Protection Motivation Theory and Adherence to Sport Injury Rehabilitation Revisited

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With estimates in excess of 3 million injuries sustained each year in the United States by children and adults in sport and recreational activities (Bijur et al., 1995; Booth, 1987), sport injury has emerged as a serious public health concern. For injuries requiring rehabilitation, adherence to the prescribed regimen is considered important to achieve successful treatment outcomes (Taylor & Taylor, 1998). Depending on the particular measure of adherence used, adherence rates ranging from 40 to 91% have been documented in sport injury rehabilitation settings (Brewer, 1999). Evidence of a positive relationship between adherence to sport injury rehabilitation programs and clinical outcome has been obtained in several studies (Brewer, Van Raalte, Cornelius, et al., 2000; Derscheid & Feiring, 1987; Hawkins, 1989; Meani, Migliorini, & Tinti, 1986; Satterfield, Dowden, & Yasamura, 1990).

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More than a decade of research has identified numerous personal, situational, cognitive, emotional, and behavioral factors associated with adherence to sport injury rehabilitation programs (Brewer, 1999). Although early investigations of sport injury rehabilitation adherence were predominately atheoretical, a study in which personal investment theory constructs were used as predictors of adherence to sport injury rehabilitation (Duda, Smart, & Tappe, 1989) began a trend toward the application of established theoretical perspectives to sport injury rehabilitation behavior. Cognitive appraisal models derived from the stress and coping literature (Brewer, Van Raalte, Cornelius, et al., 2000; Daly, Brewer, Van Raalte, Petitpas, & Sklar, 1995; Udry, 1997), attribution theory (Brewer, Cornelius, et al., 2000; Laubach, Brewer, Van Raalte, & Petitpas, 1996), and protection motivation theory (Taylor & May, 1996) are among the theoretical frameworks that have been used to guide investigations of sport injury rehabilitation adherence.

Protection motivation theory (Maddux & Rogers, 1983; Rogers, 1975, 1983), which is an extension (Prentice-Dunn & Rogers, 1986) of the health belief model popularized by Becker and his colleagues (Becker & Rosenstock, 1974; Janz & Becker, 1984), holds that people’s adherence to health behaviors is influenced by their perceptions of how severe the threat to their health is, how susceptible they are to the health threat, how effective the health behaviors are in addressing the health threat, and how able they are to perform the health behaviors. Presumably, through the processes of threat appraisal and coping appraisal (Brouwser & Sorrentino, 1993), adherence to a given treatment is highest when individuals perceive the health threat and their susceptibility to the health threat as high, consider the treatment effective in addressing the health threat as high, consider the treatment effective in addressing the health threat, and perceive themselves as able to carry out the treatment. In a recent meta-analysis of 65 studies that have evaluated protection motivation theory in association with more than 20 different health issues, support was obtained for each of the main components of the theory (Floyd, Prentice-Dunn, & Rogers, 2000).

Taylor and May (1996) examined the utility of protection motivation theory in predicting adherence to sport injury rehabilitation with a sample of 62 competitive and recreational athletes with various injuries. They found that all four of the factors specified in protection motivation theory—perceived injury severity, perceived susceptibility to further complications without rehabilitation, belief in the efficacy of the treatment, and rehabilitation self-efficacy—were positively associated with one or more indices of adherence to a home-based sport injury rehabilitation program. Positive associations between belief in the efficacy of treatment and sport injury rehabilitation adherence have been obtained in two other studies (Duda et al., 1989; Noyes, Matthews, Mooar, & Grood, 1983).

Although Taylor and May’s (1996) application of protection motivation theory is unquestionably groundbreaking, it is limited in several respects. In particular, the participants’ injuries were heterogeneous, the rehabilitation protocols were also heterogeneous and were focused exclusively on home-based activities, and the sample was divided into “compliant” and “noncompliant” participants to form dichotomous dependent variables. Heterogeneity of the injuries and rehabilitation protocols is problematic in that the influence of different injuries and rehabilitation protocols cannot be disentangled from relationships between predictor variables (i.e., protection motivation theory constructs) and criterion variables (i.e., adherence indices). Using dichotomous dependent variables results in less sensitive measurement of adherence than is possible with continuous dependent variables.