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Virtual Assistance Improves Diet Compliance of Hypertension Patients



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Abstract

Changes in lifestyle that are far from healthy living behavior are currently in line with the increase in hypertension which requires compliance efforts in drug consumption and diabetes management. Lack of knowledge is one of the factors of non-compliance in the management of hypertension. Mentoring is one way to increase knowledge. Knowing the effect of virtual mentoring on hypertension diet on dietary compliance of hypertension sufferers is the goal in this study. The design of the study was pre-experimental. A sample of 28 respondents was obtained by purposive sampling technique. The results of the study before being given virtual assistance showed most of the respondents (53.6%) had adequate hypertension diet compliance, while after virtual assistance showed almost all respondents (89.3%) complied in the implementation of the hypertension diet. The results of the Wilcoxon test analysis showed $p: 0.000$ and 0.05 , indicating that virtual assistance had an effect on dietary compliance with hypertension sufferers. Virtual assistance makes communication between patients and health workers more intense, both in the process of transferring information and controlling. Virtual mentoring interventions can be used as a method of health education for health workers to improve dietary compliance with hypertension sufferers.

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INTRODUCTION

One of the degenerative diseases in cardiovascular system disorders, namely hypertension, can be a silent killer if it does not get proper treatment (Fitria, :, & Candrasari, 2010). Management of hypertension can be done through hypertension management which includes several components, namely: antihypertensive drugs, diet management, exercise and stress management (Setyawan, 2017). The implementation of hypertension management is carried out on an ongoing basis because blood pressure can change at any time. Therefore, compliance is required in its implementation (Triwibowo, Frilasari, & Dewi, 2016). One component that sufferers often neglect is related to diet management (Dhina Widayati & Nuari, 2020). Currently, there are still many hypertensive patients who do not comply with the hypertension diet. This failure is closely related to the lack of knowledge about the hypertension diet (Devi & Putri, 2021). Many sufferers still consume fatty foods, vegetables that contain salt and lack of exercise.

WHO data (2017) states 70% of known hypertension sufferers. Of these, 25% of them received good treatment. It is predicted that the prevalence of hypertension will increase by 60% in 2025 with the number of sufferers reaching 1.56 billion people worldwide (WHO, 2017). Based on the results of Riskesdas 2018, the prevalence of the population with high blood pressure in East Java Province by 36.3%. The prevalence increases with increasing age. When compared with Riskesdas 2013 (26.4%), The prevalence of high blood pressure has increased significantly. Estimated number of hypertensive patients aged 15 years in Java Province East around 11,008,334 population, with the proportion of men 48.83% and women 51.17%. Of these, hypertension sufferers who receive health by 35.60% or 3,919,489 population. The results of a preliminary study conducted in Sambirejo Village in February 2021, 60% of hypertensive patients did not comply with the hypertension diet.

Hypertension can be caused by several factors, namely: age, family history of hypertension, gender, obesity, lack of exercise, stress and high-salt foods. Other factors that trigger hypertension are: smoking and alcohol consumption (Amalia, 2018). In the elderly, with the aging process that occurs, there will be changes in the cardiovascular system, namely a decrease in the elasticity of blood vessels

which can result in an increase in blood pressure. Hypertension can develop into a more serious disease in the cardiovascular system itself, namely coronary heart disease or other organs such as stroke, kidney failure to cognitive disease (Suprayitno & Huzaimah, 2020).

Management of hypertension involves several components, namely medication, diet management, exercise and stress management (Mapagerang & Alimin, 2018). In the management process, maintenance is needed which takes place over a period of time (Wulandari & Widayati, 2020). This is because an individual's blood pressure can fluctuate. Therefore, it is necessary to comply with hypertension treatment. This includes adherence to dietary management (D Widayati, 2020). The dietary factor is an important thing to consider in people with hypertension because this component looks simple but we do it every day. In order to prevent further complications, people with hypertension should adhere to a hypertension diet every day regardless of the presence or absence of pain and symptoms that arise (Novian, 2013). This is intended so that the blood pressure of people with hypertension remains stable so that they can avoid hypertension and its complications (Kurniawati, 2016).

There are several factors that influence the behavior of hypertension sufferers in controlling blood pressure, one of which is knowledge (Yanti, Yuliza, & Saluluplup, 2019). Knowledge greatly affects hypertensive patients in hypertension management, including in this case related to dietary compliance. One of the efforts that can be done to increase compliance is through education (Dhina Widayati, 2020)

In connection with the current pandemic situation which requires physical restrictions and social distancing, it is necessary to develop online (virtual) based health education services, one method of mentoring and monitoring can be done by utilizing technological developments such as the use of the web or with communication media in the form of video calls (Afrian Nuari & Widayati, 2021). This service can be in the form of consultation or assistance. Assistance that is carried out remotely using the help of information technology can enable the delivery of messages and information more easily, quickly and cheaply. This method is considered more effective and efficient. Both in terms of time, financing and understanding of patients. Virtual assistance really needs to be

done, especially regarding diet problems for hypertensive patients. This virtual assistance is expected to be a medium for health workers and patients to consult directly about the patient's dietary problems, besides that health workers can also directly monitor the health development of the hypertensive patient.

The purpose of this study was to determine the effect of Virtual Mentoring About Dietary Hypertension on Diet Compliance in Hypertensive Patients.

METHOD

The design used in this study was pre-experimental involving 28 hypertensive patients as

respondents which obtained through purposive sampling with inclusion criteria: hypertensive patients who have gadgets and exclusion criteria: (1) hypertensive patients who have visual and hearing impairments, (2) patients with hypertension with severe criteria (feeling complaints due to increased blood pressure). The independent variable was virtual assistance which was given 3 times a week for 2 weeks (6 times) with the duration of each meeting for 30 minutes via Whatsapp media. The dependent variable was dietary compliance which was measured by using a questionnaire. The study was conducted in Sambirejo Hamlet, Sambirejo Village, Pare District, Kediri Regency in June 2021. Data were analyzed by Wilcoxon sign rank test with α 0,05.

RESULT

Hypertension Diet Compliance Before Virtual Assistance

Table 1: Frequency Distribution of Hypertension Diet Compliance Before Virtual Assistance

Compliance	n	%
Less	12	42,9
Quite	15	53,6
Good	1	3,5
Total	28	100

Based on table 1, it shows that before being given virtual assistance, most of the respondents (53.6%) namely 15 respondents had hypertension diet compliance in the quite category.

Hypertension Diet Compliance After Virtual Assistance

Table 2: Frequency Distribution of Hypertension Diet Adherence After Virtual Assistance

Compliance	n	%
Less	0	0
Quite	3	10,7
Good	25	89,3
Total	28	100

Based on table 2 shows that after virtual assistance, almost all respondents (89.3%) namely 25 respondents had adherence to the hypertension diet in the good category.

The Effect of Virtual Assistance on Hypertension Diet Compliance

Table 3: Distribution of the frequency of dietary compliance in patients with hypertension before and after virtual mentoring.

Pre Test	Post Test							
	Less		Quite		Good		Total	
	f	%	f	%	f	%	f	%
Less	0	0	3	10,7	9	12,2	12	42,9
Quite	0	0	0	0	15	53,6	15	53,6
Good	0	0	0	0	1	3,5	1	3,5
Total	0	0	3	10,7	25	89,3	28	100

p-Value = 0,000

α = 0,05

Based on table 3 it is known that before being given virtual assistance, it is known that most of the respondents (53.6%) had adequate adherence to a hypertension diet, while after virtual assistance, almost all respondents (89.3%) had good compliance.

Based on the results of data analysis using the Wilcoxon test, it was found that p value: 0.001 which showed that there was an effect of virtual assistance on hypertension diet on dietary compliance in hypertension sufferers in Sambirejo Hamlet, Sambirejo Village, Pare District, Kediri Regency.

DISCUSSION

Identify Hypertension Diet Compliance Before Virtual Assistance About Hypertension Diet

Based on the results of the study, it was known that before being given virtual assistance, most of the respondents (53.6%) namely 15 respondents had adequate hypertension diet compliance.

Compliance comes from the word obedient which means obeying an order or rule, and discipline which means obedience to do something that is recommended for him (Nuari et al., 2018). Compliance with hypertension sufferers in this case is related to the management of hypertension related to the regularity of taking medication, regularly following the recommended diet and changing a healthy lifestyle with rest patterns, physical exercise or exercise patterns and stress management (Dewanto, Munir, & Djuari, 2017).

There are several factors that influence changes in individual behavior to become obedient to the treatment program, namely age, educational history, length of suffering (Adliyani, 2015).

Based on the general data of respondents, it is known that most of the respondents (53.6%) are 31-40 years old. One of the factors that influence the compliance of hypertension patients is age (Rohani & Ardenny, 2019). A person's compliance depends on age where at the age of 31 to 40 years the individual already has a broader insight so that a person can do what is good for himself, including adherence to a diet (Anisa & Bahri, 2017).

According to the researcher's assumptions in terms of the level of compliance in performing a hypertension diet, the older a person gets, the better his mental development process is, but at certain ages, the increase in the mental development process is not as fast as when he was in his teens, thus it can be concluded that the age factor will affect the level of compliance of a person who will experience a peak at certain ages and will decrease the ability to accept or remember something along with advancing age.

Based on the general data of respondents, it is known that almost half of the respondents (32.1%) have a history of junior and senior high school education. According to (Notoatmojo, 2018) it is stated that the level of education affects a person's knowledge, this statement is in accordance with

(Efendi & Larasati, 2017) in his research, namely there is a significant relationship between age, education, and compliance, the results of the analysis of the level of education with compliance obtained a p value of 0.002.

According to researchers, the history of education affects a person in interpreting something. Individuals with a high educational history will be able to understand more about the development of knowledge and easily receive information about new values in knowledge and vice versa if someone has low knowledge it will be very difficult to accept new things or new sciences and not always have obedience (Dhina Widayati & Lestari, 2015)

Based on the general data of respondents, it is known that most of the respondents (53.6%) suffer from hypertension for 1-2 years. The saturation factor of hypertension sufferers who undergo diet and the cure rate achieved is not as expected can also be a factor in non-compliance. In general, patients who have long suffered from hypertension but have not yet achieved maximum recovery can cause boredom with the diets that have been carried out so far. This results in these patients tend to be disobedient (Anisa & Bahri, 2017). Another study that supports the results of this study is the research conducted by (Rohani & Ardenny, 2019) which shows that patients who have experienced a disease for one to five years tend to be more obedient to the process of taking drugs and recommendations given by doctors because of their great curiosity. and the desire to recover is great, while patients who have experienced the disease for more than five years have a tendency to have poorer adherence to taking medication and adherence to doctor's recommendations. This is due to more patient experiences, where patients who have complied with the treatment process but the results obtained are not satisfactory, so that patients tend to surrender and do not comply with the treatment process being undertaken (Dhina Widayati & Nuari, 2017).

According to the researcher, one of the factors that influence adherence is the length of time suffering from the disease. The longer a person suffers from hypertension, the patient will feel bored with the dietary rules that must be applied every day so that the respondent will eat the food he likes even though it is against the dietary rules.

Based on the results of the identification of each component of hypertension diet compliance, among others: regulating diet, reducing salt consumption and eating lots of fruits and vegetables. Based on these components, hypertension sufferers are still often violated, namely it is difficult to reduce salt consumption. Patients with hypertension assume that it is not delicious to eat without any salty foods (Dhina Widayati, Ariningsih, & Tauhid, 2021). This is shown from the results of the questionnaire where respondents still like to consume foods that contain salt.

Identification of Hypertension Diet Compliance After Virtual Mentoring About Hypertension Diet

Based on the results of the study, it showed that after virtual assistance, almost all respondents (89.3%) namely 25 respondents obeyed the hypertension diet.

Hypertension can be avoided by avoiding risk factors and preventing them with various efforts, namely implementing a healthy lifestyle by doing regular physical activity, getting enough sleep, relaxing and relaxing the mind, avoiding caffeine, cigarettes, alcohol and stress then adopting a healthy diet by avoiding reducing foods that contain high fat, high calories, oily, cholesterol, coconut milk, excessive salt (Dewanto et al., 2017).

Obedience is a term that leads or refers to participation in problem solving and decision making about behavior change, the change is an act that is carried out voluntarily known as adherence (Adliyani, 2015). It must be remembered that adherence is a multidimensional phenomenon that is determined by five interrelated dimensions, namely patient factors, therapy factors, health system factors, environmental factors and socio-economic factors (Dhina Widayati, Hayati, & Chotijah, 2018). All factors are important factors in influencing compliance so that no influence is stronger than other factors.

The high incidence of hypertension recurrence correlates with the low rate of adherence to the hypertension diet. This is what underlies the need for intervention modifications to increase the rate of adherence to a hypertension diet in hypertensive patients (Fitria et al., 2010). In this study, a modification of the intervention to increase compliance through education was carried out in the form of virtual assistance.

According to researchers, people with

hypertension must continue to carry out a hypertension diet every day regardless of the presence or absence of pain and symptoms. The purpose of the hypertension diet is to control the blood pressure of people with hypertension to remain stable or blood pressure to be normal so that it can avoid hypertension and prevent complications, especially the heart and blood vessels that can cause death.

According to researchers, various strategies have been tried to increase compliance, namely the support of health professionals (Azizah, Widayati, & Rachmania, 2017). Health professional support is needed to improve compliance, the simplest example is the existence of communication techniques. Communication plays an important role because good communication provided by health professionals, whether doctors or nurses, can instill obedience in patients (Azizah et al., 2017). Health professionals who can convince the patient's family to support the improvement of the patient's health can reduce non-compliance (Wulandari & Widayati, 2020).

Analysis of the Effect of Virtual Mentoring on Hypertension Diet Compliance

Based on the results of the study, it was known that before being given virtual assistance, it was known that most of the respondents (53.6%) had a fairly compliant hypertension diet.

Based on the results of data analysis using the Wilcoxon test, the results of the sig (2-tailed) value $p: 0.000$ and the error level (α): 0.05 , so $p < \alpha$ so H_0 is rejected and H_1 is accepted, meaning that there is an effect of virtual mentoring on hypertension diet on Dietary compliance in patients with hypertension in Sambirejo Hamlet, Sambirejo Village, Pare District, Kediri Regency.

Mentoring is how to help someone find what they want from the position where they are now, by exploring what resources are needed, the mental attitude that must be built, and suitable techniques in applying them so that they will experience increased compliance due to the treatment given (Dhina Widayati, Nuari, & Setyono, 2018). Providing information and education through virtual assistance is one of the efforts to empower the community in compliance with the hypertension diet at home. In addition to yourself, this information is also expected to be conveyed to other people and family members.

This study is also supported by the results of (Suprayitno & Huzaimah, 2020)'s research with the title the effect of mentoring hypertension diet behavior on dietary compliance in hypertension sufferers in Sanggrahan Village. From the results of the analysis test, it is known that the analysis of the distribution of pre-test and post-test dietary compliance in the mentoring group obtained a value = 0.003 then value <0.05 so it can be said that the hypertensive dietary behavior mentoring variable has an influence on dietary compliance in hypertensive patients.

CONCLUSION

Hypertension diet assistance can virtually increase the compliance of hypertensive patients on a hypertension diet.

SUGGESTION

Virtual assistance can be used as a method in delivering health information and controlling diet compliance in patients with hypertension.

FUNDING

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CONFLICTS OF INTEREST

There is no conflict of interest in this study project. All components can work well according to their respective duties and can work as a good team.

AUTHORS CONTRIBUTION

In this study the first author as a correspondence author who is responsible for the research process to publication by writing articles that have been adjusted to journal guidelines. The second author assisted in the research process and data analysis. The third author helps research in the data collection process.

REFERENCE

- Adliyani, Z. O. N. (2015). Pengaruh Perilaku Individu terhadap Hidup Sehat. *Perubahan Perilaku Dan Konsep Diri Remaja Yang Sulit Bergaul Setelah Menjalani Pelatihan Keterampilan Sosial*, 4(7), 109–114.
- Afriani Nuari, N., & Widayati, D. (2021). Peningkatan Self Management Penyakit Gasritis Melalui Gastroeduweb Pada Remaja. *The Indonesian Journal of Health Science*, 13(2), 141–151. <https://doi.org/10.32528/ijhs.v13i2.5826>
- Amalia, R. N. (2018). *Quasi Experiment Pre-Post Test One Group* .
- Anisa & Bahri. (2017). *Faktor-Faktor Yang Mempengaruhi Kepatuhan*. 6(1), 56–65.
- Azizah, A., Widayati, D., & Rachmania, D. (2017). Diacharge Planning Mempengaruhi Kualitas Pelayanan Keperawatan. *Journals of Ners Community*, 8(1), 53–63.
- Devi, H. M., & Putri, R. S. M. (2021). Peningkatan Pengetahuan dan Kepatuhan Diet Hipertensi melalui Pendidikan Kesehatan di Posyandu Lansia Tlogosuryo Kota Malang. *Jurnal Akademika Baiturrahim Jambi*, 10(2), 432. <https://doi.org/10.36565/jab.v10i2.399>
- Dewanto, R. R., Munir, R. S., & Djuari, L. (2017). Manajemen Penderita Hipertensi di Puskesmas Pacar Keling 18-31 Mei 2015. *JUXTA: Jurnal Ilmiah Mahasiswa Kedokteran Universitas Airlangga*, 9(1), 54–59.
- Efendi, H., & Larasati, T. (2017). Dukungan Keluarga dalam Manajemen Penyakit Hipertensi. *Jurnal Majority*, 6(1), 34–40.
- Fitria, D., ; W., & Candrasari, A. (2010). Pengaruh Pendidikan tentang Hipertensi terhadap Perubahan Pengetahuan dan Sikap Lansia di Desa Makahaji Kartasura Sukoharjo. *Biomedika* , 2(2), 54–62. Retrieved from https://publikasiilmiah.ums.ac.id/xmlui/bitstream/handle/11617/1042/Biomedika_Vol.2_No.2_3_Domas_Fitria_Widyasari.pdf?sequence=1&isAllowed=y
- Kurniawati, W. W. (2016). PENGARUH PENDIDIKAN KESEHATAN TERHADAP KEPATUHAN DIET PADA PENDERITA HIPERTENSI. *The Indonesian Journal of Health Science*, 7(1), 1–7.
- Mapagerang, R., & Alimin, M. (2018). Hipertensi Dengan Kontrol Diet Rendah Garam. *Jikp(Jurnal Ilmiah Kesehatan Pencerah)*, 7(1), 1–8.
- Notoatmojo, S. (2018). *Promosi Kesehatan : Teori dan Aplikasi*. Jakarta: Rineka Cipta.
- Novian, A. (2013). Kepatuhan Diit Pasien Hipertensi. *Jurnal Kesehatan Masyarakat*, 9(1), 100– 105.
- Nuari, N. A., Halim, P., Badruddin, S., Maulamin,

- T., Setiawan, M. I., Widayati, D., ... Abdullah, D. (2018). Caring of disabilities deaf mute patient with talking devices application based on mobile. *International Journal of Engineering and Technology(UAE)*, 7(3.6 Special Issue 6), 432–437. <https://doi.org/10.14419/ijet.v7i3.6.17488>
- Rohani, R., & Ardenny, A. (2019). Analisis Faktor Yang Berhubungan Dengan Kepatuhan Diet Penderita Diabetes Melitus. *Jurnal Proteksi Kesehatan*, 7(2), 61–67. <https://doi.org/10.36929/jpk.v7i2.132>
- Setyawan, A. B. (2017). Hubungan antara tingkat stres dan kecemasan dengan kejadian hipertensi pada lansia di Klinik Islamic Center Samarinda. *Jurnal Ilmu Kesehatan*, 5(1), 1–8.
- Suprayitno, E., & Huzaimah, N. (2020). Pendampingan Lansia Dalam Pencegahan Komplikasi Hipertensi. *SELAPARANG Jurnal Pengabdian Masyarakat Berkemajuan*, 4(1), 518. <https://doi.org/10.31764/jpmb.v4i1.3001>
- Triwibowo, H., Frilasari, H., & Dewi, I. R. (2016). Hubungan Kepatuhan Diet Hipertensi Dengan Tekanan Darah Pada Pasien Hipertensi Di Poli Penyakit Dalam RSUD Prof . Dr . SOEKANDAR MOJOKERTO * Heri Triwibowo , ** Heni Frilasari , *** Indah Rachma Dewi Akper Bina Sehat PPNI Mojokerto. *Jurnal Keperawatan*, 5(1), 1–6.
- WHO. (2017). *Penyakit Tidak Menular*.
- Widayati, D. (2020).). Edukasi Managemen Diabetes Berbasis Kelompok Sebaya sebagai Upaya Meningkatkan Kepatuhan Diet dan Perawatan Mandiri Penderita Diabetes. *The Indonesian Journal of Health Science*, 12(2), 137–146.
- Widayati, Dhina. (2020). *Edukasi Managemen Diabetes Berbasis Kelompok Sebaya sebagai Upaya Meningkatkan Kepatuhan Diet dan Perawatan Mandiri Penderita Diabetes Mellitus Dhina*. 12(2), 137–146.
- Widayati, Dhina, Ariningsih, S., & Tauhid, M. (2021). Saline Solution Oral Hygiene dalam Meningkatkan Nafsu Makan Pasien Anoreksia. *The Indonesian Journal of Health Science*, 13(1), 1–11. <https://doi.org/10.32528/ijhs.v13i1.4902>
- Widayati, Dhina, Hayati, F., & Chotijah, N. (2018). Family Acceptance dan Tingkat Stres Pasien HIV. *Jurnal Keperawatan Respati Yogyakarta*, 5(7), 364–369.
- Widayati, Dhina, & Lestari, N. (2015). Peningkatan Kualitas Hidup Pada Penderita Gagal Ginjal Kronik Yang Menjalani Terapi Hemodialisa Melalui Psychological Intervention Di Unit Hemodialisa Rsd Gambiran. *Jurnal Ilmu Kesehatan*, 3(2), 6–11.
- Widayati, Dhina, & Nuari, N. A. (2017). Pengembangan model health participative masyarakat (hepar) dalam peningkatan PHBS dan pengendalian vektor DBD. *Jurnal Penelitian Keperawatan*, 3(2), 131–140.
- Widayati, Dhina, & Nuari, N. A. (2020). Kreasiki Gymnastics in Reducing the Stress Level of Diabetes Mellitus Patients. *Jurnal Info Kesehatan*, 18(1), 18–27. <https://doi.org/10.31965/infokes.vol18.iss1.295>
- Widayati, Dhina, Nuari, N. A., & Setyono, J. (2018). Peningkatan Motivasi dan Penerimaan Keluarga dalam Merawat Pasien GGK dengan Terapi Hemodialisa melalui Supportive Educative Group Therapy. *Jurnal Kesehatan*, 9(2), 295. <https://doi.org/10.26630/jk.v9i2.830>
- Wulandari, O., & Widayati, D. (2020). Pemberdayaan Keluarga Dalam Menurunkan Tingkat Kecemasan Pasien Ggk Dengan Hemodialisa. *Care : Jurnal Ilmiah Ilmu Kesehatan*, 8(3), 326. <https://doi.org/10.33366/jc.v8i3.1806>
- Yanti, M., Yuliza, W. T., & Saluluplup, M. L. (2019). Pengetahuan , Sikap dan Pengalaman yang Berhubungan Dengan Perilaku Pencegahan HIV / AIDS Pada Wanita Pekerja Seks. *Jurnal Ilmu Kesehatan*, 4(1), 65–71. <https://doi.org/10.33757/jik.v4i1.277.g121>