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## Research

### Evaluation Of Medication Adherence In Patients With Hypertension



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	<b>Abstract</b>
Published on: 16 Jan 2025	<p>The World Health Organization (WHO) defines medication adherence as the degree to which an individual's behaviour in taking medication aligns with the agreed recommendations of a healthcare provider. In this study, medication adherence refers to the extent to which elderly hypertension patients comply with prescribed drug regimens. In this study, hypertensive refer to elderly patients diagnosed with hypertension and on antihypertensive treatment for at least one month at the study hospital. The study identifies five key factors influencing antihypertensive adherence among the elderly: beliefs and attitudes, therapy, socio-economic status, patient characteristics, and physician-related factor.</p> <p><b>Methods:</b> Prospective study was conducted in patients with hypertension disease in Narasaraopet. They were randomly approached by sending them the MMAS-8 scale questionnaire form to Area hospital in Narasaraopet, palnadu.</p> <p><b>Results:</b> The study included 205 patients, with the majority 88 aged over 60 years. The study demographics revealed 141 female and 64 male patients. Of these, 162 were married, and 43 were unmarried. Regarding education, 88 patients had completed primary school. Additionally, 76 patients had experienced hypertension for 2–6 years.</p> <p><b>Conclusion:</b> Adherence to antihypertensive medication is essential for effective blood pressure management in the elderly, ensuring therapeutic benefits and maintaining quality health.</p>
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	<b>Keywords:</b> Medication adherence, hypertension, socio-economics, regimens, demographics.

## INTRODUCTION

### Medication Adherence

Medication adherence, defined as the extent to which a patient's medication- taking behavior aligns with prescribed regimens, is critical determinant of therapeutic outcomes, particularly in chronic condition like hypertension.<sup>1</sup>



### **Types of medication adherence**

#### **Primary non-adherence:**

- Intentional non-adherence: A deliberate decision to not take medication as prescribed, often due to perceived side effects, cost concerns, or dissatisfaction with treatment outcomes.
- Unintentional non-adherence: Occurs inadvertently, such as forgetting to take medication or misunderstanding the dosing regimen

#### **Secondary non-adherence**

- Adverse Drug Reactions: Side effects that lead to discontinuation or reduced adherence.
- Complex Regimens: Difficult-to-follow dosing schedules or multiple medications.
- Cost-Related non-adherence: Inability to afford medication.
- Physician-Patient Communication: Poor communication between healthcare providers and patients<sup>2</sup>

### **Factors Contributing to Medication Non-Adherence**

According to the World Health Organization (WHO), barriers and factors influencing medication adherence can be categorized into the following five groups:

**Socio demographic factors:** age, ethnicity, income level, education, social status, and social support.

**Healthcare system concepts:** the patient-clinician relationship, patient-centered care, physician communication styles, quality-based reimbursement models, and therapeutic inertia

**Therapy-related factors:** selection of complex treatment regimens, frequent modifications to treatment plans, adverse effects, insufficient refill frequency, and lack of regimen consolidation.

**Condition-related factors:** impacting medication adherence include the presence of multiple comorbidities, such as depression, psychosis, substance abuse, dementia, and significant disabilities.

**Patient-related factors:** affecting medication adherence include limited understanding or knowledge, poor perception of illness severity and treatment

Efficacy, denial of diagnosis, concerns about dependence or adverse effects, and loss to follow-up.<sup>3</sup>

### **Hypertension**

Hypertension, also referred to as high blood pressure, is a medical condition marked by consistently elevated blood pressure levels beyond the normal range. It is measured in millimetres of mercury (mmHg) and is expressed as two values: systolic pressure, which measures the force during a heartbeat, and diastolic pressure, which reflects the pressure during the resting phase between heartbeats.<sup>4</sup>

It can be caused by genetic factors, obesity, metabolic factors. Genetic predisposition is indeed an important factor in the development of hypertension (high blood pressure). Research has shown that if one or both parents have hypertension, there is an increased likelihood that their children will also develop the condition. The genetic risk, hypertension is also influenced by lifestyle factors such as diet (high sodium, low potassium), physical activity, weight, alcohol consumption, and stress. In fact, managing these lifestyle factors can sometimes help individuals with a genetic predisposition to hypertension maintain normal blood pressure. Thus, while family history increases risk, it's important to focus on preventive measures, such as maintaining a healthy diet, staying active, reducing stress, and regularly monitoring blood pressure.<sup>5</sup>

Symptoms are headache, nausea, vomiting, giddiness, fatigue. Mostly occurred complications are cardiovascular problems [like Angina pectoris, myocardial infraction], kidney diseases, ophthalmic problems.<sup>6</sup>

## **MATERIAL AND METHODS**

**Study design:** The study was conducted at Area Hospital, palanadu road, Narasaraopet at six months period of time.

**Objectives:** Our primary goal is to evaluate the medication adherence in patients with hypertension. And secondary to improve the medication adherence in patients with hypertension management and evaluate the current therapy. Determine the Proportion of Non-Adherence to antihypertensive medications among patients.

**Study method:** Patient medication details were obtained from patients case sheet and required data entered in data collection forms. The data collected based on various parameters like Age, Gender, Marital status, Educational status, Duration of HTN, Frequency off hospital visit, Medication taking and using, use of Alternative method. Totally 205 patients undergo the medication adherence with hypertension by using MMAS-8 scale questionnaire form.

## RESULTS & DISCUSSION

**Table 1**

<b>Age</b>	<b>No. of Patients</b>	<b>Percentage</b>
20-40	17	8.292%
40-50	45	21.95%
50-60	55	26.83%
Above 60	88	42.92%
<b>Sex</b>		
Female	141	68.78%
Male	64	31.22%
<b>Marital Status</b>		
Married	162	79.02%
Unmarried	43	17.04%
<b>Educational Status</b>		
Literate	32	15.6%
Primary school	88	42.93%
Secondary school	22	10.73%
High school	49	23.92%
University	14	6.82%

**Table 2**

<b>Duration of HTN</b>	<b>No. of Patients</b>	<b>Percentage</b>
6-12 months	18	8.78%
2-6 years	76	37.07%
7-10 years	45	21.96%
Above 10 years	66	32.19%
<b>Frequency of follow-up visit for HTN</b>		
Once a month	144	70.25%
Once every two		
Months and over	61	29.75%
<b>Knowing the name of medication use</b>		
Knowing	151	73.65%
Not knowing	54	26.35%
<b>Frequency of medication intake</b>		
Once a day	135	65.85%
Twice a day& over	70	34.15%
<b>Status of taking medication regularly</b>		
Yes	176	85.86%
No	29	14.14%
<b>Status of alternative method</b>		
Yes	60	29.27%
No	145	70.73%

The present study included 205 patients. Based on age group the more no of patient 88 will be present in above 60 years. Based on gender. The number of female patients were 141 and male patients were 64. Based on marital status. The number of married patients were 162 and the number of unmarried patients were 43. Based on educational status. The number of patients were 88 in primary school and number of patients were 14 in university level. Based on duration of hypertension. The 76 no. of patients are suffered by the hypertension from 2-6 years. Based on frequency of follow up visit for hypertension. The 144 no. of patients were frequently follows up visited once a month with hypertension. Based on medication use. The 151 patients were known name of the medication use and 54 patients did not known use of the medication. Based on medication intake.135 patients were taken the medication once a day and 70 patients were taken medication twice a day and over.

## CONCLUSION

Adherence to anti-hypertensive medication is crucial for effective blood pressure management, especially in elderly patients, as it ensures that therapeutic benefits are achieved. Healthcare professionals need to be aware of the factors influencing medication adherence to provide the right advice and help maintain patients' health. Non-adherence can lead to worse clinical outcomes, potentially requiring more complex medication regimens and increasing healthcare costs. The rate of adherence can vary depending on the study methods, the population, and the definition of adherence used. The reasons for poor adherence and the barriers to improving it differ among patients.

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### Conflict Of Interest

Conflict of interest declared none.

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