Journal of Clinical and Nursing Research, 2025, Volume 9, Issue 12
http://ojs.bbwpublisher.com/index.php/JCNR
Online ISSN: 2208-3693
Print ISSN: 2208-3685

Investigation on the Cognitive Status of Community Medical Staff and Patients towards General Practitioners in Neijiang City

Linlin Yi, Xiaojuan Zhu, Ruoyu Zhang

The First People's Hospital of Neijiang, Neijiang 641000, Sichuan, China

Abstract: *Objective*: This study aims to investigate the cognitive status of community medical staff and patients in Neijiang City towards general practitioners, and analyze the current cognitive status, cognitive needs, and the importance of knowledge dissemination and intervention regarding general practitioners. *Methods*: A total of 50 community medical staff and patients in Neijiang City were selected for a questionnaire survey conducted from April 2023 to March 2025. A self-designed questionnaire on the concepts of multimorbidity and general practitioners was employed, and the survey was carried out twice, before and after the dissemination of general practice knowledge. Based on the demographic characteristics of the participants and the differences in survey results before and after the knowledge dissemination, the influencing factors and cognitive needs of community medical staff and patients towards general practitioners at this stage were analyzed. *Results*: Individuals under the age of 35 acquired knowledge mainly through community education (50.00%) and electronic media (50.00%), while those aged 35–65 and over 65 primarily learned through peers, accounting for 57.14% and 48.72%, respectively. After general practice education, among individuals aged ≤ 65, those with a college degree or higher demonstrated higher rates of multimorbidity and met the criteria for family doctor awareness compared to those aged > 65 with a high school diploma or lower, with statistically significant differences ($p < 0.05$). Logistic regression analysis revealed that educational attainment (college degree or higher) served as a protective factor for high awareness levels among general practitioners, while age (> 65 years) emerged as a risk factor for high awareness levels among general practitioners, with statistically significant differences ($p < 0.05$). *Conclusion*: To enhance the knowledge and awareness levels of general practitioners among community medical staff and patients, it is imperative to actively expand channels for proactive acquisition of relevant knowledge through education and outreach. Additionally, targeted educational efforts should be intensified for individuals with lower educational attainment and older age groups to establish a public awareness foundation for the effective promotion of general practitioner-led healthcare initiatives at the grassroots level.

Keywords: General practitioners; Awareness status; Public perception; Influencing factors

Online publication: Dec 31, 2025

1. Introduction

General practitioners represent a grassroots healthcare service model promoted in China in recent years based on the development of general medicine. This model aims to provide comprehensive and individualized medical services, including preventive care, health management, medical treatment, and rehabilitation, to grassroots personnel.

As a result, general practitioners occupy a comprehensive and professional role in community and family health management, exerting a positive influence on the adjustment of the national future healthcare model and the alleviation of healthcare service pressures [1,2]. However, during the actual promotion of the general practitioner program, it was found that due to differences in social and economic development as well as medical resources across different regions, the program in our city is still at the basic promotion stage.

Moreover, from the summary of promotional experience at the current stage, it was observed that limitations in the cognitive level of general practitioners among primary-level medical staff and patients may affect the progress of program promotion. Therefore, it is necessary to refine the promotional content and format based on the analysis results of the current knowledge and awareness of general practitioners among primary-level medical staff and patients in our city [3,4]. Given the aforementioned background, a questionnaire survey was conducted among 50 medical staff and patients to analyze their current awareness and needs regarding general practitioners, as well as the importance of knowledge dissemination and intervention related to general practitioners. The details are as follows.

2. Materials and methods

2.1. Clinical data

A total of 50 medical staff and patients from communities in Neijiang City were selected for a questionnaire survey conducted from April 2023 to March 2025.

2.1.1. Inclusion criteria

The 50 medical personnel and patients were all from the outpatient and inpatient departments of Haozikou Community in Neijiang City, Baima Town Health Center, and Jiaotong Town Health Center, or are medical practitioners, all of whom are permanent residents. Patients were aged between 18 and 80 years old and have one or more types of chronic diseases. They possess intact cognitive and language communication functions, enabling them to complete questionnaires independently or with the assistance of researchers.

2.1.2. Exclusion criteria

Individuals who drop out of the study or were lost to follow-up during the research period; those unable to cooperate in completing the questionnaire; critically ill patients or those who die during the study period; individuals without smartphones or with severe visual or auditory impairments.

2.2. Methods

2.2.1. Questionnaire survey

(1) Demographic information

Prior to enrollment, researchers used electronic questionnaires to survey and recorded information such as

age, gender, occupation, and educational level of the study subjects.

(2) General practitioner questionnaire survey

A self-designed questionnaire on the concept of multimorbidity and general practitioners was used. Questionnaire surveys were conducted twice, before and after the dissemination of general practice knowledge.

2.2.2. General practice knowledge education

After the completion of the initial questionnaire survey, community hospitals, in collaboration with their respective communities, the education on general practitioner-related knowledge for the study participants was conducted within their jurisdiction. For medical professionals, each unit was responsible for completing relevant knowledge training and education. For community patients, hospitals and communities was collaborated to organize lectures on general practice knowledge and distribute promotional brochures.

During this period, hospitals was utilized their WeChat official accounts to regularly push relevant health education videos, requiring timely viewing. Additionally, hospitals and communities have actively utilized local bulletin boards to post relevant promotional content to enhance the accessibility of health-related knowledge. The general practice education required continuous intervention for six months.

2.3. Observation indicators

Based on the demographic characteristics of the study participants and the results of the questionnaire surveys conducted before and after the general practice knowledge education, analyze the influencing factors and cognitive needs regarding general practitioners among community medical staff and patients at the current stage.

2.4. Statistical methods

Data was analyzed using SPSS 23.0 software; all research data were qualitative and was expressed as n (%). Tests such as chi-square or rank-sum tests was used; a *p*-value of less than 0.05 was considered statistically significant.

3. Results

3.1. Analysis of demographic data

Analysis of the demographic data of the study subjects revealed that the main groups were females (56.00%) and individuals aged over 65 (78.00%). The predominant occupational category was public institutions (56.00%), and the majority of the subjects had a college or undergraduate education level (86.00%). The proportion of individuals with three types of comorbid chronic diseases reached 52.00%. See **Table 1** for details.

3.2. Analysis of knowledge acquisition channels for general practitioners

Analysis of the knowledge acquisition channels for general practitioners among the study subjects indicated that individuals under the age of 35 acquired knowledge through community education (50.00%) and electronic media (50.00%). For those aged between 35 and 65, as well as those over 65, the primary knowledge acquisition channel was through peers, with proportions of 57.14% and 48.72%, respectively. See **Table 2** for details.

Table 1. Analysis of demographic data (n, %)

Demographic data		n	Percentage (%)
Gender	Male	22	44.00
	Female	28	56.00
Age	< 35 years	4	8.00
	35–65 years	7	14.00
	> 65 years	39	78.00
Occupation	Medical practitioner	2	4.00
	Service industry	4	8.00
	Worker	5	10.00
	Company employee	9	18.00
	Public institution	28	56.00
	Family-run shop	1	2.00
	Unemployed	1	2.00
Education level	Bachelor's degree	18	36.00
	Associate degree	25	50.00
	High school	4	8.00
	Junior High school	1	2.00
	Primary school	1	2.00
	Incomplete primary	1	2.00
Chronic disease status	1 Type	6	12.00
	2 Types	14	28.00
	3 Types	26	52.00
	4 Types	2	4.00
	5 Types	2	4.00

Table 2. Analysis of knowledge acquisition channels for general practitioners (n, %)

Channel type / Age group	< 35 years (n = 4)	35–65 years (n = 7)	> 65 years (n = 39)
Community education	2 (50.00)	1 (14.29)	7 (17.95)
Digital media	2 (50.00)	1 (14.29)	3 (7.69)
Previous medical visits	0	0	4 (10.26)
Heard from peers	0	4 (57.14)	19 (48.72)
Heard from children/grandchildren	0	1 (14.29)	6 (15.38)
Total	4	7	39

3.3. Comparison of co-morbidity and cognitive compliance with family doctors before and after general practice education

There was no statistically significant difference in the comparison of co-morbidity and cognitive compliance with family doctors among individuals of different age groups and educational levels before general practice education ($p > 0.05$). After general practice education, among those aged ≤ 65 years, individuals with a college degree or higher demonstrated higher levels of co-morbidity awareness and cognitive compliance with family doctors compared to those aged > 65 years and those with a high school diploma or lower, with statistically significant differences ($p < 0.05$). See **Table 3**.

Table 3. Comparison of co-morbidity and cognitive compliance with family doctors before and after general practice education (n, %)

Grouping basis		Multimorbidity knowledge attainment rate		Family physician knowledge attainment rate	
		Before education	After education	Before education	After education
Age	≤ 65 years (n = 11)	3 (27.27)	11 (100.00)	2 (18.18)	11 (100.00)
	> 65 years (n = 39)	11 (28.21)	28 (71.79)	8 (20.51)	26 (66.67)
χ^2-value		0.004	3.978	0.029	4.955
p-value		0.951	0.046	0.864	0.026
Education level	Associate degree or above (n = 43)	13 (30.23)	36 (83.72)	10 (23.26)	35 (81.40)
	High school or below (n = 7)	1 (14.29)	3 (42.86)	0 (0.00)	2 (28.57)
χ^2-value		0.759	5.858	2.035	7.831
p-value		0.384	0.016	0.154	0.003

3.4. Analysis of factors influencing the cognitive level of general practitioners among community medical staff and patients

Logistic regression analysis revealed that educational level (college degree or higher) was a protective factor for a high cognitive level of general practitioners, while age (> 65 years) was a risk factor for a high cognitive level of general practitioners, with statistically significant differences ($p < 0.05$). See **Table 4** and **5**.

Table 4. Assignment method

Factor	Assignment
Age	≤ 65 years = 1, > 65 years = 0
Education level	Associate degree or above = 1, High school or below = 0

Table 5. Analysis of factors influencing the cognitive level of community medical staff and patients towards general practitioners

Factor type	β	Sx	Wald χ^2	*p*-value	OR	95% CI
Age	-0.57	0.24	5.91	< 0.01	0.57	0.35–0.94
Education level	0.68	0.18	12.36	< 0.01	1.95	1.32–2.84

4. Discussion

Based on this questionnaire survey, the following survey results were analyzed accordingly.

(1) People under 35 years old acquire knowledge through community outreach (50.00%) and electronic media (50.00%), while those aged 35–65 and over 65 primarily rely on hearing about it from their peers, with proportions of 57.14% and 48.72%, respectively. The analysis reveals that, influenced by factors such as the current development of communication technology and the widespread use of smartphones, in addition to disseminating information through traditional media such as television and newspapers, electronic media has become the primary medium for information dissemination in the context of the national healthcare reform efforts. However, among the elderly population, limitations related to their ability to independently use network information technology and smartphones prevent them from actively acquiring knowledge about general practitioners through relevant channels, thereby restricting their overall cognitive level due to passive acquisition [5,6].

(2) After general practice education, among individuals aged ≤ 65 years, those with a college degree or above demonstrated higher rates of multimorbidity coexistence and met the standards for family doctor awareness compared to those aged > 65 years with a high school education or below, with statistically significant differences ($p < 0.05$). Logistic regression analysis revealed that educational attainment (college degree or above) served as a protective factor for high awareness levels among general practitioners, while age (> 65 years) emerged as a risk factor, with statistically significant differences ($p < 0.05$). Analysis indicates that elderly populations generally have lower educational levels and exhibit notable degenerative changes in visual, auditory, and cognitive functions, resulting in lower information absorption during general practice education and limited practical educational outcomes. Therefore, feasible educational approaches should be tailored to the characteristics of this demographic [7,8].

Based on the aforementioned analysis, this study proposes the following recommendations to address the need for enhancing awareness of general practitioners among grassroots personnel.

(1) During the promotion of general practitioner programs, hospitals and communities should actively establish collaborative models. Relevant community hospital staff should regularly conduct group-based educational sessions within communities to strengthen outreach efforts targeting populations with high demand for general practitioner services. Additionally, multimedia channels should be leveraged to actively promote online education among university students and young adults, enabling them to disseminate relevant knowledge to elderly family members through household communication, thereby improving overall public awareness [9].

(2) Additionally, for the elderly population, after community hospitals have completed training on general practitioner-related knowledge for community workers, community workers should conduct individualized education through home visits, which can be carried out multiple times, in order to enhance the elderly's grasp of general practitioner knowledge [10].

5. Conclusion

In summary, regarding the cognitive level of general practitioner knowledge among community medical staff and patients, it is necessary to actively increase the channels for proactively acquiring and disseminating relevant knowledge, and strengthen the dissemination of such knowledge to individuals with low educational attainment

and the elderly population, thereby providing a public awareness foundation for the effective promotion of general practitioner medical programs at the grassroots level.

Disclosure statement

The authors declare no conflict of interest.

References

[1] He N, Hao S, Hao R, et al., 2022, Exploring Strategies for Eliminating Hepatitis C at the Primary Care Level Based on the Current Awareness of Hepatitis C Among General Practitioners. Liver, 27(3): 311–315.

[2] Qin W, Zhang S, 2018, Investigation on the Awareness of Community Management of Type 2 Diabetes Mellitus Among General Practitioners in Pudong New Area. Shanghai Medical & Pharmaceutical Journal, 39(4): 48–50 + 58.

[3] Su L, Zhang Q, Li W, 2015, Investigation on the Awareness and Abilities of Humanistic Qualities Among General Practitioners and Specialist Residents. China Higher Medical Education, 2015(6): 13–14.

[4] Gu J, Lu X, Chen Y, et al., 2013, Comparative Investigation on the Professional Awareness of Trainees in the Assistant General Practitioner Training Program (3+2 Model) and the Standardized Training Program for General Practitioners (5+3 Model) in Shanghai. Chinese Journal of General Practitioners, 12(9): 717–721.

[5] Liu X, Wang S, Tang M, et al., 2024, A Qualitative Study on the Factors Influencing the Implementation of Integrated Physical Activity and Medical Services in Community Healthcare Institutions from the Perspective of General Practitioners. Chinese Journal of General Practice, 27(19): 2312–2318.

[6] Yin Z, Liu C, Zhang B, et al., 2023, A Qualitative Study on the Current Status of Teaching Objective Awareness and Formulation Among Teachers in the Standardized Training of General Practice Residents. Chinese Journal of General Practice, 26(28): 3533–3538.

[7] Wen M, Chen Y, Li J, et al., 2021, Analysis of the Current Status of Fatigue Cognition and Influencing Factors in Community Patients with Coronary Heart Disease. Chinese Journal of Modern Nursing, 27(26): 3535–3539.

[8] Li C, Shen Q, He P, et al., 2021, Influencing Factors of Anxiety Level, Sexual Knowledge Cognition Level, and Sexual Education Demand Level in Community Patients with Coronary Heart Disease and the Correlations Among Them. Chinese Journal of Human Sexuality, 30(2): 154–157.

[9] Qiu M, Liu Q, Zhang H, et al., 2022, Disease Cognition, Behavioral Characteristics, and Influencing Factors of Medical-Seeking Behavior in Community Patients with Osteoarthritis: A Mixed-Methods Study. Chinese General Practice, 25(25): 3165–3170 + 3177.

[10] Wang C, Zhang J, Zhang Y, et al., 2024, Influencing Factors of Quality of Life in Community Patients with Gastrointestinal Malignant Tumors and the Impact of Patient Self-Engagement on Quality of Life. China Medicine, 19(10): 1485–1489.