

# The Influence of Doctor-Patient Communication on Patients' Trust: The Role of Patient-Physician Consistency and Perceived Threat of Disease

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**Purpose:** To investigate the influence mechanism of doctor-patient communication on patients' trust, especially the mediating role of patient-physician consistency and the moderating role of perceived threat of disease.

**Methods:** A total of 699 patients in Guangzhou, China was investigated by questionnaire. The main effect, mediating effect, and moderating effect of the model was verified by SPSS23.0 and LISREL8.71 statistical software.

**Results:** It was revealed that doctor-patient communication has a significant positive effect on patients' trust. The consistency between patient and physician partially mediates the relationship between doctor-patient communication and patients' trust. Additionally, the perceived threat of the disease moderates the psychological process through which doctor-patient communication affects patients' trust.

**Conclusion:** Both doctor-patient communication and patient-physician consistency have predictive effects on patients' trust. Doctor-patient communication is not only a direct influence on patient trust but also an indirect influence mediated by patient-physician consistency. Perceived threat of disease moderates the psychological process through which doctor-patient communication affects patients' trust. Specifically, compared to a high level of perceived threat of disease, a low level of perceived threat of disease can enhance the effect of doctor-patient communication on patients' trust. The results of this study underscore the importance of doctor-patient communication and the value of patient-physician consistency for building patients' trust. To foster a harmonious doctor-patient relationship, medical colleges should place great emphasis on cultivating medical students' communication skills. Hospitals should enhance on-the-job training and provide institutional support for doctors, encourage agreements between doctors and patients regarding disease diagnosis and decision-making, and be attentive to patients' perceived threat of disease, particularly for those with high level of perceived threat of disease.

**Keywords:** doctor-patient communication, patient-physician consistency, perceived threat of disease, patients' trust, doctor-patient relationship

## Introduction

Studies over the past few years have provided important information on patients' trust.<sup>1,2</sup> According to Yang and Wu,<sup>3</sup> patients' trust refers to their belief that doctors possess the necessary skills to diagnose and treat diseases, in addition to prioritizing the interests of their patients.<sup>3</sup> Patients' trust brings a number of positive outcomes in the doctor-patient relationship, such as patient satisfaction,<sup>4</sup> patient compliance.<sup>5,6</sup> However, patients' trust is declining globally, and patient violence against doctors is common in China.<sup>7</sup> *The White Paper on the practice status of Chinese doctors* published in January 2018 indicates that 62% of doctors in China have had medical disputes of varying degrees, and 66% of doctors in China have experienced some form of conflict with patients. During the period 2013 to 2017, a Grade-A tertiary hospital in Taizhou, China, received 1299 medical disputes, on an average of 260 cases per year, involving over 1026 medical personnel.<sup>8</sup> All these factors indicate that the doctor-patient relationship has become a social issue in Chinese society.

Therefore, rebuilding trust between doctors and patients has become a major goal of the Chinese medical industry.<sup>9</sup> As a result, it is of great theoretical and practical significance to investigate ways to improve patients' trust.

Previous research has established that despite the fact that patients' trust is affected by a variety of factors including social background, medical situation, and individual characteristics of patients and doctors,<sup>10</sup> doctor-patient communication is one of the most critical factors.<sup>11,12</sup> It is a kind of communication that occurs during the diagnosis and treatment process, aimed at addressing patients' medical conditions and health needs.<sup>13</sup> In general, doctor-patient communication has three roles: (1) the establishment of a good interpersonal relationship between doctors and patients; (2) the exchange of information regarding health services; (3) the making of treatment decisions.<sup>14</sup> By establishing effective doctor-patient communication, healthcare professionals are able to understand the health service needs of patients, as well as provide better health care services.<sup>15</sup> Meanwhile, based on the perspective of social information processing, patients are more likely to be satisfied and to place more trust when they receive information through doctor-patient communication.<sup>16</sup> Consequently, doctor-patient communication facilitates with the transmission of information to patients, who process and evaluate the information to formulate their perceptions, attitudes and behaviors.

In addition, the relationship between doctor-patient communication and patients' trust,<sup>17</sup> as well as patient-physician consistency and patients' trust<sup>18</sup> have been examined in the literature. To date, the mediating role of patient-physician consistency in the relationship between doctor-patient communication and patients' trust has received less attention in the research literature.<sup>16,17</sup> Thus, it is unclear how physician-patient communication affects patients' trust. Patient-physician consistency refers to the extent to which patient and physician align in their evaluation of health-related information.<sup>19</sup> Based on social information processing theory, doctor-patient communication conveys information about the patients' health, which provides relevant cues for the formation of the patients' perceptions and attitudes towards the physician, as well as activating the patients' process of social information. By capturing the medical information conveyed by the doctor, the patient evaluates the professional competence and service attitude of doctor. The research has indicated that effective doctor-patient communication is essential for patient-physician consistency,<sup>20</sup> which is a prerequisite for quality healthcare.<sup>21</sup> It is due to that effective doctor-patient communication facilitates the exchange of medical information, helps to regulate patients' emotions, and enables the doctor to understand the needs, perceptions and expectations in order to reach an agreement on health services.<sup>22</sup> As a result of the patient-physician consistency, a variety of positive health outcomes are achieved, including a greater level of compliance and satisfaction among patients.<sup>20,23</sup> In general, highly satisfied patients are more likely to trust their doctors.

Moreover, in the process of patients' trust formation, it is not only influenced by doctor-patient communication, but also by the role of contextual factors in the healthcare visit.<sup>9</sup> The moderating role of contextual variables has received scant attention in the research literature,<sup>2,24</sup> thus not explaining well the mechanisms of patients' trust formation. Nonetheless, some scholars have suggested that individual characteristic factors can moderate patients' responses to doctor-patient communication.<sup>18</sup> Thus, based on The Common-Sense Model of Self-Regulation (CSM) proposed by Leventhal,<sup>25</sup> perceived threat of disease is constructed as a moderating variable in the process of doctor-patient communication to influence patients' trust. As an individual characteristic variable, perceived threat of disease reflects the formation of an individual's understanding and emotional response to a health threat based on past life experiences, medical knowledge reserves, and the influence of others such as doctors, so as to adopt corresponding coping strategies.<sup>26</sup> It depends primarily on the individual's intuition, emotions and direct judgment.<sup>27</sup> Thus, perceived threat of disease is subjective. Different people have different perceptions of the same level of illness. As a result, patients with low perceived threat of disease rationally and tend to have a greater degree of confidence in the doctors' professional competence and treatment level, which contributes to the positive effects of doctor-patient communication on patients' trust in the process of doctor-patient communication. In conclusion, patients with a high level of perceived threat of disease have a lower level of extraction and processing of information conveyed by doctor-patient communication. Conversely, patients with a lower level of perceived threat of disease have a higher level of extraction and processing of relevant information and will have a stronger trust in doctor-patient communication based on patient-physician consistency.

In summary, the study aimed to investigate the mechanism of doctor-patient communication on patients' trust. As doctor-patient communication is effective in increasing patients' trust, hypothesis 1 is as follows: doctor-patient communication has a significant positive effect on patients' trust. Based on the characteristics of doctor-patient communication, we believe that doctor-patient communication positively influences patient-physician consistency, and

patient-physician consistency enhances patients' trust. Therefore, hypothesis 2 is as follows: patient-physician consistency mediates the effect of doctor-patient communication on patients' trust. In addition, since the formation of patients' trust is influenced by contextual factors, we further explore the moderating role of perceived threat of disease as a contextual variable in influencing patients' trust through doctor-patient communication. Hypothesis 3 is as follows that perceived threat of disease moderates the effect of doctor-patient communication on the patient-physician consistency, and low perceived threat of disease enhances the effect of doctor-patient communication on patients' trust compared to the high perceived threat of disease.

## Method

### Participants and Procedure

This study was conducted from August 17, 2021 to November 11, 2021 by means of both online questionnaire and offline questionnaire. The selection criteria for the subjects were hospital inpatients or outpatients. The hospitals where the questionnaires were distributed included Guangdong Provincial Hospital of Chinese Medicine, Guangdong General Hospital and Guangzhou First Municipal People's Hospital. To ensure the reliability of the sample data, the respondents were rewarded a red envelope or a small gift once before answering. Additionally, respondents who answered carefully were rewarded a red envelope or a small gift again. A total of 985 questionnaires were eventually distributed through the online questionnaire and offline questionnaire. At the same time, in order to improve the validity and authenticity of the final data, the questionnaires with obviously illogical answers to the reverse questions, obvious patterns of answers or randomly filled in were excluded, and a total of 699 valid questionnaires were obtained, with an effective rate of 71.0%.

### Instruments

#### Doctor-Patient Communication

Doctor-patient communication was measured by the scale revised by Wang,<sup>28</sup> based on the earlier work of the evaluation indexes of the SERVQUAL scale and the Doctor-patient communication Evaluation scale designed by Zhao.<sup>29</sup> 15 items were included on the scale, with three dimensions of content, empathy and outcome. Examples included "How well did the doctor interpret the results of tests or tests?" and "How well did the doctor examine you in person?". A 5-point Likert scale Items was used to code the items, with 1 = very poor, 2 = poor, 3 = general, 4 = good and 5 = very good.

#### Patient-Physician Consistency

According to Zhu<sup>30</sup> Patient-physician Consistency Scale was developed by Kerse<sup>31</sup> and Laugesen et al.<sup>32</sup> It used a 5-item Likert scale (eg, "To what extent do you think the doctor understands why you want to see a doctor?" and "To what extent do you and your doctor agree on the recommended treatment for a (significant) health condition?"). A 5-point Likert scale Items was used to code the items, with 1 = very inconsistent, 2 = inconsistent, 3 = general, 4 = consistent and 5 = very consistent.

#### Patients' Trust

Patients' trust was measured by the scale revised by Dong and Bao.<sup>33</sup> The scale is a revision of the Chinese version of the Wake Forest Physician Trust Scale. Based on the Chinese cultural context, the Chinese version of the Wake Forest Physician Trust Scale contained 10 items, including two dimensions of benevolence and technical competence. Examples included "I feel that the treatment chosen by my doctor is the best one for me" and "I have no hesitation in trusting my doctor with my life". A 5-point Likert scale Items was used to code the items, with 1 = strongly disagree, 2 = disagree, 3 = general, 4 = agree, 5 = strongly agree.

#### Perceived Threat of Disease

Perceived threat of disease was measured by the scale revised by Wang<sup>34</sup> and Karademas<sup>35</sup> sorted out the threat-related theories to obtain the basic needs of human beings, based on which they designed the perceived original threat scale related to the disease. According to Wang,<sup>34</sup> the 7-item scale was developed by Karademas.<sup>35</sup> Examples included "The symptoms caused by the disease/poor health condition are very serious" and "the disease/poor health condition has

a great impact on my life". A 5-point Likert scale Items was used to code the items, with 1 = strongly disagree, 2 = disagree, 3 = general, 4 = agree, and 5 = strongly agree.

## Statistical Analysis

SPSS statistical software was used to analyze the common method bias, reliability and validity of the sample data by the Harman single-factor method. Then, descriptive statistical analysis was conducted to obtain the mean and standard deviation of four variables, doctor-patient communication, patient-physician consistency, perceived threat of disease and patients' trust, as well as the correlation coefficient between the four variables, which laid a foundation for subsequent analysis. Also, Structural Equation Modeling (SEM) was used to examine the effect of doctor-patient communication on patients' trust and the mediating effect of patient-physician consistency. Finally, Bootstrapping was used to analyze the moderating effect of perceived threat of disease.

## Ethics

This study was approved by the Ethics Committee of Business School of Medicine, Guangdong Pharmaceutical University. All procedures were conducted by the Declaration of Helsinki and the relevant regulations of China. All subjects agreed to participate voluntarily and anonymously, and the right of informed consent was obtained during the investigation. The preface of the questionnaire emphasizes the confidentiality of the survey data and the research purpose of the sample. Thus, there was no potential risk for the subjects in this study.

## Results

### Participant Characteristics

Patients' demographic characteristics are summarized in Table 1. In the survey of valid data, there were 364 women accounting for 52.1%, and 335 males accounting for 47.9%. In terms of the age of the sample, 629 individuals were aged 18–44, accounting for 90.0%; 66 individuals were aged 45–59, accounting for 9.4%; and 4 individuals were aged 60 or above, accounting for 0.6%. In terms of the academic qualifications of the sample, 26 individuals had a junior high school education or below, accounting for 3.7%; 121 individuals had a high school or technical secondary school education, accounting for 17.3%; 481 individuals had a bachelor's degree or college degree, accounting for 68.8%; and 71 individuals had a master degree or above, accounting for 10.2%. In terms of the monthly income of the sample, there were 173 individuals with income below 3499 yuan, accounting for 24.7%; 217 individuals with income between 3500–6999 yuan, accounting for 31.0%; 220 individuals with income between 7000–9999 yuan, accounting for 31.5%; 72

**Table 1** Demographics (n=699)

Variables	Category	Frequency	Percentage (%)
Gender	Man	335	47.9
	Woman	364	52.1
Age	18 to 44	629	90.0
	45 to 59	66	9.4
	≥60	4	0.6
Academic qualifications	Junior high school or below	26	3.7
	High school or technical secondary school	121	17.3
	Bachelor's degree or college degree	481	68.8
	Master's degree or above	71	10.2
Income	3499 yuan or below	173	24.7
	3500 to 6999 yuan	217	31.0
	7000 to 9999 yuan	220	31.5
	10,000 to 19,999 yuan	72	10.3
	20,000 yuan or above	17	2.4

individuals with income between 10,000 and 19,999 yuan, accounting for 10.3%; 17 individuals with income of more than 20,000 yuan, accounting for 2.4%.

## Common Method Bias

To avoid the problem of common method bias caused by the survey data coming from the same investigator, this study deliberately shuffled the items of variables in the questionnaire design stage to avoid showing regularity. In the questionnaire survey, the anonymity of filling in the questionnaire and the confidentiality of information were emphasized to ensure that the sample data reflected the true thoughts of the participants. In addition, the homogeneity of the sample data was tested by Harman's single-factor test. The results showed that the first factor without rotation only explained 38.77% of the total variance, which was within the recommended range of 50%. As a result, the common method bias of the study sample data was within an acceptable range.

## Reliability and Validity

According to Table 2, Cronbach's  $\alpha$  coefficients for doctor-patient communication, patient-physician consistency, perceived threat of disease and patients' trust were 0.94, 0.87, 0.85 and 0.92, respectively, which were all higher than the usual standard of 0.7, indicating that the collected data had good reliability. Principal component analysis and maximum rotation of variance were used to test the validity of the data. The KMO values of doctor-patient communication, patient-physician consistency, perceived threat of disease and patients' trust were 0.96, 0.88, 0.85 and 0.94, respectively. The cumulative variance contribution rates were 52.71%, 66.17%, 71.36% and 57.27%, respectively. The factor loading of all items in the four scales was greater than 0.6. In conclusion, the data collected in the study had good reliability and validity.

## Descriptive Statistics

According to Table 2, the mean, standard deviation and correlation coefficient of the study variables were presented. As shown in Table 2, the mean values of doctor-patient communication, patient-physician consistency, perceived threat of disease and patients' trust were 4.13, 3.92, 3.40 and 3.83, respectively. Doctor-patient communication was significantly positively correlated with patient-physician consistency ( $r=0.72, p<0.01$ ). Doctor-patient communication was not correlated with perceived threat of disease ( $r=-0.02, p>0.05$ ). And doctor-patient communication was significantly positively correlated with patient's trust ( $r=0.75, p<0.01$ ). There was no correlation between patient-physician consistency and perceived threat of disease ( $r=-0.02, p>0.05$ ). But there was a significant positive correlation between patient-physician consistency and patients' trust ( $r=0.76, p<0.01$ ). There was no correlation between perceived threat of disease and patients' trust ( $r=-0.03, p>0.05$ ). As a result, preliminary evidence was provided for the testing of subsequent hypotheses.

## Hypothesis Testing

### Main Effect Analysis

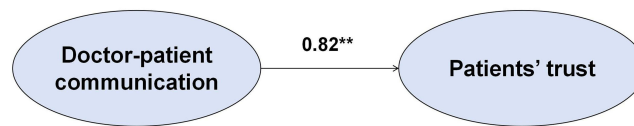
In this study, LISREL8.71 statistical analysis software was used to verify the impact of doctor-patient communication on patient trust by using structural equation model. As can be seen from Figure 1, the main effect model was well fitted

**Table 2** Correlation Coefficients of Each Variable and Cronbach's  $\alpha$ . (n=699)

Variables	Mean	SD	1	2	3	4
1. DPC	4.13	0.62	(0.94)			
2. PPC	3.92	0.64	0.72**	(0.87)		
3. PTD	3.40	0.81	-0.02	-0.02	(0.85)	
4. PT	3.83	0.74	0.75**	0.76**	-0.03	(0.92)

**Note:** Significance level: \*\* $p < 0.01$ .

**Abbreviations:** DPC, Doctor-patient communication; PT, Patients' trust; PPC, Patient-physician consistency; PTD, Perceived threat of disease.



**Figure 1** The SEM of main effect model.  
**Note:** \*\* $p < 0.01$ .

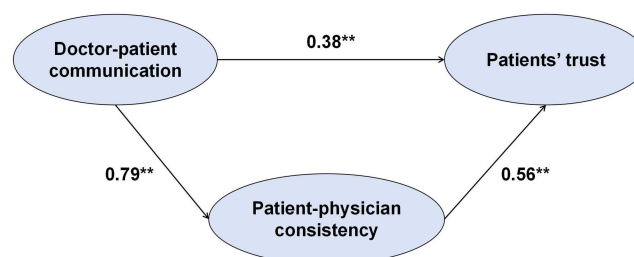
( $\chi^2=1119.89$ ,  $df=274$ ,  $\chi^2/df=4.09$ ,  $RMSEA=0.067$ ,  $CFI=0.98$ ,  $NFI=0.98$ ,  $NNFI=0.98$ ,  $IFI=0.98$ , and  $SRMR=0.039$ ). The results showed that doctor-patient communication had a significant positive effect on patients' trust ( $\beta=0.82$ ,  $p < 0.01$ ), indicating that effective doctor-patient communication could significantly improve patients' trust level. Therefore, hypothesis 1 was supported.

### Mediation Model Analysis

Based on the main effect model, a partial mediation model was constructed by adding patient-physician consistency. Statistical analysis software LISREL8.71 was used to verify part of the mediation model based on 699 samples, as shown in Figure 2. The model was well fitted ( $\chi^2=1344.89$ ,  $df=402$ ,  $\chi^2/df=2.35$ ,  $RMSEA=0.058$ ,  $CFI=0.99$ ,  $NFI=0.98$ ,  $NNFI=0.99$ ,  $IFI=0.99$  and  $SRMR=0.036$ ). The results showed that the direct impact of doctor-patient communication on patients' trust. It also showed the indirect impact on patients' trust through patient-physician consistency, which meant that the mediating role of patient-physician consistency between doctor-patient communication and patients' trust was verified. Therefore, hypothesis 2 was supported.

### Moderating Effect

SPSS was used to verify the indirect effect of values under different conditions of perceived threat of disease. From the result of the indirect effect with partial conditions on the left side of Table 3, it could be seen that when the level of perceived threat of disease was low (Low  $PTD \leq 2.60$ ), the indirect effect of doctor-patient communication on patients' trust through patient-physician consistency was 0.46, and the confidence interval was [0.37, 0.56]. When the level of perceived threat of disease was high (High  $PTD \geq 4.21$ ), the indirect effect of doctor-patient communication on patients' trust through patient-physician consistency was 0.34, and the confidence interval was [0.25, 0.44]. Since the above confidence interval did not contain zero point, it meant that the indirect effect of doctor-patient communication on patients' trust through patient-physician consistency was significant regardless of whether the perceived threat of disease took a low or high value. Moreover, as can be seen in Table 3, the indirect effect of doctor-patient communication on patients' trust decreased as the value of perceived threat of disease increased from low to high. The right half of Table 3 indicated the INDEX values of the relevant determinants based on the result of SPSS Process. It showed that doctor-patient communication had a moderating effect on the indirect relationship between patients' trust and patient-physician consistency. It was confirmed by determining the index value of  $-0.07$ , the standard error of 0.03, and the confidence interval of  $[-0.15, -0.02]$ . As the confidence intervals did not contain zero point, it indicated that the moderating mediating effect of doctor-patient communication on the impact of patients' trust was significant. Hypothesis 3 was further verified.



**Figure 2** The SEM of mediation effect model.  
**Note:** \*\* $p < 0.01$ .

**Table 3** Bootstrapping Analysis Results of the Moderated Mediation

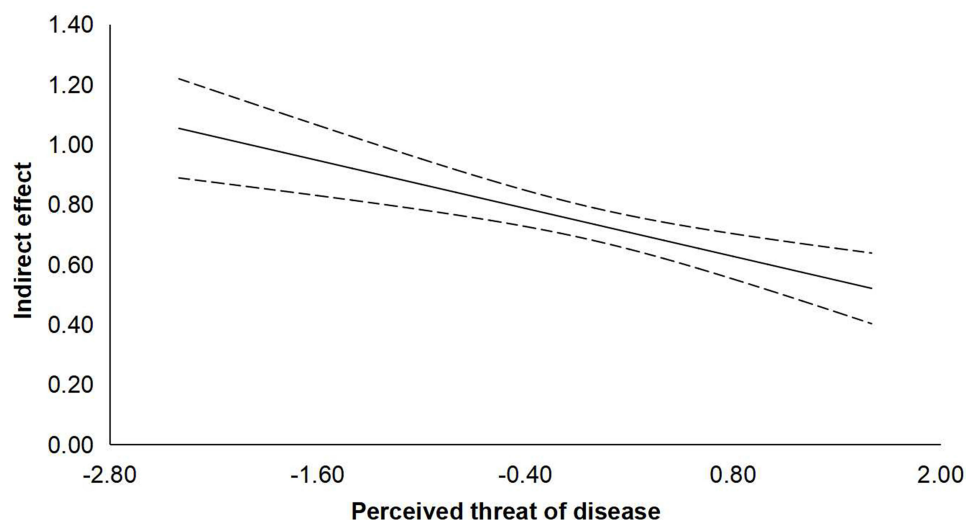
Mediators	Indirect Effect					Moderated Mediation Effect			
	Moderator	Effect	SE	95%LLCI	95%ULCI	INDEX	SE	95% LLCI	95% ULCI
PPC	Low value	0.46	0.04	0.37	0.56	-0.07	0.03	-0.15	-0.02
	Mean value	0.40	0.04	0.33	0.48				
	High value	0.34	0.05	0.25	0.44				

To better visualize how the magnitude of indirect effects is constrained by perceived threat of disease, the Bootstrap results for indirect effects were presented (variables were centralized). It could be seen in Figure 3 that for low level of perceived threat of disease (M-1SD, PTD=-0.8), the interaction effect value was 0.84. When the mean value of perceived threat of disease (PTD=0), the value of interaction was 0.73. High level of perceived threat of disease (M+1SD, PTD=0.80), with the value of interaction effect was 0.63. It could be seen that the indirect effect decreases as the degree of perceived threat of disease increases. As can be seen in Figure 3, the different degrees of perceived threat of disease significantly affected the effect of doctor-patient communication on patient's trust through patient-physician consistency.

## Discussion

Firstly, doctor-patient communication has a significant positive impact on patients' trust. It suggests that doctor-patient communication improves the level of patients' trust, which is consistent with existing research conclusions.<sup>17,36,37</sup> The findings indicate that in the doctor-patient relationship, doctor-patient communication is a key factor and an important source of patients' trust. In practice, information asymmetry exists between doctors and patients, which is exactly the key to the conflict between doctors and patients. In essence, doctor-patient communication is a process of interpersonal interaction, as well as the exchange of emotions and information between doctors and patients, which reflects the patient-centered treatment concept to a certain extent. Effective doctor-patient communication is conducive to eliminating patients' misunderstandings, improving patients' understanding and cooperation in clinical decision-making, as well as building trust between doctors and patients. Compared with the existing studies, most of them focus on a certain type of patients' trust.<sup>15,38</sup> As a result of the study of ordinary patients in Guangzhou, China, the research group trusted by the patients is expanded from a specific group to the general group, resulting in a more universal application of the research results.

Secondly, based on social information processing theory, the study reveals internal mechanism of doctor-patient communication impact on patients' trust. Several studies have examined the importance of doctor-patient

**Figure 3** Moderating effect of perceived threat of disease.

communication, patients' trust and other factors in the doctor-patient relationship.<sup>8,39</sup> However, few studies have focused on the mediating mechanism of the formation mechanism of patients' trust, especially the influence of patient-physician consistency on doctor-patient communication and patients' trust. In a few studies, patient-physician consistency has been examined the mediating role of between doctor-patient communication and patients' trust. Based on the theory of social information processing, the study reveals that the information transmitted by doctor-patient communication enhance patient-physician consistency, as well as ultimately have a positive impact on patients' trust, thus verifying the mediating role of patient-physician consistency. Therefore, based on the social information processing theory, the study clearly expounds the patient trust form the inner psychological mechanism base on the perspective of doctor-patient communication, which makes up for the shortcomings of existing studies. It provides a new intervention direction for hospitals to build a harmonious doctor-patient relationship and improve patients' trust.

Finally, the study reveals boundary conditions for the impact of doctor-patient communication on patients' trust, enriches intervention studies of patients' trust formation mechanisms, and shows that the strength of doctor-patient communication to increase patients' trust through patient-physician consistency is constrained by perceived threat of disease. Due to the differences in perceptions of different individuals, based on social information processing theory, the study examines the differences in the acquisition, extraction and interpretation of doctor-patient communication messages among patients with different perceived threat of disease. The study suggests that doctor-patient communication is more effective for patients with low perceived threat of disease compared to those with high perceived threat of disease, and enhances patient-physician consistency to a greater extent in patients with low perceived threat of disease, which in turn leads to higher levels of patients' trust. Although existing studies have examined the relationship between doctor-patient communication and patients' trust, few studies have focused on the boundary conditions under which doctor-patient communication affects patients' trust. By studying the boundary conditions of doctor-patient communication and patients' trust, we gain a clearer understanding of the circumstances under which doctor-patient communication is effective and provide a theoretical basis for further exploration of interventions to enhance patients' trust.

## Implication

The results of the study have important implications for hospital management. Firstly, the study indicates that doctor-patient communication has a significant impact on patients' trust. The administrator of the hospital should improve the awareness of the positive impact of doctor-patient communication on patients' trust. In the actual clinical work, the administrator of the hospital should pay attention to doctor-patient communication and strengthen the training of communication skills and methods of the medical staff at all levels. Secondly, hospital administrators should formulate consultation guidelines to regulate doctor-patient communication, limit the number of daily outpatient visits, and ensure that doctors have enough time to communicate with patients. Thirdly, we do our best to adopt random sampling methods for sampling. However, due to practical difficulties, we are only able to select typical hospitals and follow the principle of random sampling, but we are unable to achieve complete random sampling. A more scientific sampling method can be used in future research to increase the validity of the scientific research results. Furthermore, hospital administrators should pay more attention to physician-patient consistency. The identification of mediating path provides a means for an administrator to improve patients' trust. An administrator could take measures to increase the consensus between patients and doctors in terms of disease degree and treatment plan. For example, the administrators could set up some online answers to further respond to patients' doubts about seeking medical treatment. Finally, perceived threat of disease is of great significance for improving the effectiveness of doctor-patient communication. In fact, the effect of doctor-patient communication on patients' trust would be affected by other factors. As an important individual characteristic variable, perceived threat of disease plays an important role in the formation of patients' trust. Hospitals could classify patients by identifying their disease perception. To foster a harmonious doctor-patient relationship, medical staff are selected in addition to doctors to initiate timely interventions and improve communication and exchange of information with patients with a high perceived threat of disease.



## Limitation

The study also has some limitations. (1) The research samples are mainly from Guangzhou, China, so it is unclear whether the results of this study can be generalized to other regions. Future research could expand the samples to other regions or even other countries to improve the universality of the research conclusions. (2) The static relationship between doctor-patient communication, patient-physician consistency, perceived threat of disease and patients' trust was discussed. The formation process of patients' trust is a dynamic change process, and the dynamic relationship between them needs to be explored in the future. (3) The study tested only the effect of perceived threat of disease as a situational variable on doctor-patient communication and patients' trust through patient-physician consistency. Future research could focus on the moderating effect of other situational factors to enrich the research on situational variables.

## Conclusion

In the study, patients in Guangzhou, China are taken as research objects. From the perspective of social information processing theory and based on Chinese cultural context, hypotheses such as the influence of doctor-patient communication on patients' trust are verified. The results show that doctor-patient communication has a significant impact on patients' trust. Patient-physician consistency plays a mediating role in the relationship between doctor-patient communication and patients' trust. In addition, perceived threat of disease plays a moderating role in the psychological process of doctor-patient communication affecting patient trust through patient-doctor consistency. In other words, compared with patients with low level of perceived threat of disease, the indirect effect is weakened when there is the high level of perceived threat of disease.

## Data Sharing Statement

The research data of this paper can be obtained from the corresponding author according to relevant regulations.

## Author Contributions

All authors made a significant contribution to the work reported in the conception, study design, execution, acquisition of data, analysis and interpretation; took part in drafting, revising or critically reviewing the article; gave final approval of the version to be published; have agreed on the journal to which the article has been submitted; and agree to be accountable for all aspects of the work.

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## Disclosure

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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