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Implementation *Evidence Based Brisk Walking Exercise* towards Reducing Family Blood Pressure Mr. A In Pajarakan Kulon, Probolinggo

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Abstract
Hypertension is an increasing health problem throughout the world and is one of the main causes of cardiovascular disease, stroke and kidney failure. Hypertension is suffered by many people, both in developing and developed countries. So far, hypertension treatment tends to refer more to pharmacological medical treatment, but actually hypertension can be controlled using non-pharmacological treatment, including the Brisk Walking Exercise. Brisk Walking Exercise has several advantages, where this exercise is quite effective in increasing maximum heart rate capacity, stimulating muscle contractions, breakdown of glycogen, and increasing tissue oxygen. This study aims to find out how the implementation of the Evidence Based Brisk Walking Exercise intervention reduces blood pressure in Mr. A in Pajarakan Kulon, Probolinggo. Researchers used experimental methods, interviews and physical examinations to achieve the desired results. After carrying out the Evidence Based Brisk Walking Exercise intervention, researchers found that there was a reduction in hypertension, blood pressure was normal, and the client became calm. So, it can be concluded that the Evidence Based Brisk Walking Exercise is effective for use as a nursing care intervention for hypertension.

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1. INTRODUCTION

Hypertension or what is often called *the silent killer* is the title given to high blood pressure which is a hidden killer that causes death whose initial signs are unknown or without symptoms at all [1]. Hypertension is an increasing health problem throughout the world and is one of the main causes of cardiovascular disease, stroke and kidney failure [2]. High blood pressure is a non-communicable disease which is one of the main causes of premature death in the world [3].

Hypertension is suffered by many people, both in developing and developed countries. According to data from WHO (2018), hypertension is the eleventh highest cause of death in the world, namely 1,153,308 people. Hypertension is one of the deadliest diseases in the world. As many as 1 billion people in the world or 1 in 4 adults suffer from this disease [4]. Based on data from the Indonesian Ministry of Health (2018), the prevalence of hypertension according to gender is that the prevalence of women with hypertension is 36.85% and men is 31.34%. In this case, the prevalence of women is greater than men. Based on data from the health profile of North Sumatra Province, the prevalence of high blood pressure in 2019 was dominated by men, namely (32.28%) higher than women, namely (31.68%) [5].

Hypertension indirectly kills the sufferer but rather triggers the occurrence of other diseases which are classified as serious and deadly and gives symptoms that continue to the body's organs, such as stroke for the brain, coronary heart disease for the blood vessels and heart muscle [6]. The high incidence of hypertension complications can affect the quality of life of hypertension sufferers to decrease [7]. Hypertension can occur with various risk factors, for example heredity, gender, age, and race. Apart from that, overweight or obesity, smoking behavior, lack of sports activity, alcohol consumption, stress, and unhealthy eating patterns also influence the occurrence of hypertension [7].

Physical activity and a lifestyle that lacks exercise is one factor in the occurrence of hypertension that can be changed. Someone who rarely does physical activity such as sports is more likely to have a smaller heart capacity because the heart will have a harder time pumping blood throughout the body. It is believed that physical activity carried out regularly can make a person's heart stronger compared to people who do not exercise regularly. Exercise can help improve blood flow in the blood vessels because the body will get more oxygen, thus helping the blood circulation process throughout the body. WHO also stated that doing physical activity such as light exercise with a regular rhythm every week can be the basic basis for treating hypertension before choosing medication assistance [8].

So far, hypertension treatment tends to refer more to pharmacological medical treatment, but actually hypertension can be controlled using non-pharmacological treatment [9]. Treatment of high blood pressure using pharmacological drugs can have side effects. So, it is necessary to use non-pharmacological therapy which does not cause many side effects [9]. Non-pharmacological treatment for hypertension is treatment without drugs and can be done through eating a balanced diet, stopping smoking, stopping consuming alcohol, controlling stress, herbal therapy, massage therapy, yoga exercises, and aerobic exercise or physical activity such as jogging, cycling, swimming, walking or *brisk walking*[9].

Brisk Walking Exercise has several advantages, where this exercise is quite effective in increasing the maximum capacity of the heart rate, stimulating muscle contractions, breakdown of glycogen, and increasing tissue oxygen. Hypertension sufferers can do the technique *Brisk Walking Exercise* for 20-30 minutes [7]. When compared with other sports such as tennis, cycling or running. This is because walking is the most fun and easy sport to do. *Brisk Walking Exercise* has an impact on reducing the risk of mortality and morbidity in hypertensive patients through the mechanisms of burning calories, maintaining body weight, helping the body relax and increasing compounds *beta endorphin* which can reduce stress as well *Brisk Walking Exercise* safe for all ages of people with hypertension [9].

Based on the background that has been presented, researchers feel motivated to explore applications *Evidence Based Brisk Walking Exercise* on reducing blood pressure in Mr. A who suffers from hypertension to stabilize blood pressure.

2. RESEARCH METHOD

This research uses a qualitative method with a phenomenological approach, which aims to obtain an overview of life experiences, seen from the perspective of the person being studied [10]. In this research, a qualitative approach was used to obtain in-depth information about implementation *Evidence Based Brisk Walking Exercise* on reducing blood pressure in Mr. A who suffers from hypertension to stabilize blood pressure. This approach also provides an opportunity for participants to share in-depth experiences about what they experience in caring for children with mental disabilities.

In this research, data was obtained and collected through in-depth interviews with participants. Formal unstructured interviews were used as the primary method of data collection. This is an appropriate data collection method in phenomenological studies. With specific structured questions, researchers and participants engage in unstructured discussions in an effort to further clarify the meaning of an experience [11]. Researchers collected data from participants through several stages, including: *First,* preparation/administration stage; *second,* implementation; *third,* termination. The data source for this research was taken from Mr. A from Pajarakan Kulon Village, Probolinggo.

Data analysis is carried out after each participant collects data. The results of the analysis can direct the next process. Transcripts of interviews and field notes (*field notes*)

that the researcher has made are simultaneously analyzed. Analysis techniques specifically use data analysis *Interpretive Phenomenology Analysis* (IPA). IPA has eight stages which include: (1) Making data transcripts or managing what is obtained; (2) Reading transcripts; (3) Making categorization; (4) Determination of categories; (5) Formulation of themes; (6) Theme clusters; (7) Complete description; (8) Report on analysis results [12].

3. RESEARCH RESULTS AND DISCUSSION

Hypertension or high blood pressure is a chronic condition characterized by increased blood pressure on the walls of the arteries [2]. This causes the heart to work harder to circulate blood throughout the body through the blood vessels. According to Smith Tom, hypertension can be defined as peristaltic blood pressure where the systolic pressure is above 140 mmHg and the diastolic pressure is above 90 mmHg [13]. Meanwhile, according to the Indonesian Association of Hypertension Doctors (2019), a person is diagnosed with hypertension if SBP ≥ 140 mmHg and BBP ≥ on repeated measurements in the clinic, systolic blood pressure is the first measurement that is the basis for determining the diagnosis of hypertension [3]. Complications of hypertension can also cause more severe damage, for example stroke (occurs in the brain and causes quite high mortality), heart failure (damage to the heart's blood vessels), and myocardial infarction [14].

From the definitions above, it can be concluded that hypertension is a condition where blood pressure rises, namely systolic blood pressure ≥ 140 mmHg, and diastolic blood pressure ≥ 90 mmHg which is caused by blood vessel disorders which cause the blood to transport a supply of oxygen and nutrients to the tissues. the body becomes disturbed.

The classification of hypertension based on systolic blood pressure and diastolic blood pressure is divided into four classifications [15]. This classification can be seen in the table below:

Classification of hypertension based on type and risk factors

Other risk factors, target organ damage or disease	Blood Pressure (mmHg)			
	Normal high TDS (130-139) or TDD 90-99	Hypertension grade I TDS (140-159) or TDD 90-99	Hypertension grade II TDS 160-179 or TDD 100-109	Hypertension grade III TDS > 180 or TDD > 110
There are no other risk factors		Low risk	Low risk	High risk
1-2 risk factors	Low risk	Medium risk	Moderate to high risk	High risk
>3 risk factors	Low to moderate risk	Moderate to high risk	High risk	High risk
Organ damage, grade 3 CKD or DM	Moderate to high risk	High risk	High risk	High to very high risk
Symptomatic PKV, CKD grade >4 or DM with organ damage/risk factors	Very high risk	Very high risk	Very high risk	Very high risk

Based on causes, hypertension can be divided into 3 large groups, namely [6]:

a. Essential hypertension (primary hypertension) is hypertension of unknown cause.

b. Secondary hypertension is hypertension caused by another disease.
c. Isolated systolic hypertension, which is a pressure condition of blood ≥ 140 mmHg with diastolic blood pressure ≥ 90 mmHg. HST is the type of hypertension that most often occurs in the elderly population.

There are more than 90% of sufferers of primary hypertension, while the remaining 10% are caused by secondary hypertension. The exact cause of essential hypertension is not yet known, while secondary causes of essential hypertension have not been found. In essential hypertension there is also no cardiovascular disease, kidney failure or other diseases, genetics and race are part of the causes of essential hypertension, including stress. Moderate alcohol intake, smoking, environment and lifestyle. Although the cause of primary hypertension is not yet known with certainty, according to L.S. Williams & P.D, Hopper (2007) in their book recently revealed several risk factors for hypertension, controlled and uncontrolled factors [16]. The following is an explanation of what controlled and uncontrolled factors are:

a. Controllable factors
   1. Descendants

      Hypertension is more common among people with a family history of hypertension. Those with a family history of hypertension tend to have almost twice the risk of developing hypertension compared to those whose family does not have a history of hypertension. People with a family history of hypertension should be encouraged to check their blood pressure regularly.
   2. Age

      As a person gets older. Plaque builds up in the arteries and the blood vessels become stiffer and less elastic, causing the heart to work harder to force blood through the blood vessels, thereby increasing blood pressure.
   3. Diabetes mellitus

      Many adults who suffer from diabetes mellitus also have hypertension. The risk of developing hypertension with a family history of diabetes and obesity is greater than those without such a history. Lifestyle modifications and adherence to therapy are critical to preventing heart attacks, strokes, blindness, and kidney failure associated with high blood glucose levels and blood pressure.

b. Uncontrolled factors
   1. Influence of body weight

      There is a strong link between being overweight and increasing blood pressure. Weight reduction is one of the most important lifestyle modifications for lowering blood pressure. Someone who is obese is twice as likely to suffer from hypertension as someone with a normal weight. This is due to the buildup of fat and cholesterol levels which inhibit blood flow, and the heart's performance becomes harder, which then causes an increase in blood pressure.
   2. Lifestyle
      - Salt intake

        High blood pressure is associated with a diet high in salt. Patients with high blood pressure can be lowered by limiting food sodium intake, the more salt consumed, the higher the blood pressure. This is because salt makes the body retain water and if you eat too much, the excess water in the blood puts pressure on the walls of the blood vessels.
      - Caffeine

Consuming high amounts of caffeine can trigger an increase in blood pressure, because this can cause stiffness in the aorta, thereby increasing the risk of cardiovascular disease.

- Potassium and magnesium intake

  Hypertension sufferers must pay attention to a balanced diet by ensuring adequate nutritional intake, because low nutritional intake can trigger cardiovascular disease. Foods rich in potassium (fruit), magnesium (vegetables) and calcium (milk) can help keep blood pressure stable.
- Smoking

  Smoking is a major risk factor for cardiovascular disease. Blood pressure can increase because the nicotine content in cigarettes can constrict blood vessels.
- Alcohol consumption

  Regular daily alcohol consumption can increase the risk of hypertension and cause resistance to anti-hypertensive therapy.
- Sport

  People with low range of motion have a high risk of hypertension. Exercise helps prevent and control hypertension by reducing body fat. Patients with hypertension should be evaluated by a healthcare provider before starting an Exercise plan.

Secondary hypertension is hypertension whose cause can be identified, such as kidney abnormalities, adrenal gland tumors, or congenital aortic defects. When the cause of secondary hypertension is treated before permanent structural changes occur, blood pressure usually returns to normal. The Indonesian Association of Hypertension Doctors, Indonesian Society of Hypertension (InaSH) (2015), revealed that there are several conditions that lead to suspicion of secondary hypertension, which include: (1) Severe hypertension or resistant hypertension, (2) Acute increase in BP in patients with previous BP. stable, (3) Age less than 30 years in non-obese patients with no family history of hypertension and no risk factors for hypertension, (4) Malignant hypertension or accelerated hypertension (severely hypertensive patients with signs of target organ damage), (5) Onset of hypertension before puberty [14].

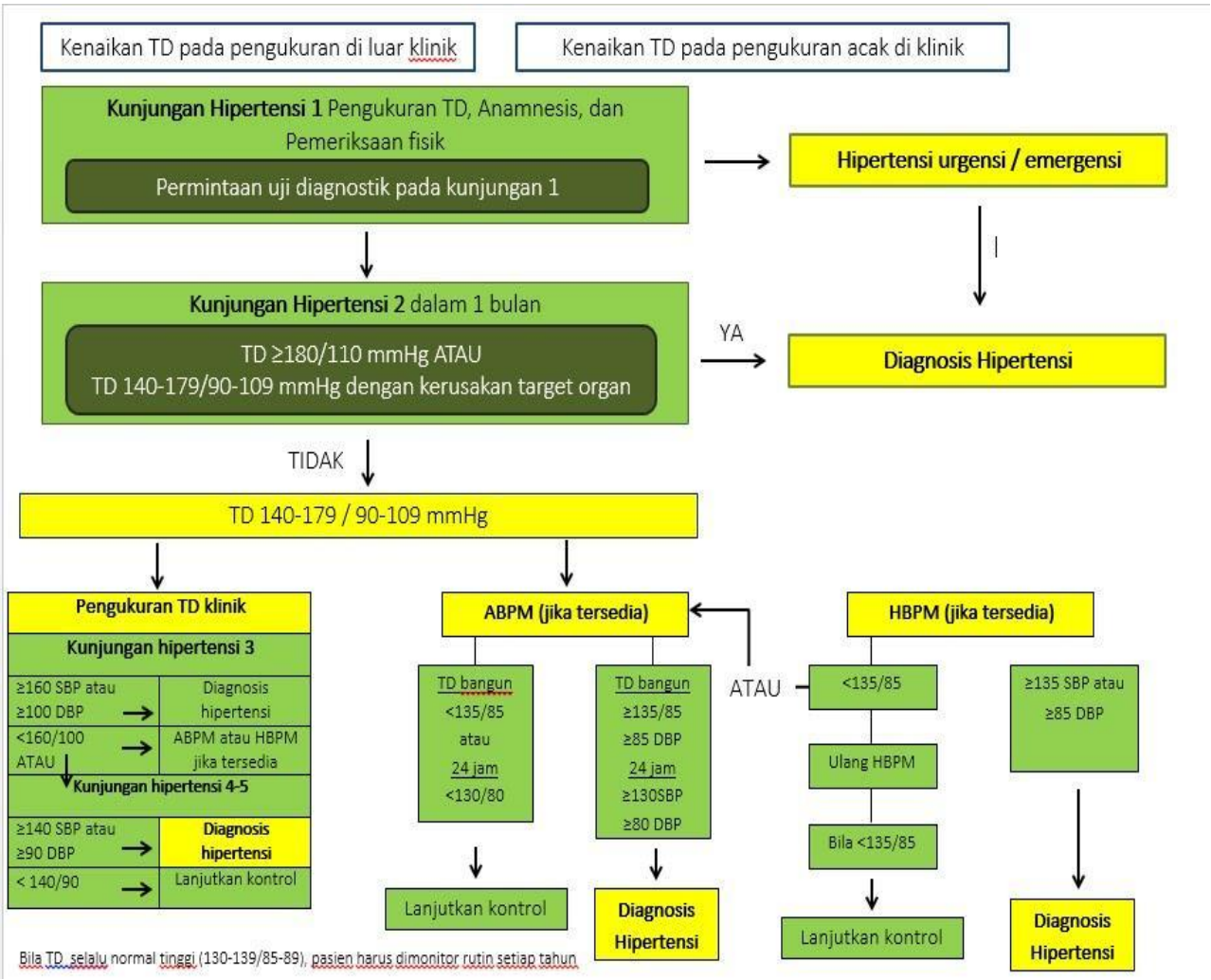
Systolic Isolated Hypertension or (HIS) is a condition of systolic blood pressure ≥ 140 mmHg while diastolic blood pressure ≥ 90 mmHg, this condition is usually common in the elderly. HIS treatment is recommended to reduce cardiovascular disease, such as early heart failure and stroke risk [17]. Lifestyle modifications are usually tried first if the systolic elevation is not too severe, if lifestyle modifications fail to reduce the systolic pressure, antihypertensive drugs are added to improve the systolic pressure [6].

Hypertension can be diagnosed at the first visit in hypertensive emergencies and hypertensive urgencies. However, at the second visit the diagnosis is made if: Continuous blood pressure > 180/110 mmHg or continuous blood pressure > 140/90 mmHg indicates diabetes, chronic kidney disease or organ damage. At the third visit the diagnosis of hypertension can be made if: BP is continuously > 160/100 mmHg. At the fourth visit the diagnosis of hypertension can be made if: BP is continuously > 140/80 mmHg. The diagnosis of hypertension can also be made through self/home measurements: duplicating readings at home in the morning and evening within 1 week (excluding the first day) > 135/85 mmHg and via ABPM the average waking pressure > 135/85 mmHg or 24 hour average > 130/80 mmHg[18], see image below.

Management of hypertension is to reduce the risk of cardiovascular disease and related morbidity. The goal of treatment is to achieve and maintain systolic pressure below 140 mmHg and diastolic pressure below 90 mmHg and control risk aspects [14]. There are two ways to treat hypertension:

a. Non-pharmacological management

Non-pharmacological management with lifestyle modifications is very important in avoiding high blood pressure and is an inseparable part of treating high blood pressure. Non-pharmacological management of hypertension consists of various lifestyle modification methods to lower blood pressure which include:[19]



1. Balanced nutritional food

The recommended dietary principle is balanced nutrition: eat 5 portions of fruit and vegetables per day, because they contain enough potassium which can lower

blood pressure. Sodium consumption should be limited to an intake of 1.5 grams/day or 3.4-5g grams/day. Limiting sodium consumption can help lower blood pressure and reduce the risk of cardiovascular disease.

2. Lose excess weight

   Weight loss reduces blood pressure, possibly by reducing the workload of the heart and stroke volume is also reduced. Efforts to lose weight to achieve a normal BMI.

3. Sport

   Regular exercise such as walking, running, swimming, cycling is useful for lowering blood pressure and improving heart condition. Exercising regularly for 30 minutes 3-4 times a week is highly recommended for lowering blood pressure. Exercise levels HDL content, which can reduce the occurrence of atherosclerosis due to hypertension.

4. Improving an unhealthy lifestyle

   Quitting smoking and not consuming alcohol is important for reducing the long-term effects of hypertension because cigarette smoke is known to reduce blood flow to various organs and can increase heart function.

b. Pharmacological management

Pharmacological therapy is by taking recommended antihypertensive drugs which aim to keep blood pressure in hypertensive sufferers under control and prevent complications [3]. The types of antihypertensive drugs that are often used are as follows:

1. Diuretics

   Diuretics are drugs that increase urination, increasing the excretion of salt (Nacl). The drugs that are often used are long-acting drugs that can be used in a single dose, preferably potassium-saving diuretics. The drug that is widely available is spironolactone. HCT, Chlortalidone and Indopanide.

2. Beta-blocker

   The mechanism of action of this drug is by reducing the heart rate and pumping power of the heart, thereby reducing the power and frequency of heart contractions. In this way, blood pressure will decrease and the hypotensive power will be good. Drugs that are included in the Beta-Blocker type are propranolol, Atenolol, Pindolol and so on.

3. ACE inhibitors and ARBs

   The class of angiotensin converting enzyme (ACE) inhibitors and angiotensin receptor blockers (ARB) angiotensin enzyme inhibitors (ACE inhibitors/ACE I) inhibit the work of ACE so that the conversion of angiotensin I to II (vasoconstrictor) is disrupted. Meanwhile, angiotensin II is at its receptor. Both ACEI and ARB have a vasodilation effect, thereby lightening the burden on the heart. ACE inhibitors include captopril and enalapril.

4. Calium channel blockers (CCB)

   Calcium channel blockers (CCB) inhibit the entry of calcium into arterial blood vessel cells, thereby causing dilatation of coronary arteries and also peripheral arteries. This type of drug includes Long Acting Nifedipine and Amlodipi.

5. Other antihypertensive groups

   The use of peripheral alpha receptor blockers as centrally acting drugs, and vasodilators in the elderly population is very limited, due to significant side effects. Drugs that include peripheral Alpha are Prazosin and Terazosin.

Normally the heart pumps blood throughout the body to meet the cells' needs for oxygen and nutrients. When pumping, the heart forces blood through the blood vessels, thereby creating pressure against the walls of the blood vessels, which is then measured as blood pressure. Blood pressure is influenced by cardiac output (CO), peripheral vascular resistance, blood viscosity (thickness), and the amount of blood in the blood. circulate [5].

There are several processes that can influence blood pressure, these processes include regulation of the nervous system, arterial baroreceptors and chemoreceptors, the renin-angiotensin-aldosterone mechanism, and body fluid balance. One factor that influences blood pressure is through adjustments to cardiac output (CO), which is the amount of blood pumped out by the heart every minute. Heart rate rises to increase cardiac output in response to physical or emotional activity that requires more oxygen to organs and tissues [20].

PVR (Peripheral Vascular Resistance) also affects blood pressure; This is because blood flows through plaque in the blood vessels. Anything that causes blood vessels to become narrower can also cause an increase in PVR. Each time PVR increases, more pressure is required to push blood through the blood vessels, resulting in increased blood pressure. If PVR decreases, the pressure required to push blood becomes less. Increased arteriolar PVR is the main mechanism that increases blood pressure in hypertension [8].

Factors that interfere with the normal regulation of blood pressure can cause hypertension. Many of these factors are not well understood. Excessive stimulation of the sympathetic nervous system, which causes vasoconstriction of most blood vessels, can cause hypertension. Changes in baroreceptors and chemoreceptors may also influence the development of hypertension. Baroreceptors may become less sensitive to prolonged increases in vascular pressure and then fail to stimulate vasodilation through vascular stretching. Additionally, increases in hormones that cause sodium retention, such as aldosterone, lead to increased fluid retention. Changes in kidney function that alter fluid excretion also result in an increase in overall body fluids which may contribute to hypertension [21].

Hypertension, if not managed properly, can cause several complications including coronary heart disease, heart failure, stroke and kidney failure [17]. One effective way to reduce hypertension is *brisk walking exercise*. *Brisk walking exercise* is a form of fast walking exercise with moderate intensity, although not as fast as running. Hypertension sufferers use a brisk walking technique for 20-30 minutes at an average speed of 4-6 km/hour or 100 steps per minute. *Brisk walking exercise* Effective for increasing maximum heart rate capacity, increasing muscle contractions, breaking down glycogen and increasing oxygen levels in tissues. This exercise can also reduce plaque formation through increased fat utilization and increased glucose utilization [20]. The physical activity recommended by the Centers for Disease Control is brisk walking exercise. Brisk walking or exercise *brisk walking exercise* is a form of physical activity, brisk walking with moderate intensity. Brisk walking activities are carried out twice a week with a frequency of 20-30 minutes [22].

Benefit *brisk walking exercise* namely that it can increase the growth of new capillaries and new blood vessels. Apart from that, it can also be useful for controlling hypertension by reducing blood pressure [23]. Brisk walking or brisk walking exercise is very effective and practical, this exercise can also be done independently anywhere and at any time. The benefits of brisk walking exercise can also increase levels of good HDL cholesterol obtained by the body and make the blood less thick or plaque buildup so that blood vessels flow smoothly, increase heart rate capacity, and help relax the body so that blood pressure becomes stable [19].

Brisk walking exercise Can be done 5 times or 2-3 times a week and 15-30 minutes a day for optimal achievement. Before doing brisk walking exercises, it is best to warm up

and cool down after doing the exercise. *Brisk walking exercise* is the cheapest exercise option and has good health benefits if done regularly while still paying attention to safety, such as not forcing yourself if you experience fatigue, shortness of breath, heart palpitations and chest pain. Brisk walking exercise can be useful for lowering blood pressure, the risk of cardiovascular disease, and cholesterol [22].

According to Chasanah and Sugiman (2022), there are several indications that can be given, namely to patients who experience an uncontrolled increase in blood pressure, do not have musculoskeletal disorders, and are able to carry out physical activity. *brisk walking exercise* [18]. As for contra indications *brisk walking exercise* in general, hypertension sufferers include unstable angina, uncontrolled hypertension (systolic and diastolic blood pressure ≥160/100 mmHg), acute myocardial infarction, uncontrolled metabolic disease, complications of heart disease and musculoskeletal disorders. The initial signs and symptoms that need to be paid attention to include headache, pallor, palpitations, cold sweat, shortness of breath and chest pain. If these symptoms appear, they should be stopped or the intensity further reduced [20].

Therapy *brisk walking exercise* done on foot. Walking is a series of continuous straight forward steps with the feet stepped forward one by one and moving along with the steps. Techniques *brisk walking exercise* there are four stages. The first stage is to step one foot forward, while doing a brisk *walking exercise*, when walking there are no feet floating in the air. The front foot must touch the ground first before the back foot is raised again. What often happens at this stage is that the body posture is too stiff, the footsteps are not rhythmic, they are too hasty, they bend their knees too much and it still looks like they are running because they are still floating in the air [20].

The second stage is to pull the back leg forward. After the front foot touches the ground, the back foot is immediately pulled forward to continue the brisk walking exercise. The heel of the foot touches the ground first. Things that must be paid attention to in this phase are not to be too stiff when pulling the back leg and not to take too small or too wide a step, and not to lose balance [20].

The third stage is relaxation. At this stage, it is between the initial stage when you step your foot forward and when you are about to pull your back foot. At this stage, the waist is in the same position as the shoulders, while the arms are vertical and parallel to the side of the body with a curve of 90 degrees [20]. The fourth stage is encouragement. The final stage or push stage is the final movement when the three stages above have been completed. This push stage is the stage of accelerating the walking pace with full force but still having to be rhythmic. This aims to get the shortest time span when taking footsteps, things that must be avoided are steps that are too short and steps that are too long [20].

In this case, Mr. A is in good health, but there is still hypertension, namely Mr. A. Mr. A also said that he had a desire to recover from his history of hypertension but did not know how to cure his hypertension. So that the characteristic limitations that lead to the diagnosis emerge, namely failing to take action to prevent health problems, failing to achieve optimal control, minimizing changes, the nursing diagnosis of health behavior that tends to be at risk related to hypertension is established by researchers.

From the problems faced by Mr. A then the researcher provides intervention *evidence based brisk walking exercise*. This research was carried out by providing appropriate communication and health therapy intervention models both in terms of media selection and humor in an effort to campaign for preventive measures for hypertension based on facts that can trigger bad effects on the body. Communication can influence health behavior in order to prevent early detection, and *treatment* of health problems. It is hoped that Mr. A and the family are able to increase knowledge about health, the family is able to recognize problems regarding hypertension, the family is able to understand the prevention and

management of health behavior related to hypertension, and the family is able to improve family health.

One of the studies conducted by Rahayu, et al,[7] *brisk walking exercise* has several advantages, where this exercise is quite effective in increasing the maximum capacity of the heart rate, stimulating muscle contractions, breakdown of glycogen, and increasing tissue oxygen. Hypertension sufferers can do the technique *brisk walking exercise* for 20-30 minutes [7]. This research was carried out by providing various interventions so that appropriate communication and health therapy models were found both in terms of media selection and *brisk walking exercise* in an effort to campaign for preventive measures for hypertension. In the study of health communication, this research falls into the area *of health promotion* which focuses on how communication influences the adoption of health behavior as a form of prevention, early detection, and treatment of health problems.

Another research done by Silvia Sari by using *brisk walking exercise* on changes in blood pressure in hypertensive sufferers showed that there were significant results from brisk walking therapy, there were changes in blood pressure in hypertensive patients [23]. This therapy is quite effective in stimulating muscle contractions, increasing heart rate capacity, breaking down glycogen and increasing oxygen in the tissues. Apart from that, this exercise can also reduce plaque formation through increasing the use of fat and increasing the use of glucose [24]. In line with the results of Rachmatullah et al., (2022) *brisk walking exercise* This is an exercise that is quite effective in increasing the maximum capacity of the heart rate, stimulating muscle contractions, breakdown of glycogen, and increasing tissue oxygen. This exercise can also reduce plaque through increased fat utilization and increased glucose utilization. Benefits obtained after doing brisk *walking exercise* can maintain heart health, normalize blood pressure, prevent coronary thrombosis, prevent digestive disorders, and benefit mental health.

Nursing procedures are carried out for a week, starting from Thursday 21 December 2023 to Wednesday 27 December 2023, over a period of three meetings, each meeting taking approximately 20-30 minutes. The first nursing action carried out by the researcher was checking blood pressure and carrying out therapy *Evidence Based Brisk Walking Exercise* is a form of brisk walking activity with moderate intensity, although not as fast as running. The impact of hypertension if not treated will have an impact on other health such as kidney disease, heart disease and stroke. Based on heredity, hypertension occurs more often among people with a family history of hypertension. Those with a family history of hypertension tend to have almost twice the risk of developing hypertension compared to those whose family does not have a history of hypertension. People with a family history of hypertension should be encouraged to check their blood pressure regularly. According to the influence of body weight, there is a strong relationship between being overweight and increasing blood pressure. Obese people are twice as likely to suffer from hypertension as people with normal weight. Meanwhile, in terms of lifestyle, such as salt intake, caffeine, potassium intake, magnesium and smoking, high blood pressure is associated with a diet high in salt. Patients with high blood pressure are lowered by limiting dietary sodium intake, the more salt consumed, the higher the blood pressure. Meanwhile, consuming foods high in caffeine can trigger an increase in blood pressure, because this can cause stiffness in the aorta. To handle or overcome healthy behavior, this can include health education. In line with this theory, according to researchers, providing education on the dangers of smoking behavior in the elderly changes those who previously did not know enough about the dangers of smoking on human health [13].

The nursing evaluation obtained after nursing actions during three meetings within a week with a duration of approximately 20-30 minutes in each meeting was obtained by the final evaluation on Wednesday, December 27 2023, the blood pressure results of Mr. A has

started to improve while Mrs. I also said that her husband no longer had headaches and his sleep had improved again. Tagged with Mr. A also underwent therapy several times *evidence based brisk walking exercise* without being accompanied by a researcher. When compared with *outcome* many have achieved the specified outcome criteria, namely, behavior that improves health, recommended health checks, disease prevention and control.

This research shows that giving *brisk walking exercise* is an important intervention to be implemented by community nurses. This action can reduce a person's hypertension. Community nurses must always accompany their patients' needs, especially when the patient really wants to recover from hypertension, but does not know how to treat it.

4. CONCLUSION

Providing therapy *Brisk Walking Exercise* to Mr. A in Bawangan Hamlet, Pajarakan Kulon Village on reducing blood pressure in hypertensive sufferers showed that there were results of reducing blood pressure every time the intervention was carried out and which was carried out for three days a week. This is related to the detailed explanation as follows:

Client response after therapy *brisk walking exercise* during three meetings a week, quite significant results were obtained as proven by Mr. A said he was no longer hypertensive with Mr. A has started to normalize, namely 120/80 mmHg. Based on the assessment data above, data was obtained on the client's main complaint with hypertension, and the client often had headaches from the back to the nape of the neck as if being pricked, the client felt uncomfortable with the client's current condition. On examination of vital signs, blood pressure was found: 170/100mmHg, respiration: 20x/minute, temperature: 36.5 °C, pulse: 104x/minute. Researchers raised the nursing diagnosis of Acute Pain related to a physical injuring agent characterized by major signs of grimacing, difficulty sleeping and restlessness while minor signs of increased blood pressure (D.0077).

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6. BIBLIOGRAPHY

[1] S. M. Kristiawan and I. N. Adiputra, “Olahraga Senam Satria Nusantara, Olahraga Jalan Cepat Menurunkan Tekanan Darah Pada Lansia Hipertensi Di Lapangan Renon, Denpasar,” *E-Jurnal Med.*, vol. 8, no. 5, pp. 1–6, 2019.

[2] F. Suciana, N. W. Agustina, and M. Zakiatul, “Korelasi Lama Menderita Hipertensi Dengan Tingkat Kecemasan Penderita Hipertensi,” *J. Keperawatan dan Kesehat. Masy. Cendekia Utama*, vol. 9, no. 2, p. 146, 2020, doi: 10.31596/jcu.v9i2.595.

[3] Z. E. Abdi, “Analisis Pengaruh Perilaku Pencegahan Hipertensi Berdasarkan Konsep Health Belief Model Dan Dukungan SosialPada Masyarakat Desa Baruh Jaya Propinsi Kalimantan Selatan Tahun 2015,” UNIVERSITAS AIRLANGGA, 2015.

[4] W. H. Organization, “Cardiovascular Diseases (CVDs),” 2021.

[5] “Riset Kesehatan Dasar 2018,” *Kementrian Kesehatan Republik Indonesia*, Jakarta, 2018.

[6] A. Al-Makki, D. DiPette, and P. K. Whelton, “Hypertension Pharmacological Treatment in Adults: A World Health Organization Guideline Executive Summary,” *Hypertension*, vol. 79, no. 1, pp. 293–301, 2022, doi: 10.1161/HYPERTENSIONAHA.121.18192.

[7] D. Julistyanissa and C. Chanif, “PENERAPAN BRISK WALKING EXERCISE

TERHADAP PERUBAHAN TEKANAN DARAH PENDERITA HIPERTENSI," *Ners Muda*, vol. 3, no. 3, pp. 345–355, 2022, doi: https://doi.org/10.26714/nm.v3i3.10535.

[8] Carlson *et al.*, "Isometric Exercise Training for Blood Pressure Management: ASystematic Review and Meta-Analysisto Optimize Benefit," *Hypertens. Res.*, vol. 39, no. 2, pp. 89–94, 2016, doi: 10.1038/hr.2015.111.

[9] R. K. Dewi, I. A. R. Rahayu, and P. G. Yasa, "Pengaruh Brisk Walking Exercise terhadap Tekanan Darah pada Pasien Hipertensi," *J. Kesehat. Al-Irsyad*, vol. 15, no. 2, pp. 172–184, 2022, doi: 10.36746/jka.v13i1.66.

[10] J. W. Creswell, *Penelitian Kualitatif & Desain Riset: Memilih Diantara Lima Pendekatan*, 3rd ed. Yogyakarta: Pustaka Pelajar, 2013.

[11] I. N. Rachmawati and Y. Afiyanti, *Metodologi Penelitian Kualitatif dalam Riset Keperawatan*. Jakarta: Rajawali Press, 2014.

[12] J. A. Smith, P. Flower, and M. Larkin, *Interpretative Phenomenological Analysis*. London: Sage Publications, 2009.

[13] S. Hidayat, *Cara Mudah dan Menyenangkan Mengatasi Hipertensi*. Yogyakarta: Griya Pustaka Utama, 2021.

[14] Nengyuliamaudi, H. Platini, and Sandra Pebrianti, "Aktivitas Fisik Pasien Hipertensi," *J. Keperawatan 'Aisyiyah*, vol. 8, no. 1, pp. 25–38, 2021, doi: 10.33867/jka.v8i1.239.

[15] "Klasifikasi Hipertensi," 2018.

[16] L. S. Williams and P. D. Hopper, *Understanding Medical-Surgical Nursing*, 3rd ed. United States: F. A Davis Company, 2007.

[17] R. N. Haldar, "Global Brief on Hypertension: Silent Killer, Global Public Health Crisis," *Indian J. Phys. Med. Rehabil.*, vol. 24, no. 1, 2013, doi: 10.5005/ijopmr-24-1-2.

[18] S. U. Chasanah and Sugiman, "Hubungan Aktifitas Fisik dengan Derajat Hipertensi pada Lansia di Wilayah Kerja Puskesmas Berbah Sleman Yogyakarta," *An-Nadaa J. Kesehat. Masy.*, vol. 9, no. 2, p. 119, 2022, doi: 10.31602/ann.v9i2.6683.

[19] D. D. Lestari, T. S. Handayani, and D. T. Rahmawati, "Pengaruh Teknik Brisk Walking Exercise Terhadap Perubahan Tekanan Darah Penderita Hipertensi Di Wilayah Puskesmas Sambirejo Kab. Rejang Lebong," *J. Nurs. Public Heal.*, vol. 10, no. 2, pp. 168–177, 2022.

[20] "Cegah Hipertensi Dengan Rutin Melakukan Brisk Walking Exercise," 2023.

[21] L. I. He, W. Wei, and Z. Can, "Effects of 12-Week Brisk Walking Training on Exercise Blood Pressure in Elderly Patients with Essential Hypertension: A Pilot Study," *Clin. Exp. Hypertens.*, vol. 40, no. 7, pp. 673–679, 2018, doi: 10.1080/10641963.2018.1425416.

[22] CDC, "How Much Physical Activity Do Older Adults Need? Physical Activity Is Essential to Healthy Aging," 2023.

[23] S. Purnomo, A. Sabri, and S. Sari, "Brisk Walking dan Diet Dash Exercise terhadap Perubahan Tekanan Darah pada Penderita Hipertensi: Literature Review," *J. Ilm. Permas*, vol. 13, no. 3, pp. 153–163, 2023, doi: https://doi.org/10.32583/pskm.v13i3.1182.

[24] R. Rachmatullah, W. Widyatuti, and S. Sukihananto, "The Effect of Brisk Walking Exercise on Blood Pressure Reduction: A Systematic Review," *Faletehan Heal. J.*, vol. 9, no. 1, pp. 100–110, 2022, doi: https://doi.org/10.33746/fhj.v9i01.388.