Chapter 34
The Science of Individuality and Tailored M-Health Communication

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ABSTRACT

The era of the science of individuality promises to fully recognize the uniqueness of the individual who needs to be seen and treated with utter respect for his or her individuality. It will not be long until digitizing a person unlocks the cause for what is wrong, creating valuable knowledge that can save a life or markedly improve the quality of life. On the other hand, emerging m-health technologies provide fundamentally different ways of looking at tailored communication technology. As a result, tailored communications research is poised at a crossroads. It needs to both build on and break away from existing frameworks into new territory, realizing the necessary commitment to theory-driven research at basic, methodological, clinical, and applied levels. The chapter envisions tailored m-health communication in the context of the science of individuality, emphasizing the variability, stability, and centrality of the individual.

INTRODUCTION

The health care environment is currently changing to meet technology and societal trends which converge to bring into being new communication patterns that connect and coordinate the roles of healthcare stakeholders. At the same time, the healthcare industry is steering inexorably toward a distributed service design in which essential decision-making occurs at the point of care. One of the central engines of this shift towards decentralization and reorientation of health care services is mobile healthcare (M-Health). M-Health describes the use of a broad range of telecommunication and multimedia technologies within the wireless care delivery design and can be broadly defined as the delivery of healthcare services via mobile communication devices. M-Health establishes healthcare communities in which every stake-

DOI: 10.4018/978-1-6684-2414-8.ch034

holder can participate. However, it disrupts the traditional service model where healthcare information, security and access is centrally managed, maintained and limited, transforming the healthcare sector and destroying components that are slow to adapt.

M-Health interventions range from simple to complex applications and systems that remotely coordinate and actively manage patient care. In this context, it offers an elegant solution to the problem of accessing the right information within highly fluid, distributed organizations. Moreover, it removes geography and time as barriers to care by establishing connectivity with remote locations and remote workers, creates new points of contact with patients, and changes the frequency and intensity of health care delivery. It also establishes effective new treatment modalities like telehealth, remote patient monitoring, self-care, and home health while it blurs the boundaries between professional medical advice and self-care. Overall, M-Health blends three bodies of knowledge: high technology, life sciences, and human factors.

Additionally, four prevailing theories are explaining the formation of health attitudes, intentions, or behaviors (Weinstein, 1993):

- The protection motivation theory.
- The health belief model.
- The theory of reasoned action.
- The subjective expected utility.

These theories share an underlying premise. Health intentions arise to avoid potential adverse outcomes through cognitive assessment and include a cost-benefit component. However, existing studies have largely ignored the role of various message tactics and individual characteristics, contrary to the protection motivation model (Rogers, 1985). Overall, health messages accommodate risk information in different formats (Keller, 2006):

- To increase perceptions of vulnerability.
- To include action steps.
- To provide comparative information to increase intentions.

By the same token, tailoring is a multi-dimensional communication strategy that involves the development of individualized messages that are based on the pre-assessment of critical variables or characteristics that are linked to the underlying model of behavior change. Several studies have found that tailored health messages demand greater attention for the following reasons:

- They are processed more intently.
- They contain less redundant information.
- They are perceived more positively by health consumers.

Specifically, the Elaboration Likelihood Model suggests that personal information enhances the strength of motivation and sensitivity to the argument, forcing the individual to expound on the message. Moreover, if the argument is forceful to senses, personal pertinence increases the probability for persuasion. Thus, tailoring creates an ideal environment for persuasion and health behavior change. Studies of tailored communication are exploding in an array of disciplines. In health education, studies have shown that tailored print materials are generally more effective than non-tailored ones (Prochaska et al., 1993;