# Survey on Alzheimer's Disease Prevention in Xinjian District, Nanchang City

Hui Qin[a], Simin Wang[b*], Ni Yan[c], Jinsong Peng[d], Jianwu Xu[e] and Yuliang Wang[f]

Department of Economics and Management, Jiangxi University of Traditional Chinese Medicine, Nanchang, Jiangxi, China

[a] email: 2967856008@qq.com, [b] email: 275348658@qq.com, [c] email:2809628731@qq.com, [d]email: 2929192758@qq.com, [e] email: 599221672@qq.com,[f] email:442298348@qq.com

*corresponding author

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**Abstract:** Objective: To find out the knowledge of residents in Xinjian District, Nanchang City, Jiangxi Province, about Alzheimer's disease and the specific conditions of related patients, to explore a feasible plan to prevent and alleviate Alzheimer's disease for residents in the area, to enhance their awareness of health management, and to improve their quality of life. Methods: Using a random sampling method, 181 general residents and 82 patients in Xinjian District, Nanchang City, Jiangxi Province, were randomly selected to conduct a questionnaire survey on related knowledge. Results: The survey showed that 90.96% of residents in Xinjian District were aware of the disease, but only 23.16% knew about its prevention, while 75.16% of healthy residents were worried about the possibility of developing the disease in the future. Conclusion: Residents in Xinjian District lack knowledge about the prevention of the disease, and it is necessary to strengthen the community and media education about the knowledge of the disease to improve the health management awareness of residents in Xinjian District for better prevention and treatment of Alzheimer's disease.

## Introduction

Alzheimer's disease (AD), also known as dementia, is a degenerative disease of the central nervous system with an insidious onset and a chronic progressive course, characterized by progressive memory impairment, language and writing impairment, personality changes, and emotional and behavioral abnormalities. There is no effective drug to cure or reverse the disease [1]. In this study, we investigated 181 residents and 82 patients with AD in Xinjian District, Nanchang City, Jiangxi Province, to understand the knowledge of AD and the specific situation of AD patients in the area, and to explore a feasible plan to prevent and alleviate the disease, to enhance the awareness of health management, to improve the physical condition of the affected population, and to improve the quality of life of the residents.

## 1. OBJECT AND METHOD

### 1.1. Study Subjects

From May to June 2021, 181 cases of general residents as well as 82 cases of AD patients in Xinjian District, Nanchang City, Jiangxi Province were randomly selected for the study using paper as well as electronic versions of the questionnaire, using a random sampling method.

### 1.2. Research Methods

### 1.2.1. Survey method

A random sampling method was used, and the survey was conducted by investigators using a combination of online and offline methods for general residents of Xinjian District, Nanchang City, Jiangxi Province, and AD patients, respectively. With the informed consent of the respondents, the

questionnaires were answered independently by the respondents themselves, and for those residents who could not complete the questionnaires themselves, they were narrated by the investigators and recorded accordingly, and the questionnaires were checked by the investigators at the scene when they were collected to avoid missing items and omissions. A total of 263 questionnaires were distributed, and 259 valid questionnaires were collected, with an efficiency rate of 98.48%.

### 1.2.2. Survey instrument

The research team designed the questionnaire independently and adjusted the content of the questionnaire through the pre-survey to finalize the content of the questionnaire. The research team designed the questionnaire independently and adjusted the content of the questionnaire through the pre-survey to finalize the content of the questionnaire. The first part: survey of the general population in the community; the knowledge of AD among the general population in the community; the current situation of AD prevention and education. The second part: the basic situation of AD patients; the discovery of the condition, etc.

### 1.3. Statistical Methods

All survey data were entered into the computer, and EXCEL and SPSS22.0 statistical software were used for data entry and related statistical analysis, respectively, and the general statistical descriptions of the data were expressed as percentages (%).

## 2. SURVEY RESULTS

### 2.1. Survey of the General Residents in the Community

### 2.1.1. Basic situation

A total of 263 questionnaires were distributed in this survey, and 263 were returned, with a recovery rate of 100%. Excluding invalid questionnaires, 259 valid questionnaires were obtained, and the effective response rate was 98.48%. Among them, 111 (42.86%) were males. 148 (57.14%) were females, in addition to 82 AD patients, 39 (47.56%) were males and 43 (52.44%) were females. The basic profile of the general population, as shown in Table 1.

**Table 1.** Basic information of the general population

| Survey contents | Survey Subjects |
|---|---|
| Sex<br>Male<br>Female | <br>72(40.68%)<br>105(59.32%) |
| Age (years)<br>Below 50<br>50~70<br>70 or more | <br>95(53.67%)<br>55(31.07%)<br>27(15.25%) |
| Education level<br>Illiterate<br>Elementary School<br>Secondary School<br>University and above | <br>17(9.60%)<br>42(23.73%)<br>31(17.51%)<br>85(48.02%) |

### 2.1.2. Awareness of AD among the general population in the community:

**Table 2.** Awareness of AD among the general po

| About AD | Survey Subjects |
|---|---|
| Do you know AD<br>Yes<br>No | <br>161(90.96%)<br>16(9.04%) |
| Do you know how to prevent AD<br>Yes<br>No | <br>41(25.47%)<br>120(74.53%) |
| Are you worried about having AD in the future?<br>Yes<br>No | <br>121(75.16%)<br>40(24.84%) |

The questions set for the cognition of AD include: whether they know the disease and whether they know how to prevent the disease, the causative factors related to the occurrence of AD, clinical manifestations, etc.; this survey found that 9.04% of the residents did not know the disease at all, in addition, 74.53% of the residents did not know how to carry out prevention, and 25.47% of the residents knew a little preventive measure. The acquisition of knowledge of AD prevention is still due to the popularization of health care knowledge in recent years, and does not form a systematic mastery of knowledge, as shown in Table 2.

### 2.1.3. The current situation of prevention and education:

The survey found that most of the ways for community residents to learn about AD were provided by newspapers, TV, internet and other media, accounting for 87.58%, while community publicity was relatively small, accounting for only 44.10%, see Figure 1. In addition, residents have little knowledge of AD-related advocacy services at the national level.
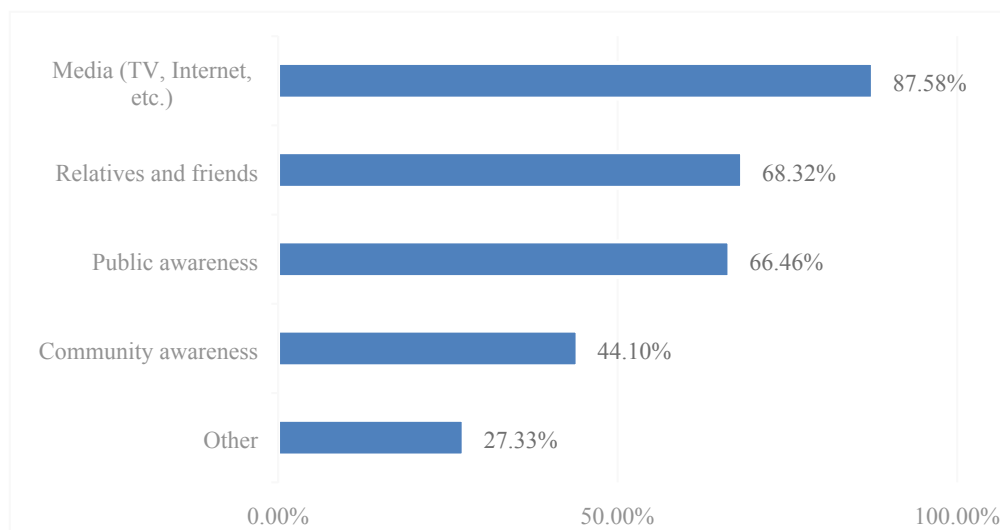


**Figure 1.** Residents' access to AD

## 2.2. AD Patient Situation

### 2.2.1. Basic patient profile.

**Table 3.** Basic information of AD patients

| Basic information of AD patients | Survey Subjects |
|---|---|
| Sex | |
| Male | 39(47.56%) |
| Female | 43(52.44%) |
| Occupational Status | |
| Physical work | 44(53.66%) |
| mental work | 13(15.85%) |
| Both | 25(30.49%) |
| Family History | |
| Yes | 6(7.31%) |
| No | 25(30.49%) |
| Not sure | 51(62.20%) |

Including age, gender, educational status, occupational status, family history, and underlying diseases; it was found that people who had been mainly engaged in physical labor were more likely to have the disease, accounting for 53.66%, while those engaged in mental labor were relatively less likely to have the disease, accounting for 15.85%, as shown in Table 3. Basic information of AD patients. In addition, only 14.63% of AD patients did not suffer from other diseases, and 85.37% of them suffered from certain underlying disease, as shown in Figure 2.
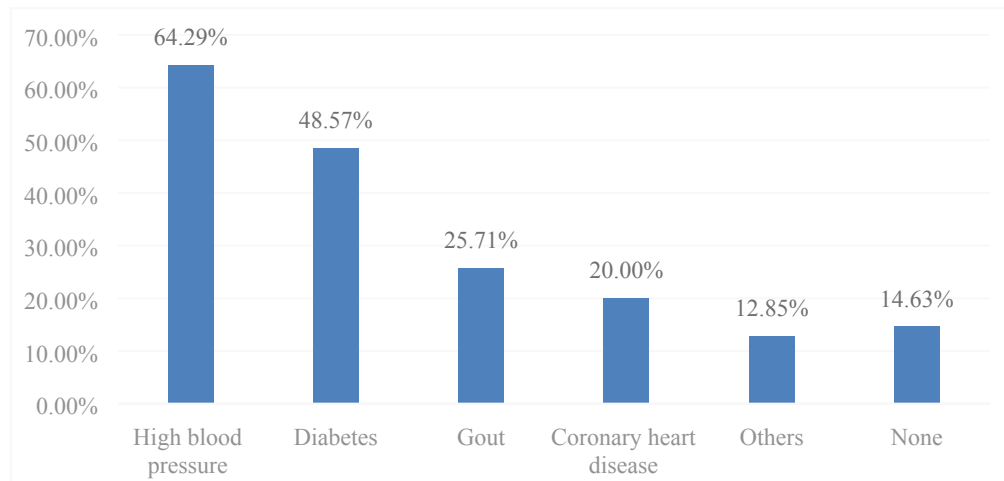
**Figure 2.** Underlying diseases of AD patients

### 2.2.2. Discovering the condition:

This includes how the patient was diagnosed, age of diagnosis, clinical condition, related causative factors, cost of treatment, and effect of TCM treatment. It was found that 60.98% of the patients were found to have AD through medical checkups following detection by friends and relatives, and only a small percentage of patients had regular medical checkups; meanwhile, 53.66% of the patients and their families did not know about TCM treatment modalities, and only 4.88% of the patients were very well informed about TCM treatment modalities, as shown in Table 4; in addition, there were some differences in the treatment costs of patients, as shown in Figure 3.

**Table 4.** Prevalence of AD patients

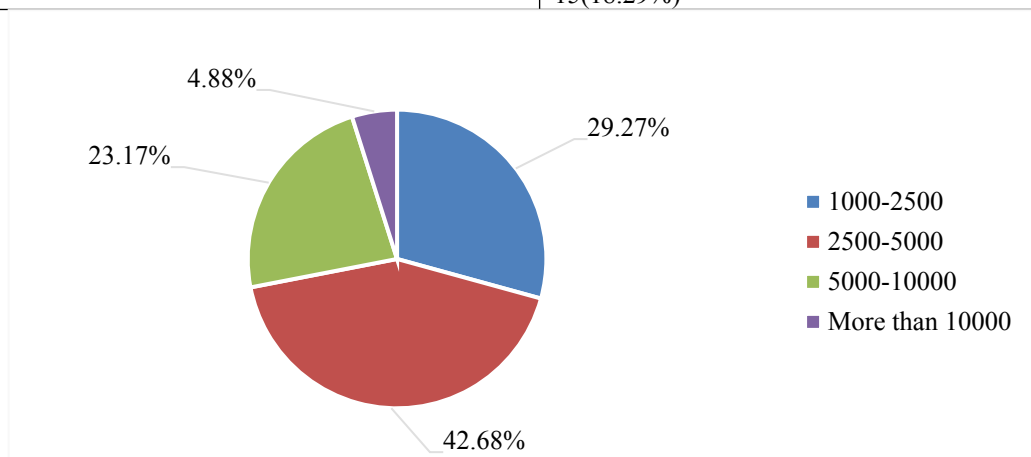| AD patients with the disease | Survey Results |
|---|---|
| Clinical symptoms | |
| Memory fading | 65(79.27%) |
| Repeatedly doing one thing | 55(67.07%) |
| High mood swings | 43(52.44%) |
| Language and writing difficulties | 55(67.07%) |
| Others | 17(20.73%) |
| Knowledge of TCM treatment modalities | |
| Don't know | 44(53.66%) |
| Fairly knowledgeable | 34(41.46%) |
| Very well | 4(4.88%) |
| Patients' treatment demands | |
| Lower costs | 63(76.83%) |
| Increased medical care | 63(76.83%) |
| Improve treatment effect | 55(67.07%) |
| Other | 15(18.29%) |



**Figure 3.** Monthly treatment costs for AD patients (¥/month)

## 3. DISCUSSION

### 3.1. Community Residents' Awareness of AD

The study showed that residents in Xinjian District, Nanchang City, Jiangxi Province, had relatively high knowledge of AD, 90.96% of them had heard of the disease through different ways, among which, 87.58% of them knew about the disease through media such as TV and internet, however, only 44.10% of the residents got the knowledge of AD through community bulletin boards. Nowadays, people have more access to television, the Internet and other online media, which have various forms of propaganda and can effectively disseminate knowledge to residents, and should continue to increase propaganda efforts [2]. In addition, most residents do not have a systematic knowledge of the disease, and the level of understanding of related services at the national level is also lacking, and the demand for community education is high; in this regard, relevant community managers should improve related work and increase publicity efforts.

### 3.2. Current Status of AD Prevention Education

The survey shows that the residents in the newly built area have regular living habits, but still a large proportion (75.16%) of residents are worried about the possibility of developing AD in the future. Since AD has an insidious onset and continues to develop progressively, it is necessary for middle-aged and elderly people to understand the risk factors of the disease and the corresponding health management measures, such as regular exercise, moderate increase in brain activity, and reasonable diet as effective measures to prevent AD. However, the results of the survey on the demand of AD prevention knowledge showed that 74.53% of the residents did not know how to prevent Alzheimer's disease, and some of the residents acquired some preventive measures for the disease thanks to the popularization of health care knowledge in recent years, which indicates the lack of knowledge about AD among the residents, therefore, it is necessary to carry out AD-related education work in the community and improve the awareness of community residents on self-health management is very necessary.

### 3.3. Patient-related Conditions

The exact etiology of AD has not yet been unified in academic circles. However, relevant studies have demonstrated that both high fat and high cholesterol in serum are independent risk factors for the development of Alzheimer's disease, while some scholars have also suggested that atherosclerosis may be the pathogenesis of Alzheimer's disease [3]. In the study, we found that only 14.63% of AD patients did not suffer from other underlying diseases, and 85.37% of patients suffered from certain underlying diseases, among which the highest percentage of underlying diseases were hypertension, high cholesterol, accounting for 64.29%, and a small number of patients suffered from diabetes, ventilation, coronary heart disease, etc. In addition, the survey showed that the majority of patients with primary and secondary school education and below In addition, the survey showed that the majority of patients with primary and secondary education and below, accounting for 89.03%, and 53.66% of the patients were mainly engaged in manual labor. Therefore, this study is consistent with the majority of studies.

### 3.4. Findings on the Condition

In our study, we found that 60.98% of the patients were found to have the disease through friends and relatives, and only 7.32% were found to have the disease through regular community checkups, while 34.15% of the patients were already in the moderate stage when they were first diagnosed, and even more, 13.41% were already in the severe stage when they were first diagnosed. Many patients with severe disease are lost to timely diagnosis and treatment. Therefore, early detection and treatment is the key to the prevention and treatment of AD, and it is important to conduct regular medical checkups and early diagnosis and treatment, and to take immediate action once the first signs of dementia are detected, rather than ignoring them [4]. At the same time, the study showed that 43.90% of the families thought that the disease had a greater impact on the

family, and only 17.07% thought that the disease had a lesser impact. Through our analysis, we believe that prevention is more important than treatment for AD, and that we should focus on prevention, take the attitude of "treating the disease before it happens rather than treating the disease after it happens", advocate a healthy lifestyle and a healthy lifestyle to prevent the occurrence of AD in high-risk groups, and treat mild AD mainly with Chinese medicine and treat moderate AD with a combination of Chinese and Western medicine to prevent the development of The development of untreatable severe stage of AD is prevented [5]. In conclusion, prevention of AD is a long-term and important task that requires our joint efforts.

In conclusion, in this survey, we found that residents in Xinjian District are relatively well aware of AD, but their knowledge about prevention is lacking, so we need to strengthen community and media education about AD, and we should also moderately strengthen the popularization of preventive knowledge related to Chinese medicine to improve the health management awareness of residents in Xinjian District for better prevention and treatment of AD. In addition, since the survey area is limited to Xinjian District, Nanchang City, Jiangxi Province, appropriate preventive measures should be taken to address the dietary habits and lifestyle patterns of the residents in Xinjian District, and the degree of residents' knowledge about AD-related prevention should be continuously enhanced.

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