care/treatment program, conflict in decision-making, economic difficulties, many demands and family conflicts and related clinical conditions: COPD, Multiple Sclerosis, Rheumatoid Arthritis, Chronic Pain, Substance Abuse, Hypertension and Renal Failure/Terminal Stage. (IDHS).

Patients with hypertension and anxiety are caused by genetics and a restless mind.

One way to manage anxiety is through psychotherapy. Psychotherapy involves several therapies, including relaxation therapy, which involves tensing and then relaxing certain muscles. Progressive muscle relaxation techniques focus attention on specific muscle activity by identifying tense muscles and then reducing tension through relaxation techniques to achieve a feeling of relaxation (Sigit & Winarti, 2021). In this case, an assessment was conducted, monitoring the patient's blood pressure during each home visit, and measuring the pulse. The goal was to identify changes in signs resulting from physiological and psychological stress. Furthermore, these actions can serve as indicators of the patient's blood pressure and pulse.

3.1.3. Analysis of Nursing Care Plans

The author chose to use interventions in cases diagnosed with Ineffective Family Health Management. The author has objectives that are in accordance with the SLKI label, namely Family Health Management (L.12105) with outcome criteria, namely the ability to explain health problems experienced, family activities to address health problems appropriately, actions to reduce risk factors, symptoms of family members' illnesses. The success criteria for the action label to reduce risk factors by assessing, monitoring the patient's blood pressure and pulse by performing progressive muscle relaxation (Azizah et al., 2021).

3.1.4. Implementation and Evaluation Analysis

3.1.4.1. Nursing Interventions

The author chose to use an intervention on ASUS, namely using SIKI labeled Progressive Muscle Relaxation Therapy, namely identifying a quiet and comfortable place, first monitoring the patient's vital signs before and after progressive muscle relaxation, monitoring periodically to ensure the muscles are relaxed, relaxation is carried out in sequence for 15 minutes with each movement 2x8 and accompanied by the patient to be encouraged to breathe relaxed. From the results of the assessment, the focus of the intervention is to carry out progressive muscle relaxation for 15 minutes, namely the progressive muscle relaxation technique is a relaxation therapy by tensing certain muscles and then relaxing, the progressive muscle relaxation technique focuses on a muscle activity by identifying tense muscles and then reducing tension by doing relaxation techniques to get a feeling of relaxation. The feeling of relaxation can reduce symptoms such as blood pressure and heart rate, reduce pain, reduce anxiety and stress, increase comfort, improve sleep (Sigit & Winarti, 2021).

According to (Azizah et al., 2021), the application of progressive muscle relaxation can help lower blood pressure in hypertensive patients. This allows them to manage their blood pressure. Nursing interventions provided to patients are based on the SLKI and SIKI, tailored to the patient's needs and circumstances.

3.1.4.2. Implementation of nursing

The author carried out the main implementation carried out on patients managed with progressive muscle relaxation techniques, using a demonstration method using posters.

Implementation includes observation of the patient's health condition, nursing, namely conducting assessments and physical examinations, therapeutics by providing progressive muscle relaxation therapy to patients accompanied by education on how to reduce hypertension and anxiety. And collaborating with the patient's family to always provide support and remind patients to regularly check hypertension and regularly take medication and perform progressive muscle relaxation on patients. The advantages of the demonstration, can increase knowledge and patients more easily understand the movement. Patient Mrs. T suffers from hypertension and anxiety so that actions are taken to check vital signs periodically during visits, in order to maintain the stability of the patient's vital signs. According to (Sari, 2022) progressive muscle relaxation techniques can help patients who experience hypertension and anxiety. Progressive Muscle Relaxation is a relaxation technique to get a feeling of relaxation, so it can reduce anxiety and stress.

Position the patient in a relaxed and comfortable position, sitting with their body leaning against a wall. Perform each movement slowly from head to toe, always ending the relaxation session gradually. Tense the muscles for 5-10 seconds, then relax them for 20-30 seconds each. Two sets of 8.

recommend tensing the leg muscles for 5 seconds to avoid cramps, recommend focusing on the sensation of the muscles stretching and encourage patients to always relax when breathing with the aim of preventing muscle cramps/fatigue when doing progressive muscle relaxation therapy.

3.1.4.3. Nursing Evaluation

Nursing evaluation in the case after nursing actions for 1x6 days, the problem of family health management nursing is ineffective, characterized by: vital sign measurements were taken before performing progressive muscle relaxation techniques, namely initial BP: 186/100 mmHg and the patient did not understand the progressive muscle relaxation technique after performing nursing actions, namely progressive muscle relaxation, the vital sign results decreased to BP: 167/95 mmHg and the patient was able to perform progressive muscle relaxation techniques sequentially and independently. Then for anxiety, the patient was also able to understand how to handle anxiety experienced by the patient/family by using progressive muscle relaxation techniques.

3.2. Discussion

Family nursing is the process of providing nursing care based on family needs, encompassing assessment, determining a family nursing diagnosis, intervention, implementation, and evaluation, involving family members. Health services provided to families encompass three preventive measures: primary, secondary, and tertiary prevention (Susanto, 2022).

The nursing process is a structured approach to addressing problems that apply to individuals, families, groups, and communities. In family nursing, nurses play a role in defining the family as a service unit and system, focusing on the family itself. (Sari, 2023). Registered family nurses are members of the health professional community involved in implementing research findings, developing and implementing guidelines in the areas of health, leadership, education, case management, and counseling. The primary focus of family nursing is to empower clients and families, improve health, and enhance the motivation of educators, advocates, case managers, clients, and their families (Harwijayanti et al., 2022).

According to the World Health Organization (2023), an estimated 1.28 billion adults aged 30-79 worldwide suffer from hypertension, most of whom (two-thirds) live in low- and middle-income countries. An estimated 46% of adults with hypertension are unaware they have the condition. Less than half of adults (42%) with hypertension are diagnosed and treated, and approximately 1 in 5 adults (21%) with hypertension can control it.

Hypertension is a leading cause of premature death worldwide. Anxiety is a problem within the family; anxiety itself can trigger various factors, including economic, psychological, physical, and other factors.

Progressive muscle relaxation is a relaxation therapy that can help stretch and relax muscles simultaneously. This progressive muscle relaxation is performed for 15-20 minutes, twice daily, in the

morning and afternoon, for three consecutive days. It aims to reduce muscle tension, anxiety, and neck and back pain. In addition, it also

It can lower blood pressure, heart rate, and metabolic rate. Progressive muscle relaxation can also improve concentration, overcome insomnia, and transform passive emotions from active ones (Sari, 2022).

Due to the patient's lack of family health management, intervention is needed to prevent the patient from experiencing more severe hypertension and persistent anxiety. One frequently performed intervention is progressive muscle relaxation techniques. Progressive muscle relaxation is a relaxation therapy that can help stretch and relax muscles simultaneously. This progressive muscle relaxation is performed for 15-20 minutes, twice a day, in the morning and afternoon, for three consecutive days, aiming to reduce muscle tension, anxiety, and neck and back pain. In addition, it can also reduce hypertension. This is in accordance with the patient Mrs. T with a diagnosis of Ineffective Family Health Management in Gentingan Hamlet, Sidoagung, Godean, Sleman, Yogyakarta.

Mrs. T, 41 years old, has been diagnosed with hypertension, the client has a history of hypertension and vertigo since 2018. When the client was assessed, her general condition was good, composmentis consciousness, with E4V5M6 with vital signs, namely blood pressure: 187/113 mmHg, pulse: 76 x / min, temperature: 36.8C, respiration: 22 x / min. Based on the nursing problem assessment data found, family health management was ineffective.

Based on the results of the assessment and data analysis that Mrs. T has a family nursing problem that is ineffective family health management. Interventions given to patients with ineffective family health management nursing problems are before performing progressive muscle relaxation techniques, monitoring the patient's vital signs before/after performing progressive muscle relaxation techniques, Arrange the patient's position to relax and be comfortable by sitting and leaning against the wall. Do each movement from head to toe slowly and always stop the relaxation session gradually. Recommend tensing the muscles for 5-10 seconds, then recommend relaxing the muscles for 20-30 seconds each "2x8, recommend tensing the leg muscles for 5 seconds to avoid cramps, recommend focusing on the sensation of stretching muscles and encourage patients to always relax when breathing aims to prevent muscle cramps/fatigue when performing progressive muscle relaxation therapy.

In the first visit assessment, namely the stage 1 assessment, which includes the assessment of general data, family history and developmental stages, environmental data, family structure, family function, family stress and coping, and family expectations. From the assessment, the results obtained were that Mrs. T's family experienced ineffective family health management. In the second visit assessment, a head-to-toe physical examination was conducted on Mrs. T's family. The results of the assessment showed that Mrs. T experienced hypertension and anxiety. In the third visit assessment, an implementation was carried out to overcome hypertension and anxiety in Mrs. T by using progressive muscle relaxation techniques. The results showed that the patient felt relaxed and had felt anxiety starting to decrease with vital signs decreasing from 187/100 mmHg to 165/95 mmHg. After the first implementation, at the next visit, we conducted a second family health examination to find out if there were other unresolved problems. From the results of the assessment, it was found that the patient was still not controlling hypertension and encouraged the patient to independently apply progressive muscle relaxation techniques. In the final visit assessment, we carried out a second implementation accompanied by an evaluation.

The results of the assessment were that the patient was able to perform the progressive muscle relaxation technique independently and sequentially, with blood pressure indications before the relaxation technique was carried out, namely 187/100 mmHg to 167/95 mmHg after the progressive muscle relaxation technique was carried out and the patient said that anxiety could be controlled well.

4. Conclusion

Family nursing is the process of providing nursing care based on family needs, encompassing assessment, determining family nursing diagnoses, intervention, implementation, and evaluation, involving family members. Family nurses are registered health professionals involved in the application of research findings, developing and implementing health guidelines, leadership, education, case management, and counseling.

The first visit assessment involved collecting general, regional, and local data, resulting in a cluster of Mrs. T exhibiting inadequate health management. The second visit assessment involved a thorough physical examination of Mrs. T, which revealed hypertension and hypertension. The third visit assessment involved the application of progressive muscle-relaxive techniques, which resulted in vital signs increasing from 187/100 mmHg to 165/95 mmHg. The fourth visit assessment involved evaluating whether the patient could correctly perform progressive muscle-relaxive techniques.

After conducting research and discussion on the application of progressive muscle relaxation therapy techniques to reduce anxiety levels in hypertension sufferers, the following conclusions were obtained: The level of anxiety of hypertension sufferers before being given Progressive Muscle Relaxation therapy was mostly moderate anxiety characterized by feelings of anxiety, bad feelings, irritability, feeling tense, unable to rest peacefully, trembling, restlessness, difficulty sleeping, restless sleep, frequent waking at night, difficulty concentrating, poor memory, decreased memory, muscle pain, stiffness, feeling weak, tachycardia, chest pain, feeling lethargic / limp, feeling pressured in the chest, often taking deep breaths, nausea, frequent urination, dry mouth, dizziness, heavy head, restlessness, tense face, and tense muscles.

Based on the results of the above application, the author can conclude that progressive muscle relaxation can help lower blood pressure in hypertensive patients. This allows them to manage their blood pressure.

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