

The Relationship Between the Physician-Patient Relationship, Physician Empathy, and Patient Trust



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ABSTRACT:

BACKGROUND: A trusting physician-patient relationship is an essential component of high-quality care.

OBJECTIVE: To explore the relationship between the physician-patient relationship, physician empathy, and patient trust.

DESIGN: Cross-sectional survey.

PARTICIPANTS: A total of 3289 patients (response rate 68.6%) from 103 hospitals in eastern, central, and western China completed surveys.

MAIN MEASURE: Physician empathy, patient trust, and physician-patient relationship were measured by the Chinese version of Consultation and Relational Empathy Scale, Wake Forest Physician Trust Scale, and Patient-Doctor Relationship Questionnaire, respectively. Bootstrapped mediation analysis was performed.

KEY RESULTS: There were moderate to strong correlations between physician empathy, patient overall trust, and patient trust in physician's benevolence and competence, and the physician-patient relationship ($r = 0.49-0.75$, $P < 0.01$ for all). Patients' evaluation of physician-patient relationship was predicted by their perception of physician empathy, patient overall trust, and trust in the physician's benevolence. Mediation analysis showed that the indirect effect of physician empathy on physician-patient relationship through patient overall trust was significant ($\beta = 0.18$, 95% CI: 0.15-0.21) and that the mediation effect of patient trust in physician's benevolence was significant ($\beta = 0.24$, 95% CI: 0.20-0.28), though the mediation effect of patient trust in physician's competence was not ($\beta = 0.01$, 95% CI: -0.02 to 0.02).

CONCLUSIONS: Patients' perception of physician empathy influences their evaluation of the physician-patient relationship both directly and indirectly via patient trust in the physician's benevolence. These findings underline the importance of patient belief in physician benevolence and empathy in building trustful and harmonious relationships between physicians and patients.

KEY WORD: physician empathy; patient trust; physician-patient relationship; benevolence; competence.

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INTRODUCTION

The physician-patient relationship is an important component of high-quality care.^{1,2} This relationship has unequal power in the dyadic relationship, due to information asymmetry between physicians and patients. Because of this asymmetry, patient's trust in their physician is a keystone in the physician-patient relationship.^{3,4} Patient trust is the patients' expectation that physician will provide beneficial care and truthful information to the patient, regardless of their ability to monitor or control the physician.^{5,6} Trust building is an important step in developing high-quality physician-patient interactions and relationships.⁷⁻⁹ Distrustful patients suspect their physicians' motivations and may even act aggressively during their interaction.¹⁰

Trustful physician-patient relationships are associated with high disclosure of information, patient adherence and satisfaction, better health outcomes, and fewer lawsuits.¹¹⁻¹⁵ One systematic review found moderate to strong correlations between trust and health outcomes including patient satisfaction.¹² The most common reason for a patient's decision to charge their physician was their perception of poor relationship and/or a lack of collaboration.¹⁵

Over the past two decades, the patient's trust in their physician has declined in China, resulting in the deterioration of the physician-patient relationship.^{16,17} A White Paper on Chinese Physicians' Working Conditions in 2017 showed that 66% of physicians experienced violence against them, including verbal and physical abuses.¹⁸ A nationwide survey in China found that 70% of health care professionals deemed the relationship between physician and patient strained, and only 26% of health care professionals thought their patients believed in them.¹⁹ The survey also found that less than half of surveyed patients trusted their physicians.¹⁹ The degeneration of the physician-patient relationship is due to the confluence of several factors including patient-related (e.g. low health literacy, lack of understanding of medicine), health care professional-related (e.g. consciousness of occupational risk, high workload), health care setting-related (e.g. hospital environment), interpersonal interaction-related (e.g. poor communication, lack of empathy), and negative media reports.²⁰⁻²³ Among these factors, interpersonal interaction-related factor was deemed the main reason for the tense relationship between physicians and patients. Research has found that 80% of

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doctor-patient disputes result from poor communication, often due to lack of empathy during interactions.^{23, 24}

Empathy is the ability to understand the patient's perspective and feelings, as well as sharing and acting on this understanding during interpersonal interactions.²⁵ Physician empathy is beneficial to the building of good physician-patient relationships and the maintenance of therapeutic relationship in a conflict context, and has a positive influence on health outcomes through its positive effect on this relationship.^{1, 26–28} Patients reported trust building is based on the physicians' empathic behaviors during their interactions, such as paying attention to their feelings and emotion, conveying an understanding of their perspective, putting them at ease, and providing care consistent with their needs.^{29, 30} Empathy reduces distrust in strangers.³¹ Furthermore, according to Mayer's integrative model of trust and Tomlinson's causal attribution model of trust repair, improving physician's empathy could be an effective way to rebuild patient trust and improve deteriorated physician-patient relationships.^{32, 33} Thus, theoretical elaborations and prior research suggest an important role of empathy on patient trust. However, there are few empirical studies that examine the relationship between physician empathy, physician-patient relationship, and patient trust. A review conducted by Hoff et al. suggested that future research should focus on the interrelationship between various relational features, such as trust and empathy, and explore how these factors complement each other.³⁴ This information could provide the theoretical basis for future interventions on empathy to rebuild patient trust and improve physician-patient relationships. This study aims to test whether patient trust in physicians plays a mediating role in the association between patients' perception of physician empathy and the physician-patient relationship.

METHODS

Design and Participants

From September 2019 to February 2020, convenience sampling was used to recruit participants from 103 hospitals in eastern developed regions, central sub-developed regions, and western underdeveloped regions of China. The survey included primary, secondary, and tertiary hospitals. Patients were eligible to participate if they were over 18 years old, were able to communicate in Mandarin, and were able and willing to take part in the study. The researchers explained the study's purpose using a standardized script. Patients who agreed to participate in the study provided oral informed consent and were informed that they could leave the study at any time. The survey was self-administered, and patients could complete the questionnaire at their convenience and were given the opportunity to ask researchers questions. All study data were collected anonymously and kept confidential. This study received approval from the Ethics Committee of the Shanghai Normal University.

Measures

Patients' gender, age, education, visiting hospital grade, and region were collected. Participants completed the Chinese version of the Consultation and Relational Empathy Scale (C-CARE). This measures patient-rated empathy of physicians during communication and assesses several components of empathy, including cognitive, emotive, and behavioral domains.^{25, 35} It is a single-dimensional scale with 10 items with Likert response options ranging from 1 for "poor" to 5 for "excellent". The total score of C-CARE ranges from 10 to 50, with a higher score reflecting a greater perception of physicians' empathy. Cronbach's α of the C-CARE was 0.96.

The Chinese version of the Wake Forest Trust Scale (C-WFPTS) was used to evaluate patient trust in physicians. This scale was initially developed by Hall et al.³ and introduced and revised into Chinese in 2012.³⁶ It's a 10-item measurement, with two dimensions, trust in benevolence and trust in competence. "Benevolence" dimension measures patient trust in physician's belief or attitudes toward care and actions advocating for patient's interests, and "competence" dimension measures patient trust in the physician's technical expertise and knowledge.³⁶ The 5-point Likert scale responses range from "strongly disagree" to "strongly agree" and include positively and negatively worded items. The total score of C-WFPTS ranges from 10 to 50, with a higher score reflecting higher trust. Cronbach's α of the C-WFPTS was 0.89.

The Chinese version of the Patient-Doctor Relationship Questionnaire (C-PDRQ) was used to assess patient perception of physician-patient relationship, which was developed by Van der Feliz-Cornelis et al. in 2004³⁷ and introduced in China in 2011.³⁸ The scale consisted of 15 items, which are rated on a 5-point Likert scale ranging from "not at all appropriate" to "totally appropriate". C-PDRQ's three-dimension structure, "satisfaction with the treatment", "accessibility to the doctor", and "medical symptoms of the patient", has been verified in previous research.³⁸ Cronbach's α of the C-PDRQ was 0.86.

Data Analysis

Data analyses were conducted using SPSS Version 21.0. We conducted descriptive analyses, used Pearson correlation, and performed mediation analyses (Models 4 of Hayes's Process macro 3.3 for SPSS). To test whether physician-patient relationship would be indirectly associated with empathy through patient overall trust in physician, and whether the two dimensions of patient trust in physician play different roles in mediation effect, two models were built. The mediator of the first mediation model was patient overall trust in physician, and the mediators of the second mediation model were patient trust in physician's benevolence and patient trust in physician's competence. We standardized all continuous variables and used Hayes's bootstrapping approach to test the two models. Bootstrapping approach is less susceptible to sample size and makes no assumption of the normality of the mediation paths, so it results in more accurate estimates of confidence

Table 1 Demographic Characteristics of Patients (n=2256)

Demographic variables	n	(%)
Gender		
Male	963	42.7
Age		
18–30	606	26.9
31–40	495	21.9
41–50	469	20.8
51–60	384	17.0
> 60	302	13.4
Education		
Primary school or below	253	11.2
Junior high school	534	23.7
Senior high school/technical school	506	22.4
Junior college	430	19.1
Undergraduate or above	533	23.7
Hospital grade		
Tertiary hospital	1778	78.8
Secondary hospital	274	7.7
Primary care institution	204	2.9
Region		
Eastern	683	30.3
Central	761	33.7
Western	812	36.0

intervals.³⁹ Mediation effects were significant if 95% confidence intervals (CI) did not contain the value zero.

RESULTS

Participant Characteristics

Of 3289 patients surveyed, 2256(68.6%) returned valid questionnaires. Patients' mean age was 43.2 years old (SD = 15.9, ranging from 18 to 95 years old). Among them, 963 (42.7%) were male. Patient characteristics are shown in Table 1.

Descriptive Statistics and Correlations of the Main Variables

Table 2 shows all mean scores, standard deviations, and correlations (Pearson's rho) of the main variables. All correlations were significantly positive across the main variables. As expected, patients' perception of physician empathy was positively associated with overall trust, trust in physician's benevolence and competence, as well as their rating of the patient-provider relationship ($r = 0.49-0.75, p < 0.01$ for all). The patient overall trust, trust in benevolence, and competence were all significantly correlated with their perception of the physician-patient relationship ($r = 0.49-0.65, p < 0.01$ for all).

Table 2 Mean, Standard Deviations, and Correlations of the Main Variables

	M ± SD	1	2	3	4	5
1. Physician-patient relationship	61.30 ± 7.67	1.00**				
2. Physician empathy	41.06 ± 5.47	0.75**	1.00**			
3. Patient overall trust in physician	36.41 ± 4.67	0.65**	0.64**	1.00**		
4. Patient trust in physician's benevolence	18.79 ± 2.43	0.70**	0.68**	0.90**	1.00**	
5. Patient trust in physician's competence	17.62 ± 2.69	0.49**	0.49**	0.92**	0.66**	1.00**

Note: ** $p < 0.01$

Testing the Mediation Effects

In testing the relationship between empathy and overall trust (model 1), we found that empathy had both direct ($\beta = 0.56, p < 0.001$) and indirect ($\beta = 0.18, p < 0.001$) effects on the physician-patient relationship ($F = 1732.21, r^2 = 0.61$). The total standardized effect of empathy was strong ($\beta = 0.74, p < 0.001$). The mediation effect of patient overall trust accounted for 24.3% of the total effect (Fig. 1). Physician empathy was a stronger predictor of patient ratings of this relationship than overall trust ($\beta = 0.29, p < 0.001$) (Fig. 1). In our second model, testing the effects of trust in benevolence and competence, empathy had direct effects on patient trust in their physician's benevolence ($\beta = 0.68, p < 0.001$) and competence ($\beta = 0.49, p < 0.001$). It had both direct ($\beta = 0.50, p < 0.001$) and indirect effects ($\beta = 0.24, p < 0.001$) on patient ratings of their relationship with their physician ($F = 1254.40, r^2 = 0.63$). The total effect of empathy, as mediated by these two aspects of trust was similar to that seen in our first model ($\beta = 0.74, p < 0.001$). While empathy predicted both patient ratings of their trust in the benevolence and competence of their physician, competence was not significantly related to patient ratings of the physician-patient relationship when empathy and benevolence were in the model (Fig. 2). The mediation effect using benevolence rather than overall trust accounted for 32.4% of the total effect.

DISCUSSION

We found that empathy was an important component of patient's ratings of the quality of their relationship with their physician. Empathy had a greater impact on patient ratings than overall trust or trust in the physician's benevolence. In both models, empathy had a strong effect. Interestingly, when empathy and benevolence were included in the model, the patient rating of their physician's competence had no impact on their ratings of the relationship. This suggests that Chinese patients place high importance on their physician empathy and trust in physician's benevolence.

Our finding that patients' perception of the physician-patient relationship is predicted by physician empathy and patient overall trust in physician is consistent with previous studies.^{7, 29} Our finding that patients pay more attention to physician's benevolence than competence in their evaluation of the physician-patient relationship differs from studies from

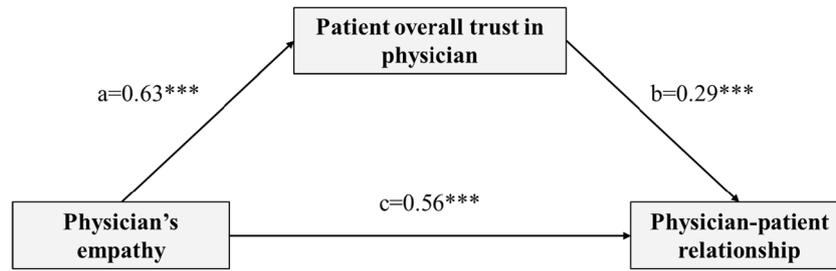


Figure 1 Mediation results of physician empathy on physician-patient relationship through patient overall trust in physician. All paths are presented in standardized regression coefficients. The indirect path ab is a product of the a path and b path. $***p < 0.001$. Direct effect= c : $\beta=0.56$, $SE=0.017$, 95% CI: 0.53–0.60. Indirect effect= ab : $\beta=0.18$, $SE=0.014$, 95% CI: 0.15–0.21. Total effect= $ab+c$: $\beta=0.74$, $SE=0.014$, 95% CI: 0.72–0.77.

the physician’s perspective.^{40, 41} Generally, physicians value their expertise and competence as the most important factor in medical practice, while our patients reported that interpersonal and communication skills were more important.^{42, 43} Our study suggests that patients and physicians have different opinions on the important elements of a good physician-patient relationship.

Furthermore, we found that empathy significantly influenced patient ratings of both benevolence and competence, consistent with theory and previous research.^{7, 29, 32} The effect of physician’s empathy on patient trust in physician’s benevolence could be explained by Mayer’s integrative model of trust and Tomlinson’s causal attribution model of trust repair, which posits that benevolence is a quality that physician can improve by displaying empathic behaviors.^{32, 33} Previous studies have found that physician’s empathy improved patient satisfaction and patient satisfaction was the antecedent of patient trust in physician’s competence.^{44, 45} Thus, physician’s empathy is crucial in developing and building trust.

While previous studies have found a correlation between physician’s empathy and physician-patient relationship,^{7, 27} this is the first study to demonstrate that the patients’ perception of their physician’s empathy influences their evaluation of physician-patient relationship via patient trust in their physician’s benevolence. These results also underline the

importance of physician’s empathy in building trustful and harmonious dyadic relationships with their patients. Research has found that empathy training programs, such as face-to-face training, role play, simulation game, Balint groups, and neuroscience-informed curriculum, are effective in improving health care professionals’ empathy.^{46–49} The contents of empathy training include providing explanations of treatment, providing non-specific empathic responses, a friendly manner, using non-verbal behaviors (e.g. leaning forward, nodding), and active listening.^{49, 50} Moreover, Smith et al. found that empathy training did not need to be long to be effective.⁵⁰ Physician empathy training has the potential to improve patient-doctor relationships and cultivate empathic ability. Such training should be included in medical education.

There are several limitations of our study. First, the cross-sectional design means that the causal relationship remains speculative. Determining causality would require either interventional trials or obtaining longitudinal data. Second, there are many other important variables that impact patient ratings of their relationship, including satisfaction,⁵¹ patient centeredness,⁵² and communication style.⁵³ Our study suggests that patients’ perception of empathy and patient trust in physician’s benevolence predict about two-thirds of patient ratings of relationships, future research could include more variables to more fully explore the nature of harmonious relationships between physicians and patients.

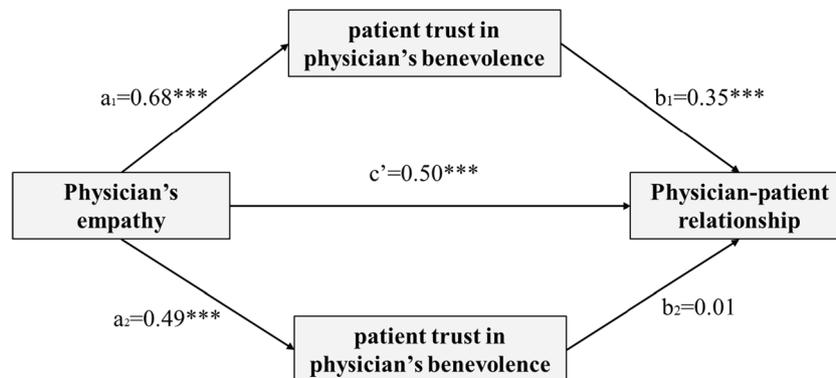


Figure 2 Mediation results of physician empathy on physician-patient relationship through patient trust in physician’s benevolence. All paths are presented in standardized regression coefficients. The indirect path a_1b_1 is a product of the a_1 path and b_1 path. $***p < 0.001$. Direct effect= c' : $\beta=0.50$, $SE=0.018$, 95% CI: 0.47–0.54. Indirect effect—Trust in benevolence= a_1b_1 : $\beta=0.24$, $SE=0.019$, 95% CI: 0.20–0.28. Trust in competence= a_2b_2 : $\beta=0.01$, $SE=0.010$, 95% CI: –0.02–0.02. Total effect= a_1b_1+c' : $\beta=0.74$, $SE=0.014$, 95% CI: 0.72–0.77.

CONCLUSION

In summary, patients' evaluation of the physician-patient relationship was directly and indirectly predicted by their perception of physician empathy and patient overall trust. Patient trust in their physician's benevolence had a greater effect on patients' evaluation of the physician-patient relationship than the patient trust in their physician's competence. Patients' perception of physician empathy could directly influence patient overall trust, and patient trust in physician's benevolence and competence. The mediation analysis showed that the influence of physician empathy on physician-patient relationship can be partially explained by patient trust in the physician's benevolence. These results imply that patients focus more on physician's benevolence than their competence during interactions. The findings highlight the importance of physician empathy in developing trustful and harmonious relationships.

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Declarations:

Conflict of Interest: The authors declare that they do not have a conflict of interest.

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