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A Study to Measure Patients' Trust in Medical Practitioners in Surat City

Ranjita Bhowmick

Ph.D Research Scholar, Management, VNSGU

ABSTRACT

Purpose: This study examines the critical role of trust in the doctor-patient relationship within the healthcare system. Trust acts as a pivotal element that enhances collaboration and communication, thereby improving patient outcomes. Defined as the subjective confidence in the reliability and integrity of healthcare providers, trust encompasses fidelity, competency, honesty, confidentiality, and overall reliability. The primary aim of the study is to examines the critical role of trust in doctor-patient relationship within the healthcare system and evaluate the factors influencing patients' trust in their medical practitioners.

Research Design: This quantitative study employed an online survey administered via Google Forms to collect data from 646 patients. The survey assessed patients' understanding of trust in their healthcare providers, focusing on factors such as technical competence, empathy, reliability, and expertise. Statistical analyses including correlation, exploratory factor analysis, and Kruskal-Wallis tests were conducted to examine differences in trust perceptions across age groups and educational levels.

Findings: The study revealed significant differences in how age groups of patients' impact technical competence, patience, understanding of social and economic conditions, adherence to instructions, confidentiality, trust despite mistakes, respect, access to technologies, recommendations for healthcare, dependability, and approachability. Educational qualifications also significantly influenced perceptions of healthcare provider trust across several factors except for the provision of information. The findings underscore the importance of tailoring communication and care strategies based on patients' age and educational backgrounds to enhance trust and satisfaction in healthcare settings. Understanding these demographic variations can inform healthcare providers in developing patient-centred approaches that foster trust and improve healthcare outcomes.

Keywords: Trust, Doctor-Patient Relationship, Healthcare, Age Differences, Educational Qualifications.

1. INTRODUCTION

Trust is an indispensable element in the doctor-patient relationship, serving as a vital lubricant that fosters cooperation and enhances outcomes. In essence, trust serves as the cornerstone of the doctor-patient relationship, fostering collaboration, enhancing communication, and ultimately improving patient outcomes in the healthcare system (Fallon E. Chipidza et al, 2022).

According to Gambetta (2000), trust can be defined as the subjective probability that one agent holds regarding another agent or group of agents performing a particular action. This assessment occurs in the absence of direct monitoring of the actions and influences the decision-making of the assessing agent.

Trust in healthcare encompasses various domains, including fidelity, competency, honesty, confidentiality, and overall reliability.

In the healthcare system, trust is cultivated through a culmination of experiences and interactions between patients and healthcare providers. Patients develop a favourable attitude towards seeking and receiving healthcare services when they trust their healthcare providers. This trust is built upon the foundation of past experiences, where patients feel confident in the fidelity and competence of their physicians. Furthermore, honesty and confidentiality in communication further solidify this trust (Dezhi Wu et.al, 2022). Moreover, a strong patient-physician bond forged on trust reduces the likelihood of patients switching healthcare providers. Patients are more inclined to continue seeking care from physicians they trust, leading to greater continuity of care and improved healthcare outcomes.

Trust in medical practitioners significantly influences patients' willingness to follow medical advice and treatment plans. When patients trust their healthcare providers, they are more likely to adhere to prescribed medications and lifestyle changes. Trust in healthcare providers can also impact patients' mental and emotional well-being. Knowing that they are in good hands can reduce anxiety and stress related to health concerns. The positive impact of trust in the patient-physician relationship extends beyond mere satisfaction; it directly correlates with improved patient outcomes and greater patient involvement in their own care. When patients trust their physicians, they are more likely to adhere to treatment plans, communicate openly about their concerns, and actively engage in shared decision-making processes. This increased involvement and cooperation contribute to better health outcomes and overall patient satisfaction (Dezhi Wu et.al, 2022).

2. LITERATURE REVIEW

Trust is a critical factor in the acceptance and success of e-health platforms, impacting patients' willingness to share sensitive information and adhere to medical recommendations. Several scholarly research papers have explored various dimensions and determinants of trust in health care services.

Contributor	**Topic of research**	**Constructs/Variables/Dimensions used for measuring trust**	**Published in**
Merenstein Z., Shuemaker J.C, Philips R.L (2023)	Measuring Trust in primary care	Fidelity, Competence, Honesty, Confidentiality and Global trust.	The Milibank Quaterly, Vol. 101, No.3 (pp.841-880)
Aboueid, S. E., Herati, H., Nascimento, M. H. G., Ward, P. R., Brown, P. R., Calnan, M., Perlman, C. M., & Meyer, S. B. (2023).	How do you measure trust in social institutions and health professionals?	Competence, Integrity, Communication, Benevolence, Fidelity, Fairness, Global trust, Confidentiality, Relational comfort and dependability.	Sociology Compass, e13101. https://doi.org/10.1111/soc4.13101

Sousa S., Cravino J., Martins P. (2023)	"Challenges and trends in user trust disclosure in AI popularity"	Trust as personal trait, trust as social trait, trust as reciprocal trait.	Multimodal Technologies and interact, 7, 13.
Zhaohua Deng et al 2018	What Predicts Patients' Adoption Intention Toward m-Health Services in China: Empirical Study";	Regression analysis revealed that trust, perceived usefulness, and perceived ease of use positively influenced adoption intention, while privacy and performance risks negatively affected trust and adoption intention.	JMIR Mhealth Uhealth 2018;6(8): e172 doi:10.2196/mhealth.9316
Kim, Y., & Park, H. (2018).	Building Trust in Online Health Communities: An Exploratory Study.	Perceived credibility of information and supportiveness of the community	Journal of Medical Internet Research, 20(7), e23.
Jamie LoCurto and Gina M Berg (2016)	"Trust in health care settings: Scale development, methods and preliminary determinants"	Honesty, confidentiality, dependability, communication, competency, fiduciary responsibility, fidelity and agency	The Milbank Quarterly volume 101, Issue 3, P. 841-880. (https://doi.org/10.1111/1468-0009.12654)
Anand T.N. (2014)	Development and testing of a	"Healthcare system trust"- perceived quality,	Indian J Med Ethics. 2015 Jul-Sep;12(3):149-57. doi: 10.20529/IJME.2015.044.

	scale to measure trust on public health care system	communication, and reliability.	
Tomsik, P. E., Smith, S., Mason, M. J., Zyzanski, S. J., Stange, K. C., Werner, J. J., & Flocke, S. A. (2014).	Understanding and measuring health care Insecurity	Health care insecurity, quality of life, perceived stress scale	*J Health Care Poor Underserved*. 2014 November; 25(4): 1821–1832. doi:10.1353/hpu.2014.0180
Wirtz, J., & Lwin, M. O. (2009).	Regulatory focus theory, trust and privacy concern	Promotion-focused behaviour (relational behaviour, relationship investment, repatronage intensions), Prevention-focused behaviour (Defensive, deflective and disruptive behaviour)	*Journal of Service Research*. Forthcoming
Thorne, S. E., & Robinson, C. A. (1988)	Reciprocal trust in health care relationships.	Trust, Health care relationships, patient competence, satisfaction with health care relationships.	*Journal of Advanced Nursing, 13*(6), 782-789.
Hall, M. A., Zheng, B., Dugan, E., Camacho, F., Kidd, K. E., Mishra, A., & Balkrishnan, R. (2002).	Measuring patients' trust in their primary care providers	Fidelity, Competence, Honesty, Confidentiality, Global trust.	*Medical Care Research and Review, 59*(3), 293-318. https://doi.org/10.1177/1077558702059003004
Thom, D. H., Hall, M. A., & Pawlson, L. G. (2004).	Measuring patients' trust in physicians when assessing quality of care. *Health Affairs*	Feasibility, changeability, Physics' behaviour and trust	*23*(4), 124-132. https://doi.org/10.1377/hlthaff.23.4.124

Based on the literature review on measuring trust, it is found that trust has five potential domains which consist of Fidelity, Competence, Honesty, Confidentiality and global trust. Trust in physicians, whether general or specific, is likely intertwined, influenced by patients' age, educational qualification, past experiences and impacting their willingness to trust new doctors initially. Additionally, trust correlates with patient attitudes and behaviours, including care satisfaction, compliance with recommendations, second opinion seeking, and previous disputes with physicians. Trust differs from satisfaction as it's forward-looking, cantered on vulnerability and future interactions rather than retrospective evaluation.

3. RESEARCH DESIGN:

To achieve the objectives of this study, a quantitative research approach was employed, utilizing a structured questionnaire to gather information through an online survey conducted via Google Forms. The survey included 646 patients and focused on their trust in family doctor confidentiality, technology usage, dependability, and honesty. Additionally, the study assessed sensitivity and willingness to share personal health data. The scale to measure trust on medical practitioners is taken from Anand Tn and V Raman Kutty (2014). Demographic information, such as age, gender, occupation, and self-assessed digital literacy, was also collected. The primary aim of the study is to examines the critical role of trust in doctor-patient relationship within the healthcare system and evaluate the factors influencing patients' trust in their medical practitioners.

4. NORMALITY TESTING

Before testing any hypotheses, normality tests were conducted to determine if the data set was well-modelled for computing. In this study, the Kolmogorov-Smirnov test and Shapiro-Wilk of normality was applied. This test assumes that the data is not- normally distributed if the p-value is greater than 0.05, often referred to as the formal test of normality.

Exploratory factor analysis (EFA) is conducted on non-normal data to identify underlying relationships between variables, even when data doesn't meet normality assumptions. Applying EFA helps reveal latent structures, guiding the refinement of theoretical models. Robust or non-parametric EFA techniques accommodate non-normality, ensuring accurate results. This approach enhances the validity of factor solutions derived from real-world, often non-normally distributed data. Consequently, EFA remains a powerful tool for uncovering hidden patterns in complex datasets.

Item reduction occurred in two stages. Initially, each item underwent evaluation and prioritization. Subsequently, reduction was based on analyses of item-to-total correlations and exploratory factor analysis. Exploratory factor analysis was chosen due to the absence of a definitive theory on trust in the healthcare system. A sample size of 646 was deemed sufficient for this analysis. Patients were approached at healthcare facilities in Surat, Gujarat, with their prior consent obtained before data collection. Socio-demographic information of the patients was also collected concurrently. Factor extraction utilized the maximum likelihood method, and data analysis was conducted using IBM SPSS (version 21.0) software. By running exploratory factor analysis, two components were identified.

Component 1	Particulars	
Assurance	THCMPTC (I BELIEVE MY DOCTOR/HEALTH CARE PROVIDER IS TECHNICALLY COMPETENT)	.748
	THCMPDCE (DOCTOR CONSIDERS ALL EQUALLY)	.700

	THCMPDKC (I FEEL MY DOCTORS KEEP CONFIDENTIALITY)	
	THCMPRDA (I RESPECT MY DOCTOR FOR THE ACTIVITIES HE IS DOING)	.654
Empathy	THCMPLP (MY DOCTOR HAS PATIENCE TO LISTEN TO MY PROBLEMS)	.792
	THCMPID (MY DOCTOR WILL PROVIDE ALL THE INFORMATION PON MY DIAGNOSTICS)	.855
	THCMPADMP (I BELIEVE I CAN APPROACH MY DOCTOR FOR ALL MEDICAL PROBLEMS)	.798
Reliability	THCMPRSHC (I RECOMMEND MY DOCTOR FOR SEEKING HEALTH CARE)	.749
	THCMPDDO (MY DOCTOR IS DEPENDABLE ONE)	.803
	THCMPID MY DOCTOR WILL PROVIDE ALL THE INFORMATION ON MY DIAGNOSTICS	.855

In this component, respondents express trust and confidence in their healthcare providers' technical competence, patience, information provision, adherence to instructions, consideration, respect, dependability, and approachability.

Component 2	**Particulars**	
Empathy	THCMPSEC (MY DOCTOR PROVIDER UNDERSTANDS MY SOCIAL AND ECONOMICAL CONDITIONS)	.712
Reliability	THCMPDM (EVEN IF MY DOCTOR MAKES A MISTAKE, I STILL BELIEVE HIM)	.870
Expertise	THCMPSOD (I NEVER TOOK SECOND OPINION FROM OTHER DOCTORS FOR MY DISEASE)	.780

This component reflects aspects related to the patient-doctor relationship, including the provider's understanding of the patient's social and economic context, patient loyalty in seeking second opinions, trust even in the case of doctor mistakes, and willingness to recommend the provider for healthcare needs.

5. HYPOTHESIS TESTING

The following hypotheses were examined regarding trust in healthcare providers:

Hypothesis	**Null Hypothesis (H0)**	**Alternative Hypothesis (H1)**	**P-Value**	**Result**	**Outcome**
Age Group	There is no significant difference in trust in healthcare providers/medical practitioners based on age group.	There is a significant difference in trust in healthcare providers/medical practitioners based on age group.	0.217	Not Significant	No significant difference in trust based on age group.

Educational Qualification	There is no significant difference in trust in healthcare providers/medical practitioners based on educational qualification.	There is a significant difference in trust in healthcare providers/medical practitioners based on educational qualification.	0.001	Significant	Educational qualification significantly influences trust perceptions.

These hypotheses were tested to explore the variability in trust levels towards healthcare providers among different age groups and educational qualifications, contributing to a more nuanced understanding of patient-provider trust dynamics.

6. RESEARCH ANALYSIS AND FINDINGS

The analysis of healthcare trust shows that perceptions vary significantly across different dimensions and age groups. Older patients tend to have higher levels of trust in their healthcare providers across aspects such as patience, understanding, adherence to instructions, equity, confidentiality, respect, access to technology, recommendations, dependability, and approachability. Younger patients, in contrast, often exhibit lower levels of trust in these areas. The study suggests that health care providers if consider these age-related differences when aiming to improve patient trust and satisfaction across demographics.
The Kruskal-Walli's test results provide insights into how age groups perceive various aspects related to their healthcare providers:

Variable	Test Statistic	P-Value	Result	Interpretation
THCMPTC (Technical Competence)	7.056	0.217	Not Significant	No significant difference in how different age groups perceive technical competence of healthcare providers.
THCMPLP (Patience to Listen)	14.661	0.012	Significant	Significant difference among age groups in perceptions of doctors' patience in listening to patients' problems.
THCMPID (Information on Diagnostics)	9.912	0.078	Not Significant	No strong evidence of significant difference among age groups in receiving information about diagnostics from doctors.
THCMPSEC (Understanding Social and Economic Conditions)	21.670	0.001	Significant	Highly significant difference among age groups in perceptions of doctors' understanding of social and economic conditions.
THCMPHCP (Following Instructions)	17.081	0.004	Significant	Significant difference among age groups in likelihood to follow

				medical instructions given by doctors.
THCMPSOD (Taking Second Opinion)	15.581	0.008	Significant	Significant difference among age groups in propensity to seek second opinions from other doctors.
THCMPDCE (Considering All Equally)	15.600	0.008	Significant	Significant difference among age groups in perceptions of doctors considering all patients equally.
THCMPDKC (Confidentiality)	16.328	0.006	Significant	Significant difference among age groups in perceptions of confidentiality maintained by doctors.
THCMPDM (Belief Despite Mistakes)	22.650	< 0.001	Highly Significant	Highly significant difference among age groups in trusting doctors despite mistakes.
THCMPRDA (Respect)	27.817	< 0.001	Highly Significant	Highly significant difference among age groups in respect towards doctors' activities.
THCMPDALI (Access to Latest Technologies)	42.655	< 0.001	Highly Significant	Highly significant difference among age groups in perceptions of doctors' access to latest medical technologies.
THCMPRSHC (Recommendation)	20.670	0.001	Significant	Significant difference among age groups in likelihood to recommend their doctor to others seeking healthcare.
THCMPDDO (Dependability)	23.451	< 0.001	Highly Significant	Highly significant difference among age groups in perceptions of doctors' dependability.
THCMPADMP (Approachability for Medical Problems)	22.263	< 0.001	Highly Significant	Highly significant difference among age groups in perceptions of doctors' approachability for medical problems.

Additionally, the Kruskal-Walli's test was conducted to determine if there are significant differences in perceptions of doctor-patient relationships across different educational levels:

Variable	Chi-Square	p-value	Result	Outcome
Technical Competence (THCMPTC)	19.870	0.001	Significant	Significant differences in perceptions of technical competence across educational levels.

Patience to Listen (THCMPLP)	12.060	0.017	Significant	Educational levels significantly influence perceptions of doctors' patience.
Providing Information (THCMPID)	7.111	0.130	Not Significant	No significant differences in perceptions of information provision across educational levels.
Understanding Social and Economic Conditions (THCMPSEC)	12.475	0.014	Significant	Significant differences in perceptions of doctors' understanding of social and economic conditions across educational levels.
Following Instructions (THCMHCP)	20.149	0.000	Significant	Educational level significantly impacts adherence to medical instructions.
Taking Second Opinions (THCMPSOD)	14.429	0.006	Significant	Significant differences in the propensity to seek second opinions across educational levels.
Considering All Equally (THCMPDCE)	14.446	0.006	Significant	Significant differences in perceptions of fairness in treatment across educational levels.
Confidentiality (THCMPDKC)	15.069	0.005	Significant	Significant differences in perceptions of confidentiality across educational levels.
Belief Despite Mistakes (THCMPDM)	12.805	0.012	Significant	Significant differences in continued trust despite mistakes across educational levels.
Respect for Doctor (THCMPRDA)	15.300	0.004	Significant	Significant differences in respect for doctors across educational levels.
Access to Latest Technologies (THCMPDALI)	11.358	0.023	Significant	Significant differences in perceptions of doctors' access to the latest technologies across educational levels.
Recommend Doctor (THCMPRSHC)	19.325	0.001	Significant	Significant differences in the likelihood of recommending doctors across educational levels.
Dependability (THCMPDDO)	13.855	0.008	Significant	Significant differences in perceived dependability across educational levels.
Approachability for Medical Problems (THCMPADMP)	21.772	0.000	Significant	Significant differences in perceptions of approachability across educational levels.

7. CONCLUSION:

This study highlights the pivotal role of trust in the doctor-patient relationship within the healthcare system. The findings demonstrate significant differences in trust perceptions based on patients' age and educational qualifications, influencing various factors such as technical competence, empathy, and

reliability. Age-specific and education-tailored communication strategies are essential for fostering trust and improving patient satisfaction. Understanding these demographic variations can guide healthcare providers in developing patient-centered approaches that enhance trust and ultimately lead to better healthcare outcomes. By addressing the unique needs of different patient groups, healthcare providers can build stronger, more reliable relationships, ensuring higher levels of patient trust and engagement in their own care.

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