



Qualitative Study on Self-Management Experiences of Hypertensive Patients During the Covid-19 Pandemic

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ABSTRACT

High blood pressure, often known as hypertension, is a chronic condition that if left untreated can lead to problems such as kidney failure, heart disease, stroke and other serious illnesses. People with co-morbidities are one of the populations that are most susceptible to contracting the virus during the Covid-19 (Coronavirus Disease 2019) pandemic. According to the Ministry of Health 2020, hypertension made up 50.5 percent of the comorbidities. Self-management is the foundation to be able to manage hypertension and preventing its complications. However, during the Covid-19 pandemic, it can have an impact on the management of chronic diseases such as hypertension because it is caused by a number of factors in efforts to prevent the transmission of Covid-19. The purpose of this study to determine the experience and application of self-management in hypertensive patients during the Covid-19 pandemic. The qualitative descriptive method is used in this study. This study had 9 participants who were chosen using a purposive sampling technique. According to the findings, three themes can be used to explain how hypertensive patients experienced self-management during the Covid-19 pandemic; Not being affected by the pandemic, Disrupted self-management, and Contextual factors influencing self-management during the Covid-19 pandemic. Self-management of hypertensive patients did not change much before and during the pandemic, although treatment was changed during the Covid-19 outbreak. Due to the support of families, medical personnel, and health resources, people with hypertension can still manage themselves efficiently during the Covid-19 pandemic.

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Kata kunci:

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ABSTRAK

Tekanan darah tinggi, yang sering disebut dengan hipertensi, adalah kondisi kronis yang jika tidak ditangani dapat menyebabkan masalah seperti penyakit jantung, gagal ginjal, stroke, dan penyakit serius lainnya. Orang dengan penyakit penyerta adalah salah satu populasi yang paling rentan tertular virus selama pandemi Covid-19 (Coronavirus Disease 2019). Menurut Kementerian Kesehatan 2020, hipertensi merupakan 50,5 persen dari penyakit penyerta. Self-management merupakan landasan untuk dapat mengelola hipertensi dan mencegah komplikasinya. Namun, di masa pandemi Covid-19 dapat berdampak pada pengelolaan penyakit kronis seperti hipertensi karena disebabkan oleh sejumlah faktor dalam upaya pencegahan penularan Covid-19. Tujuan penelitian ini untuk mengetahui pengalaman dan penerapan self-management pada pasien hipertensi pada masa pandemi Covid-19. Metode deskriptif kualitatif digunakan dalam penelitian ini. Penelitian ini memiliki 9 partisipan yang dipilih dengan menggunakan teknik purposive sampling. Hasil penelitian didapatkan tiga tema yang dapat digunakan untuk menjelaskan bagaimana pasien hipertensi melakukan manajemen diri selama pandemi Covid-19 yaitu;

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Tidak terpengaruh pandemi, Self-management terganggu, Faktor kontekstual mempengaruhi manajemen diri selama pandemi Covid-19. Self-management pasien hipertensi tidak banyak berubah sebelum dan selama pandemi, meskipun pengobatan diubah selama wabah Covid-19. Adanya dukungan keluarga, tenaga medis, dan sumber daya kesehatan, penderita hipertensi tetap dapat mengelola diri secara efisien di masa pandemi Covid-19.

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INTRODUCTION

High blood pressure, often known as hypertension, is a chronic disease that can lead to complications if not treated. The term "silent killer illness" is frequently used to describe hypertension because people with hypertension usually do not feel any symptoms, so they are often not alert and do not realize the dangers of complications and even death (Winata et al., 2018). Until now, hypertension is still a significant global health problem (Firmawati et al., 2015). The World Health Organization (WHO) estimates that in 2015, the number of people with hypertension will continue to rise along with the population. WHO estimates that 1.5 billion people will have hypertension by 2025, and 9.4 million will die from the condition and its complications. The highest prevalence of hypertension is found in developing countries (WHO, 2019). In Indonesia, the prevalence of hypertension has significantly increased from 25.8% in 2013 to 34.1% in 2018. The estimated number of hypertension cases in Indonesia is 63,309,620 people, while the mortality rate due to hypertension is 427,218 (Ministry of Health RI Agency for Research and Development, 2018).

People with comorbidities are one of the most vulnerable populations exposed to the virus during the Covid-19 pandemic (Coronavirus Disease 2019). Based on the data provided by the Covid-19 Handling Task Force, as of October 13, 2020, 1,488 people with comorbidities were among the total number of confirmed cases of Covid-19 (Ministry of Health RI, 2020). The percentage of comorbidities includes hypertension (50.5%), diabetes mellitus (34.5%), and heart disease (19.6%). Among the patients that died from the COVID-19 illness in Indonesia, 13.2% had hypertension, 11.6% had diabetes, and 7.7% had heart disease (Ministry of Health RI, 2020).

For people with hypertension, it is imperative to apply self-management. Self-management is the basis for controlling hypertension and preventing complications (Mulyati et al., 2013). Self-management of hypertension can be in the form of compliance in taking medication, a good lifestyle such as not smoking, not drinking alcohol, doing a hypertension diet, doing physical activity, and being able to manage stress (Chapman & Bogle, 2014). Self-management helps improve the quality of life and satisfaction in life (Mulyati et al., 2013). Proper self-management can control and minimize the risk of complications, aiming to better support people in managing their condition (Chapman & Bogle, 2014).

The Covid-19 pandemic is a significant threat to global public health (Walker et al., 2020). The Covid-19 outbreak was deemed a public health emergency of worldwide concern by WHO on January 30, 2020, because it poses a significant risk to nations with weak health systems. (WHO, 2021). Currently, Covid-19 is the main focus in the world, but the danger of other diseases may be overlooked (Sohrabi et

al., 2020). The public is advised not to visit health services if it is not in an urgent condition (Nadar et al., 2020).

Additionally, managing long-term conditions like diabetes and stable hypertension might be impacted (Nadar et al., 2020). Hospitals around the world have cancelled all in-person elective patient care, including routine outpatient clinics. They are turning to telemedicine as a social distancing measure to reduce the surge in the number of patients receiving treatment infected with the Covid-19 virus (Nadar et al., 2020). In this situation, blood pressure and glucose levels must be monitored regularly (Nadar et al., 2020).

Patients with cardiovascular disease and hypertension are at higher risk of complications due to restrictions related to Covid-19 and disruption of health services (Pan American Health Organization, 2020). The increased risk of complications is caused by several factors, such as limited access to primary care services due to social distancing regulations, impaired access to chronic disease medications and difficulties in living a healthy lifestyle during Covid-19 restrictions (Pan American Health Organization, 2020). With this background, the researchers decided to study more about the experiences and self-management strategies used by hypertensive patients during the Covid-19 pandemic.

METHOD

The research method used in this study is descriptive qualitative. This study was conducted in the Work Area of the Kasihan II Primary Health Care from March to May 2021.

The researchers interviewed nine hypertensive patients to participate in this study. A purposive sampling method was used to select the participants.

An individual diagnosed with essential hypertension by health workers, experiencing hypertension for more than one year, male or female aged 18-59 years, and able to communicate well were eligible to participate in this study. However, patients with hypertension with other associated chronic conditions were excluded from this study. After obtaining data on prospective participants according to the criteria, the researchers explain the research and ask for prospective participants' approval to participate in the study (informed consent).

The process of collecting research data was carried out through semi-structured in-depth interviews. Interviews were conducted face-to-face using health protocols for 15-45 minutes at a time and place as agreed by participants. The interview process was recorded using a voice recorder with the participants' permission, and the researcher documented the attitudes and expressions of the participants when answering both verbal and non-verbal questions. An

interview guide was developed and used to guide the interview. In the interview guide, the researcher used open-ended questions. The questions asked related to the perception of hypertension and the self-management

experience during the Covid-19 pandemic. To enhance this study's rigour, the researchers used several methods, including member checking, rich and thick description, peer debriefing, and reference materials (see details in Table 1).

Table 1. Data Validity

No	Data Validity	Description
1.	Member checking	The researcher conducted a member check by repeating the participant's answers after the participants answered the questions given by the researcher during the interview.
2.	Rich and thick description	researchers provide a description of the findings the data that the researcher has obtained such as the attitudes and expressions of the participants when answering questions both verbally and non-verbally
3.	Peer debriefing	the researcher conducts peer debriefing by conducting discussions with the supervisor regarding the data findings that the researcher has obtained from the participants.
4.	reference materials	Researcher used references in the form of interview recordings.
5.	Transferability	Researchers make detailed, clear, systematic and reliable research reports so that readers can understand the research results and the research results can be applied.
6.	Dependability	The supervisor audits the entire activity of the researcher in conducting research, starting from the researcher determining the problem/focus, entering the field, determining the data source, conducting data analysis, testing the validity of the data, to making conclusions.
7.	Confirmability	The researcher conducts guidance with the supervisor to test the results of the research that is associated with the research process carried out

We followed the steps of inductive thematic analysis outlined by Braun and Clarke (2006). We began the data analysis by reading and re-reading the transcript and revisited audio recordings to get the data's immersion. Afterwards, we coded the interview transcripts line-by-line using the data analysis software Open code 4.03. Once all the data were coded, we searched for patterns and themes and reviewed the themes until we produced the final analysis.

RESULTS

The characteristics of the nine participants can be seen in table 2, as follows:

Table 2. Characteristics of Participants

Participant Code	Age (years old)	Gender	Education	Occupation	Duration of suffering from hypertension
P 1	49	Female	Senior High School	Laborer	±2,5 years
P 2	58	Female	Elementari School	Laborer	±3 years
P 3	46	Female	Elementari School	Housewife	±4 years
P 4	58	Male	Senior High School	Laborer	±3 years
P 5	51	Female	Senior High School	Laborer	±6 years
P 6	54	Male	Senior High School	Employees	±4 years
P7	44	Female	Junior High School	Laborer	±2 years
P8	48	Female	Senior High School	Housewife	±2,5 years
P9	59	Female	Elementari School	Housewife	±1,5 years

The results of the study obtained three themes that describe the self-management experience of people with hypertension during the Covid-19 pandemic, as evidenced by the following statements:

Not affected by the pandemic

The data show that participants made no significant changes in self-management of hypertension during the Covid-19 pandemic and remained unaffected during the

lockdown. The ongoing pandemic did not cause any disruption to their hypertension management, so they continued to manage their illness in more or less the same way as before. Three subthemes fall under this theme: lifestyle modification, taking antihypertensive drugs, routine examinations and traditional medicine.

a. Lifestyle modification

During the pandemic, participants managed their blood pressure through lifestyle modifications such as regulating

diet, physical activity, and stress management the same way as before the pandemic. They stated:

P7: "Of course, I tried to reduce the salt I put in my food, so when I cook it, I set it aside, and I add water again, like that..."

P9: "...walk in the morning for about 30 minutes, sometimes if I am not tired I walk for 45 minutes. I do it regularly every day."

b. Taking antihypertensive drugs

The data analysis results showed that some participants said to control their blood pressure by taking the medication regularly. As stated as follows:

P5: "...I always take medication regularly... I take 5 ml of amlodipine.."

c. Routine check-up

The results of data analysis showed that four of the nine participants continued to carry out routine checks to health services during the Covid-19 pandemic. As stated as follows:

P6: "I go to primary health care once a month to check..."

d. Traditional medicine

The results of data analysis showed that some participants took not only medical treatment but also traditional medicine to control their blood pressure. As stated as follows:

P5: "...I often make grass jelly, I squeeze grass jelly leaves and drink it, or I grate cucumber or chayote..."

Disrupted self-management

While some participants said their self-management was not affected by the pandemic, others felt the Covid-19 pandemic had changed the need to manage their illness. The pandemic has impacted their daily life, including their income. This change has become another source of stress that indirectly affects their health. One participant stated:

P7 : "...usually a week I get this kind of income, now it's less.. make it more difficult, add more thoughts even though if you think too much, it's easy to get tension up..."

Two subthemes were identified under this theme, including:

a. Change of schedule to do routine check-up

Participants described that there were some differences between before and during the pandemic in terms of their schedule to do the routine check-up at the healthcare facilities. They stated:

P6 : "...if before the pandemic it was once every two weeks because of the pandemic, you couldn't gather, so this doctor was given more medicine, maybe for one month"

b. Termination on community health program

From the interview results, it was also known that six of the nine participants said the *Posbindu*, which is an integrated community-based intervention for non-communicable diseases surveillance had stopped during the Covid-19 pandemic. As stated as follows:

P4 : "There used to be a Posbindu here. Well, during this pandemic it had stopped."

Contextual factors influence self-management during the Covid-19 pandemic

The results of data analysis indicate that there are factors that support and inhibit self-management in patients with hypertension. This can be seen from the sub-themes we

identified, namely 1) the availability of family support, 2) the availability of support from health workers, 3) availability of examination services during the pandemic, 4) fear of contracting the Covid-19 virus in health services, and 5) lack of self-awareness and motivation.

a. Availability of family support

The results of participant interviews said that family was a supporting factor in controlling their blood pressure. As stated as follows:

P8 : "...sometimes my husband says it's not salty enough, but he already knows he adds his own to his food, so that's understandable"

b. Availability of health support

The results of the interviews showed that health workers were also among those who supported the participants in controlling their blood pressure. As stated as follows:

P7 : "...if every time I check I am told that my blood pressure must be controlled, don't leave the medicine too..."

c. Availability of inspection service

The results of the data analysis showed that health services at the Primary Health Care during the Covid-19 pandemic continued to serve people with hypertension to carry out control with health service facilities in accordance with health protocols so that participants felt safe to control the Primary Health Care. As stated as follows:

P9 : "...and the clinic also continues to serve, but there are limits so you can keep your distance from each other, maintain health protocols, wash your hands or use hand sanitizer, there is a place to wash your hands too. there is a temperature check first before control"

d. Fear of contracting the Covid-19 virus in health services

The results of the study showed that two of the nine participants who before the pandemic had routine control at the Primary Health Care became rare and almost never carried out control with the reason that they were afraid of the corona virus because at the Primary Health Care many people visited to check. As stated as follows:

P2 : "Because many people know that the queues at the Primary Health Care are long.. I feel scared too, especially since the situation is still a pandemic, and the waiting is too long, so it's stressful to get dizzy."

e. Lack of self-awareness and motivation

The results of data analysis showed that non-compliance with hypertension self-management was caused by a lack of self-awareness and motivation. As stated as follows:

P3 : "...but sometimes it's salty, I like to eat salted fish (laughs) if chicken doesn't really like it, I like salted fish, haha even though I can't, because it makes my blood pressure high hahaha (laughs)..."

DISCUSSION

Not affected by the pandemic

Self-management is a practice that people engage in to preserve their quality of life. A healthy lifestyle in patients with hypertension can manage and control the risk factors for hypertension complications. Lifestyle modifications made by participants such as maintaining diet, doing physical activity and managing stress. This is in line with research

Kirom, Fitria, & Erna (2021) that in people with hypertension, nutrition, exercise, and stress management all have an impact on blood pressure levels. The results showed that most of the participants maintained their diet by reducing salty foods. In research Kirom, Fitria, & Erna (2021) explained that excessive consumption of sodium can cause an increase in extracellular due to the withdrawal of intracellular fluid to normalize the concentration of fluid, the increase in the volume of extracellular fluid causes an increase in blood volume and can cause hypertension. In addition to reducing saltiness, the participants also reduced the consumption of fatty foods such as fried foods. Excessive consumption of fat can also increase low density lipoprotein (LDL) cholesterol levels in the blood and increase and stick to the walls of blood vessels, resulting in plaque that can clog blood vessels (Kartika, Afifah, & Suryani, 2017). Physical activity is also one of the modifications made by participants. Participants perform physical activities such as walking every morning, cycling and doing household chores. Physical activity is an activity that is easy to do where carrying out daily activities includes physical activity, in addition to doing physical activity makes systolic blood pressure drop by 4-9 mmHg (James et al, 2015). The results showed that the stress management carried out by the participants was very diverse, one of which was by sleeping. Participants felt that sleep can reduce stress. In contrast to the research conducted by Upoyo (2019) which shows that hypertensive patients perform stress management with finger handheld relaxation techniques and deep breath relaxation with equally effective results in reducing stress in hypertensive patients.

The results of the study also stated that self-management carried out by participants to control their blood pressure was by regularly taking medication. Adherence to taking medication affects the success of treatment therapy. Treatment therapy will not be achieved if without the patient's awareness to comply with taking medication, non-compliance in taking medication can have a negative effect on the development of the disease (Cahyanti, 2019). Obedient participants in the treatment of hypertension are indicated by routinely visiting the Primary Health Care when the medicine runs out or by buying medicine at the pharmacy. This happens because people with hypertension are starting to realize the importance of having a health check or health screening. Cultivating the behavior of routine health checks/screening is the implementation of effective preventive promotive efforts and becomes the main pillar in improving health status (Susanti et al., 2021).

In addition to medical treatment, participants also took traditional medication to lower blood pressure. Patients who underwent conventional pharmacological therapy along with herbal therapy, had a better quality of life when compared to patients who only underwent herbal therapy (Nurhayati & Widowati, 2016). In line with research conducted by Al-Hadid et al (2020) which shows that the use of herbal medicines and supplements as well as antihypertensive drugs is mostly carried out by hypertensive patients in Jordan, as many as (51.4%) involved in the study consume herbs to treat hypertension. The study also concluded that the use of a combination of antihypertensive drugs is much more effective than using only antihypertensive drugs (Al-Hadid et al., 2020).

Disrupted self-management

The existence of the Covid-19 pandemic has caused more negative impacts than positive impacts on society, especially on health, psychosocial and economic aspects. This research

was strengthened by Singh et al (2021) which states that the significant economic impact of job and income loss due to job restrictions due to the Covid-19 pandemic causes further stress and impacts on health. The Covid-19 pandemic has significantly reduced the ability of the health system to deliver healthcare. One of the impacts is that there is a change in the pattern of health services, such as a change in the pattern of control schedules, maintaining preventive and curative services, which is very important to pay attention to, especially in vulnerable populations, one of which is people with chronic diseases. The existence of services provided by health workers during a pandemic can help people with hypertension carry out good health management. The results showed that participants said there were some differences between before and during the pandemic in controlling their blood pressure. These changes were mostly related to blood pressure control by participants who adjusted the policies of the Primary Health Care. This is in accordance with the literature review conducted by Azwar et al (2021) that explains that in primary health care during the Covid-19 pandemic, a strategy is needed so that health services can continue to run as usual. Rearrangement of patterns or models of health services, clear procedures and security guarantees are needed as an effort to reduce the number of COVID-19 cases, due to the Covid-19 pandemic related to changes in health services that have brought the Integrated Development Post program to a halt. In line with research Kusuma et al (2020) this shows that the Sumbertebu Village government has a policy of temporarily stopping Integrated Development Post-NCD activities since March 2020 as a preventive effort so that the community remains safe from Covid-19 transmission. In addition, the temporary suspension was carried out because the community and cadres did not yet have knowledge about the implementation of Integrated Development Post- NCD by implementing health protocols during the adaptation period for the new habits of the Covid-19 pandemic (Kusuma et al., 2020).

The results also showed that the cessation of the Integrated Development Post activities affected the participants in controlling their blood pressure. In line with research Fuadah & Rahayu (2018) It was explained that the utilization of NCD Integrated Development Post services in patients with hypertension was very useful in overcoming and controlling blood pressure. This shows that there is a strong relationship between the use of the bosbindu program on controlling blood pressure in patients with hypertension.

Contextual factors influence self-management during the Covid-19 pandemic

Family support is assistance provided by the family in the form of verbal and non-verbal actions and information (Agustina, 2017). The results of the family research remind to take medicine, remind to do health control, remind to maintain a diet such as reducing salty and reduce fried food and also the family does not protest if the food is not salty enough. Study Puspita (2017) also stated that It is evident that patients who receive more attention from their family members are more disciplined in following treatment than patients who receive less attention from them. The relationship between the role of family support on one's medication adherence and good support and attention given by the family, such as providing health services, helping pay for treatment, and reminding to take medication. Compared to responders who do not have family support, those with

hypertension who have it likely to be more compliant with their therapy (Rasajati, Raharjo, & Ningrum, 2020). Health workers are critical in increasing people's access to high quality health care, which helps individuals become more aware of the need to live a healthy lifestyle and be more passionate and able to do so (Suryadi & Hafizurrachman, 2017).

Additionally, during the Covid-19 pandemic, help is provided in the form of medical services at the Primary Health Care, which continues to serve people with hypertension to carry out control with health service facilities in accordance with health protocols so that participants feel safe to control the Primary Health Care. This is consistent with studies analyzing the effects of the Covid-19 pandemic on services at the Ranotana Weru Health Center and Teling Atas Health Center Manado City conducted by Pangoempia, Grace, & Adisti (2021) The results showed that throughout the Covid-19 pandemic, the Primary Health Care continued to serve patient visits by implementing health protocols such as the application of screening for each visitor by means of which patients were required to wash their hands, check or measure body temperature, then officers asked complaints and came to the Primary Health Care. The Primary Health Care also implements physical distancing by providing patient seating distances and directing patients to maintain a distance between patients and patients and health workers (Pangoempia, Grace, & Adisti, 2021).

The results showed that before the pandemic, participants who had routine control at the Primary Health Care rarely even did control for one reason, one of which was fear of the corona virus because many people visited the Primary Health Care to check. This is in line with research Singh et al (2021) which stated that because of their concern and anxiety over Covid-19, several participants put off going to the hospital or seeing a doctor and delayed checking their blood pressure and blood sugar. Strengthened by research by Zakaria et al (2020) which shows the results of respondents with chronic diseases as much as 63% said they were hesitant to visit a health center during the Covid-19 pandemic, this was due to their fear of contracting a Covid-19 virus infection.

Non-compliance is a person's behavior that is not optimal or disciplined in carrying out a treatment. Some participants said that they still eat salty foods and are reluctant to do routine checks where participants know that it should not be done but still do it. It is concluded that the patient factor is the lack of awareness and motivation that causes health management non-compliance. This is in accordance with research Rasajati, Raharjo, & Ningrum (2020) which shows that there is a correlation between motivation and medication adherence, and people who are highly motivated to seek therapy are more likely to adhere to their treatment plan than people who are less motivated. High-motivated hypertensive individuals will adhere to treatment more closely because they understand the importance of preventing complications (Rasajati, Raharjo, & Ningrum, 2020). The limitation of this research is that the researcher did not test the validity of the triangulation of sources in the form of interviews to clarify the findings to the family of the participants regarding the self-management carried out by the participants and the family support to the participants. Triangulation of sources was not carried out because the researchers had difficulty meeting the participant's family, most of which were still working when the researcher conducted interviews with the participants.

LIMITATION OF THE STUDY

Besides, the limited time of the study also prevented the researcher from conducting interviews with the participants' families.

CONCLUSIONS AND SUGGESTIONS

The conclusion obtained from the results of this study is the self-management behavior carried out by hypertension sufferers during the Covid-19 pandemic by way of lifestyle modification, taking antihypertensive drugs, conducting routine checks and conducting alternative treatments. The Covid-19 pandemic caused a change in management for people with hypertension marked by the impact of the Covid-19 pandemic, a change in the control schedule for health services and the cessation of Integrated Development Post activities. The availability of family support, help from health professionals, and the availability of examination services throughout the pandemic are the supporting and inhibiting variables for self-management in patients with hypertension during the Covid-19 pandemic.

Follow-up research from this study is required to determine the role of the family in assisting hypertension sufferers to self-manage their condition during the Covid-19 pandemic, to take action to prevent non-adherence to hypertension treatment, and to use alternative research methods to study self-management in hypertension sufferers during the Covid-19 pandemic in order to collect different types of data.

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ETHICAL CONSIDERATIONS

This research has obtained ethically appropriate information which was approved by the Health Research Ethics Committee of the University of Muhammadiyah Yogyakarta (KEPK FKIK UMY) with the ethical number No.077/EC-KEPK FKIK UMY/III/2021

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Conflict of Interest Statement

There are no competing interests in this study.

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