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# Study on the Status and Countermeasures of Service Ability of General Practitioners in Community

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**Abstract:** This study tried to carry out a research to learn the current status of urban GPs and the influencing factors so that management strategies are proposed in order to provide guidance for improving the ability of general practitioners and optimizing the quality of community health services. Stratified random cluster sampling was employed to recruit 185 community general practitioners in sample cities among which questionnaires were distributed. Two independent samples t-test, analysis of variance, and multiple linear stepwise regression were used to analyze the datas. Based on the theoretical framework of the Unity Nations Development Programme (UNDP) capability evaluation, we propose measures and suggestions from the system, organization, and individual levels. The capacity of the 35 community-based general practitioners in the five dimensions of the urban community surveyed in this study (35-175 points), and the total score of the community-based general practitioners in the urban community (128.64) 18.958 points, the scores of each dimension are the basic medical service ability (32.02±5.659) points, the public health service ability (39.42±6.923) points, the humanities occupational ability (19.68±2.799) points, and the professional accomplishment (19.31±2.775) points. Scientific research ability (18.20±3.373) points. The results showed that the general service ability of general practitioners, academic qualifications, income satisfaction, and familiarity are the influencing factors which influence the service ability of general practitioners in urban communities. In the future development of the community general practitioner team, it is necessary to clarify the functional orientation of community general practitioners under the hierarchical diagnosis and treatment system, provide multi-level appropriate community general medical services, and comprehensively consider community general practitioners to improve service capabilities. At the level of demand issues, and then based on this development to solve the problem of countermeasures and suggestions.

**Keywords:** Urban Community, General Practitioners, Service Capabilities, Management Strategies

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## 1. Introduction

General practitioners are highly integrated medical talents who mainly undertake integrated services such as preventive health care, common diseases diagnosis and treatment, referral, patient rehabilitation and chronic disease management and health management at the grassroots level. They are called "gatekeepers" for residents' health and control of medical expenses who play an important role in basic health services [1]. Speeding up the training of a large number of qualified general practitioners is of great significance to strengthening the basic medical and health service system,

promoting the signing services by family doctors, establishing a system of graded diagnosis and treatment, maintaining and improving the health of the people [2].

At present, the total number of general practitioners in China is 253000, that is, general practitioners or practitioners (assistants) who have obtained a certificate of training for general practitioners. The number of general practitioners per 10000 population is only 1.82 [3]. Moreover, the provision level of health services is not high, the younger community nursing staff, low job satisfaction, inadequate training limited the provision and sustainable development of health service [4]. The weak service capacity can not meet the needs of community health services based on the bio-psycho-social

medicine model of community residents under the new situation. The role and development of general practitioners in primary health care is undergoing a combination of quantitative and technical constraints [5-6].

Therefore, the key to improving the level of health services at the grassroots level lies in the study of improving the capacity of general practitioners [7]. To clarify the general practitioner service function, strengthen the general practitioner team, and enhance the general practitioner service capability. This study tried to carry out a research to learn the current status of urban GPs and the influencing factors so that management strategies are proposed in order to provide guidance for improving the ability of general practitioners and optimizing the quality of urban community health services.

## 2. Objects, Contents of Investigation and Methods of Statistical Analysis

### 2.1. Subjects of Investigation

In our study, 185 general practitioners from 20 community health service centers in Shandong province were investigated by using multi-stage stratified cluster random sampling. The general practitioner in this survey refers to a doctor who meets any of the following conditions: (1) A doctor who is registered as a general practitioner and practices as a "general practitioner"; (2) A doctor who has obtained a general medical degree and engaged in medical work; (3) A doctor who works in a medical institution as a general practitioner. Moreover, we use of self-designed interview syllabus to carry out personal in-depth interviews with relevant experts in colleges and universities, heads of health administration departments, heads of community health service centers, and community general practitioners.

### 2.2. Contents of Investigation

The survey tool is self-designed questionnaire and in-depth interview outline. This questionnaire consists of three parts: (1) Basic status of general practitioners, such as gender, age, marital status, education, technical title, type of employment, income, whether registered as a general medical profession, etc. (2) Basic status of training and education of general practitioners, such as whether participated in community general medical training, type of training, motivation, content, factors that prevent participation in relevant training, and knowledge and skills that need to be trained to improve. (3) The situation of service capacity. Based on the WONCA tree model [8], RAPRIOP management model, community health management theory, A total of 35 items from five dimensions: basic medical service ability, public health service ability, humanities practice ability, professional literacy, and scientific research and learning ability were used to evaluate and investigate the service ability of general practitioners in urban communities. Each entry is divided into 5 levels of complete inability, inability, general ability, ability, and ability according to the Likert 5 rating method, and is assigned 1 to 5

points [9]; The total service ability score equals 5 dimension entries total score divided by total number of entries.

### 2.3. Statistical Analysis

The database was created with double entry and logical verification by using EpiData2.0.SPSS20.0 software was used for statistical processing of data. Two independent samples t-test, analysis of variance, and multiple linear stepwise regression were used to analyze the data. Based on the theoretical framework of the Unity Nations Development Programme (UNDP) capability evaluation, we propose measures and suggestions for strengthening the service capacity building of GPs in urban communities from the system, organization, and individual levels [10].

## 3. Results

### 3.1. Basic Situation and Score Comparison of Service Capacity of GPs

- (1) Basic situation of general practitioners in urban communities: The ratio of male to female in the community general practitioner is 1:1.89; the average age is (33.58±7.715) years; education is mainly based on a bachelor degree of 104 (56.2%); It is 61 (33.0%) juniors and 81 (43.8%) intermediate people; the income is mostly concentrated in 3000-4000 yuan, there are 72 people (38.9%), and the income satisfaction is not high, very dissatisfied 16 (8.6%) people, Dissatisfied 30 (16.2%) people, generally 67 (36.2%); 159 (85.9%) worked in public hospitals at various levels before working in the community; the number of people working in the community general practitioner for more than 5 years was 116 People (62.7%). There were 169 (91.4%) people who had obtained the general training certificate, and 16 (8.6%) were not. The primary health care system and general medicine related policies were well-acquainted, and they were relatively familiar with 101 (54.6%) people. Be familiar with 36 (19.5%) people.
- (2) The participation of general practitioners in urban communities in training and education: 87.0% of the community general practitioners participated in related training and education; the motivation for participation was mainly to improve the quality of medical services (142 (88.2%); 98 (60.9%) people; major obstacles not participating in related training and education work is too busy 10 (41.7%) people, lack of training information and opportunities (limited number of places) 10 (41.7%) people; participation in related training and education mainly needs to be improved The knowledge or skill is 127 (68.6%) people with medical skills.
- (3) Service capacity of general practitioners in urban communities: The capacity of the 35 community-based general practitioners in the five dimensions of the urban community surveyed in this study (35-175 points), and the total score of the community-based general

practitioners in the urban community (128.64±18.958 points, the scores of each dimension are the basic medical service ability (32.02±5.659) points, the public health service ability (39.42±6.923) points, the humanities occupational ability (19.68±2.799) points, and the professional accomplishment (19.31±2.775) points. Scientific research ability (18.20±3.373) points. As shown in Table 1.

**Table 1.** Overall capacity of community general practitioners.

dimension	items	Score Range	Score
basic medical service ability	9	9~45	32.02±5.659
public health service ability	11	11~55	39.42±6.923
humanities practice ability	5	5~25	19.68±2.799
professional literacy	5	5~25	19.31±2.775
scientific research and learning ability	5	5~25	18.20±3.373
Overall service capacity	35	35~175	128.64±18.958

### 3.2. Analysis of Influencing Factors on Service Capacity of GPs

The results of the T test or single factor variance analysis show that gender, education, income satisfaction, registration of general medical majors, and familiarity with the policy system have statistical significance for the difference of service capacity in the dimensions of basic medical service capacity, (P<0.05); Age, educational level, income satisfaction, and degree of familiarity with the policy system have statistical significance for the difference of service

capacity in the dimensions of public health service capacity, (P<0.05); Title, income satisfaction, and degree of policy familiarity have statistical significance for the difference of service ability in the dimensions of humanistic practice ability (P<0.05); Income satisfaction, and familiarity with the policy system have statistical significance for the difference of service ability in the degree of professional accomplishment, (P< 0.05); Whether the rotation, income satisfaction, and degree of familiarity with the policy system in general hospitals have statistical significance for the difference of service capacity in the dimensions of scientific research learning ability, (P<0.05); Literacy, income satisfaction, and familiarity with the policy system have a statistical significance for the total score of community general practitioner service capacity (P<0.05).

The multivariate linear regression analysis model was established with community general practitioner service ability score as dependent variable, community general practitioner basic condition, general practitioner related training education as independent variable. The test level for entering the regression equation is 0.05, and the test level for removing the equation is 0.10. The results of multi-factor analysis showed that there was a positive correlation between the general service ability of general practitioners in the urban community and academic qualifications, income satisfaction, and familiarity with related policy systems in general medicine. As shown in Table 2.

**Table 2.** Multivariate and gradual regression analysis.

Factor	Unstandardized Coefficients	Standardized coefficients	t	P	Colinear diagnosis	
					TOL	VIF
Constant term	168.611		26.133	0.000		
Educational background	4.267	0.164	2.507	0.013	0.984	1.107
Income satisfaction	2.654	1.408	2.062	0.041	0.917	1.164
Policy familiarity	10.172	0.402	5.604	0.000	0.946	1.138

## 4. Discussion

### 4.1. Distribution of General Practitioner

The results of this study showed that the total score of service capacity of general practitioners in urban communities is 128.64±18.958. It is found from the proportion of community general practitioners 'service ability that the dimensions of basic medical service ability and public health service ability are higher. The reason may be that the basic work of community general practitioners is mainly caused by common diseases, frequent diagnosis and treatment, and public health work. This is similar to the domestic literature [11]. However, the service ability of humanities, professional literacy and scientific research and learning ability is relatively low. In this way, community general practitioners are required not only to have a good basic level of diagnosis and treatment, and the ability to provide public health related work services, but also to strengthen the ability of other dimensions, including critical disease communication skills, the use of laws to resolve disputes, and scientific research and

academic services. In order to meet the increasing health needs of community residents, the comprehensive competence of community general practitioners under the graded diagnosis and treatment system will be improved.

### 4.2. Analysis of Services Capacity Factors of Community General Practitioners

The results of single factor analysis show that gender, education, registration of general medical majors, income satisfaction, and familiarity with related policies have an impact on the ability of basic medical services; Age, education, income satisfaction, and familiarity with relevant policies have an impact on public health service capabilities; Title, income satisfaction, and relative policy familiarity have an impact on the ability of humanities practice; Income satisfaction and relative policy familiarity have an impact on professional literacy; Whether or not to participate in hospital rotation, income satisfaction, and related policy familiarity have an impact on scientific research learning ability. The multivariate linear regression analysis shows that education, income satisfaction and relative policy familiarity have a

statistically significant effect on the overall service ability of community general practitioners. This is similar to the domestic literature [12].

The level of education is positively related to the service ability of community general practitioners [13]. The development of general medicine in China started late, and the education and training mechanism of general medicine is not perfect. As a result, the number of general practitioners is insufficient and the overall quality is not high. The cultivation of highly educated personnel is the cornerstone of improving the service ability of community general practitioners. Vocational income is the basic need of community general practitioners, and it is the survival requirement in Maslow's theory. High income is the embodiment of self-worth, and it is also the main incentive factor to increase the motivation of work. GPs are more concerned with career development and self-achievement, and are also more concerned about career income. Increased income leads to higher income satisfaction and better job motivation. The general practitioners are more familiar with policy, their community service capacities are better. In the process of promoting the hierarchical diagnosis and treatment system, relevant policies are needed to guide the general practitioners, clarify their own functional orientation and division of work, in order to effectively improve their own service capabilities and efficiently provide quality and comprehensive general services to community residents.

## 5. Conclusion

### 5.1. Clarifying Government Responsibility

The government will gradually improve the supporting policies related to the general practitioner system, increase the construction of policies and institutions, and implement the planning for the training of general medical personnel [14]. The government should increase its financial support and increase its investment in general medical education. The government should make rational overall planning, optimize the allocation of talents, increase the policy preference for areas where the general practitioner system is lagging behind, encourage and guide general practitioners to join the grassroots level, and increase the professional willingness of general practitioners to take root at the grassroots level. The Government should increase publicity and guidance to raise the awareness of the community about GPs and their services, and alleviate the current misunderstanding of the work of GPs.

### 5.2. Developing Organizational Performance Incentives

The organization should continuously improve the performance appraisal system and highlight the fairness, efficiency and orientation of the evaluation indicators, so as to achieve the quality and quantity of double improvement to comprehensively improve the level of service capacity [15]. The organization should issue a preferential policy for the evaluation of professional titles of community general practitioners, and formulate a comprehensive evaluation standard for senior professional titles. Take into account the

content, nature and orientation of the community general practitioners in formulating the standards, and appropriately relax the requirements for academic qualifications, academic papers and English, with a focus on the ability to solve primary health care problems. The organization should improve the training content, increase the training opportunities for community general practitioners on increasing trust and relationship communication. This can enable the two sides to establish a better relationship of trust and increase the effectiveness of general medical treatment.

### 5.3. Recognizing Personal Role

General practitioners should clarify their own work functions under the hierarchical diagnosis and treatment system, re-position their roles, and invest in general medical services in a more positive manner. GPs should also continue to learn about relevant policies and systems, follow the development trend of general medicine, and comprehensively improve our service capabilities.

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