

The Relationship Between Drug Information Services and the Level of Compliance in Hypertension Patients at Tuan Rondahaim Regional Hospital, Simalungun Regency in 2025

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Drug information services are very necessary, especially since many patients have not received adequate drug information about the drugs they are using, because incorrect use of drugs and non-compliance with taking drugs can harm patients. Patient compliance influences the success of treatment. Without patient awareness, therapy results will not be optimal, and this can even lead to treatment failure. Hypertension patients need to regularly check themselves at the hospital or independently at home periodically to monitor their condition and adjust their treatment in a timely manner for optimal healing effectiveness. Hypertension treatment aims to prevent and avoid dangerous complications. This study was descriptive with a prospective approach. In this study, the sampling technique used was nonprobability sampling with purposive sampling technique. The research instruments used were checklist sheets and questionnaires. The most respondents were in the 60-69 year age group, namely 44 respondents (44%), the most common gender classification for hypertension sufferers was female, namely 53 people (53%), the most common level of education was high school with a total of 55 people (55%), and the most common type of work was farmer with a total of 57 people (57%). Drug information services that are frequently provided are Drug Name, Dosage, How to Use and Indications, implemented 99% - 100%, Dosage Form (55%), Side effects (66%), Interactions 43%, and storage only 8%, while. Information that has not been provided is drug contraindications (0%) and drug stability (0%). The level of compliance is low with 58 respondents (58%), the level of compliance is high with 8 respondents (8%). Based on the results of the statistical test, there is a relationship using correlation, obtaining a significant value of 0.000, indicating that there is a relationship between drug information services and the level of compliance of hypertension patients.

Keywords: Drug Information Services, Hypertension Patient, Compliance

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1. Introduction

Pharmaceutical services in hospitals are an integral part of the hospital health care system, which is patient-oriented and aims to identify, prevent, and resolve drug-related problems and other health issues experienced by patients. One form of pharmaceutical service is the provision of drug information to patients (Ministry of Health of the Republic of Indonesia, 2016).

Drug information services constitute a form of pharmaceutical practice that involves direct and responsible care for patients related to pharmaceutical preparations, with the goal of achieving definite outcomes that contribute to improving patient health.

patient adherence plays an important role in the success of a treatment. Therapeutic outcomes will not reach optimal levels without the patient's own awareness and adherence. Poor adherence may lead to treatment failure and can even cause harmful complications that may ultimately become fatal.

Hypertension, or high blood pressure, is defined as a systolic blood pressure above 140 mmHg and a diastolic blood pressure above 90 mmHg on two separate measurements taken five minutes apart in a calm and rested condition. Increases in blood pressure are influenced by several risk factors, including age, sex, family history, and genetic predisposition (non-modifiable factors), as well as lifestyle behaviors such as smoking, high salt intake, saturated fat consumption, use of repeatedly heated cooking oil, alcohol consumption, obesity, physical inactivity, stress, and estrogen use (Ministry of Health of the Republic of Indonesia, 2014).

Data from the 2018 Basic Health Research (Riskesmas) reported that only 54% of individuals with hypertension take antihypertensive medications routinely. About 32.27% do not take their medication regularly, and 13.33% never take their medication at all. The most common reason for non-adherence among hypertension patients was lack of perceived need, reported by 59.8% of respondents.

Antihypertensive drugs must be taken for life with doses adjusted according to the physician's prescription. As hypertension is a chronic disease, adherence to antihypertensive therapy is crucial. Based on the explanation above, the researcher is interested in conducting a study entitled: "The Relationship Between Drug Information Services and the Level of Medication Adherence Among Hypertensive Patients at Tuan Rondahaim Regional General Hospital, Simalungun Regency, in 2025."

2. Methods

This study employed a descriptive research design with a prospective approach and utilized a total sampling technique, in which the number of samples was equivalent to the total population. Data were collected using structured questionnaires administered to hypertensive patients at Tuan Rondahaim Regional General Hospital. The dependent variable in this study was medication adherence among hypertensive patients, while the independent variable was the quality of drug information services (PIO) provided at the hospital in 2025. The study sample consisted of all patients who redeemed antihypertensive prescriptions at Tuan Rondahaim Regional General Hospital, Simalungun Regency, between May and July 2025, met the inclusion criteria, and were therefore eligible to participate. A total of 100 respondents were included in the final analysis. Medication adherence was assessed using the Morisky Medication Adherence Scale (MMAS-8), a validated instrument widely used for measuring adherence to chronic medication regimens. Prior to questionnaire administration, respondents received a clear explanation regarding the purpose of the study and the content of the instrument. Data collection was performed through self-administered questionnaires. Responses were processed and scored according to established MMAS-8 guidelines. The collected data also included several components related to patients' perceptions of pharmaceutical information services. For statistical analysis, a correlation analysis using SPSS software was employed to examine the relationship between drug information services and medication adherence among hypertensive patients. This analytical approach enabled the identification of the strength and direction of the association between the study variables.

3. Results And Discussion

Respondent Characteristics Based on Age

Table 1. Respondent Distribution by Age.

No	Age (Years)	Number of Patients	Percentage (%)
1	30–39	2	2%
2	40–49	12	12%
3	50–59	38	38%

No	Age (Years)	Number of Patients	Percentage (%)
4	60–69	44	44%
5	70–79	4	4%
Total		100	100%

Based on the study findings, the majority of hypertensive patients belonged to the 60–69 years age group, totaling 44 respondents (44%). As individuals age, arterial elasticity decreases, and the heart, blood vessels, and hormonal systems undergo natural physiological changes. These changes, combined with additional risk factors, increase the likelihood of developing hypertension.

Respondent Characteristics Based on Gender

Table 2. Respondent Distribution by Gender

No	Gender	Number of Patients	Percentage (%)
1	Male	47	47%
2	Female	53	53%
Total		100	100%

The results show that the majority of respondents were female, totaling 53 individuals (53%). According to Julius (2008), the risk of hypertension in women increases after menopause due to a decline in estrogen levels, which reduces High-Density Lipoprotein (HDL). Furthermore, psychological factors and hormonal changes, such as the reduction of estrogen and progesterone, contribute to increased blood pressure among post-menopausal women.

Respondent Characteristics Based on Educational Level

Table 3. Respondent Distribution by Educational Level

No	Education Level	Number of Patients	Percentage (%)
1	Junior High School	24	24%
2	Senior High School	55	55%
3	Diploma	6	6%
4	Bachelor’s Degree	15	15%
Total		100	100%

The data indicate that most hypertensive patients had a senior high school education (55%). A lower educational level is often associated with limited health knowledge, difficulty in understanding health information provided by healthcare workers, and slower adoption of healthy lifestyle behaviors (Anggara & Prayito, 2012).

Respondent Characteristics Based on Employment Status

Table 4. Respondent Distribution by Employment

No	Occupation	Number of Patients	Percentage (%)
1	Farmer	57	57%
2	Trader	7	7%
3	Retired	7	7%
4	State-Owned Enterprise (SOE) Worker	1	1%
5	Entrepreneur	2	2%
6	Civil Servant	18	18%
7	Housewife	6	6%
8	Driver	1	1%
9	Tailor	1	1%

No	Occupation	Number of Patients	Percentage (%)
Total		100	100%

Most respondents worked as farmers, totaling 57 individuals (57%). Riskesdas (2013) states that 25% of hypertension cases occur among farmers, partly due to occupational exposure to chemicals such as pesticides, which may contribute to elevated blood pressure.

Identification of Drug Information Service Components Provided to Hypertensive Patients

Table 5. Components of Drug Information Services

Drug Information Component	Number of Patients (n)	Percentage (%)
Drug Name	100	100%
Dosage Form	55	55%
Dosage	100	100%
Instructions for Use	100	100%
Storage Instructions	8	8%
Indications	99	99%
Contraindications	0	0%
Stability	0	0%
Side Effects	66	66%
Drug Interactions	43	43%

The findings show that drug information components most frequently provided to patients included drug name, dosage, instructions for use, and indications (99–100%). Information on dosage form (55%), side effects (66%), and drug interactions (43%) was given less consistently. Storage instructions were provided to only 8% of patients. Contraindications and stability information were not provided at all (0%). Overall, drug information services at Tuan Rondahaim Hospital were implemented, and all patients received at least some form of drug information.

Identification of Medication Adherence Levels among Hypertensive Patients

Table 6. Medication Adherence Level

Adherence Level	Number of Patients (n)	Percentage (%)
High	8	8%
Moderate	34	34%
Low	58	58%
Total	100	100%

The results show that 58% of respondents had low medication adherence, indicating that the majority of hypertensive patients had not yet followed their antihypertensive regimen consistently.

Relationship Between Drug Information Services and Medication Adherence

Table 7. Correlation Analysis

	Medication Adherence	Drug Information Services
Medication Adherence	Pearson Correlation: 1 Sig. (1-tailed): — N = 100	Pearson Correlation: 0.882** Sig. (1-tailed): 0.000 N = 100
Drug Information Services	Pearson Correlation: 0.882** Sig. (1-tailed): 0.000 N = 100	1 — N = 100

Correlation is significant at the 0.01 level (1-tailed).

Criteria:

Significant value ≥ 0.05 → No relationship

Significant value ≤ 0.05 → There is a relationship

Based on the correlation analysis, the significance value obtained was 0.000, indicating a statistically significant relationship between drug information services and medication adherence among hypertensive patients.

The Pearson correlation coefficient was 0.882, which falls within the category of very strong correlation (0.76–0.99). This means that better drug information services are strongly associated with higher medication adherence. The positive coefficient indicates a direct relationship: the more comprehensive the drug information provided, the greater the likelihood that patients will adhere to their antihypertensive therapy.

4. Conclusion

Based on the results of this study, it can be concluded that drug information services at Tuan Rondahaim Regional General Hospital were not fully implemented, as only four of the ten required components—drug name, dosage, instructions for use, and indications—were consistently provided, while other components such as dosage form, side effects, interactions, storage instructions, contraindications, and stability were delivered inadequately or not at all, largely due to high outpatient volume; medication adherence among hypertensive patients was also suboptimal, with 58% demonstrating low adherence, 34% moderate adherence, and only 8% high adherence, a condition influenced in part by the generally low educational level of respondents; furthermore, the study found a very strong positive correlation between drug information services and medication adherence, indicating that better and more comprehensive drug information provision is associated with higher levels of adherence among hypertensive patients..

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