

## The Effect of Counseling on Hypertension Patient Compliance At La Temmamala Hospital, Soppeng Regency

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**ABSTRACT:** Counseling services from pharmacists provide education about how to take medication, the amount and consistency in taking medication for patients in the hope that the patient will comply with the treatment or therapy they are undergoing. One thing that influences patient compliance is the level of patient knowledge that can be obtained from counseling. The aim of this study was to determine the level of compliance of hypertensive patients at La Temmamala Regional Hospital, Soppeng Regency with the counseling provided. This research used a sample of 59 respondents. With this type of research, one group pre-test and post-test design. The pretest was carried out on respondents who were then given treatment in the form of intervention, namely counseling. The posttest is carried out when taking the next drug. The research results showed an increase in the level of compliance after providing counseling. Statistical analysis using the Wilcoxon test showed that there was a significant influence ( $p=0.00001$ ) between the pretest and posttest scores. Pretest data for patients with a low level of compliance was 89.84%, moderate compliance was 10.16%. Posttest data for patients with moderate levels of compliance was 54.24% and high compliance was 45.76%.

**KEYWORDS:** Counseling, Compliance, Hypertensive, La Temmamala Soppeng Regional Hospital.

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### INTRODUCTION

Hypertension is a health problem because hypertension is a risk factor for diseases such as heart failure, diabetes mellitus and stroke (Maulia, Hengky, & Muin, 2021). Hypertension or better known as high blood pressure is a chronic disease caused by excessive and almost unstable blood pressure in the arteries, which has the potential to reduce a person's quality of life because it can damage vital organs (Lukitaningtyas, D. 2023). Blood pressure for hypertensive people is 140/90 mmHg, namely the systolic phase of 140 mmHg indicates the blood phase when the heart contracts and the diastolic phase of 90 mmHg indicates the phase of blood returning to the heart (Wati et al., 2023).

Hypertension often causes complications such as stroke, heart disease and kidney failure. These complications occur because hypertension sufferers do not receive adequate treatment for their disease. The aim of treating hypertension is so that the patient can maintain blood pressure in a controlled condition, where undergoing this treatment requires patient compliance. Patient compliance is one of the determining factors in the success of treatment for hypertension sufferers. One thing that influences patient compliance is the patient's level of knowledge which can be obtained from counseling from the pharmacist.

The chemist's consulting service offers education on pharmaceutical administration, including instructions on dosage, frequency, and adherence, with the aim of ensuring that the patient complies with the prescribed treatment or therapy. A study conducted by Tamba (2022) examined the impact of drug counselling on the compliance of hypertension patients in hospitals in Medan City. The findings indicate a notable influence of drug counselling on the adherence of high blood pressure patients in outpatient treatment (Tamba et al., 2022). Resha (2019) conducted a study that demonstrated the efficacy of counselling in enhancing medication adherence among combination hypertension patients by 6.18%. Additionally, counselling was found to reduce systolic values by 15.93% and diastolic values by 5.5% ( $p = 0.0001$ ).

Soppeng district is characterised by a significant prevalence of hypertensive individuals. According to health service data, hypertension is the most prevalent disease in the Soppeng district in 2022, with a total of 17,353 cases. In the Latemmamala Regional Hospital district of Soppengu, there are an average of 141 visits per month by patients with hypertension.

### METHODS

#### Location and Research Time

This research was carried out at the Pharmacy Installation of La Temmamala Regional Hospital, Soppeng Regency.

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## Population and sample

### 1. Population

The population in this study were patients at the La Temmamala Regional Hospital Pharmacy Installation, Soppeng Regency.

### 2. Sample

Samples were taken from outpatients who used oral antihypertensives as hypertension treatment therapy at La Temmamala Regional Hospital who met the inclusion and exclusion criteria.

The number of samples was calculated based on the equation.

$$n = \frac{N}{1 + Ne^2}$$

$$n = \frac{141}{1 + 141 (0,1)^2}$$

$$n = \frac{141}{2,41}$$

n = 58,50 sample (bullet to 59 respondents)

Description:

n = The number of samples

N = The number of population

e = Error tolerance 10% (0,10)

### a. Inclusion criteria

1. Patients diagnosed with hypertension by a doctor.
2. Hypertensive patients aged > 17 years
3. Hypertensive patients who are willing to become respondents
4. Patients who can communicate well (can read and write)

### b. Exclusion criteria

1. Hypertensive patients with comorbidities, such as kidney disease and stroke.
2. Patients who refused became respondents.

## Instrument and Materials

The study utilised two instruments: a demographic data questionnaire for hypertension patients at La Temmamala Regional Hospital area of Soppeng Sulawesi South, and a drug compliance questionnaire based on the MMAS-8 (Morisky Medication Adherence Scale). The resources utilised consist of data acquired through the administration of questionnaires to participants.

## Data Analysis

The research data obtained were analyzed using the Wilcoxon Test to determine the effect of counseling on patient compliance. The data obtained was then described in percentage form, the data was then analyzed descriptively and presented in table form. A questionnaire score <6 indicates low compliance, 6 to <8 indicates moderate compliance, and 8 indicates high compliance.

## RESULTS AND DISCUSSION

Discussion of this research at La Temmamala Regional Hospital, Soppeng Regency, respondent data in the research was obtained from data on questionnaires filled out by respondents. Researchers asked for the consent of hypertensive patients who met the inclusion and exclusion criteria by signing an agreement to become respondents. After signing the informed consent, respondents filled out a questionnaire and were then given counseling about compliance in taking medication by a pharmacist. A month later, the same respondents, totaling 59 people, were asked to fill out a posttest questionnaire. The data obtained from the research were the characteristics of the respondents, namely age, gender, education, occupation. The results of the comparison of levels of compliance in the pretest and posttest were also obtained, as well as the influence of counseling on hypertension patient compliance as seen from the pretest and posttest scores.

### Karakteristik Responden (Respondent Characteristics)

Characteristics of respondents in this study obtained information regarding age, gender, education and occupation.

Table 1. Characteristics of Respondents Based on Age

Age (year)	Frequency (n)	Percentage (%)
23-49	Low 8	13.6
50-69	High 38	64.6
≥ 70	Moderate 13	22.1

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According to the data in table 1, the largest group of respondents fell within the age range of 50-59 years (38 individuals or 64.6%), followed by respondents who were 70 years old or older (13 individuals or 22.1%). Faisal's (2022) earlier research has established a notable association between age and the occurrence of high blood pressure, indicating that age is a substantial risk factor for hypertension. As a person gets older, their blood pressure tends to increase. Once an individual reaches the age of 40, they are prone to undergoing degenerative processes, characterised by the accumulation of collagen on the muscle layer, leading to the thickening of artery walls. This situation will result in vasoconstriction of the legs and blood arteries, leading to reduced blood flow to the extremities. As a result, the heart is compelled to exert more effort than usual. (Amanda & Martini, 2018). According to a study conducted by Widjaya et al. (2019), those who are over 59 years old are 2.61 times more likely to have hypertension compared to those who are under 59 years old. One of the primary factors contributing to physiological changes in the body is ageing. These changes include the buildup of collagen in the muscle layer, leading to the thickening of the uterine wall, as well as the narrowing and hardening of blood vessels after reaching the age of 45. As stated by Faisal (2022), as individuals age, their capacity to absorb knowledge diminishes, leading to potential challenges in adhering to drug regimens. This might manifest as forgetfulness, dosage reduction, or non-compliance with prescribed guidelines.

**Table 2. Characteristics of Respondents Based on Gender**

Gender		Frequency	Percentage (%)	Valid Percent	Cumulative Percent
Valid	Man	19	32.2	32.2	32.2
	Woman	40	67.8	67.8	100.0
	Total	59	100.0	100.0	

Based on gender characteristics in table 2, it shows that the majority of respondents were 40 women (67.8%) and 19 men (32.2%). This is in accordance with research by Mulyaningsih (2018) which states that women suffer from hypertension more than men, namely 67% versus 33%. This research is also in accordance with Basic Health Research in 2018 where the prevalence of hypertension in women is higher than in men. Hypertension in women is higher than in men due to hormonal factors. Women experience a decrease in the hormone estrogen after menopause. Women who have not experienced menopause are protected by the hormone estrogen which has a protective effect on the heart (Wulandari, et al., 2021).

**Table 3. Characteristics of Respondents Based on Education**

Education		Frequency	Percentage (%)	Valid Percent	Cumulative Percent
Valid	S1	28	47.5	47.5	47.5
	SMA	18	30.5	30.5	78.0
	SMP	13	22.0	22.0	100.0
	Total	59	100.0	100.0	

Based on the educational characteristics in table 3, it shows that the most recent education was Bachelor's degree (28 people or 47.5%). Education is an activity or learning process to develop or improve certain abilities so that educational targets can stand alone (Sandi, 2018). According to Tamba (2022) in his article entitled "The Effect of Medication Counseling on Hypertension Patient Compliance in One of the Hospitals in Medan City in 2022, he said that the higher a person's level of education, the better their mindset and understanding of the disease and treatment of hypertension. he is undergoing and the higher the education, the better the patient's awareness of health.

**Table 4. Characteristics of Respondents Based on Occupation**

Profession		Frequency	Percentage (%)	Valid Percent	Cumulative Percent
	housewives	18	30.5	30.5	30.5
	employee	16	27.1	27.1	57.6
	(retired)	6	10.2	10.2	67.8

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Valid					
	civil servants	4	6.8	6.8	74.6
	businessman	15	25.4	25.4	100.0
	Total	59	100.0	100.0	

Based on the job characteristics in table 4, it shows that the majority of housewives work (18 people or 30.5%) in this study. Housewives or housewives have many obligations in carrying out their work, such as taking care of the house and children. The same thing is seen in Apriliyani's (2019) research which states that stressful events related to work obligations are very likely to be experienced (Apriliyani & Ramatillah, 2019). This happens because stressful conditions can increase the activity of the sympathetic nervous system, which can gradually cause blood pressure to increase. So the higher a person's stress level, the greater the increase in blood pressure. Stress is a sign of emotional, physical fear and anxiety about environmental changes that induces the release of the stress hormone, cortisol, from the adrenal glands by physiologically releasing hormones from the hypothalamus. Hypothalamic activators can also stimulate activity in the sympathetic nervous system. Direct activation of sympathetic nerves can trigger a vasoconstrictor response in blood vessels, increasing the work of the heart to circulate blood and resulting in an increase in blood pressure. According to Saleh, et al., (2014) which shows that the higher a person's stress level, the higher the person's degree of hypertension.

**Table 5. Comparison Results of Compliance Levels in Pretest and Posttest**

Classification	Total	Pretest (%)	Total	Posttest (%)
Low	53	89.84	0	0
Moderate	6	10.16	27	54.24
High	0	0	32	45.76
Total	59	100	59	100

Based on table 5, it can be seen that during the pre-test it was found that the proportion of patient compliance levels was 53 people or 89.84% in the low category, 6 people or 10.16% in the medium category, and no respondents fell into the category tall. Furthermore, during the post test there were significant changes. This means that there is a difference in compliance in the pretest and after the posttest, namely that there were no respondents in the low category, while in the medium category there were 27 people or 54.24% and in the high category there were 32 people or 45.76%.

### NORMALITY TEST

The normality test is carried out to test whether research data is normally or not normally distributed, so that it can be seen which statistical test will be used to test the research hypothesis. In this study, the normality test used was Shapiro Wilk with a level of  $\alpha = 5\%$  to detect data normality.

It can be seen from the table that the Shapiro Wilk score on the pretest is more than 0.05, so the data is normal. Meanwhile, in the posttest the data is less than 0.05, so the data is not normal. So then the Wilcoxon Test will be carried out.

### WILCOXON TEST

Based on the table of interpretation results of the Wilcoxon Test output above, it can be seen that 59 respondents experienced an increase from pretest to posttest scores. which shows an increase in compliance before and after counseling. Counseling is a forum for pharmacists to help patients to increase patient awareness so that they comply with their medication therapy. Counseling is expected to ensure the patient's understanding, safety and effectiveness in treatment so that it influences patient compliance in undergoing treatment

Based on the "Statistical Test" Wilcoxon hypothesis test result output above, the Asymp.Sig value is known. (2-tailed) has a value of  $0.00001 < 0.05$ . Because it is less than 0.05, as is the basis for decision making in the Wilcoxon test, there is an influence between the pretest and posttest scores.

### CONCLUSIONS

Based on the research that has been conducted it can be conclude

1. Based on the conducted research, it can be inferred that counselling has a positive impact on the compliance of hypertension patients. The findings of the pretest and posttest questionnaires indicate a significant rise in patient conformance after receiving counselling ( $p=0.00001$ ).

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2. The compliance of hypertension patients in the Outpatient Pharmacy of La Temmamala Regional Hospital, Soppeng Regency was assessed using the MMAS-8 questionnaire. The results showed that 32 respondents (45.76%) had high compliance, while 27 respondents (54.24%) had moderate compliance.

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