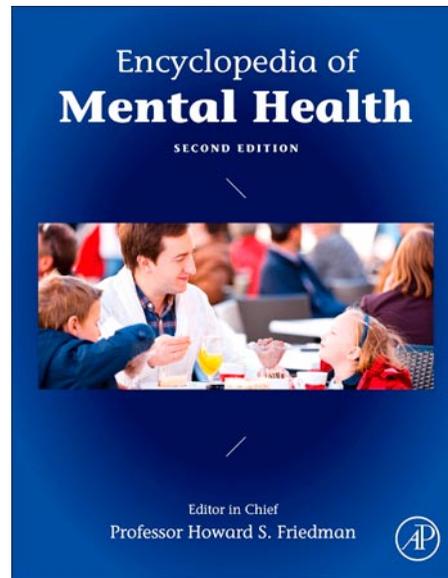


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Health Beliefs and Patient Adherence to Treatment

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Glossary

Adherence (or compliance) The degree of success a patient has in carrying out medical treatment recommendations given to him or her by a health professional.

Empathy Being sensitive to an individual's changing feelings and connecting emotionally to that person; an understanding of a person's private health perceptions.

Joint decision-making A collaborative partnership in which physicians (or other health professionals) work

together with their patients towards a mutually agreed upon treatment plan.

Nonadherence (or noncompliance) A patient's ignoring, forgetting, or misunderstanding of their treatment regimen.

Patient-centered care Physicians' ability to increase patient autonomy and effectively support their patient's ability to self-manage their condition; physicians' must emphasize patients' role as expert.

Self-efficacy An individual's personal judgment of his or her ability.

Introduction

Patient nonadherence is a significant barrier to effective medical treatment and to achieving therapeutic goals. Current research indicates that depending upon the disease condition and the complexity of the required treatment, as many as 40% of patients misunderstand, forget, or completely ignore treatment directives given by their healthcare providers (Dunbar-Jacobs *et al.*, 2000; Hofmann and Bunzel, 2000; Martin *et al.*, 2005). Additionally, patient nonadherence can be as high as 70% when treatment regimens are extremely complex and require significant modifications to existing habits (Chesney, 2003). Nonadherence is strongly associated with poor health outcomes, including more than 125 000 deaths each year (Christensen and Ehlers, 2002). Research suggests that nonadherence exacerbates a patient's disease (or condition) and leads to unnecessary costly procedures and incorrect diagnoses (DiMatteo, 2004; DiMatteo *et al.*, 2002; Martin *et al.*, 2005). Nonadherence also imposes a considerable economic burden; yearly US expenditures for the consequences of patient nonadherence are estimated to be between US\$290–300 billion (DiMatteo, 2004; New England Healthcare Institute, 2009).

The empirical literature on patient nonadherence is quite extensive, and efforts to understand the many factors that predict nonadherence remain an ongoing challenge (DiMatteo, 2004; DiMatteo *et al.*, 2002, 2007). Research on the physician-patient relationship suggests that effective communication can enhance patient adherence through various mechanisms including collaborative partnerships, provider empathy, and patient-centered communication (Haskard-Zolnieriek and DiMatteo, 2009; DiMatteo *et al.*, 2012).

Health Beliefs and Treatment Adherence

Establishing and maintaining good health behaviors is a difficult task for most individuals. Research to date suggests that patients make decisions about their treatment based on their beliefs and attitudes (Iihara *et al.*, 2004; DiMatteo *et al.*, 2007).

Patient health beliefs can derive from direct experiences based on cultural and environmental context, in addition to second-hand experiences or knowledge conveyed from another person within family, peer, or social support systems (Martin *et al.*, 2005). Furthermore, studies have shown that approximately 20% of the variance in medication adherence behaviors can be attributed to patients' health beliefs, particularly perceptions of medication necessity and potential side effects (Gatti *et al.*, 2009). Thus, if patients hold beliefs that are different from what their physicians recommend, or if their families (or social support networks) hold divergent views about their illness and prospective treatment, patients may be conflicted in their willingness or intention to adhere. Discordant beliefs affect adherence even more when dealing with conditions that carry potential stigma, such as human immunodeficiency virus (HIV) or depression (Martin *et al.*, 2005).

Several theoretical models have been developed to further explain how patients' health beliefs (and attitudes) affect changes in health behaviors. This section will focus primarily on the Health Belief Model (HBM). However, other models exist that provide insight to other factors (i.e., patients' intentions, subjective norms, and motivations) associated with behavior change. In the early 1950s, the HBM was first developed to understand why some individuals choose to engage in preventative health behaviors, whereas others do not (Rosenstock, 1974). The HBM proposes that individual engagement in preventative or treatment behaviors is influenced by (1) the perceived susceptibility and severity to particular diseases or negative health outcomes (that is, the likelihood of acquiring a disease and the severity of that disease if developed) and (2) the perceived benefits and efficacy of treatment, taking into account the cost associated with treatment such as money, time, and resources (Rosenstock, 1974; DiMatteo *et al.*, 2007).

The body of research encompassing the HBM is substantial; significant associations between each dimension of the HBM and behavior change have been identified (DiMatteo *et al.*, 2007). Most notably, a patient's beliefs regarding perceived barriers have been found to be significantly associated with actual changes in health behaviors (Wallace, 2002;

DiMatteo *et al.*, 2007). In a study by Wallace (2002), self-efficacy, perceived barriers, and perceived susceptibility to osteoporosis were the strongest predictors of engagement in health actions that included weight-bearing exercises and intake of calcium to prevent osteoporosis for women in college. Another study by Aljaseem *et al.* (2001) found that perceived barriers and self-efficacy strongly predicted effective disease-management behaviors for patients with diabetes. Moreover, a quantitative meta-analysis examining the relationship between perceived disease severity and patient adherence to treatment found that patients who believed their disease was serious and threatening were 2.5 times more likely to adhere to treatment than patients who believed their disease was less serious (DiMatteo *et al.*, 2007). These findings suggest that physicians must fully understand a patient's beliefs (including the patient's perceptions of the severity of their disease or condition) in efforts to foster adherence behaviors over time. The adoption of health messages and recommendations from healthcare providers that are persuasive and compelling may increase patients' awareness and understanding (i.e., change patients' beliefs) of the potential dangers of unhealthy behaviors and the associated diseases those behaviors may cause, ultimately leading to increases in effective disease management and prevention (DiMatteo *et al.*, 2007).

Further, health literacy has been associated with patients' health beliefs and adherence to treatment. Gatti *et al.* (2009) suggested that functional health literacy skills contribute to a patient's beliefs because the patient's ability to comprehend disease-management strategies depends upon their network of beliefs, which in turn can influence subsequent intentions and adherence behaviors. Anarella *et al.* (2004) found that 38% of patients with asthma who were given extensive information regarding the use of daily inhaled corticosteroids were adherent to their medication regimens, whereas 62% continued to mistakenly believe that their medications should only be taken when symptoms were present. Inadequate patient health literacy has also been associated with ethnic disparities in screening (e.g., HIV and mammography screening), likely due to limited access and understanding of written prevention materials (Peek and Han, 2004).

Physician Understanding of Health Beliefs

A fundamental component of patient-centered care is the physician's ability to understand their patients' health beliefs and preferences. Research by Street and Haidet (2010) found that understanding a patient's beliefs and preference is important for several reasons. A physician's ability to identify gaps between their own understanding as compared to their patient's perspective of living with illness can lead to treatment decisions that are better suited for their patient's specific needs and expectations. The ability of physicians to listen and understand is a key component of empathy, which has been shown to predict patients' perceptions of higher quality of care and effective communication (Hojat *et al.*, 2002; Zachariae *et al.*, 2003; Street and Haidet, 2010). Additionally, physicians and patients who engage in mutual understanding (e.g., a patient having a role in treatment decision-making) achieve

higher patient satisfaction and have better overall perceived outcomes of care (Street and Haidet, 2010).

However, current empirical research indicates that physicians have poor understanding of their patient's health beliefs in regard to decision-making, desire for health information, perceived health status, beliefs about treatment effectiveness, and patients' emotional states (Street and Haidet, 2010). Street and Haidet (2010) also found a significant difference in patients' health beliefs as compared to their physician's perceptions of their patient's health beliefs. For example, physicians believed a biological cause was responsible for their patient's condition, over which the patients had very little control. Results from this study indicated that patients actually believed the opposite. Further analysis also revealed that physicians generally underestimated their patient's beliefs about the meaning of disease, the value of natural treatments, the patient's control over their disease, and the patient's beliefs about physician-patient partnership in care. This research suggests important clinical implications for the physician-patient relationship. Given that physicians are limited in the amount of time spent with each patient, physicians should utilize aspects of their patient's medical histories to gain better insight about their patient's beliefs and perspectives (Street and Haidet, 2010). Patients may even reveal important contextual information through subtle forms of both verbal and nonverbal communication (Martin *et al.*, 2005).

Patient Health Beliefs about Depression

Depression is currently the most prevalent mental illness health professionals are called upon to diagnose and treat (Martin *et al.*, 2005; Edlund *et al.*, 2008). Depressed patients often experience pessimism, cognitive impairment, and social isolation, which may diminish the patient's ability to adhere to treatment (Martin *et al.*, 2005). Current research estimates that between 50% and 80% of patients who are prescribed antidepressants prematurely discontinue or inconsistently take their medications (Aikens *et al.*, 2008). Patient health beliefs about the necessity and/or the adverse side effects of antidepressant drug therapies have been found to predict adherence and certain treatment outcomes (Martin *et al.*, 2005; Aikens *et al.*, 2008). Moreover, some research suggests that beliefs in regards to the stigmas (or feelings of embarrassment) associated with psychiatric drug therapies may influence patients' adherence behaviors (Edlund *et al.*, 2008). Despite the growing literature on the effects of patients' health beliefs on treatment adherence for depressed patients, further research is needed to better understand the underlying mechanisms that drive such beliefs associated with treatment (Aikens *et al.*, 2008).

Joint Decision-Making and Effective Communication

Effective provider-patient communication, in which health professionals are emotionally sensitive or empathetic to a patient's feelings can foster patient beliefs that support treatment recommendations and help patients to overcome practical barriers. Martin *et al.* (2003) found that patients who were

more involved in their own care asked more questions and displayed more confidence. In addition, physicians who maintained collaborative partnerships behaved in ways that promoted patient involvement. Patients who were more involved in discussions regarding behavioral strategies were more likely to adhere to antidepressant drug therapies (Martin *et al.*, 2005). Physician–patient relationships based on partnership, reciprocity, and mutual respect (or concordance) are essential to greater patient involvement and shared decision-making. This reciprocal exchange of information is vital to a patient's understanding of the costs and benefits associated with their treatment, and through the process of negotiation with their physicians, patients can arrive at treatment plans that are conducive to their lifestyle and specific to their health beliefs (Martin *et al.*, 2005).

Clinical Implications

Current research on the provider–patient relationship suggests important clinical implications for physicians and members of the healthcare team. First, physicians and healthcare professionals must encourage patients to ask questions and to describe their personal experiences of living with illness. Second, efforts must be made to obtain feedback about patients' beliefs and the benefits and efficacy of treatment and patients' overall understanding of their disease or condition. Finally, healthcare professionals must effectively discuss with their patients how they intend to implement treatment, facilitate patient commitment, and build support in efforts to maximize adherence behaviors (Martin *et al.*, 2005).

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