

A Study of the Current Status of Medication Adherence, Barriers, and Coping Strategies Among Elderly Patients with Hypertension

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Abstract: Hypertension is a common chronic disease in older people. Regularly taking the necessary drugs will help control one's blood pressure and avoid serious health problems. Despite this, many older adults with high blood pressure have difficulty taking their medication properly, and thus are not properly managed or treated. The subject of this paper is older adults with hypertension in communities. Systematic reviews, questionnaires and other methods of collection will be used to find out how well this group takes their medication and why. The research has identified some reasons why people do not take their medicine in the four areas of individual traits, drug attributes, support from family and friends, and factors at medical institutions. Based on the above observations, the following specific measures will be taken to strengthen medical education, optimise drug schedules, etc. Based on the above results, management of chronic diseases for older hypertensive patients in communities can be improved, medication adherence and treatment efficacy enhanced, and further research on the prolonged use of medication by older adults with chronic illnesses will be carried out.

Keywords: hypertension in the elderly; medication adherence; influencing factors; intervention strategies; community-based chronic disease management

1. Research Background

1.1 Current Situation of Medication Adherence in Elderly Patients with Hypertension

Older adults with hypertension are generally older, have other chronic diseases, and have had trouble managing their blood pressure. Late-stage or prolonged hypertension is associated with many serious diseases and can be fatal [1]. Currently, most older hypertensive patients do not take their medications properly [2]. Some subjects have irregular drug-taking behaviour, such as forgetting to take a dose, stopping or changing the amount of medicine without consulting a doctor. Such activities can raise a person's blood pressure significantly, reduce the effectiveness of antihypertensive drugs, increase the risk of serious illnesses such as cerebral infarction, cerebral haemorrhage and coronary artery disease, and put a large financial burden on families and increase the demand for medical resources [3].

1.2 Characteristics of Medication Adherence in Community-dwelling Older Adults with Hypertension.

Generally, the level of pharmacological adherence in this group is relatively low; about 54% of the subjects have good adherence, 24.5% have moderate adherence, and 21.7% have poor adherence [2]. Medication Adherence Among Older Adults with High Blood Pressure Has Some Characteristics. At first, people's drug-taking patterns vary greatly. Academic education, financial situation and health literacy are related to compliance, according to [4]. Pill-taking behaviour is also influenced by one's daily life and other habits. Many older people are experiencing age-related cognitive decline, and due to irregular daily life, they may forget to take their medicine. Furthermore, some people change their treatment schedule or stop taking the medicine on their own because they are worried about side effects, do not feel any benefit from the treatment, or believe that their symptoms have gone away so they no longer need medicine [5]. The level of domestic and social support also affects the behaviour of taking drugs. Family monitoring of drug use and regular checks and health supervision by local medical staff can help to improve the appropriate use of drugs and enhance drug adherence [6]. Finally, older people with many other diseases often need complex treatment plans for several drugs. With the increase in complexity of drug therapy, dosing errors are becoming more frequent.

2. Research Goals and Motivations

2.1 Research Goals

This study aims to comprehensively assess the current status of medication adherence among community-dwelling elderly patients with hypertension using questionnaires and interviews. It further seeks to systematically identify the main barriers affecting medication adherence. The findings are expected to provide a basis for community health service institutions to optimize chronic disease management models for elderly patients with hypertension and to offer practical guidance for implementing targeted health interventions.

2.2 Significance of the Study

2.2.1 Theoretical Significance

Based on a systematic review of the current status and problems of drug adherence in older adults with hypertension, this paper will add to the existing body of knowledge and provide more evidence on chronic disease management for older persons. It will be the basis for building a pharmacological adherence support system for older Chinese hypertensive patients, and it will be personalised according to their actual circumstances.

2.2.2 Practical significance

Identify the reasons why older adults with high blood pressure do not take their medicine properly and put forward solutions for neighborhood medical services. It can help the clinical staff identify groups of patients who have difficulty taking their medication regularly and understand the reasons for this, so they can provide personalised medical education and dosing instructions, monitor adherence to the regimen, and offer specific support for these patients. Raise public awareness of hypertension and side effects of drugs through this study, help people take their medication correctly, improve the effectiveness of hypertension treatment, and reduce harm.

3. Barriers to Medication Adherence in Older Adults with Hypertension.

3.1 Patient Information

Senior people with high blood pressure do not know about their condition at the beginning. Most people have little knowledge of the risks of high blood pressure and the need for long-term medication, and they often believe that stopping pills when blood pressure returns to normal is safe, or that no medicine is required if there are no symptoms [7]. According to our research, about 46% of the subjects do not know about the importance of continuous and regular antihypertensive treatment, as shown in Figure 1. Second, natural deterioration and reduced mental functions of older people are likely reasons for poor medication adherence. Intellectual decline will increase the probability of dosing errors [8]. Based on our research, although most people say they take their medication on time, 39% still forget, as shown in Figure 2. Thirdly, emotions are also related to how long a person with high blood pressure needs to take medication. Some people are too anxious about the bad effects of the drugs and therefore do not take them [9].

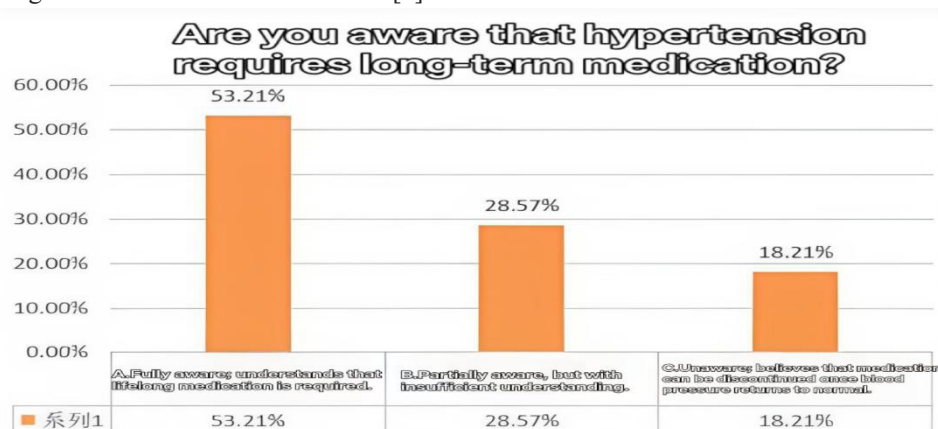


Figure 1. Survey Statistics on Hypertension Patients' Awareness of Long-Term Medication

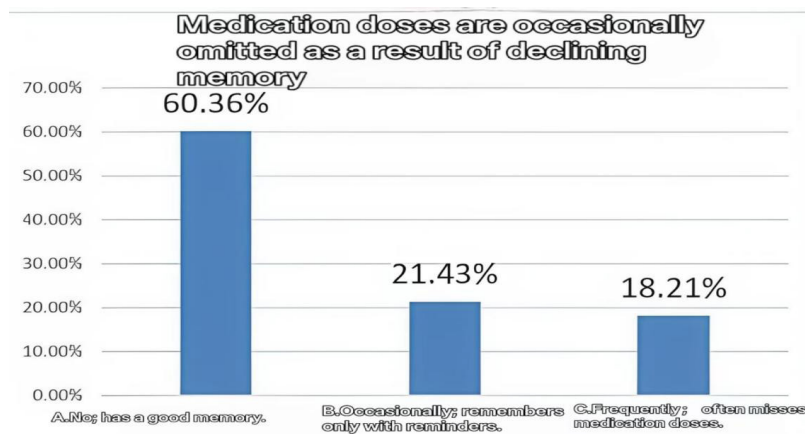


Figure 2. Memory decline is the reason why the missing drug-taking data were not recorded - Survey results on pill forgetting due to cognitive decline.

3.2 Drug-related causes

First, there are too many kinds of drugs and they are not all the same. Elderly hypertensive patients often have numerous other diseases, such as diabetes and dyslipidaemia; thus, several drugs are generally needed [10]. According to our research, 52 per cent of the participants had other chronic diseases; Figure 3 shows an illustration. Alterations in the time and amount of drug administration are also reasons for poor patient adherence to medication and may harm their health. Secondly, if there are adverse drug reactions, people will stop taking them. Some antihypertensive drugs have the side effects of dizziness, tiredness, oedema and hoarseness [11]. According to the above data (Figure 4), 41 per cent of the subjects have not started taking antihypertensive drugs. Lastly, there are issues of drug availability and cost. Some antihypertensive medications currently available, especially foreign or novel compounds, are quite costly [12]. Elderly people in rural areas are often far from pharmacies and cannot obtain their necessary medicines on time, so they may not be able to take their medications regularly.

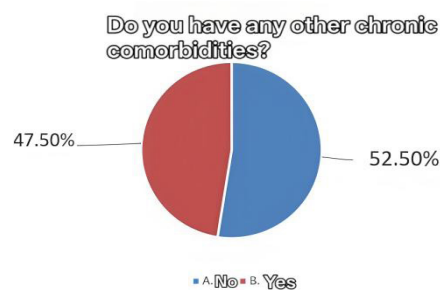


Figure 3. Inquiry into the Presence of Additional Chronic Co-morbidities - Statistics on the Incidence of Various Chronic Associated Conditions.

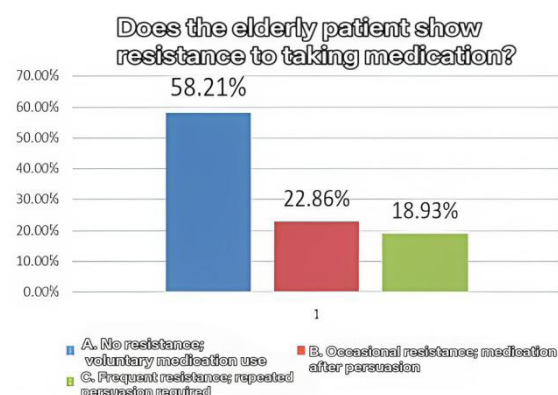


Figure 4. Statistics on Obstacles to Drug Consumption for Older Adults "Survey Data on the Ease of Obtaining Antihypertensive Drugs"

3.3 Family and Social Support Factors

At first, there is no parental supervision. A large proportion of older adults live alone [13] (Figure 5), and thus there is little family care or supervision. The will of a senior to take their own medicine will affect how regularly they take it. According to our research, only 52.86% of family members tell older people about their medication; Figure 6 shows this. Strengthen the Support for Neighbourhood-Oriented Governance. Due to the limited number of doctors at the grassroots level, there are few follow-up visits for older people with high blood pressure, and the recommendations they receive are often not all-encompassing. Lastly, the communal health education initiatives are lacking.

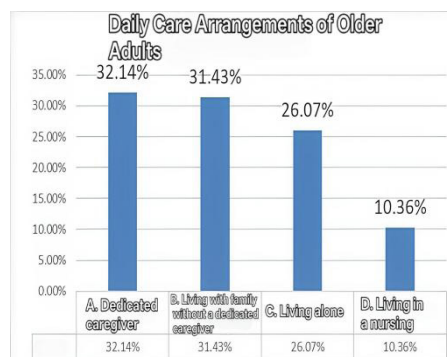


Figure 5. Survey Statistics on Daily Care Arrangements for Older Adults.

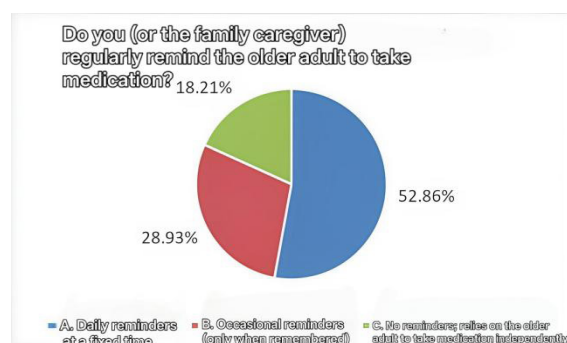


Figure 6. Survey Statistics on Caregivers' Medication-Reminding Behaviour - Statistical Analysis of Daily Care Schedules for Seniors.

3.4 Factors Related to Health Care Services

Initially, inadequate physician-patient interaction exists. Most doctors focus on treating patients in their daily work and do not explain the drug dosage or other precautions for different people. Second, the medical service is not personalised. Thirdly, there is no observation system. Therefore, it is often not possible to adjust the drug schedule in time, and both drug adherence and the overall health of this group are negatively affected. Based on our findings, almost half of the older adults have difficulty obtaining prescriptions, as shown in Figure 7.

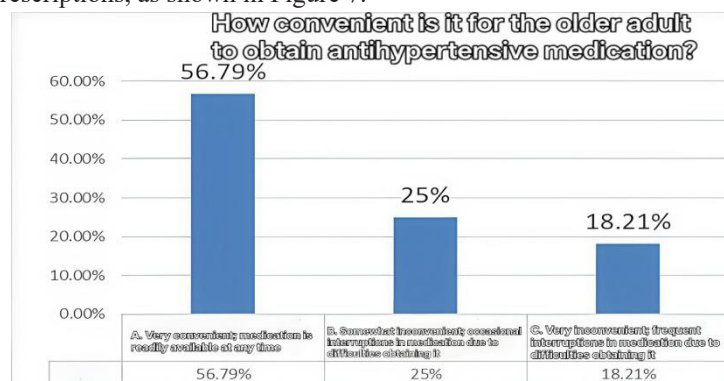


Figure 7. Survey Statistics on Older Adults' Resistance to Medication Intake - Statistical Data of Objections from Older Adults to Drug Consumption

4. Response Strategies

4.1 Strengthen health education to improve the patients' knowledge and self-management skills.

Given the cognitive characteristics of older adults at the beginning, health education should be provided in simple and easily understandable ways, such as neighbourhood classes, pictures, short videos, one-on-one tutoring, special Q&A sessions, etc. Instructional materials should highlight the dangers of hypertension, the need for continuous drug treatment and its importance, correct dosage methods, and how to handle pharmacological side effects properly to correct the widespread misconceptions among patients about taking medicine [14]. Volunteers can organise self-governance group activities for older adults with high blood pressure. In addition, reminder sheets need to be provided for people with cognitive impairments, and it is recommended that they use pillboxes.

4.2 Optimisation of Medication Regimens for Improved Drug Safety and Access to Medicines

In the process of developing drug protocols, doctors should consider all factors related to a specific patient's age, other diseases, body systems, etc. Strengthen the optimisation of therapeutic plans by reducing the number of drugs and decreasing the frequency of administration, and favour prolonged-release antihypertensive preparations that have good safety characteristics and fewer side effects. Also, pay close attention to any drug-related side effects in the patients during their treatment. If there is malaise after taking the drug, adjust the time of taking it. Add frequently used antihypertensive drugs to the list of healthcare insurance benefits to help reduce the cost of medication and the financial pressure on patients under the pharmaceutical provision and payment system. A reasonable quantity of essential drugs should be available in the primary healthcare centres.

4.3 Enhance the Support Network at Home and in the Community for Medication Management.

Educational programmes for family members need to be strengthened to increase their awareness of hypertension and the reasons for taking medication, and to motivate them to take their medicine regularly. Neighbourhood medical services should pay more attention to older people living alone or in "empty-nest" homes. As many older adults in the family are frequently away from home, local healthcare institutions should conduct regular blood pressure checks for them, promptly distribute their medications, and monitor any changes in their blood pressure closely. In addition, to enhance the long-term disease management capacity of the community for older adults with high blood pressure, the number of medical staff should be increased and the regularity of follow-up consultations improved.

4.4 Improving Healthcare Quality and Strengthening the Doctor-Patient Relationship

Training on the skills of communicating with patients will help to enhance the ability of medical staff in hospitals. During the course of clinical practice, one should be mindful of patients' concerns, provide clear and all-encompassing explanations of the treatment plan, and fully inform them about potential side effects of the drugs and how to handle them. Specialized Medical Service Institutions will also be established. In addition, the following uprocol should be simplified to prevent older hypertensive patients from missing the next appointment due to complicated administrative work and thus failing to modify their medication at the right time.

4.5 Fostering a Social Co-governance Environment to Strengthen Health Protection for Elderly Patients with Hypertension

Increase public investment in the prevention and control of hypertension among older adults, strengthen the foundation of the basic healthcare system, and promote the normalisation of community management of chronic diseases. Media entities should use all kinds of platforms, such as broadcast television, radio and local community displays, to spread public health education on hypertension prevention and management, give people general wellness knowledge, increase their awareness of hypertension among older adults, and help them better understand the associated risks. Civil organisations and activists should be encouraged to carry out medical aid for older people with high blood pressure. Organise volunteer-led support activities for older adults who live alone or in "empty-nest" houses to provide company, help with taking medicine and monitoring blood pressure, etc.

5. Research Methods

5.1 Literature Review Method

All kinds of databases around the world have been utilised, such as China National Knowledge Infrastructure (CNKI), Wanfang Data, VIP Database, etc., to collect relevant documents and evidence on drug compliance for older adults with high

blood pressure.

5.2 Questionnaire Survey Method

The two groups of the elderly studied had high blood pressure and lived in different areas. A personalised question paper entitled "Survey on Medication Adherence Among Elderly Patients with Hypertension" was distributed for collection. The above list includes the basic information on demographics, health status, medication adherence, health literacy and family/community support. The two were for the patients and for the people living with them at home. Systematic random sampling was used to select the subjects. All completed forms were checked and sorted out; invalid answers were not used. Statistics were used to find out how well the subjects currently take their medication and what reasons might prevent them from doing so.

5.3 Interview Method

Semi-formal talks were held with these people and the local medical staff and family members of the subjects. The above discussions have pointed out the problems that patients face in taking their medications, reasons for non-compliance with drug regimens, difficulties clinicians have in long-term management of chronic diseases, relatives' attitudes towards monitoring pill-taking, and other problems at this stage.

5.4 Statistical Analysis Methods

Organise and analyse the data collected in the previous step using SPSS as shown below. Descriptive methods were used to describe the main characteristics of older adults with hypertension and to assess their current levels of medication adherence. Based on the chi-squared test and multivariate regression model, we identified the main reasons for poor medication adherence that also support the findings of this paper.

6. Expected Results and Contributions

6.1 Expected Results

Based on the above research results, a set of practical, functional and highly implementable intervention measures to improve drug adherence among older adults with high blood pressure has been developed, and these have been customised according to the particular circumstances in urban and rural areas.

6.2 Contributions

Scholarly Achievements:

Based on the above practical exploration, this paper has added new data on medication adherence in older adults with hypertension to our research field and expanded the database of empirical evidence for the management of chronic diseases in older people.

Practical Contributions

Intervention strategies in this paper can be employed to manage chronic hypertension in older adults in both urban and rural areas, help local medical staff organise special wellness programmes, offer pharmacological education to boost drug adherence among older hypertensive patients, and reduce the frequency of hospitalisation.

7. Research Content

7.1 Survey on the Current Situation of Medication Adherence in Older Patients with Hypertension

The research area and the subject of study have been decided, and a practical survey has been organised. On-site interviews and other measures were carried out to obtain some basic data on whether older people with high blood pressure take their medications regularly, how much they take, and for how long. Differences in drug adherence were also considered according to various social and economic backgrounds, such as age, sex, educational attainment, financial situation, length of illness, control of blood pressure, and the number of comorbidities.

7.2 Analysis of Factors Affecting Medication Adherence in Older Adults with Hypertension.

Based on the four categories of individual factors, drug-related factors, household and neighbourhood support, and medical care services, according to the results of questionnaire distribution and semi-structured interviews, specific reasons for poor medication adherence among older adults with high blood pressure have been identified.

7.3 Development of Strategies to Improve Medication Adherence in Older Adults with Hypertension.

According to the results of the barrier assessment and considering the biological and psychological features of older

adults with chronic diseases in the community, some concrete and feasible measures have been taken in the five areas of wellness education, medication management, family and neighbourhood support, improvement of medical services, and joint governance by society.

7.4 Feasibility Analysis and Refinement of the Response Strategy

Clinical staff at neighbourhood health centres and specialists in the management of chronic diseases were invited to evaluate the proposed intervention methods and judge whether they were practical, reasonable and effective.

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