Understanding Trust in Medical Technology: Using the Example of Obstetrics

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(ABSTRACT)

Understanding how patients and operators trust medical technology will provide insight into the role, implementation and use of technology in health systems. Models developed in aviation and manufacturing that predict operators' trust or distrust in technology (Biros, 2004; Jian, Bisantz, Drury, & Llinas, 1998; Lee & See, 2004; Muir & Moray, 1996; Parasuraman, 1997) may not be applicable to medical technology and health systems. The first objective of this research was to empirically define the construct trust in medical technology by differentiating it from trust in technology and providing a model of it's factors. The second objective of this research was to generate a theory of how patients and health care providers construct trust in medical technology in an applied context. The third objective of this research was to develop and validate an instrument to measure patients' trust in medical technology. The results of these combined studies identified 30 factors of trust in medical technology and provided evidence to support the hypothesis that trust in technology and trust in medical technology are different constructs. A grounded theory was developed that shows that patients' trust in medical technology is based on a combination of characteristics from the technology, providers and how the providers use the technology, while physicians' trust is constructed from the trustworthiness of the system and trust in their own abilities. An 80 item instrument for measuring trust in medical technology was developed and validated. Recommendations for the design of obstetric work systems are discussed.

DEDICATION

I dedicate this dissertation to my grandparents who taught me to love and respect life, all people and the earth.

Enid Ferguson
Tommy Ferguson
Robert Headen, Sr.

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Mountains should be climbed with as little effort as possible and without desire. The reality of your own nature should determine the speed. If you become restless, speed up. If you become winded, slow down. You climb the mountain in an equilibrium between restlessness and exhaustion. Then, when you're no longer thinking ahead, each footstep isn't just a means to an end but a unique event in itself. This leaf has jagged edges. This rock looks loose. From this place the snow is less visible, even though closer. These are things you should notice anyway. To live only for some future goal is shallow. It's the sides of the mountain which sustain life, not the top. Here's where things grow.

Robert M. Pirsig
Zen and the Art of Motorcycle Maintenance

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