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Summer 5-28-2023

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Recommended Citation

Liu, Sisi; Qiu, Fan; Xiong, Xinlei; Yin, Zhuying; and Wang, Hong, "A Study on Sustainability of Online Medical Platform Consultation Mode Based on Multi-stage Trust Transmission" (2023). *WHICEB 2023 Proceedings*. 34.

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A Study on Sustainability of Online Medical Platform Consultation Mode Based on Multi-stage Trust Transmission

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1. INTRODUCTION AND RESEARCH QUESTIONS

Patient trust is critical to the sustainability of an online medical platform's service mode^[1]. Established research suggests that patients' consecutively hesitation and resistance to the OMC services is largely due to a lack of trust in all aspects of OMC services^[2]. Trust in the platform and healthcare providers can effectively reduce patients' perceptions of risk regarding the privacy and security of the platform and the accuracy of online diagnoses, directly influencing patients' access decisions in the long and short term^[3]. Therefore, patient trust plays a vital role in the closed-loop operation of the "online consultation - offline treatment - online review" service mode. Although the study of patient trust has attracted scholarly attention, less research to date has focused on the intrinsic evolutionary process of patient trust at the temporal and spatial levels and the extrinsic mechanisms that facilitate its evolution, in the context of online medical platform consultation mode.

Therefore, this study will explore the transmission relationship of patient trust at each stage of the online medical consultation mode. Our research questions are as follows: (1) Whether existing online trust can be enhanced in the offline treatment phase? (2) Whether synthetical trust in the online-offline convergence medical service can be sustained in the online review phase? (3) How does the physician's comprehensive emotional support and doctor-patient characteristics influence the formation of patient trust in the subsequent phase?

2. THEORY AND RESEARCH FRAMEWORK

Based on theories such as the trust transfer perspective and emotional support, the hypotheses and research framework are proposed herein (Figure 1).

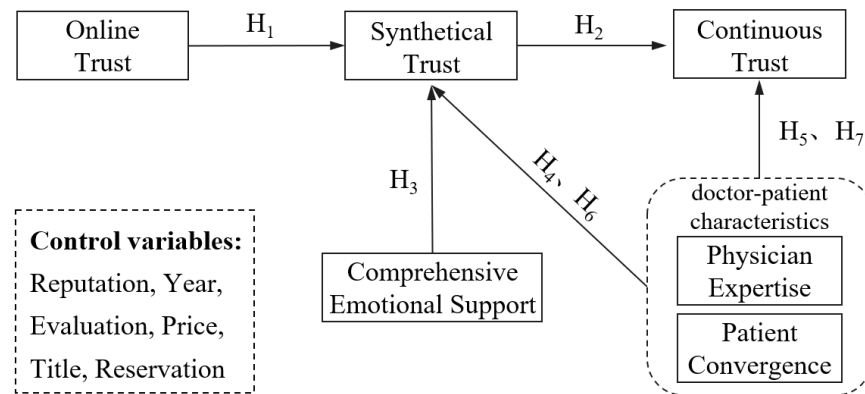


Figure 1. Multi-stage trust relationship transmission model for patients

The dataset is derived from the consultation records of 102 doctors on the Good Doctor Online website between 2021 and 2022, and hypotheses are tested by calculating various indicators and using two multiple regression model.

3. RESULTS AND MAJOR FINDINGS

In the process of moving from online trust to synthetical trust and continuous trust, patient trust is influenced

by two sides: (1)intrinsic factors, i.e., patients' trust in the previous stage; (2)extrinsic factors, including comprehensive emotional support, physician expertise and patient convergence.

Table1. Regression results for synthetical trust, continuous trust

Independent variable	Dependent variable: lnST		Independent variable	Dependent variable: lnCT	
	Model 1a	Model 1b		Model 2a	Model 2b
Reputation	-0.246(-1.21)	-0.749***(-3.82)	Reputation	0.151*** (4.14)	-0.104***(-2.81)
Reservation	0.375(1.18)	0.228(0.90)	Reservation	-0.004(-0.04)	-0.096(-1.27)
Title	-1.147**(-2.11)	-0.683(-1.49)	Title	-0.391**(-2.00)	-0.124(-1.23)
Year	-0.169***(-4.00)	-0.087**(-2.21)	Year	-0.016(-1.01)	0.019(1.65)
Evaluation	1.537*** (6.94)	0.969*** (4.58)	Price	0.006(0.09)	0.094** (2.03)
Price	-0.216(-0.91)	0.046(0.31)	ST	-	0.149*** (5.46)
OT	-	0.397*** (3.94)	PE	-	0.567* (1.70)
ES	-	4.438** (2.43)	PC	-	0.099*** (3.06)
PE	-	1.924* (1.84)			
PC	-	0.646*** (5.20)			
Constant	1.219(1.10)	-5.461***(-3.20)	Constant	0.818* (1.98)	-0.527* (-1.77)
R-squared	0.540	0.721	R-squared	0.185	0.570
F	32.42	30.69	F	7.619	42.44

*p<0.1, **p<0.05, ***p<0.01(bilateral).

4. CONTRIBUTIONS

Our research not only enriches the relevant study on the trust relationship and formation mechanism at each stage of the online medical platform consultation mode, but also provides online medical platforms with relevant strategies to develop the active participation of users and stabilize their continued use. First, platforms should add a forum function module to create a doctor-patient interaction zone and add personalized services. Plus, doctors' online communication skills and service awareness should be enhanced to improve the professionalism and authority of their services. Moreover, platforms should enhance the synergy between itself, patients and offline medical institutions to maintain the relationship chain of patient trust.

ACKNOWLEDGEMENT

This research was supported by grants from National Natural Science Foundation of China (71901152), Guangdong Basic and Applied Basic Research Foundation (2023A1515010919), Guangdong Province Innovation Team "Intelligent Management and Interdisciplinary Innovation" (2021WCXTD002), and Shenzhen Stable Support Grant (20220810100952001).

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