

## Original Article

# Analysis of patients' demand for professional conduct by residents in public hospitals based on expectations

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## ABSTRACT

**Objective:** This study aims to reveal patients' demand for professional conduct by physicians in public hospitals in terms of 22 elements in five dimensions, namely, the principles of life value, integrity fairness and justice, rationality, and honesty, based on the theory of social expectations and from the perspective of patients. **Methods:** More than 1500 patients were selected from 34 public hospitals in Shandong Province, China to participate in a questionnaire survey. A Chi-square test, logistic regression analysis, and other methods were used to analyze the survey data, such as satisfaction with residents' medical services and demand for professional conduct. **Results:** About 79.5% of the patients expressed that the medical services provided by residents in public hospitals were above the "average" level. There was statistical significance for age, educational level, occupation, and satisfaction with inpatient services ( $P < 0.05$ ). In the ranking of moral elements, four elements related to honesty, three elements related to rationality, two elements related to kindness (righteousness), and one element related to life value ranked in the top 10 elements, all with average scores above 4.70. **Conclusion:** The social evaluation mechanism for professional conduct by residents in public hospitals should be strengthened, and the standardized training system for the professional conduct of residents in public hospitals should be improved.

**Keywords:** Public hospitals; Patient expectation; Residents; Professional conduct; Demand survey

## INTRODUCTION

The professional conduct of residents in public hospitals are of direct concern to the interests of inpatients and the development of medical and health services, and has long been of public concern. Since the Physician's Oath was proposed in 2002, the basic principles that doctors should adhere to and professional responsibilities that they should undertake have caused extensive debate among medical professionals in China and other countries.<sup>[1]</sup> Since the Chinese Medical Doctor Association officially joined the international ranks implementing the Physician's Oath in

2005, research on doctors' professional conduct in China has gradually deepened. However, currently, there are still some problems, such as the emphasis of theory over empirical research and medical education over clinical practice.<sup>[2]</sup> In this study, we perform an objective evaluation and empirical analysis based on patients' subjective feelings about and expectations of the medical service level of physicians in public hospitals, which provides a realistic basis for improving the evaluation standards for the professional conduct of residents in public hospitals and promoting standardized training of residents.

## MATERIALS AND METHODS

### Respondents

In this study, convenience sampling was adopted in 16 cities in the east, middle, and west regions of Shandong Province. A total

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of 34 public hospitals were selected for the survey, including 26 Grade-III Class-A general hospitals. The respondents were patients who had been admitted to and discharged from the 34 surveyed public hospitals from 2015 to 2018 or their family members, excluding outpatients and professional physicians. A total of 1600 questionnaires were distributed, and 1522 valid questionnaires were collected, with an effective recovery rate of 95.1%.

### Survey tools

The survey was conducted using the Questionnaire on the Requirements for the Elements of the Professional Ethics Evaluation Index System for Residents in Public Hospitals designed and prepared by our research group. The questionnaire was based on a literature research, relevant information from previous research, and the results of several rounds of expert consultation. The questionnaire provided an empirical survey on the degree of demand by patients for the following five principles of professional conduct by residents in public hospitals: life value (V1), kindness (righteousness) (V2), fairness and justice (V3), rationality (V4), and honesty (V5). The principles comprise 22 elements (Y11–Y54), which reflect the degree of inpatients' expectations regarding the ethical elements of residents. The reliability of the questionnaire was tested by Cronbach's  $\alpha$  coefficients and split-half coefficients. Table 1 shows that the overall reliability of the questionnaire and the reliability of each dimension were good.

### Statistical analysis

SPSS 2.0 software was used for statistical processing and analysis of the survey data. Chi-square test and logistic regression analysis were employed to analyze inpatients' demand for professional conduct and evaluation of the relevant elements of residents' professional conduct as well as the influencing factors, with  $\alpha = 0.05$  as the significance level. The five dimensions (V1–V5) of medical ethics elements were assigned different scores, where 1 = very important, 2 = relatively important, 3 = neutral, 4 = relatively unimportant, and 5 = unimportant, according to the degree of demand. Elements in different dimensions (Y1–Y22) were assigned scores based on the same criteria.

## RESULTS

### Basic information of the respondents

The sample included 647 male respondents and 875 female respondents, accounting for 42.5% and 57.5% of the total, respectively. The proportion of female respondents was higher than that of male respondents. As for the distribution of educational levels, 230 subjects (15.1%) had primary school education or

below, 310 subjects (20.4%) had junior high school education, 423 subjects (27.8%) had senior high school education, 484 subjects (31.8%) had university education, and 75 subjects (4.9%) had postgraduate education. As for the distribution of occupations, there were 432 firm employees (28.4%), 236 farmers (15.5%), 184 self-employed workers (12.1%), 242 retirees (15.9%), 146 employees of government agencies and public institutions (9.6%), 64 migrant workers (4.2%), and 65 others (4.3%).

### Inpatients' demand for professional conduct by residents in public hospitals

The results of the survey showed that, overall, patients who were neutral, relatively satisfied, or very satisfied with medical services provided by residents in public hospitals accounted for about 79.5% of the total, while those who were relatively dissatisfied or very dissatisfied accounted for about 20.5%. The percentages of patients that considered it necessary, relatively necessary, and very necessary to strengthen the standardized construction of residents' professional conduct were 25.5%, 30.7% and 32.1%, respectively, which comprised 88.3% of the total investigated population. Univariate analysis was performed on patients' demand for doctors' professional conduct. The statistical results showed that four factors—age, educational level, occupation, and satisfaction with inpatient services—were statistically significant ( $P < 0.05$ ), as shown in Table 2. Variable values were further assigned to four factors, namely, age, educational level, occupation, and satisfaction with inpatient services (see Table 3). Unconditional logistic stepwise regression was used for the multivariate analysis. The statistical results showed that older patients and family members had higher demand for residents' professional conduct than did younger patients and family members. Patients and family members with relatively low degree of satisfaction with inpatient services had higher demand for residents' occupational standardization, as shown in Table 4.

### Inpatients' ranking of demand for elements of residents' professional conduct

Based on the basic principles of moral system construction, that is, the five principles of life value, kindness (righteousness), fairness and justice, rationality, and honesty, this survey provided an empirical analysis on the degree of demand for 22 elements reflecting the professional conduct principles of residents in public hospitals, thereby reflecting the expectations of inpatients for the ethical elements of residents. The ranking of demand for the top 10 elements was Y54, Y42, Y43, Y21, Y11, Y51, Y22, Y52, Y53, and Y44, which included four elements related to the principle of honesty, three elements related to the principle of rationality, two

**Table 1.** Reliability analysis of the questionnaire on the requirements for the elements of the professional ethics evaluation index system for residents in public hospitals

	V1	V2	V3	V4	V5	Entire questionnaire
Cronbach's $\alpha$ coefficient	0.7865	0.8452	0.8326	0.9242	0.9146	0.9328
Split-half coefficient	0.7490	0.7817	0.9011	0.9138	0.8983	0.9259

**Table 2.** Univariate analysis of inpatients' demand for professional conduct by residents in public hospitals

Survey content	Survey options	Number of people surveyed	Demand for residents' professional conduct		$\chi^2$ -value	P-value
			Number of people	Proportion (%)		
Gender	Male	647	538	83.21	1.897	0.138
	Female	875	748	85.54		
Age (years)	Under 15	34	29	60.22	22.873	< 0.001
	16–25	193	76	67.45		
	26–35	554	236	79.65		
	36–45	323	193	82.78		
	46–55	256	156	88.12		
	Over 55	78	51	90.56		
Educational level	Primary school and below	230	104	45.12	20.398	0.005
	Junior high school	310	184	59.43		
	Senior high school (technical secondary school)	423	253	59.84		
	University/college	484	386	79.85		
	Postgraduate and above	75	67	89.92		
Occupation	Employees of enterprises	432	331	76.58	20.043	0.005
	Farmers	236	141	59.89		
	Self-employed workers	184	147	79.87		
	Retirees	242	221	91.34		
	Employees of government agencies and public institutions	146	129	88.45		
	Migrant workers	64	47	73.23		
Satisfaction with inpatient medical services	Others	65	49	75.44	34.560	< 0.001
	Very satisfied	100	61	60.78		
	Relatively satisfied	400	318	79.45		
	Neutral	709	634	89.45		
	Relatively dissatisfied	245	228	92.87		
Very dissatisfied	68	67	98.56			

**Table 3.** Variables and value assignment in the unconditional logistic regression analysis

Variable	Value assignment
Age (years)	Under 15 = 1; 16–25 = 2; 26–35 = 3; 36–45 = 4; 46–55 = 5; over 55 = 6
Educational level	Primary school and below = 1; Junior high school = 2; Senior high school (technical secondary school) = 3; University/college = 4; Postgraduate and above = 5
Occupation	Employees of enterprises = 1; Farmers = 2; Self-employed workers = 3; Retirees = 4; Employees of government agencies and public institutions = 5; Migrant workers = 6; Others = 7
Satisfaction with inpatient medical services	Very dissatisfied = 1; Relatively dissatisfied = 2; Neutral = 3; Relatively satisfied = 4; Very satisfied = 5

**Table 4.** Multivariate logistic regression analysis of inpatients' demand for professional conduct by residents in public hospitals

Variable	B	SE	Wald	P	OR	95%CI	
						Upper limit	Lower limit
Educational level (control = primary school and below)							
Junior high school	0.659	0.222	1.785	0.013	1.767	2.874	1.125
Senior high school (technical secondary school)	0.785	0.235	2.205	0.017	1.980	2.980	1.242
University/college	1.134	0.243	34.879	< 0.001	3.128	4.459	2.989
Postgraduate and above	1.280	0.251	40.359	< 0.001	4.560	4.898	3.785
Satisfaction with inpatient medical services (control = very dissatisfied)							
Relatively dissatisfied	-1.056	0.459	7.389	0.012	4.320	4.624	4.198
Neutral	-1.240	0.405	9.245	0.002	2.484	3.685	2.058
Relatively satisfied	-1.789	0.365	32.455	< 0.001	0.256	0.525	0.145
Very satisfied	-1.893	0.314	43.566	< 0.001	0.168	0.324	0.092

elements related to the principle of kindness (righteousness), and scores of more than 4.70 (see Table 5). one element related to the principle of life value. All had average

**Table 5.** Comprehensive ranking of demand for residents' professional conduct (by inpatients)

Ranking	Dimension (V)	Element (Y)	$\mu \pm S$
1	Principle of honesty (V5)	Take the initiative to undertake responsibilities (do not evade responsibilities) (Y54)	4.84±0.41
2	Principle of rationality (V4)	Adopt reasonable communication (active, effective, and initiative communication between doctors and patients) (Y42)	4.82±0.44
3	Principle of rationality (V4)	Adopt reasonable medical behavior (relieving the pain of patients and reducing their financial burden) (Y43)	4.81±0.45
4	Principle of kindness (righteousness) (V2)	Prioritize meeting the demands of patients, and place personal interests second (Y21)	4.79±0.48
5	Principle of life value (V1)	Show respect for patients (including respect for patients' culture, occupation, age, sex, sexual orientation, beliefs, and disability) (Y11)	4.75±0.62
6	Principle of honesty (V5)	Protect the privacy of patients (Y51)	4.74±0.53
7	Principle of kindness (righteousness) (V2)	Show sympathy (empathy and compassion) for patients and their situations (Y22)	4.73±0.53
8	Principle of honesty (V5)	Protect patients' right to informed consent, and truthfully inform them of the medications, surgical risks, and possible adverse reactions (Y52)	4.72±0.55
9	Principle of honesty (V5)	Truthfully fill in medical records and issue medical certificates (Y53)	4.70±0.55
10	Principle of rationality (V4)	Ensure reasonable purpose of medical care (emphasizing doctors' professional values) (Y44)	4.70±0.57
11	Principle of fairness and justice (V3)	Be willing to accept evaluation and supervision (by superiors, peers, patients, and self) (Y34)	4.69±0.59
12	Principle of kindness (righteousness) (V2)	Do not prescribe drugs more than necessary doses or without indications (Y24)	4.68±0.57
13	Principle of fairness and justice (V3)	Be recognized, approved, and accepted by patients (Y33)	4.68±0.59
14	Principle of life value (V1)	Do not refuse to provide first aid under any circumstances (Y13)	4.68±0.59
15	Principle of fairness and justice (V3)	Treat all patients equally (Y31)	4.67±0.58
16	Principle of life value (V1)	Display dedication and self-sacrifice (Y12)	4.67±0.60
17	Principle of fairness and justice (V3)	Equitably allocate health resources (use drugs rationally and treat illness properly) (Y32)	4.66±0.56
18	Principle of life value (V1)	Take correct actions that are beneficial to life safety /avoid mistakes (Y15)	4.59±0.65
19	Principle of rationality (V4)	Display reasonable attention (including paying attention to patients' culture, age, sex, disability, etc.) (Y41)	4.56±0.62
20	Principle of kindness (righteousness) (V2)	Refuse kickbacks (for drugs and devices) (Y23)	4.55±0.62
21	Principle of life value (V1)	Provide sustainable health education (Y14)	4.53±0.65
22	Principle of kindness (righteousness) (V2)	Refuse bribery (Y25)	4.51±0.52

## DISCUSSION

### *Relationship between patients' expectations and professional conduct of residents in public hospitals*

Our empirical survey based on patients' expectations seeks to drive changes in the contemporary doctor–patient relationship and reform of the medical and health system, and to identify problems and summarize rules from the status quo of patients' expectations

of residents' professional conduct. The professional population of residents in public hospitals represents the backbone force of the medical service in public hospitals, and is a key factor affecting the quality of medical services in public and the concentrated reflection of medical practice behavior. Based on research related to the theory of social expectations, patients' demand for doctors' professional conduct can to a great extent reflect the degree of social expectations.<sup>[9]</sup> This survey also showed that patients of

different ages, occupations, and educational levels had significant differences in their degrees of satisfaction with and demands for the status quo of residents' professional conduct. The survey also showed that currently, based on the diverse social backgrounds of patients in China, their social expectations for medical services in public hospitals tend to concern safer and more effective medical services, and they also expect to receive more extensive medical care. To promote the reform of public hospitals further by ensuring public welfare and accelerating the transformation of social roles, it is necessary to identify diversified social demand from a multi-dimensional perspective, and to develop an expectation model for patients, paying attention to patients, and maximizing the social benefits of public hospitals.<sup>[4]</sup> Therefore, there is an urgent need to study the ethical standard system and social motivation for professional conduct evaluation of residents in public hospitals.

### ***Analysis of demand for principles and elements of residents' professional conduct based on patients' expectations***

The survey of demand elements from five dimensions, namely, the principles of life value, kindness (righteousness), fairness and justice, rationality, and honesty, not only reflects the composition of common moral standards, but also has the characteristics of typical requirements for mediating conflicts between doctors and patients.<sup>[5]</sup> Among them, the principle of life value in the field of medical ethics is an approximately absolute or quasi-absolute principle, because everyone has a unique life, and it must be the starting point of any first or human nature evaluation.<sup>[6]</sup> In the screening of residents' professional conduct, in this study, we emphasized the influences of medical activities on people's life value, especially reflected in residents' respect for patients through their medical behavior. For example, from the survey results, we observed diversity in patients' culture, occupation, age, sex, and physical condition background, reflecting the differences in their satisfaction with and demand for medical services. The evaluation dimension of kindness (righteousness) requires that, in professional practice, doctors should especially grasp the principles of "good deeds" and "preventing evil deeds" in clinical activities, such as whether to prioritize meeting a patient's preferences and how to protect patients' interests in diagnosis and treatment services. In this survey, the demand for this element was higher (fourth place). In addition, regarding "sympathy for patients and their situations" in the survey, more patients mentioned their understanding of sympathy, reflecting that they not only sought the objective mercy of residents in the treatment, but also their subjective empathy and compassion. Moreover, according to the principles of fairness, justice, and rationality, we observe that currently, patients have a relatively high demand for such aspects as equal medical care and reasonable medical care, which are embodied in the rationality of communication, rationality of behavior, fairness of resource allocation, etc. The element within the principle of honesty that was the most important in demand was "take the initiative to undertake responsibilities (do not evade responsibilities)." From the perspective of patients' expectations, there is still a crisis of trust in the inpatient medical systems of public hospitals among

patients, and there is high demand for residents to meet their responsibilities and remain honest.

### ***Importance of improving standardized training for professional conduct by residents in public hospitals***

The French sociologist Emile Durkheim<sup>[7]</sup> once said: "There are as many types of morals as there are different occupations. Morality is composed of norms, which can dominate individuals, force them to act in such ways, and also limit individuals' tendencies and prohibit them from going beyond boundaries." The description of the resident occupation by the Accreditation Council for Graduate Medical Education in the United States clearly points out that residents are expected to show respect, enthusiasm, and honesty to patients; to fully meet the preferences of patients, to place personal interests second, and to strengthen responsibilities; they should pursue excellence and constantly improve their professional capabilities.<sup>[8]</sup> Therefore, such values and ethical norms should be reflected in the accreditation criteria of residents. At present, China's professional standardized training for residents focuses on techniques, skills, and professional training, while there is a lack of professional conduct training programs for residents. However, today's doctors, patients, and the public are deeply aware that medical professional conduct is in crisis, and thus, we should establish how to strengthen the evaluation of residents' professional conduct, start professional education modes, and design resident training programs aimed at cultivating professional conduct. Based on understanding the cognitive differences between doctors and patients, China should preserve the essence of medical professional conduct, revise its forms, and strengthen its value.<sup>[9]</sup> Every resident should be taught how to clearly identify and prompt the truth, put patients' interests first, and integrate patients' unique circumstances into clinical decision-making. Physicians' professional conduct is not only a moral standard, but also a requirement for professional medical conduct, the embodiment of clinical decision-making, and an inevitable outcome of the simultaneous development of professional medical education and the physician's personality.

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### **Conflict of Interest**

None declared.

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