



## The Effectiveness of The Family Mentoring Model in Improving the PENSIKU (Knowledge, Attitudes and Behaviour) of Clients and Families in Treating Hypertension

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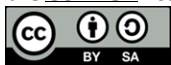
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### ABSTRACT

**Background:** Hypertension is the most common disease experienced by the community and usually appears without complaints so that many clients do not know that they have suffered from hypertension. Until now Hypertension is still a major problem and is the first cause of death in the world. **Purpose:** This study aims to determine the effectiveness of the family assistance model in improving the PENSIKU (knowledge, attitudes and behavior) of clients and families in treating hypertensive hypertension. **Methods:** The study design used quasi-experimental Non-Randomized Control Group Pre-Test Post Test Design on 120 hypertensive clients and 120 families. The instrument used in this study was the PENSIKU questionnaire. Equality analysis before intervention and control group models was performed with an independent t-test with  $\alpha = 0.05$ . To determine the change in the average value of the intervention and control groups using the dependent t-test. **Results:** The results showed that the Family Assistance Model was effective in improving the PENSIKU (knowledge, attitudes and behavior) of clients and families in treating hypertensive hypertension. This is shown by the increase in client PENSIKU (knowledge, attitudes and behavior) by 7.1% and family PENSIKU (knowledge, attitudes and behavior) by 5.8%. **Conclusions:** This model is recommended to be implemented in all community health center areas as an effort to control hypertension.

### KEYWORDS

Mentoring Model, Knowledge, Attitudes, Behaviour, Treating Hypertension

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## 1. BACKGROUND

Hypertension is a disease most experienced people. Hypertension usually appears without any complaints so that many clients do not know that they had suffered from hypertension (Palomo-Piñon,

2016); (Wijayanto, 2020). Signs and symptoms are sometimes can't feel, so it is known as the silent killer. Hypertension also leads to various complications of the blood vessels that can lead to coronary heart disease, kidney and stroke later (Appel et al.,

2006); (Adib, 2009). Complications or impacts that can be caused by hypertension vary widely, consist, have an impact on the physical, psychological and socio-economic clients (Setiati et al., 2014).

Hypertension still be the main proplem in the world, both in developed countries and in countries - developing countries, including Indonesia. Based on the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure on VII (JNC-VII), nearly 1 (one) by the billion people suffer from hypertension in the world (Black & Elliott, 2013). According to the result of the World Health Organization (WHO) that hypertension is the number 1 cause of death in the world. Based on data from the Ministry of Health RI (2014) that In 2010 in the United States there are 28.6% of adults aged 18 years and over who suffer from hypertension, Meanwhile, according to the American Heart Association (AHA) that the American population older than age 20 years who suffer from hypertension has reached up to 74.5 million, but almost about 90-95% of cases of unknown cause. The prevalence of hypertension based on measurements in the population aged >18 years of growing the year 2007: 25.8%, in 2013; 31.7% and 2018: 34% (Risksedas, 2018); (Kemenkes RI, 2020).

The prevalence of hypertensive clients in East Java is still quite high, namely 26.2% (Kemenkes, 2013) and has increased to 36.3% (Balitbangkes Kemenkes RI, 2013). Based on data at the Puskesmas Bangsal Mojokerto, the number of hypertensive patients reached 29.30%. Meanwhile, the results of the coverage of high blood pressure checks aged > 15 years in Mojokerto Regency reached 38.27% (Balitbangkes Kemenkes RI, 2019). Based on these data, it can be concluded that the prevalence of hypertension in Mojokerto Regency is still high when compared to the prevalence of hypertension nationally.

Various attempts have been made to control hypertension, but the prevalence of hypertension is still high, and many clients obtained with various comorbidities hypertension or other complications. National program efforts have been made to control hypertension still leads to preventive measures (prevention) and early detection of cases of hypertension, namely through the examination of blood pressure in the population aged over 15 years through an integrated coaching post activities (POSBINDU) (Widodo & Husniah, 2019). It is closely associated with various causes are interrelated among them a lack of understanding and their wrong perceptions

about hypertension, lack of awareness and willingness of individuals and families to care for hypertensive clients (Setyawan, 2019). The absence of efforts by local government programs to support the care of hypertension clients in the family and approach that can increase the participation of individuals and families in the care of hypertension clients is also the basic of this research.

**2. METHODS**

This study used a quasi-experimental design through a Non-Randomized Control Group Pre-test Post-test design approach. Sampling by purposive sampling and divided into 2 groups, namely 60 respondents of hypertension clients and families as intervention groups and 60 respondents of hypertension clients and families as control groups.

**3. RESULTS**

The independent variable is family assistance and the dependent variable is PENSIKU (knowledge, attitude and behavior) of clients and families in treating hypertension. The instrument used in this study was the PENSIKU questionnaire.

The model intervention was given for 8 weeks divided into 4 Weeks of Mentoring and 4 Weeks of Independent. Mentoring is carried out once a week. Data collection was carried out before and after the model intervention. Equality analysis before intervention and control group models was performed with an independent t-test with  $\alpha = 0.05$ . To determine the change in the average value of the intervention and control groups using the dependent t test. This study has the signature of approval of each respondent in inform consent.

**Table 1.** Characteristics of Respondents

Characteristic	Category	Intervention		Control		Total	Sig
		N	%	N	%		
Sex	Female	52	55.9	41	44.1	93 (77.5)	0.707
	Male	8	29.6	19	70.4		
Education level	Elementary	4	33.3	8	66.7	12 (10.0)	0.775
	Junior High	22	52.4	20	47.6	42 (35.0)	
	Senior High	34	57.6	25	42.4	59 (49.2)	
	College	0	0	7	100	7 (5.8)	
Characteristic		Intervention		Control			Sig
		Mean	SD	Mean	SD		
Age		45,08	5,47	45,66	4,70		0,341
long known hypertension		3,93	2,55	2,28	1,71		0,042

Table 1 shows that the sex of hypertensive respondents is mostly female as much as 77.57% and the two groups are equivalent (p-value: 0.707). Nearly half of the hypertension patient's education level had high school education, as much as 49.2% and the two groups were equivalent (p-value: 0.775).

Based on age, it was shown that in the intervention group the average age was

45.08 and the control group was 45.66, the results of the analysis showed that the two groups were equivalent (p-value: 0.341). Based on the length of time they knew about hypertension, the average intervention group was 3.93 years, the control group was 2.55 and the results of the analysis showed that the two groups were not equal (p-value: 0.042).

**Table 2.** PENSIKU (Knowledge, Attitudes, Behaviour) of Hypertensive Clients

Variable	Group	n	PRE		POST		Diff. Mean	p-value	Effectiveness (%)
			Mean	SD	Mean	SD			
Know ledge	Interv.	60	79.6	6.9	86.7	7.3	<b>7.1</b>	0.001	<b>7.1</b>
	control	60	81.4	9.1	81.0	8.8	<b>-0.4</b>	0.347	
Attitudes	Interv.	60	79.5	6.3	83.4	7.8	<b>3.8</b>	0.001	<b>3.8</b>
	control	60	78,1	6.9	78.9	8.2	<b>0.8</b>	0.007	
Behavior	Interv.	60	80.2	7.7	86.1	7.5	<b>5.9</b>	0.001	<b>5.9</b>
	control	60	77.4	9.0	77.9	8.6	<b>0.5</b>	0.030	

Table 2 shows that respondent's knowledge of hypertension increased by 7.1 significantly after the intervention model and was significantly different (p-value: 0.001). The control group showed a decrease of 0.4 after the intervention model and there was no difference (p-value: 0.347). The effectiveness of the model on increasing the knowledge of clients with hypertension was 7.1%.

The attitude of respondents with hypertension increased by 3.8 significantly after the intervention model and it was significantly different (p-value: 0.001). In the

control group, it increased by 0.8 and was significantly different (p-value: 0.007). The effectiveness of the model on increasing the attitude of clients with hypertension was 3.8%.

The behavior of hypertensive respondents increased significantly by 5.9 after the intervention model and was significantly different (p-value: 0.001). In the control group, it increased by 0.5 after the intervention model and was significantly different (p-value: 0.030). The effectiveness of the model to increase the behavior of clients with hypertension was 5.9%.

**Table 3.** PENSIKU (Knowledge, Attitudes, Behaviour) of Family with Hypertension

Variable	Group	n	PRE		POST		Diff. Mean	p-value	Effectiveness (%)
			Mean	SD	Mean	SD			
Knowledge	Interv.	60	76.6	4.9	82.4	6.2	<b>5.8</b>	0.001	<b>5.8</b>
	control	60	76.8	7.3	78.7	8.4	1.8	0.001	
Attitudes	Interv.	60	76.6	4.7	81.9	6.3	<b>5.3</b>	0.001	<b>5.3</b>
	control	60	78.4	8.7	79.9	8.7	1.4	0.001	
Behavior	Interv.	60	75.4	5.1	80.4	5.9	<b>5.0</b>	0.001	<b>5.0</b>
	control	60	77.6	10.0	78.6	9.9	1	0.018	

Table 3 shows that there was a significant increase of 5.8 and significantly different before and after the intervention model (p-value: 0.001), in the control group there was an increase of 1.8 and it was significantly different (p-value: 0.001). The effectiveness of the model on increasing the knowledge of hypertensive client families is 5.8%.

Family attitudes increased significantly by 5.3 and there was a difference (p-value: 0.001), in the control group there was a significant increase of 1.4 and there was a difference (p-value: 0.001). The effectiveness of the model on improving family attitudes is 5.3%.

Family behavior increased significantly by 5.0 and there were differences before and after the model intervention (p-value: 0.001), in the control group there was a significant increase of 1.0 and there was a difference (p-value: 0.018). The effectiveness of the model on improving the

behavior of hypertensive client families by 5%.

#### 4. DISCUSSION

Providing model intervention for 8 weeks with visits every week through a learning process with mentoring, namely through providing health education, coaching, and counseling, as well as independent learning from workbooks, modules, leaflets, and hypertension flyers, can improve knowledge, attitudes, and behavior of clients and families in caring hypertension.

This is in accordance with the research of Babakal Abram et al (2014) which explains that there is an effect of providing health education (Brownstein et al., 2017) on knowledge of hypertensive clients' behavior, where before counseling, clients have knowledge of poor behavior (56%) and after being given health counseling clients have knowledge of good behavior (100%). Research by Rizanti (2023) explains that the

Health Coaching management given to hypertensive patients is able to increase client knowledge of hypertension and be able to reduce blood pressure both systole and diastole (Rizanti, 2023). Another study also explained that after treatment (intervention) increased knowledge was obtained and there was an effect of health education through audiovisual media on changes in the behaviour of hypertensive patients in preventing stroke at UPT Kesmas Sukawati II (Pramana, 2019).

Previous research on health coaching in families also showed positive results after its implementation; health coaching to improve healthy living behavior, including increasing the patient's physical activity, motivates patients to change their daily behavior for the better (Israfil, 2018). Health coaching also can be used as an effort for clients' and families' health management process and decision-making (Stacey, 2013). So, it can be concluded that the guidance carried out by involving family members in its implementation has a better impact on controlling blood pressure and improving the patient's lifestyle.

## **5. CONCLUSION**

The family independent nursing model with hypertensive clients is effective in

increasing the PENSIKU (knowledge, attitudes, and behavior) of clients and families in treating hypertension. So this model is very suitable to be applied in other villages and all of the Mojokerto regency.

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## **AUTHOR CONTRIBUTIONS**

Substantial contributions to conception, data collection, data analysis, and writing: Faisal Ibnu, Imam Zainuri, Rina Nur Hidayati, Indra Yulianti, and Abdillah Fatkhul Wahab. Drafting or revising the article critically for important intellectual content: Faisal Ibnu.

## **CONFLICT OF INTEREST**

The author declares that there is no conflict in the preparation of this article.

## **DATA AVAILABILITY STATEMENT**

The data are not publicly available due to privacy or ethical restrictions.



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