View metadata, citation and similar papers at core.ac.uk
brought to you by CORE
provided by KSP Journals

Journal of
Social and Administrative Sciences
www.kspjournals.org
Volume 6 December 2019 Issue 4

Doctor-patient mutual trust, telemedicine quality, and satisfaction: The role of knowledge management

By Chien-Hsing LEE [a] Shu-Huei TSENG [b] & Fu-Sheng TSAI [c†]

Abstract. Distant medical care satisfaction demands high quality care result. Both quality and satisfaction rely heavily on collective operations on knowledge of and relations between patients and doctors. Thus, knowledge sharing and doctor-patient trust are among the two critical factors that may lead to medical care quality and satisfaction. However, existing literature discussed the abovementioned in a scant fashion and without considering the gap between knowledge of owners in this context (i.e., care offerers such as doctors and receivers like patients). This paper proposes a conceptual model for an integrative discussion of the relationships among knowledge sharing, trust, medical care quality and patient satisfaction, from a fresh perspective of knowledge gap. Theoretical and practical implications are expected to be rich because this conceotual piece offer discussions from a viewpoint that starts from the mnost fundamental factor – collective knowledge attribute in terms of its heterogeneous structure.
Keywords. Knowledge sharing, Trust, Distant medical care, Quality, Satisfaction.
JEL. D80, D83, D84, D85.

1. Introduction

With the development of modern medical technology, the widespread use and continuous updating of medical equipment, and the improvement of the control and understanding of the cause of disease, telemedicine has emerged. Telemedicine is improving medical care in difficult places such as outlying islands or remote areas; improving the effectiveness of patients; improving the professional capabilities of physicians; or putting forward suggestions or operating methods to improve the actual implementation between medical process levels to reveal important issues. However, even though telemedicine is

[a] Department of Business Administration, Cheng Shiu University, Taiwan.
☎. +886 7 7310606 ✉. martinzee0312@gmail.com
[b] College of Management, I-Shou University, Taiwan.
☎. +886 8 7378595 ✉. tjeng666@gmail.com
[c†] Department of Business Administration & Office of Institutional Research and Management, Cheng Shiu University (833) No. 840, Chengcing Rd., Niaosong District, Kaohsiung city, Taiwan.
☎. +886-7-7310606 mext. 5132 ✉. fusheng_tsai@hotmail.com

relatively expensive, if the medical benefits obtained are high, it would be worthwhile to propose a suitable and fair telemedicine system.

Even with the continuous improvement of medical equipment, it is still limited by some natural and human factors, and natural factors are limited by the influence of terrain, transportation, climate, etc. Hospital doctors and nurses are reluctant to be sent to remote areas. As a result, telemedicine has gradually developed, but many problems have also arisen. For example: the patient's distrust of telemedicine, the quality of telemedicine staff, the patient's inadequate knowledge of obtaining telemedicine, and the insecurities caused by being unable to face-to-face consultation with a doctor. In practice, telemedicine doctors and technicians must be responsible for the patient's medical process, so that patients can feel safe and trust, which will definitely help the development of telemedicine.

In addition, medical knowledge management for telemedicine will assist patients to obtain medical knowledge, in order to increase patients' distrust of telemedicine and increase acceptance. And because of different education levels, fewer people can obtain telemedicine information, and those with lower education levels are less likely to receive telemedicine. Medical knowledge management is one of the main internal functions of telemedicine. Is it possible for hospitals, medical staff and patients to make good use of medical knowledge resources, accumulate good telemedicine knowledge and skills, and continuously grow in the medical field. The key to successful medical knowledge management.

According to the above, the purpose of this conceptual paper is to discuss the current situation of telemedicine, the implementation of telemedicine knowledge management, the interaction between doctors and patients, and the satisfaction of the people of Taiwan in telemedicine. For the above research purposes, the following are listed separately. Corresponding research questions, some of which will be explored in the literature review, and some will be reflected in the research framework of this study.

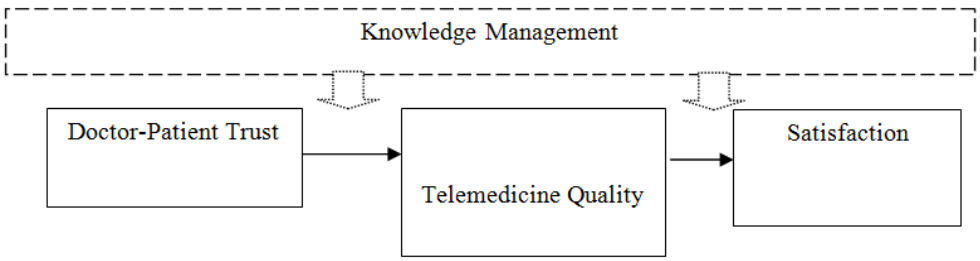

Figure 1. *Conceptual framework*

2. Literature review

2.1. Telemedicine

Telemedicine refers to the application of media technology systems, breakthrough of time and space control, and engaging in interactive medical professional consultants and consulting. According to the definition of the World Health Organization, telemedicine is "the use of

interactive video and information and communication technologies for medical care activities including diagnosis, treatment and counselling, and the transfer of health education and medical information." Accordingly, telemedicine is Combining communications, medical knowledge, and medical equipment allows doctors in remote hospitals to use video to perform long-distance visits. It can make it easier for people in remote areas, mountainous areas, and outlying islands to receive medical care and achieve better care.

Classified according to the field of medicine, the technology held by telemedicine is widely used, which can be applied to hospital management, telemedical education, teleradiology, teledermatology, Telepathology, telecardiology, teledentistry, teleophthalmology, telehomecare, tele-emergency, tele-surgery, and telepsychiatry, etc.

Early telemedicine is mainly a medical service set up for residents in remote areas and outlying islands. They are far away from major medical institutions, and because of inconvenient transportation due to blocked terrain, many people have serious medical delays due to delay regret. To address these shortcomings, many critically ill and chronic patients have lost their lives because they cannot receive immediate medical treatment or prevention, so telemedicine has been set up. But now, telemedicine is no longer limited to residents in remote areas and outlying islands. Instead, it can allow people around the world to share these precious medical resources and experiences. With regard to emergency medical care, due to the lack of medical resources in remote areas and mountainous areas, people often need to wait for ambulances and travel long distances when they are in need of emergency treatment, which leads to delays in medical treatment and causes unfortunate regrets.

Although telemedicine is so convenient, it still easily causes relative issues, which are worthy of our discussion. Technical issues have been raised before and after, such as: telemedicine software and hardware equipment, transmission speed, etc.; medical management issues, such as: safety, cost-effectiveness, ease of operation, and familiarity of medical staff There are of course legal issues, such as the attribution of liability for medical negligence and compensation. Therefore, how to diagnose and treat long-distance patients in a safe and worry-free environment, and make the development of telemedicine more valuable, is the most important thing.

2.2. Telemedicine quality

Today's medical industry has gradually followed up with medical teams in other advanced countries, and continues to make rapid progress. People no longer just follow the doctor's instructions, but they have become more aware of their health and attitudes. The quality of medical care has become an important issue here. The general public expects that the medical team can ensure the safety of the public when they seek medical care, not only taking good care of the patients' body and mind, but also the quality of

medical care is the focus of the public. The ability, patience and proficiency of medical staff to perform their duties is one of the indicators for evaluating the quality of medical care. The medical industry must establish a patient-centric concept in order to truly implement the quality of medical care. The main purpose of medical quality is to maintain patient safety, reduce medical care negligence, improve the quality of the medical environment, identify the accuracy of the disease and communicate with the doctor-patient relationship. In order to achieve continuous improvement in medical quality, a detection and notification system must be established. This is a tool commonly used in medical hospitals to manage medical quality, and this system must be kept confidential and protected. Otherwise, the safety data collection function will be exhausted.

In recent years, the medical industry has continuously developed more objective medical quality, and has also continuously required quantitative quality indicators. These indicators include structural indicators, process indicators, and result indicators. Structural indicators mainly assess whether medical institutions have sufficient medical resources to provide medical staff and patients with the best medical care. Process-level indicators refer to various behaviors in the process of medical care activities and the implementation of medical care in medical institutions. The result-oriented indicators are simply the expected and unexpected results of patients after receiving medical treatment. For example: Donabedian (1988) proposed that the monitoring of medical quality should be carried out in the following three aspects: 1. Structure level: including the organization of medical institutions, medical systems, and the quality of medical staff. 2. Process level: Is the medical procedure performed in the normal standard way? Whether the medical behavior has reached its standard. 3. Outcome level: the result of the medical behavior on the patient's diagnosis and treatment.

The future is an aging society. The medical care of many elderly people is a problem that the government and every class must face. Improving the quality of telemedicine is even more urgent. Ranaweera & Prabhu (2003) also show that satisfaction is the only way to retain customers. Choi *et al.*, (2004) conducted research on medical institutions in South Korea, and the quality of medical services and the behaviors recommended by old patients to others will affect patient satisfaction. Maxham III & Netemeyer (2002) 's research on the issue of service failure shows that even if the service fails, after real-time remedy, customers will still improve their product satisfaction and positive word of mouth. Donabedian (1988) divides medical quality into four levels: 1. Medical behavior quality, including the relationship between medical technology and medical disease. 2 The quality of non-medical behaviors, such as the environment. 3. Whether it is implemented in accordance with the medical affiliation, related to the patient and family. 4. Consider the quality of medical services received by the community from a social perspective.

Chronic diseases and patients requiring long-term care are increasing rapidly due to aging. General health insurance medical institutions may be less effective for people in remote areas. Due to the long-distance travel, the time from onset to treatment is quite long, which may affect medical treatment Diagnostic quality.

Nursing personnel play a very important role in the quality of medical care, in addition to monitoring the quality of care at all times, doing reasonable work distribution and participating in various nursing education and training to improve medical quality. Caregivers must meet the needs of the patient and ensure the safety of the patient's medical care process. This is because caregivers are one of the main performers of medical care in addition to doctors. The performance of medical personnel's perceived service has a significant positive direct relationship with the patient's overall satisfaction, and then an indirect relationship with loyalty. Both the perceived service performance and the patient's overall satisfaction have a significant direct relationship with loyalty, while the patient's overall satisfaction has a greater impact on loyalty, and the higher the patient's overall satisfaction, the higher the loyalty. Based on the above review, we propose the following propositions:

P1: *The better the quality of telemedicine, the higher the patient satisfaction.*

3. Doctor-patient mutual trust

Note that we are not just discussing about the patiens' trust in the doctors. Such relationship needs to be mutual in nature. Trust has gradually played a role as a lubricant in various social relations, allowing people to achieve good communication methods, rely on each other, and improve work efficiency. In the medical field, although medical technology continues to advance, people have different educational levels and different knowledge, which makes communication between doctors and patients more focused, but trust also becomes a medical-patient relationship Important element.

The theory of trust is widely used at all levels, such as psychology, sociology, political science, economics, social biology, law and organization and marketing, etc., the concept of trust will be used in various fields Much attention has been paid (Kramer & Tyler, 1996). Sociologists regard personal trust as part of social relationships, and define it as "trust is the perception of others' possible behavior in the future, and its constituent factors are belief and commitment" (Sztompka, 1999). In the field of economics, trust is when the two parties believe that each other will not harm each other during the transaction (Sabel, 1993). In the medical field, the trust between doctors and patients is very important. For patients, patient trust in doctors is a belief or expectation that doctors will act in some way (Anderson & Dedrick, 1990).

Rotter (1967) defines trust as "trust is the expectation of trust in the words, promises, oral or written statements of others or groups." But in

fact, there is a risk between the doctor and the patient. The patient believes that the health care provider will care about the patient's interests and is confident to accept the risky situation (Dugan *et al.,* 2005). Mayer, Davis, & Schoorrnan (1995) believe that trust is the willingness of a group to expose its dangers based on the fact that others (or groups) will expect to engage in actions that are important to them, regardless of whether they can monitor or control other groups. Conversely, if asymmetric information occurs between the two parties (doctor and patient), there may be a risk of distrust and uncertainty in the situation.

In the medical field, patient trust is a very important issue for doctors. Deutsch (1958) defines interpersonal trust as the trustee's belief in the ability and intention of the trustee, or like the scholar Rotter (1980) Define it as an individual's expectation of trust in the words, promises, and words of others. From the perspective of the relationship between doctors and patients, the doctor's behavior will affect the patient's natural psychological feelings towards the doctor. This view is based on McAllister (1995)'s belief that interpersonal trust is the process in which the trustee has confidence in the words, behaviors, and decisions of the trustee, and intends to take interactive actions. When the patient agrees with the doctor's consultation process, it will make the patient feel trust in the doctor and actively communicate with the doctor, so that the needs of the whole care process will be more clear and changed.

Therefore, in the medical relationship, the most important thing is cognitive interpersonal trust, which means that the trustee will have the willingness to trust the other person based on the trustee's own knowledge of the trusted evidence, such as the doctor's related medical certificate, It can prove the doctor's education and professional ability, so that patients can directly understand the trust of doctors through these certificates. Of course, there is also the aspect of institutional interpersonal trust. It is believed that the trustee will show trustworthy behavior to the trusted person under the constraints of the institutional norms, so that the trustee is willing to trust the trusted person; social trust is a system of trust collective or Institutions, such as hospitals or health care systems, need to take into account the atmosphere of social trust when considering patient interpersonal trust in physicians because social trust can affect interpersonal trust (Pearson & Raeke, 2000). Thorn *et al.,* (2004) also mentioned that organizational factors are important factors for establishing and maintaining medical trust, especially under economic or other pressures, and will affect physicians' consideration of seeking the best interests of patients.

And patient trust in doctors can be further broken down into identity trust and reputation trust. Identity trust comes from the trust of special identities. Regardless of the individual's achievements, he enjoys a trustworthy identity. For example: doctors, teachers, charitable organizations; reputational trust is a trust with strength or excellent performance. As long as an individual's behavior or performance is highly

affirmed, it is regarded as this trust. And reputation trust can be divided into two types: native and derivative. Patients affirm their professional ability because of their outstanding performance. This trust belongs to the original reputation trust. Doctors are believed to be trustworthy, and this trust is called derived reputation trust (Buchanan, 2000).

Trust can be explored through the five aspects of competence, fiduciary responsible and agency, control, disclosure, and confidentiality (Mechanic & Meyer, 2000) . Capabilities include technical capabilities and interpersonal skills; delegated responsibilities and agents refer to the physician's commitment to the patient to entrust him with the best health care responsibility; control is involved in various health care plans, and physicians are involved in providing patients with various The degree of control of necessary medical care; disclosure refers to the degree to which the physician informs the patient of his or her incentives and conflicts of interest with the patient. As for confidentiality, it refers to the degree of confidentiality of the patient's private information. Pearson & Raeke (2000) believe that the facet of trust includes: competence, compassion, privacy and confidentiality, reliability and dependability, and communication). However, in the relationship between doctors and patients, fidelity is the vulnerability of pursuing the best interests of patients and not being used, which includes related factors such as care, respect, defense, and avoiding conflicts of interest. Competence is about avoiding mistakes and producing the best results, in terms of honesty is about telling the truth and avoiding deliberate lies, and confidentiality is about protecting and using sensitive and appropriate Confidential information, in the end, in terms of global trust, cannot be attributed to the collective name of the four types of trust mentioned above, and can no longer be analyzed and simplified (Hall *et al.,* 2001).

Trust has a considerable impact on the quality of telemedicine. With the gradual advancement of medical technology, the division of medical care has become more subtle. However, in addition to a series of tedious medical services, patients still need to be diagnosed through high-tech equipment between some medical and disease relationships. The quality of a doctor-patient relationship still depends on the trust of the patient and the doctor. During the telemedicine care process, patients and doctors cannot directly contact each other face-to-face, and there is still a sense of distance between each other. If patients can trust the doctor, the more the doctor can understand the patient's condition, the better Knowing the needs of the patient also helps to reduce the patient's own anxiety, thereby increasing the effect of treatment, and also shortening the sense of distance between the doctor and the patient. However, too much trust in the physician may sometimes cause injuries or death due to the physician's attitude or inadequate medical diagnosis, resulting in unnecessary costs and expenses. Based on the above review, we propose the following propositions:

P2: *The higher the trust, the better the quality of telemedicine.*

4. Knowledge management

In the era of the knowledge economy, the activities of acquiring and transferring, sharing, and creating knowledge will obviously become the main internal function of telemedicine, and knowledge will be the main source. It is important to make good use of knowledge resources and accumulate them. Intelligent capital, and continuous learning to grow, will be the key to sustained success.

The knowledge is not a mere observation of a thousand articles, but a characteristic that changes with the changes of society. Knowledge-sharing knowledge-sharing knowledge can transform action and increase performance (Lichtenstein & Hunter, 2005). Because knowledge providers are less able to distinguish between different sources, those who satisfy any knowledge demand want to use knowledge in various situations, first take the position of knowledge demanders, and provide them with an understanding of phenomena ignored by existing theories. The idea of "sharing" mainly stems from the symmetry of information and the difficulties caused by the environment. Nancy (2000) proposed the idea of "sharing" to make other people know, that is, to disseminate information or knowledge owned by individuals with others, so that the other party also has the same information or knowledge. Knowledge sharing is a key component of the knowledge management system (Alavi & Leidner, 2001; Earl, 2001). The basic definition of knowledge sharing is also proposed by scholars. Senge's (1997) definition of knowledge sharing is "to assist others in developing effective and dynamic capabilities." Hendriks (1999) claims that knowledge sharing is a process of communication. When members of an organization learn about knowledge from others, they are sharing the knowledge of others. Holub (2003) pointed out that knowledge sharing increases the speed of communication, improves the quality of work and leads to innovative thinking.

Knowledge sharing is different from information sharing. Knowledge sharing is just that one party is willing to convey information to the other party, and still contains the willingness to help the other party understand the meaning of the information and learn from it, and then transform it into the personal content of the other party, and Develop new personal kinetic energy. Knowledge sharing is a dynamic process for knowledge owners to help others and develop new kinetic energy. The sharing of knowledge among individuals is not only limited to the explicit knowledge, but also the transmission of the hidden knowledge. Synthesizing the various proposals proposed by the above scholars on knowledge sharing, this study defines knowledge sharing as an individual sharing information, ideas, suggestions, and professional technical exchanges within a team with another body.

In terms of knowledge induction, if the hospital can record the experience or knowledge of relevant internal medical personnel in written form, medical technical data and meeting records are documented, clearly classified, organized and detailed, and stored in internal archives, The

maintenance and preservation of the existing knowledge and experience is quite attentive, which allows members of the hospital to quickly find the required information when needed, and the quality of telemedicine services will be improved. In terms of learning, the hospital can take the initiative to acquire and update knowledge about new products and services in the telemedicine industry, and if relevant personnel in the hospital can take the initiative to learn or obtain telemedicine related knowledge through relevant information systems, Apply it to patients with related needs, and continuously improve learning from experience and mistakes, and willing to spend time to discuss the needs of patients with telemedicine, and the quality of telemedicine services There will also be improved effects. In terms of knowledge application, if relevant personnel in the hospital try to use existing or new knowledge to develop new products, solve new problems, and improve efficiency, and often apply their knowledge to medical services and activities, the quality of telemedicine services can be improved. In the part of medical knowledge sharing, many scholars believe that if the hospital can actively transfer telemedicine-related knowledge to doctors, nurses and other related personnel, the planning and publicity staff in the hospital will spend time discussing the patient's situation with each department. For the needs of telemedicine, relevant personnel are also willing to share experience and knowledge with colleagues or patients, which can cause good interaction between the service staff and patients in the hospital, and obtain a certain level of medical knowledge with each other, and can Expanding to exchange knowledge with other cooperative organizations (such as telemedicine equipment providers) can positively affect the quality of telemedicine services (Bukowitz & Williams, 1999; Rolland & Chauvel, 2000; Roberts, 2000). We therefore propose the following propositions:

P3: *Knowledge management positively facilitates the relationships among doctor-patient mutual trust, telemedicine quality, and satisfaction.*

5. Concluding remarks

Distant medical care satisfaction demands high quality care result. Both quality and satisfaction rely heavily on collective operations on knowledge of and relations between patients and doctors. Thus, knowledge sharing and doctor-patient trust are among the two critical factors that may lead to medical care quality and satisfaction. However, existing literature discussed the abovementioned in a scant fashion and without considering the gap between knowledge of owners in this context (i.e., care offerers such as doctors and receivers like patients). This paper proposes a conceptual model for an integrative discussion of the relationships among knowledge sharing, trust, medical care quality and patient satisfaction, from a fresh perspective of knowledge gap. Theoretical and practical implications are expected to be rich because this conceotual piece offer

discussions from a viewpoint that starts from the mnost fundamental factor – collective knowledge attribute in terms of its heterogeneous structure.

References

Alavi, M. & Leidner, D.E. (1999). Knowledge management systems: Issues, challenges and benefits, *Communication of the AIS*, 1(7), 1-37.

Anderson, L.A., & Dedrick, R.F. (1990). Development of the trust in physician scale: A measure to assess interpersonal trust in patient-physician relationships. *Psychological Reports*, 67(3), 1091-100. doi. 10.2466/pr0.1990.67.3f.1091

Bukowitz, R., & Williams, L. (1999). *The Knowledge Management Field Book*. London: Pearson.

Choi *et al.*, (2004). The relationships among quality, value, satisfaction and behavioral intention in health care provider choice: A South Korean study. *Journal of Business Research*, 57(8), 913-921. doi. 10.1016/S0148-2963(02)00293-X

Deutsch, M. (1958). Trust and suspicion, *Journal of Conflict Resolution*, 2(4), 265-279. doi. 10.1177/002200275800200401

Donabedian, A. (1988). The quality of care: How can it be assessed?. *Journal of the American Medical Association*, 260, 1743–1748.

Dugan, E., Trachtenberg, F.L., & Hall, M. (2005). Development of abbreviated measures to assess patient trust in a physician, a health insurer, and the medical profession. *BMC Health Services Research*, 5(1), 64 doi. 10.1186/1472-6963-5-64

Earl, M.J. (2001). Knowledge management strategies: Toward a taxonomy. *Journal of Management Information Systems*, 18(1), 215-242. doi. 10.1080/07421222.2001.11045670

Hall, B.H., Jaffe, A., & Trajtenberg, M. (2001). The NBER patent citations data file: Lessons, insights and methodological tools. *NBER Working Papers*, No.8498. doi. 10.3386/w8498

Hendriks, P. (1999). Why share knowledge? The influence of ICT on the motivation for knowledge sharing. *Knowledge and Process Management*, 6(2), 91-100. doi. 10.1002/(SICI)1099-1441(199906)6:2<91::AID-KPM54>3.0.CO;2-M

Kramer, R.M., & Tyler, T.R. (1996). *Trust in Organizations: Frontiers of Theory and Research*. Thousand Oaks. Sage Publications.

Lee, S.M., & Hong, S. (2002). An enterprise-wide knowledge management system infrastructure, *Industrial Management and Data Systems*, 102(1), 17-25. doi. 10.1108/02635570210414622

Lichtenstein, S., & Hunter, A. (2005). Receiver Influences on Knowledge Sharing. *13th European Conference on Information Systems, Information Systems in a Rapidly Changing Economy*, ECIS 2005, Regensburg, Germany, May 26-28.

Ranaweera, C., & Prabhu, J. (2003). The influence of satisfaction, trust and switching barriers on customer retention in a continuous purchasing setting. *International Journal of Service Industry Management*, 14(4), 374-395. doi. 10.1108/09564230310489231

Rolland, N., & Chauvel, D. (2000). Knowledge transfer in strategic alliances, *In* C. Despres, & D. Chauvel, (Eds.), *Knowledge Horizons: The Present and the Promise of Knowledge Management*, Boston, M.A.: Butterworth Heinemann.

Roberts, J. (2000). From know-how to show-how? Questioning the role of information and communication technologies in knowledge transfer, *Technology* An'sis *and Strategic* Management, 12(4), 429-443. doi. 10.1080/713698499

Mayer, R.C., Davis, J.H. & Schoorman, F.D. (1995). An integrative model of organizational trust. *The Academy of Management Review*, 20(3), 709-734. doi. 10.2307/258792

Mechanic, D., & Meyer, S. (2000). Concepts of trust among patients with serious illness. *Social Science & Medicine*, 51(5), 657-668. doi. 10.1016/S0277-9536(00)00014-9

McAllister, D.J. (1995). Affect- and cognition-based trust formations for interpersonal cooperation in organizations. *The Academy of Management Journal*, 38(1), 24-59. doi. 10.2307/256727

Maxham III, J.G., & Netemeyer, R.G. (2002). Modeling customer perceptions of complaint handling over time: the effects of perceived justice on satisfaction and intent. *Journal of Retailing*, 78(4), 239-252. doi. 10.1016/S0022-4359(02)00100-8

Nancy, J.L. (2000). *Being Singular Plural*. Stanford California: Stanford University Press.

Pearson, S.D., & Raeke, L.H. (2000). Patients' trust in physicians: Many theories, few measures, and little data. *Journal of General Internal Medicine*, 15(7), 509-513. doi. 10.1046/j.1525-1497.2000.11002.x

Rotter, J.B. (1967). A new scale for the measurement of interpersonal trust. *Journal of Personality*, 35(4), 651-665. doi. 10.1111/j.1467-6494.1967.tb01454.x

Rotter, J.B. (1980). Interpersonal trust, trustworthiness, and gullibility. *American Psychologist*, 35(1), 1–7. doi. 10.1037/0003-066x.35.1.1

Sabel, C.F. (1993). Studied trust: Building new forms of cooperation in a volatile economy. *Human Relations*, 46(9), 1133-1170. doi. 10.1177/001872679304600907

Senge, P.M. (1997). The fifth discipline, *Measuring Business Excellence*. 1(3), 46-51. doi. 10.1108/eb025496

Sztompka, P. (1999). *Thrust: A Sociological Theory*. Cambridge University Press.

Thorn, B.E., Clements, K.L., Ward, L.C., Dixon, K.E., Kersh, B.C., Boothby, J.L., & Chaplin, W.F. (2004). Personality factors in the explanation of sex differences in pain catastrophizing and response to experimental pain. *The Clinical Journal of Pain*, 20(5), 275-82. doi. 10.1097/00002508-200409000-00001

Copyrights

Copyright for this article is retained by the author(s), with first publication rights granted to the journal. This is an open-access article distributed under the terms and conditions of the Creative Commons Attribution license (http://creativecommons.org/licenses/by-nc/4.0).