

Patient Trust in Physicians: Empirical Evidence from Shanghai, China

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Abstract

Background: Patient trust in physicians, which can be considered a collective good, is necessary for an effective health care system. However, there is a widespread concern that patient trust in physicians is declining under various threats to the physician–patient relationship worldwide. This article aimed to assess patient trust in physicians through a quantitative study in Shanghai, China, and to provide appropriate suggestions for improving the trust in China.

Methods: The data from a survey conducted in Zhongshan Hospital and Shanghai Tenth People’s Hospital, which are two tertiary public hospitals in Shanghai, were used in this study. Patient trust in physicians was the dependent variable. Furthermore, a 10-item scale was used to precisely describe the dependent variable. The demographic characteristics were independent variables of trust in physicians. Binomial logistic regression was employed to analyze the factors associated with the dependent variable, which was divided into two categories on the basis of the responses (1: Strongly agree or agree and 0: Strongly disagree, disagree, or neutral).

Results: This study found that 67% of patients trusted or strongly trusted physicians. The mean score of patient trust in physicians was 35.4 from a total score of 50. Furthermore, patient trust in physicians was significantly correlated with the age, education level, annual income, and health insurance coverage of the patients.

Conclusions: Patient trust in physicians in Shanghai, China is higher than previously reported. Furthermore, the most crucial reason for patient distrust in physicians is the information asymmetry between patients and physicians, which is a natural property of the physician–patient relationship, rather than the so-called for-profit characteristic of physicians or patients’ excessive expectations.

Key words: Patient Trust; Physician–Patient Relationship; Public Hospital

INTRODUCTION

The physician–patient relationship has received extensive philosophical, legal, and literary attention since the time of Hippocrates and is one of the key subjects in the modern medical literature.^[1] Patient trust in physicians is widely recognized as being central to the physician–patient relationship.^[2–4] Furthermore, this trust, which can be considered a collective good, is necessary for an effective health care system.^[5,6]

However, there is a widespread concern that patient trust in physicians is declining under various threats to the physician–patient relationship worldwide.^[7,8] In China, patient violence against physicians has become a common occurrence.^[9] Thus, improving patient trust in physicians may be much more urgent in China than in other countries.

Several researchers have confirmed that measuring patient trust in physicians is vital for improving patient trust.^[10,11] A systematic review of patient trust in physicians revealed that most studies on this topic have been conducted in the United States and published in English.^[12–14] In China, several studies have discussed patient satisfaction with physicians in Chinese, but none of them has discussed patient trust in physicians in Chinese or in other languages.

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However, several researchers have confirmed that patient trust in physicians is distinct from patient satisfaction with physicians.^[15]

The objective of this study was to assess patient trust in physicians through a quantitative study in Shanghai, China. Furthermore, this paper aimed to identify the determinants of patient trust in physicians to provide appropriate suggestions for improving this trust in China, and to enrich the theories on the issue of trust in physicians.

METHODS

Data

The data from a survey conducted in Zhongshan Hospital and Shanghai Tenth People's Hospital, which are two tertiary public hospitals in Shanghai, were used in this study. During the first eight workdays in July 2015, 100 outpatients were randomly selected using the outpatient registration numbers for each day in each hospital. We excluded patients with missing data and thereby obtained a total of 1210 respondents (a valid rate of 75.6%). The characteristics of the respondents are shown in Table 1.

Questionnaire

In this study, patient trust in physicians was the dependent variable. This variable was measured using the following question: "Please indicate to what extent you trust the physicians on a scale from 1 (strongly disagree) to 5 (strongly agree)." Furthermore, a 10-item scale was used to precisely describe the dependent variable. This scale is basically consistent with the 10- or 11-item scales employed in the United States, which were constructed using psychometric analyses that focused on feasibility, factor structure, validity, and reliability.^[12,15] The details of the 10-item scale are displayed in Table 2. Responses and coding of each item were indicated on a typical 5-point Likert scale: strongly agree (5), agree (4), neutral (3), disagree (2), and strongly disagree (1).^[16] In addition, the negatively worded items were reverse coded. The response and coding were generally used to assess patient trust in physicians.

The demographic characteristics (gender, age, education level, marital status, household registration, income, and health insurance) were independent variables of trust in physicians. Dichotomous variables were scored as either 1 (male and household registration in Shanghai) or 2; age was measured on a scale from 1 (18–29 years) to 6 (70 years and above). Education level was measured from 1 (primary school and below) to 6 (master's degree and above). The annual income was assessed from 1 (RMB 0) to 6 (RMB 120,000 and above or approximately USD 19,000). Furthermore, health insurance coverage was measured from 1 (no health insurance) to 7 (Urban Employee Basic Health Insurance Scheme [UEBHIS] and Commercial Health Insurance [CHI]).

Statistical analyses

Statistical analyses were performed using SPSS software (version 19.0; SPSS Inc., Chicago, IL, USA), and a $P < 0.05$

Table 1: Description of dependent and demographic variables (%)

Variables	Percentage
Gender	
Male	47.4
Female	52.6
Age (years)	
18–29	22.6
30–39	22.4
40–49	16.2
50–59	12.5
60–69	17.9
70 and above	8.4
Education	
Primary school and below	3.7
Middle school	17.5
High school	27.2
Junior college	14.0
Bachelor degree	33.0
Master degree and above	4.6
Marriage	
Married	69.4
Others	30.6
Household registration	
Shanghai	58.3
Other places	41.7
Annual income (RMB)	
0	12.3
1–19,999	12.6
20,000–39,999	17.9
40,000–79,999	19.6
80,000–119,999	17.1
120,000 and above	20.5
Health insurance	
Without any health insurance	7.7
UEBHIS	45.0
UCBHIS	24.3
NRCMS	10.8
CHI	3.4
FHI	3.9
UEBHIS + CHI	5.0
Trust in physicians	
Strongly disagree	0.8
Disagree	3.4
Neutral	28.8
Agree	47.0
Strongly agree	20.0

UEBHIS: Urban Employee Basic Health Insurance Scheme; UCBHIS: Urban Citizen Basic Health Insurance Scheme; NRCMS: New Rural Cooperative Medical System; CHI: Commercial Health Insurance; FHI: Free Health Insurance.

was considered statistically significant. Binomial Logistic regression was employed to analyze the factors associated with the dependent variable, which was divided into two categories on the basis of the responses (1: Strongly agree or agree and 0: Strongly disagree, disagree, or neutral). In addition, logistic regression results are presented as odds ratios (ORs), 95% confidence interval (CI), and P values.

RESULTS

Sociodemographic characteristics of sampled patients

Among all sampled patients, 47.4% were male, 26.3% were 60 years and above, and 48.4% had high school or lower education. Furthermore, 58.3% of patients had household registration in Shanghai, and 45% were covered by the UEBHIS. The sociodemographic characteristics of sampled patients are provided in Table 1.

Trust in physicians

Table 1 shows that 67% of patients trusted or strongly trusted physicians. In addition, 4.2% of patients distrusted or strongly distrusted physicians.

Patient trust in physicians was scored using the 10-item scale; the mean score of this trust was 35.4 from a total score of 50. Table 2 indicates that the highest score was obtained for the item “I can tell doctors anything about my disease” among the ten items. In addition, the lowest scores were obtained for the items “doctors sometimes pretend to know things when they are really not sure” and “If a mistake were made in my treatment, then doctors would try to hide it from me.”

Factors associated with trust in physicians

According to the logistic regression results, patient trust in physicians was significantly correlated with the age of patients. Compared with patients aged 18–29 years, those who were any other age except for 70 years and above were more likely to trust physicians. For example, patients aged 60–69 years were more likely to trust physicians (*OR* 3.36; 95% *CI* 2.00–5.67).

Furthermore, Table 3 shows that patient trust in physicians was also significantly correlated with the annual income of patients. Compared with patients without any income, those with any other income level except for RMB 40,000–80,000 were more likely to trust physicians. For example, patients with an income of RMB 80,000–120,000 were more likely to trust physicians (*OR* 7.56; 95% *CI* 4.07–14.06). Table 3 also illustrates that trust in physicians was significantly correlated with the education level of patients. Compared with patients with primary school education and below, those with any other education level were more likely to trust physicians. For example, patients who received a bachelor’s degree were more likely to trust physicians (*OR* 5.27; 95% *CI* 2.48–11.20).

In addition, Table 3 displays that patient trust in physicians was significantly correlated with the type of health insurance coverage. Compared with patients without health insurance, those covered by CHI were more likely to trust physicians (*OR* 0.36; 95% *CI* 0.15–0.86), and those covered by Free Health Insurance were less likely to trust physicians (*OR* 0.08; 95% *CI* 0.03–0.20). Patients covered by both the UEBHIS and CHI were also less likely to trust physicians (*OR* 0.39; 95% *CI* 0.18–0.87).

Furthermore, this study found that trust in physicians was not significantly correlated with patient gender, marital status, or household registration.

Table 2: Description of the scores of patient trust in physicians by the 10-item scale

Items	Mean	SD
I can tell doctors anything about my disease	4.18	0.83
Doctors are extremely thorough and careful	3.59	0.97
Doctors sometimes pretend to know things when they are really not sure*	3.26	0.93
I completely trust doctors’ judgment about my medical care	3.76	0.85
Doctors would always tell me the truth about my health, even if there was bad news	3.88	0.79
Doctors care as much as I do about my health	3.44	0.98
If a mistake were made in my treatment, doctors would try to hide from me*	3.25	0.91
Doctors always ask me to perform only necessary medical tests such as CT	3.33	1.10
Doctors make the decisions on my treatment regardless of their salaries	3.43	1.06
I sometimes worry about doctors may not keep the information we discussed totally private*	3.38	0.94

*The negatively worded item has been reverse coded. CT: Computed tomography.

Table 3: Factors associated with trust in physicians by the logistic regression

Variables	<i>OR</i>	95% <i>CI</i>		<i>P</i>
Gender	1.02	0.78	1.33	0.902
Marriage	0.76	0.54	1.07	0.116
Household registration	1.25	0.93	1.68	0.139
Age (years)				0.001‡
30–39	1.62	1.04	2.53	0.032*
40–49	2.36	1.41	3.93	0.001‡
50–59	2.28	1.31	3.97	0.003†
60–69	3.36	2.00	5.67	0.001‡
≥70	1.72	0.97	3.05	0.064
Annual income (RMB)				0.001‡
1–19,999	2.26	1.31	3.90	0.004†
20,000–39,999	2.07	1.26	3.39	0.004†
40,000–79,999	0.92	0.57	1.49	0.740
80,000–119,999	7.56	4.07	14.06	0.001‡
≥120,000	1.89	1.10	3.25	0.021*
Education				0.001‡
Middle school	2.92	1.42	6.00	0.004†
High school	3.77	1.88	7.58	0.001‡
Junior college	4.25	2.00	9.06	0.001‡
Bachelor degree	5.27	2.48	11.20	0.001‡
Master degree and above	3.86	1.43	10.43	0.008†
Health insurance				0.001‡
UEBHIS	1.30	0.78	2.18	0.314
UCBHIS	1.22	0.73	2.04	0.440
NRCMS	1.74	0.92	3.30	0.089
CHI	0.36	0.15	0.86	0.021*
FHI	0.08	0.03	0.20	0.001‡
UEBHIS + CHI	0.39	0.18	0.87	0.021*

**P*<0.05; †*P*<0.01; ‡*P*<0.001. UEBHIS: Urban Employee Basic Health Insurance Scheme; UCBHIS: Urban Citizen Basic Health Insurance Scheme; NRCMS: New Rural Cooperative Medical System; CHI: Commercial Health Insurance; FHI: Free Health Insurance; *OR*: Odds ratio; *CI*: Confidence interval.

DISCUSSION

A global survey used the same questionnaire to compare the differences in public trust in physicians among different countries.^[17] However, no global survey has been conducted for assessing patient trust in physicians. One survey in the United States showed that 70% of patients completely trusted their physicians,^[18] and another survey of cancer patients in the United Kingdom revealed that 94% of patients completely trusted the hospital physicians.^[19] Although no research has evaluated patient trust in physicians in China, several news media reports have shown that patients distrust physicians in China. For example, a survey by the China Youth Newspapers in 2013 found that approximately 70% of patients did not trust physicians in China.

However, this study showed that 67% of patients trusted or strongly trusted physicians. This result is consistent with the score determined using the 10-item scale, with a mean score of 35 from a total score of 50. The percentage and score of patient trust in physicians are similar to those in the aforementioned studies in the United States and are much higher than those in previous reports. Therefore, this study demonstrated that patient trust in physicians in Shanghai is much higher than in the locations examined in previous reports in China.

Previous studies have shown that the for-profit characteristic of physicians in China is the most crucial reason for the poor physician–patient relationships in this country.^[20] Furthermore, this for-profit characteristic is evidenced by the connection between physicians' prescription provision and their salaries.^[21] The results of this study illustrated that the item “doctors make decisions on my treatment regardless of their salaries” was ranked in the last fourth among the ten items of the scale used to assess patient trust in physicians. Therefore, we believe that the so-called for-profit characteristic of physicians is not the most crucial reason for patient distrust in physicians.

More importantly, analyses of patient trust in physicians according to the 10-item scale revealed that the information asymmetry theory plays a crucial role in patient trust in physicians. The item “I can tell doctors anything about my disease” ranked first, and the item “if a mistake were made in my treatment, then doctors would try to hide it from me” ranked last among the ten items of the scale used to assess patient trust in physicians. The considerable differences in the scores between the two items showed that patients possessed full information about themselves but did not possess full information about the physicians' diagnosis and treatment because of the obstacles in acquiring professional medical knowledge. Because it is nearly impossible for patients to possess the same amount of information that physicians do, altering the information asymmetry between patients and physicians is difficult. Furthermore, the information asymmetry in the physician–patient relationship occurs under every clinical medical environment in every country. Therefore, we believe that being pessimistic about

patient distrust in the honesty of physicians is unnecessary. In addition, hospitals and physicians should establish suitable mechanisms and channels for improving communication with patients, such as increasing the transparency of the protocol of diagnosis and treatment.

Previous studies have illustrated that critical citizens who are younger and highly paid as well as have a higher education level are considered to be a vital reason for the lower trust in local governments and their provisions, such as public services, in developed countries.^[22] Furthermore, critical citizens who have a lower trust in local governments and public services have also been found in urban China.^[23] For this reason and because of the common occurrence of patient violence against physicians, several researchers attribute the poor physician–patient relationship in China to patients' excessive expectations. Although we found that younger patients were less likely to trust physicians, those with a higher education level or a higher income were more likely to trust physicians. Therefore, this study found no strong evidence to confirm the existence of critical citizens among patients in Shanghai.

In conclusion, according to empirical evidence from two public hospitals in Shanghai, patient trust in physicians in China is higher than previously reported. Furthermore, the most crucial reason for patient distrust in physicians is the information asymmetry between patients and physicians, which is a natural property of the physician–patient relationship, rather than the so-called for-profit characteristic of physicians or patients' excessive expectations. In addition, because this study was a cross-sectional survey, deducing a continuous trend in patient trust in physicians over a long period was impossible. Regarding the patients sampled from Shanghai's hospitals, extrapolating the results of this study to the entire population of China is difficult. Therefore, conducting a continuous and comprehensive survey of patient trust in physicians in multiple regions of China has been planned in order to provide more appropriate suggestions for improving the physician–patient relationship.

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Conflicts of interest

There are no conflicts of interest.

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