Psychological Correlates of Athletic Injuries: Hardiness, Life Stress, and Cognitive Appraisal

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Abstract

The purpose of the present study was to examine the relationships among the cognitive appraisal model of athletic injury predictors. Specifically, predictions concerning the role of the personality factors of hardiness and the situational factor of life stress in prediction cognitive appraisal of injury were examined. Intercollegiate athletes (n=187) complete a pre-season survey. The pre-season survey, which contained background information, injury history, the Cognitive Hardiness Inventory (Nowack, 1990), and Life Event Survey for Collegiate Athletes (Petrie, 1992), was administered 1 to 2 weeks prior to the season. The correlations showed some support for the hypothesis that harder athletes would appraise rehabilitation as less difficult than less hardy athletes. Future researchers should consider the advantages of the cognitive appraisal model specifically taking individual difference into account when dealing with injured athletes.

Key words: Athletic injury, Cognitive appraisal model, Hardiness, Life stress

Introduction

Athletic injuries not only involve physical trauma, but psychological consequences as well. Even a minor injury in an athletic setting can have a major impact on both physical and psychological states which affect the athlete’s performance. When injured athletes have devoted years of practice and put so much into their sports, serious injury not only involves physical pain but also psychological suffering. Great successes have been made in the physical care of injured athletes and many researchers and practitioners are actively working in search of more effective methods for treating injured athletes physically. Despite the improvement in equipment and physical conditioning technique, the incidence of athletic injury has not abated (Bergandi, 1985). In fact, increased participation in sport and exercise is accompanied by a concomitant increase in injuries. The primary empirical efforts in this area have been devoted to the psychological antecedents of athletic injury, and research on the psychological consequences of athletic injury (i.e., psychological response to athletic injury) have lagged behind (Walker et al., 2007). This trend seems to be changing, however, as several studies on psychological responses to athletic injury and psychological interventions for the injured athletes have been published (Leddy 1994; Brewer et al., 1995; Daly et al., 1995; Johnson et al., 2005; Maddison & Prapavessis, 2005; Udry, 1997; Udry et al., 1997).

In terms of theoretical development in psychological response to athletic injury, several researchers (e.g.,
Lynch, 1988; Rotella & Heyman, 1993) have relied on stage models of grief and loss to explain psychological reactions to athletic injury. It is proposed that injured athletes experience psychological reactions similar to those following the death of a loved one (Rotella & Heyman, 1993). Kubler Ross (1969) in her book, “On Death and Dying”, describes these reactions as denial, anger, bargaining, depression, and, acceptance. However, research has not supported the major claims of this stage model. For example, a common sequence of discrete emotional reactions to athletic injury has not been documented (Brewer, 1994).

In contrast to stage models, several researchers have suggested that cognitive appraisal models offer better explanations for understanding the psychological response to athletic injury. This stress process, which was first introduced by Spielberger (1966) in his theory of anxiety, was conceptualized as a process by McGrath (1970), and translated to sport related situations by Martens (1977), includes situational, cognitive, emotional response, and consequence stages. For example, an athlete who has experienced injury and perceives the current situation as a threat will express more emotional disturbance than one who perceives the same situation as a challenge. Consequently, an athlete who perceives a situation negatively will show less adherence to the rehabilitation regimen and may not be able to reach their pre injury performance level.

Brewer (1994) identified five processes based on the similar cognitive appraisal models relevant to psychological responses to athletic injury. According to his model, cognitive appraisals are presumed to be influenced by personal factors (e.g., personality, disposition, self perceptions, pain tolerance, athletic identity, and demographic differences) and situational factors (e.g., timing of injury, level of competition, teammate influences, coach influences, and social support). Cognitive appraisals then determine the emotional response to the injury, which in turn influences behavioral responses (e.g., adherence to rehabilitation). Udry (1995) formulated the model related to the emotional response of the injured athletes. From Brewer’s initial cognitive appraisal model of athletic injury, Udry proposed an injury response model, which is more focused on how athletes perceive and react to the stress (i.e., injury). This model expanded upon Brewer’s model by adding coping response and physical recovery steps. Physical recovery is considered the final stage of the model. More importantly, the recursive nature of the cognitive and emotional process is included as the model addressed the injury setback impact. Finally, Daly et al. (1995) conducted a partial test for the cognitive appraisal model with recreational and competitive athletes undergoing rehabilitation following knee surgery. They looked at cognitive appraisal, emotional disturbance, and behavioral response (i.e., adherence to rehabilitation). The results provided moderate support for the cognitive appraisal model as they showed a significant correlation between cognitive and the emotional disturbance as well as an inverse relationship between emotional disturbance and one measure of adherence. Based on their findings, they suggested that the cognitive appraisal model might be a useful framework for understanding how athletes respond to injury and cope with emotions during the rehabilitation process.

Cognitive appraisal models have great potential in comparison to the previous stage models. One of the main advantages is that cognitive appraisal models allow researchers to distinguish differences among individuals. The individualizing characteristic makes this model powerful. According to Lazarus’s model of stress, this characteristic provides boundless possibilities for explaining and understanding the nature of individual differences (Lazarus & Folkman, 1984). Stress, as well as how to cope with stress, is an individual process (Gill, 1994). Unlike the stage models that treat injury as loss, cognitive appraisal models understand injury as a stress process. Unfortunately, current researches are heavily focused on the emotional consequences of injury and have virtually ignored the potential of adopting the cognitive appraisal model taking into account personal and situational differences and providing