

FACTORS RELATED TO THE IMPLEMENTATION OF THE COMPLIANCE PROGRAM IN HYPERTENSION PATIENTS AT THE SUKADIRI COMMUNITY HEALTH CENTER IN 2023

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ABSTRACT

One of the global targets in controlling non-communicable diseases (NCDs) is to reduce the prevalence of hypertension by 33% from 2010 to 2030. The Indonesian Ministry of Health held a healthy living community movement program (GERMAS) which was implemented one of them in the PATUH Program with 5 indicators. However, the implementation of the PATUH program for hypertension patients at the Sukadiri Health Center is unknown, because there is no monitoring related to the implementation of the PATUH program. The purpose of this study was to determine the factors associated with the implementation of the PATUH program for hypertension patients at the Sukadiri Health Center in 2023. This study was conducted at the Sukadiri Health Center, Tangerang Regency. The process of collecting data was carried out by interview using a questionnaire in April - May 2023. This type of research is quantitative (analytical observational) using a cross sectional study design with purposive sampling technique. The population was all hypertensive patients in the Sukadiri Health Center working area and the research sample was 134 hypertensive patients who met the inclusion criteria. Data were analyzed univariately and bivariate using the chi-square test. The results of the bivariate test showed the variables of age (pvalue = 0.378), gender (pvalue = 0.701), education (pvalue = 0.071), occupation (pvalue = 1.000), income (pvalue = 0.031), family support (pvalue = 0.006), access to health services (pvalue = 0.841), health literacy (pvalue = 0.008) and knowledge (pvalue = 0.120). Variables that are significantly associated with the implementation of the PATUH program are income, family support and health literacy

Keywords: Program Compliance; Hypertension; Hypertension Control

INTRODUCTION

Hypertension is one of the non-communicable diseases (NCDs) that is quite serious in terms of health problems, and is the main cause of death in the world.(Maulidina et al., 2019). Data from the World Health Organization (WHO) over the past thirty years, the number of adults aged 30-79 worldwide who suffer from hypertension has reached 1.28 billion.(WHO, 2021b)The problem of hypertension continues to increase significantly every year. By 2025, the number of people suffering from hypertension worldwide is estimated to reach 1.5 billion.(Ministry of Health of the Republic of Indonesia, 2019a)According to the 2018 Basic Health Research, the prevalence of hypertension in Indonesia among those aged 18 and over was 34.1%. Meanwhile, the prevalence of hypertension sufferers who did not take their medication regularly was 32.27%.(Ministry of Health of the Republic of Indonesia, 2019b)This can illustrate that many hypertension sufferers are still not compliant in controlling their hypertension.

The global target in controlling NCDs is to reduce the prevalence of hypertension cases by 33% between 2010 and 2030.(WHO, 2021a). In an effort to control hypertension in Indonesia, the Indonesian

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Ministry of Health is promoting the Healthy Living Community Movement (GERMAS), one of which is implemented in the form of the PATUH program. The PATUH program is a movement intended for people with NCDs, especially hypertension, as an effort to control blood pressure. PATUH is an abbreviation that has 5 indicators, namely P = check your health regularly and follow the doctor's recommendations, A = treat the disease with appropriate and regular treatment, T = maintain a balanced diet, U = strive for safe physical activity, H = avoid cigarette smoke, alcohol, and other carcinogenic substances (Ministry of Health of the Republic of Indonesia, 2018).

Problems with the implementation of the PATUH program are still found among people with hypertension. A 2018 study by Mayasari et al. found that 62.4% of people with hypertension did not undergo regular health checks. (Mayasari et al., 2018). The results of research by Susanto et al in 2016 found that 51.9% of hypertension sufferers were not compliant in taking antihypertensive medication. (Susanto et al., 2018). In addition, Prihandana et al. in 2020 found that as many as 58.8% of hypertension sufferers did not comply with the hypertension diet. (Prihandana et al., 2020) Meanwhile, research by Laura et al. in 2022 found that 41.67% of hypertension sufferers rarely engage in physical activity. (Laura et al., 2022). In addition, research by Memah et al. in 2019 found that 59.4% of hypertension sufferers still had smoking habits and 64.1% had alcohol consumption habits. (Memah et al., 2019). Based on this, it is known that there are still many hypertension sufferers who have not implemented the PATUH program with 5 indicators as an effort to control their disease.

Tangerang Regency is one of the regencies/cities with the highest number of hypertension cases, at 40.3%. (Banten Provincial Health Office, 2021) Sukadiri Community Health Center is one of the community health centers in Tangerang Regency. Hypertension at Sukadiri Community Health Center remains a health problem. This is because hypertension is the second-ranked disease out of the ten highest diseases at 27%. Based on the results of interviews with health workers, Sukadiri Community Health Center has conducted health education related to the PATUH program and held regular Posbindu and PTM posts every month to reach hypertension sufferers who cannot come directly to the community health center. However, in reality, there are still many hypertension sufferers who do not regularly check at the community health center. In addition, the implementation of the PATUH program for hypertension sufferers at Sukadiri Community Health Center is not yet known in its entirety, because no monitoring related to the implementation of the PATUH program. Therefore, researchers want to determine the factors related to the implementation of the PATUH program for hypertension sufferers at Sukadiri Community Health Center in 2023.

RESEARCH METHOD

Types of research

This research is a quantitative research (analytical observational) with a cross-sectional design approach..

Location and Time of Research

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This research was conducted in the working area of Sukadiri Community Health Center, Tangerang Regency and the data collection time was May – April 2023.

Population and Sample

The population in this study was all hypertension sufferers in the Sukadiri Community Health Center work area. The sampling technique used non-probability sampling with purposive sampling. The sample was hypertension sufferers registered at the Sukadiri Community Health Center and met the inclusion criteria, namely hypertension sufferers aged >18 years, have had or are currently suffering from hypertension and are recorded in the Sukadiri Community Health Center medical records, visited the Sukadiri Community Health Center during the study period, and participated in Posbindu and Pos PTM activities during the study period, totaling 134.

Data collection

This research complies with ethical approval number 03/23.02/02293. The data used are primary. The independent variables are age, gender, education, occupation, income, family support, access to health services, health literacy, and knowledge. The dependent variable is the implementation of the PATUH program.

Data collection was conducted through interviews using a questionnaire. The PATUH program questionnaire contains 11 questions adopted from the Indonesian Ministry of Health regarding 5 PATUH indicators, with a Cronbach's Alpha statistical test result of 0.710. These questions relate to regular health checks, regular medication intake, a balanced diet, safe physical activity, and avoiding cigarette smoke and alcohol. (Ministry of Health of the Republic of Indonesia, 2018).

Respondent characteristics consist of questions about age, gender, education level, employment status, and household income based on the Tangerang Regency Minimum Wage. Family support and knowledge variables are associated with the PATUH program and Cronbach's Alpha values are 0.730 and 0.720, respectively. In addition, access to health services is measured based on distance, ease of transportation, and road conditions to health service facilities with a Cronbach's Alpha value of 0.752. Meanwhile, health literacy variables are measured using The HLS19-Q12 Instrument to measure General Health Literacy which consists of 12 questions with a Cronbach's Alpha value of 0.86.

Data Processing and Analysis

The results of the data analysis are presented in tabular form. Univariate analysis was conducted to determine the frequency distribution of respondents for each variable. Next, bivariate analysis was conducted to examine the relationship between the independent and dependent variables using the chi-square test with a 95% confidence interval.

RESULTS AND DISCUSSION

Distribution of respondents based on characteristics (age, gender, education, occupation and income), family support, access to health services, health literacy and knowledge can be seen in the following table.

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Table 1. Frequency DistributionBased on Univariate Analysis Results (n=134)

Variables	n	Percentage (%)
Age		
< 55 Years	57	42.5
≥ 55 Years	77	57.5
Gender		
Man	22	16.4
Woman	112	83.6
Education		
Tall	10	7.5
Low	124	92.5
Work		
Work	42	31.3
Doesn't work	92	68.7
Income		
≥UMR Rp 4,527,688, 52	13	9.7
<UMR Rp 4,527,688, 52	121	90.3
Family Support		
High Support	33	24.6
Low Support	101	75.4
Access to Health Services		
Affordable	78	58.2
Hard to Reach	56	41.8
Health Literacy		
Enough	34	25.4
Not enough	100	74.6
Knowledge		

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Variables	n	Percentage (%)
Good Knowledge	40	29.9
Poor Knowledge	94	70.1

Table 1 shows that the majority of respondents were aged 55 years (57.5%), female (83.6%), had low education (92.5%), were unemployed (68.7%), had household income <UMR (90.3%), had low family support (75.4%), had access to affordable health services (58.2%), had insufficient health literacy (74.6%), and had poor knowledge (70.1%).

Table 2. Implementation of the PATUH Program in Hypertension Patients (n=134)

Implementation of the PATUH Program	n	Percentage (%)
Implemented	14	10.4
Not implemented	120	89.6

Based on Table 2, the majority of respondents, at 89.6%, did not implement the PATUH Program with 5 indicators. Meanwhile, 10.4% of respondents implemented the PATUH Program with 5 indicators.

Table 3. Implementation of 5 PATUH Program Indicators (n=134)

5 Compliance Indicators	n	%
Check Your Health Regularly		
Yes	97	72.4
No	37	27.6
Treat Diseases with Proper and Regular Treatment		
Yes	97	72.4
No	37	27.6
Maintain a balanced diet		
Yes	18	13.4
No	116	86.6
Strive for Safe Physical Activity		
Yes	128	95.5
No	6	4.5
Avoid Cigarette Smoke and Alcohol		

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5 Compliance Indicators	n	%
Yes	115	85.8
No	19	14.2

Table 4 shows that 72.4% of respondents received regular health check-ups and 72.4% received appropriate and regular medication. Meanwhile, 13.4% (18 respondents) followed a balanced diet. Furthermore, 95.5% of respondents engaged in safe physical activity, and 85.8% avoided cigarette smoke and alcohol.

Table 4. Results of Bivariate Analysis of Chi Square Test

Factors	Implementation of the PATUH Program				Total		Prevalence Ratio (95% CI: Lower-Upper)	P-value
	Implemented		Not Implemented					
	n	%	n	%	n	%		
Age								
< 55 Years	8	14	49	86.0	57	100	1,801 (95% CI: 0.662-4.904)	0.378
≥ 55 Years	6	7.8	71	92.2	77	100		
Gender								
Man	3	13.6	19	86.4	22	100	1,388 (95% CI: 0.422-4.573)	0.701
Woman	11	9.8	101	90.2	112	100		
Education								
Tall	3	30	7	70	10	100	3,382 (95% CI: 1.123-10.181)	0.071
Low	11	8.9	113	91.1	124	100		
Work								
Work	4	9.5	38	90.5	42	100	0.876 (95% CI: 0.291-2.634)	1,000
Doesn't work	10	10.9	82	89.1	92	100		
Income								
≥ Minimum Wage	4	30.8	9	69.2	13	100	3,723 (95% CI: 1,358-10,208)	0.031
< Minimum Wage	10	8.3	111	91.7	121	100		
Family Support								
High Support	8	24.2	25	75.8	33	100	4,081 (95% CI: 1,527-10,904)	0.006
Low Support	6	5.9	95	94.1	101	100		
Access to Health Services								
Affordable	9	11.5	69	88.5	78	100		0.841

Factors	Implementation of the PATUH Program				Total		Prevalence Ratio (95% CI: Lower-Upper)	P-value
	Implemented		Not Implemented					
	n	%	n	%	n	%		
Hard to Reach	5	8.9	51	91.1	56	100	1.292 (95% CI: 0.458-3.649)	
Health Literacy								
Enough	8	23.5	26	76.5	34	100	3,922 (95% CI: 1,465-10,495)	0.008
Not enough	6	6	94	94	100	100		
Knowledge								
Good	7	17.5	33	82.5	40	100	2,350 (95% CI: 0.882-6.262)	0.120
Not good	7	7.4	87	92.6	94	100		

Table 4 shows that the majority of respondents who implemented the PATUH program were in the age group <55 years (14%), male gender (13.6%), had higher education (30%), were unemployed (10.9%), had household income $\geq$ UMR (30.8%), had high family support (24.2%), had access to affordable health services (11.5%), had sufficient health literacy (23.5%), and were in the good knowledge group (17.5%). Table 4 also shows that the variables related to the implementation of the PATUH program were income (p -value = 0.031 and PR = 3.723), family support (p -value= 0.006 and PR = 4.081), and health literacy (p -value = 0.008 and PR = 3.922). Meanwhile, what is not related to the implementation of the PATUH program is age (p -value= 0.378 and PR =1,801), gender (p -value= 0.701 and PR = 1.388), education (p -value= 0.071 and PR = 3.382), work (p -value= 1,000 and PR = 0.876), access to health services (p -value= 0.841 and PR = 1.292), and knowledge (p -value= 0.120 and PR = 2.350).

The implementation of the PATUH program with 5 indicators at Sukadiri Community Health Center was only 10.4%. This study aligns with the research by Safitri et al. (2020) that only 29.6% implemented the PATUH program.(Safitri et al., 2019)This may indicate that not many hypertension sufferers have implemented the PATUH program as an effort to control their disease.

If we look at it in detail, more than 50% of respondents have implemented the 4 PATUH indicators.Meanwhile, another indicator, "Staying on a balanced diet," was only 13.4%. This is because the majority of respondents still consume insufficient fruits and vegetables and still consume high-fat foods, such as fried foods. Diet adherence for people with hypertension is a particular challenge when they have to follow a regular diet for a long period of time. This presents a significant challenge for those with hypertension.(Anisa & Bahri, 2017).

The Relationship Between Age and the Implementation of the PATUH Program

Age was not significantly associated with the implementation of the PATUH program (p -value 0.378). The results of this study are consistent with several previous studies.(Ambaw et al., 2013; Sari et al., 2023)This shows that neither young age, adults, nor the elderly have any influence on implementing the PATUH program as a self-care effort to control hypertension.

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Some respondents in the study were under 55 years old, who were considered to have ample time to improve their self-care skills for hypertension. Meanwhile, those aged 55 and above were considered less independent in hypertension self-care. Elderly individuals struggle with adhering to recommended diets, routinely checking their blood pressure, and taking medication regularly. Furthermore, physical weakness is a factor in older adults spending more time at home and not visiting healthcare facilities for check-ups.(Sakinah et al., 2020).

The Relationship Between Gender and the Implementation of the PATUH Program

Gender was not significantly associated with the implementation of the PATUH program (p-value 0.701). Consistent research results were also found in several other studies.(Handayani et al., 2019; Sakinah et al., 2020).

According to Logen (2015) in Fauziah (2021), female respondents use health services more often than men.(Fauziah, 2021)However, currently women do not always have time to come to the community health center because they work or have other activities.(Handayani et al., 2019)This shows that both men and women should have the same awareness in maintaining their health, especially regarding self-care for hypertension.(Tambuwunet al., 2021)

The Relationship Between Education and the Implementation of the PATUH Program

Education was not significantly related to the implementation of the PATUH program (p-value 0.071). The results of this study are also consistent with several other studies.(Sailan et al., 2021; Tambuwun et al., 2021)This shows that both people with low or high education have the same desire to recover from their illness.(Handayani et al., 2019).

This may be due to the fact that acquiring knowledge isn't limited to education or school. In this modern era, access to information is easier. People can gain knowledge from various sources, such as social media, mass media, posters, friends, close family, manuals, healthcare professionals, and so on.(Idu et al., 2022).

Relationship between Work and the Implementation of the PATUH Program

Occupation was not significantly related to the implementation of the PATUH program (p-value 1.000). The results of this study are in line with several other studies.(Handayani et al., 2019; Idrus et al., 2021).

Notoatmodjo (2010) in Handayani (2019) stated that employed people do not have much time to go to health care facilities. Meanwhile, unemployed people tend to be more compliant with their treatment and antihypertensive medication. Nevertheless, both employed and unemployed respondents can make decisions to maintain their health, especially regarding controlling hypertension.(Handayani et al., 2019).

The Relationship Between Income and the Implementation of the PATUH Program

This study shows a significant relationship between household income and the implementation of the PATUH program (p-value 0.031). Similar results have also been found in several other studies.(Sabrina et al., 2015; Wiliyanarti et al., 2019). This study also found that hypertension sufferers

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who have a household income $\geq$ UMR have a 3,723 times greater chance of implementing the PATUH program (95% CI: 1,358-10,208) compared to those with a household income $<$ UMR.

Financing is a crucial factor in supporting self-care efforts for health. Currently, the government provides healthcare financing through the Healthy Indonesia Card (KIS), specifically for those experiencing financial hardship.(Sakinah et al., 2020)However, when someone has sufficient or even higher income, they will pay more attention to their health. Implementing the PATUH program actually requires costs such as regular health check-ups, purchasing medication, visiting healthcare facilities, and paying attention to additional food intake, such as fruits and vegetables. It can be concluded that income is one of the determining factors in someone's implementation of the PATUH program.

The majority of respondents in this study had low incomes, namely $<$ UMR of Rp 4,527,688.52. This household income is related to the primary occupation in a household, where in general, people in the Sukadiri Community Health Center work area earn a living as farmers and fishermen. Therefore, the average household income is considered low.

The Relationship Between Family Support and the Implementation of the PATUH Program

In this study, family support was significantly associated with the implementation of the PATUH program (p-value 0.006). These findings are supported by several previous studies.(Lestari et al., 2022; Saraswati et al., 2018)This study also revealed that hypertension sufferers who have high family support are 4,081 times more likely to implement the PATUH program (95% CI: 1,527-10,904), compared to those with low family support.

The greater the support provided by the family, the better the hypertension sufferer will be able to implement the PATUH program. A family that is always supportive and by their side will increase a person's self-confidence and motivate them to recover from their illness.(Lestari et al., 2022).

The Relationship Between Access to Health Services and the Implementation of the PATUH Program

Access to health services was not significantly associated with the implementation of the PATUH program (p-value 0.841). This research is consistent with several other studies.(Lestari et al., 2022; Pratiwi et al., 2020).

Access to healthcare services isn't the only factor influencing hypertension patients' adherence to the PATUH program. Only two PATUH indicators require healthcare facilities: regular health check-ups and appropriate and regular medication. The other three indicators can be implemented anywhere: maintaining a balanced diet, engaging in safe physical activity, and avoiding cigarette smoke and alcohol.

The Relationship Between Health Literacy and the Implementation of the PATUH Program

This study shows that health literacy is associated with the implementation of the PATUH program (p-value 0.008). Similar results have also been demonstrated by several other studies.(Fatmawati et al., 2021; Rasmilasary, 2021). In addition, this study also shows that hypertension sufferers who have sufficient health literacy are 3.922 times more likely to implement the PATUH

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program (95% CI: 1.465-10.495), compared to hypertension sufferers who have insufficient health literacy.

A low level of health literacy can result in someone having difficulty finding, using and implementing self-care which will affect health outcomes.(Sahroni et al., 2019) Respondents with inadequate health literacy were more likely to be older and have difficulty managing their illnesses. Nevertheless, health literacy is crucial in determining the health behaviors a person will choose to improve their health.(Fatmawati et al., 2021).

The Relationship Between Knowledge and the Implementation of the PATUH Program

Knowledge was not significantly associated with the implementation of the PATUH program (p-value 0.120). Consistent research findings were also found in several previous studies.(Farida et al., 2021; Setiarini, 2018).

This study showed that respondents with poor knowledge mostly believed that reducing salty food consumption was unnecessary for those with hypertension. Furthermore, having good knowledge did not guarantee that someone would engage in healthy behaviors such as implementing the PATUH program. Good knowledge will shape healthy behaviors, especially if there is a high awareness of the importance of health and self-management of one's illness.(Saraswati et al., 2018)

CONCLUSIONS

The implementation of the PATUH Program at Sukadiri Community Health Center was 10.4%. Respondents were mostly aged ≥ 55 years (57.5%), female (83.6%), had low education (92.5%), unemployed (68.7%), had household income $\leq$ UMR (90.3%), had low family support (58.2%), had access to affordable health services (58.2%), had insufficient health literacy (74.6%), and had poor knowledge (70.1%). Factors related to the implementation of the PATUH program were income (p-value 0.031), family support (p-value 0.006), and health literacy (p-value 0.008). Meanwhile, factors that are not related to the implementation of the PATUH program are age (p-value 0.378), gender (p-value 0.701), education (p-value 0.071), occupation (p-value 1.000), access to health services (p-value 0.841), and knowledge (p-value 0.120).

It is hoped that the Sukadiri Community Health Center can improve health literacy through a promotional program by providing a pocket book on hypertension control with the 5 PATUH indicators to hypertension sufferers. Furthermore, future researchers can use variables not studied at the Sukadiri Community Health Center, such as the role of health workers, health insurance ownership, etc. They can also use different research designs, such as cohort studies, to explain the relationship between cause and effect.

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