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## Nursing Care For Families With A Deficit Of Hypertension-Related Knowledge At The Surabaya Health Centers Working Area : A Case Study

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### ABSTRACT

**Introduction:** Hypertension is the main cause of death worldwide, this condition continues to increase from year to year related to cardiovascular and kidney disease. The purpose of this case study is to explain how nursing care is given to families with knowledge deficits about hypertension at the Surabaya Health Center.

**Methods:** This case study uses a single case study design with a sample of families with knowledge deficits in hypertension. Data were collected by primary methods, namely interviews with families and secondary methods, namely conducting physical assessments. The intervention carried out was health education in accordance with the Indonesian Nursing Diagnosis Standards which was carried out for 7 days.

**Results:** After the family was given hypertension health education interventions and hypertension exercises, the family experienced an increase in knowledge related to hypertension with a pre-test score of 2 to a post-test score of 10. The family was able to control their diet and was committed to having their health checked regularly, and the family was able to carry out activities. physical exercise with hypertension independently at home.

**Conclusion:** The results of the evaluation are that there is an increase in the level of knowledge in the family and able to carry out healthy lifestyle management by controlling diet, doing hypertension exercises independently at home and committed to carrying out regular health checks. It is expected that health workers will socialize and train the skills of implementing hypertension gymnastics so that they can carry out the management of patients who experience hypertension by means of non-pharmacological management to control blood pressure in hypertensive patients

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## 1. INTRODUCTION

Hypertension is the main cause of death throughout the world, where this condition continues to increase from year to year and is closely related to cardiovascular and kidney disease. Hypertension is the condition of a person who experiences an increase in blood pressure beyond the specified normal limits, namely systolic  $\geq 140$  mmHg and diastolic  $\geq 90$  mmHg (Kementrian Kesehatan RI, 2021). Elderly is the final stage of development in human life. There are many functional declines that occur in the elderly, for example decreased hearing, vision and other

functions, one of the problems often encountered in the elderly is hypertension (Ariyanti et al., 2020). Hypertension is still a health problem in Indonesia, decreased physical function such as cardiovascular causes the elderly to be vulnerable to hypertension (Bungsu et al., 2019).

Based on Basic Health Research in 2018, the prevalence of hypertension increased by 34.1% compared to the prevalence in Rikesdas in 2013, which was 25.8% (Kemenkes RI, 2018). Indonesia, as a country in the developing stage, cannot be separated from hypertension, which still poses a serious threat to public health and whose prevalence is still high. The highest prevalence of hypertension

sufferers at the age of 55-64 years (55.2%), 65-74 years (63.2%) and >75 years (69.5%) (Kementrian Kesehatan RI, 2021).

Obtaining data at one of the Klampis Ngasem Community Health Centers in the Surabaya region, it was found that the prevalence of hypertension in January-June 2022 was 263 male hypertension sufferers or around 8.85% and there were 462 female hypertension sufferers or around 14.77%. Meanwhile, in July-December 2022 there were 658 male hypertension sufferers or around 31.83% and there were 1097 female hypertension sufferers or around 35.09%. Based on this data, it shows that in half a year there was an increase of around 20-22%. A survey was carried out in one of the Klampis Surabaya Community Health Center RT environments. The results showed that there were 22 elderly people and 11 of them were diagnosed with hypertension. The majority of 22 elderly people knew that hypertension was high blood pressure, but 8 of them did not know the normal blood pressure limits, 7 of them did not know what causes hypertension, and 7 of them did not know about efforts to prevent and control hypertension. Some elderly people also stated that they never had regular health checks.

Knowledge deficit is the absence or lack of cognitive information related to a particular topic. The causes of knowledge deficit include errors in following recommendations, lack of exposure to information, lack of interest in learning, lack of ability to remember and ignorance of finding sources of information. If the problem of knowledge deficit is not resolved it will lead to helplessness and hopelessness resulting in further problems or complications (PPNI, 2017).

Based on the Healthy Indonesia Program, the family is the focus in the approach to implementing the program (Kementrian Kesehatan RI, 2016). Home visits carried out by family nurses are intended to make observations regarding the family's knowledge of hypertension. After carrying out further observations, the family nurse carries out the role of educator, namely by providing education about hypertension and how to manage hypertension non-pharmacologically. If the family understands this, then it is likely that the family will have the skills to control hypertension and be able to improve the health status of the family.

The purpose of this case study is to explain nursing care to families with hypertension knowledge deficit problems at the Surabaya Health Center. Results Case studies are useful for applying nursing theory based on the Indonesian Nursing Diagnosis Standards (SDKI), Indonesian Nursing Outcome Standards (SLKI), and Indonesian Nursing Intervention Standards (SIKI) to increase knowledge and decrease blood pressure of clients with a medical diagnosis of hypertension who experience nursing deficit problems knowledge of hypertension at the Surabaya Health Center

## 2. METHODS

### Study Design

This case study uses a descriptive research design with a case study approach

### Population, Samples, and Sampling

Data collection for this case study was carried out in the work area of the Klampis Ngasem Health Center, to be precise, in RT 01/RW 01, Klampis Ngasem Village and the time of implementation was January 23 - February 11, 2023. The subject in this case study was the family of Mr. K with the patient Mrs. S is 63 years old with a medical diagnosis of hypertension

### Procedure

The data in this case study was collected using interview techniques, physical assessment, and observation of nursing care document studies. Interviews are carried out by asking questions to the patient and family. The physical assessment is carried out completely head to toe through inspection, palpation, percussion and auscultation. After getting the focus data, nursing diagnosis scoring is then carried out. The main or priority nursing diagnoses are taken based on scoring and appointed as family nursing care by collaborating with other nursing actions.

## 3. RESULTS

Patient on behalf of Mrs. S is 63 years old, works as a housewife. The patient has been diagnosed with hypertension since 2021, the patient has never carried out routine health control. When initially diagnosed with hypertension, the patient complained of severe dizziness and was unable to carry out activities, so the patient was taken to the doctor's office and the diagnosed with hypertension. During the assessment, Mrs. S had no complaints, the patient said that the last time his hypertension recurred was in December 2022. The results of the examination found height 155 cm, weight 47 kg, BMI 19.6. Examination of blood pressure 177/101 mmHg, pulse 108x/minute, and temperature 36.5°C. Results GDA 142 mg/dl, uric acid 6.0 mg/dl and cholesterol 118 mg/dl. The medicine that Mrs. S is amlodipine 10mg and vitamin b complex.

The patient's husband Mr. K, 64 years old, currently works as a construction worker. Mr. K has no history of illness. However Mr. K actively smokes and often smokes outside the house. During the assessment, Mr. K currently has no complaints. The results of the examination showed that height was 170 cm, BB 60 kg, BMI 22.5. Blood pressure 149/97 mmHg, pulse: 78x/minute, and temperature: 36.2°C. GDA results 76 mg/dl, uric acid 7.5 mg/dl, cholesterol 206 mg/dl.

Currently the family is in stage VII, namely middle age (middle age family). So far the task of family development can be carried out well, within the family structure communication patterns can be carried out well, family roles are also appropriate. The family says there is no conflict at the moment. Decision making is carried out through discussion and deliberation first between family members. Family functions can be carried out and affective functions can be carried out by the family, namely always providing support and affection. Regarding social functions, the family always has good relations with each other, there are never any problems with neighbors. Regarding economic function, the family is a poor family that receives assistance from the government. In keeping the house clean, Mr. K and Mrs. S always divides the task of cleaning the house, because they prefer to see the house neat and clean. Mr. K also uses a healthy toilet and applies 3 M. The condition of the house is semi-permanent with plaster and ceramic floors, own house ownership status with 10-15% ventilation. The family is classified as level II of independence.

The results of the analysis found that the family knew what hypertension was but did not know the causes, blood pressure values within normal limits and how to control or prevent hypertension. The family said that they did not know what would happen to Mrs. S if she was not treated or cared for. The family only knows that Mrs. S cannot carry out activities. Mrs. S had never had a routine check-up and only checked herself when she was sick. The family does not know what the normal blood pressure limits are and what is said to be high within mmHg. According to cadres, Mr. K rarely asks about medication problems. Mr. Family K didn't know that consuming too much salt, coconut milk and not doing enough activities in his family could risk increasing health problems. Mr. K is 2. The number of scoring results is 5

Based on this analysis, a nursing diagnosis of Knowledge Deficit was found (D.0111) b.d lack of exposure to information d.d showed inappropriate behavior, did not have sufficient knowledge about the health problems experienced, rarely did physical activity and rarely sought health information. This lack of knowledge can cause the incidence of hypertension to increase and if not managed properly can lead to complications of other diseases (Sumah, 2019).

The expected results of this case study are that families can increase their Knowledge Level (L.12111) and family health status (L.12108) based on the Indonesian Nursing Outcome Standards (PPNI, 2019). Interventions that can be given to Mr. K corresponds to the diagnosis of knowledge deficit, namely health education (I.12383) in the form of identifying readiness and ability to receive information, providing health education materials and media, explaining risk factors that can affect health, identifying factors that can increase and decrease motivation for clean living behavior and

health, and schedule health education according to the agreement and teach strategies that can be used to improve clean and healthy living behavior.

The added intervention is in the form of physical exercise education (I.12389), including explaining the health benefits and physiological effects of exercise, explaining the types of exercise according to health conditions, explaining the frequency, duration, and intensity of the desired exercise program, and families being able to modify the environment that can improve health. Providing nutrition education (I.12395), including teaching how to do a diet according to the program (low salt) (PPNI, 2018).

#### 4. DISCUSSION

Research evidence suggests that hypertensive patients have inadequate knowledge about the condition with respect to blood pressure readings, the nature of hypertension, the importance of regular treatment, the seriousness of uncontrolled hypertension, and the importance of management (Rischar et. al, 2020; Andrew et al., 2022). Bad lifestyle is the main factor that can increase hypertension. One of the causes is lack of physical activity (Bakar et al., 2023; Dwi Nur Anggraeni & Faihatul Miskiyah, 2022). Hypertension in society requires lifestyle changes as a form of developing education and knowledge about hypertension (Harmilah & Hendarsih, 2019). According to (Bungsu et al., 2019) stated that elderly people who experience declining health need their family to maintain their health.

This education is adapted to the patient's condition, namely educating the family of Mr. K related to the definition of hypertension, its causes, and how to control or prevent it. Hypertension requires comprehensive treatment to control blood pressure, both pharmacologically and non-pharmacologically. There are many non-pharmacological treatment methods to increase knowledge and reduce blood pressure, one of which is health education and hypertension exercises (Sumah, 2019; Qomariah & Lin, 2023).

Intervention with Mr. K was carried out for 7 days, from January 26th to February 7th 2023. Before the intervention was carried out, mutual trust relationship building was carried out. After the intervention was given for 7 days, the post-test evaluation result was 10, the family was able to correctly state the definition, causes, signs and symptoms, complications and prevention of hypertension. Families with a healthy lifestyle will exercise and control their daily diet. In controlling the family's diet, they have reduced their consumption of sugar, salt and fried foods, now they are increasing their vegetable intake. Mr. K has now also reduced his cigarette consumption. The family was also able to state the definition, purpose and benefits of hypertension exercise well, this shows that there has been an increase in Mr. Family's level

of understanding. K. Knowledge interventions are carried out to increase compliance with medication and lifestyle behavior which can significantly reduce blood pressure levels.

Knowledge interventions have a positive impact, not only in increasing compliance but also in effective management of hypertension in families (Andrew et al., 2022). Even though the family did not join the elderly posyandu for reasons of being far away, the family is committed to starting regular health checks every month and the plan is to check this month next week when their child is off work.

Good behavior will lead to good care, and bad behavior will result in non-optimal care. Families who pay attention to clients will influence family psychology in caring for family members (Bungsu et al., 2019). This proves that health education has an effect on increasing knowledge, attitudes and motivation (Dewi et al., 2021). The blood pressure examination results found Mr. K 130/90 mmHg and Mrs. S 140/95 mmHg. You can see the difference in blood pressure Mr. K and Mrs. S at the first visit and at the end of the visit, during the intervention with hypertension exercise, Mr.'s blood pressure. K and Mrs. S has decreased.

Giving hypertension exercise treatment that is carried out consistently can stimulate heart work activities to be able to make beneficial changes in the body of people with hypertension. By doing hypertension exercise the body's activities will encourage the heart to work optimally and can reduce and maintain blood pressure to remain stable within normal limits (Prambudia et al., 2021; Dina Sobarina & Siti Rohimah, 2022). Hypertension exercise can be used as an independent nursing intervention to reduce blood pressure in hypertension sufferers (Shintya Oftaviana et al., 2023; Martani et al., 2022). This shows that health education interventions and hypertension exercise statistically have the greatest and most significant effect on changes in systolic and diastolic blood pressure.

## CONCLUSION

The results of the evaluation are that there is an increase in the level of knowledge in the family regarding hypertension in accordance with the criteria for the Indonesian Nursing Outcome Standards with a post-test score of 10, the family is able to carry out healthy lifestyle management by controlling diet, doing hypertension exercises independently at home and Committed to carrying out regular health checks. It is expected that health workers will socialize and train the skills of implementing hypertension gymnastics so that they can carry out the management of patients who experience hypertension by means of non-pharmacological management to control blood pressure in hypertensive patients.

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