

# The effects of explanatory style on concussion outcomes in sport

Erin J.B. Shapcott<sup>a</sup>, Gordon A. Bloom<sup>a,\*</sup>, Karen M. Johnston<sup>b</sup>, Todd M. Loughead<sup>c</sup> and J. Scott Delaney<sup>a</sup>

<sup>a</sup>McGill University, Montreal, Quebec, Canada

<sup>b</sup>University of Toronto, Toronto, Ontario, Canada

<sup>c</sup>University of Windsor, Windsor, Ontario, Canada

**Abstract.** Individuals with an optimistic explanatory style have generally been linked with improved mental and physical health across a variety of chronic and serious conditions. The purpose of the current study was to examine the effects of explanatory style on recovery time and number of sport-related concussions suffered in the last 12 months. University varsity athletes ( $n = 170$ ) suffering from at least one concussion over the last 12 months from six contact or collision team sports completed both the Attributional Style Questionnaire and the Sport History Questionnaire. The results indicated that athletes with an optimistic explanatory style took longer to recover than athletes with a pessimistic or average explanatory style. More specifically, optimistic athletes who suffered a complex concussion (requiring more than 7 days to recover) took significantly longer to return to play. However, the results showed that explanatory style did not influence whether an athlete suffered subsequent concussions. Overall, the current results can be used to better understand the psychology of concussions, as well as concussion prevention efforts and management strategies.

**Keywords:** Concussion, explanatory style, sport psychology

## 1. Introduction

Despite improvements in protective equipment, injury prevention, and rule changes, sport-related concussions remain a significant problem [11]. A concussion is the result of rapid acceleration/deceleration forces exerted on the brain [24]. Furthermore, a concussion typically results in a constellation of clinical signs and symptoms, such as loss of consciousness, headache, blurred vision, and nausea, that may disappear very quickly or linger for long periods [2]. Since these signs and symptoms prevent the athlete from both training and performing daily activities, it is important to explore ways to enhance recovery. Although research has attempted to identify the factors that in-

fluence and facilitate recovery following injury, there remains little that medical personnel can do to therapeutically intervene to shorten the recovery period following a concussion [3]. However, researchers have recently recognized that a number of psychological factors, such as depression, confusion, and social support, play a critical role in the susceptibility and recovery of concussions [3,16,18,21]. One psychological factor that has received increased attention in health psychology and which may help to better understand the area of concussion prevention and rehabilitation in sport is explanatory style.

Explanatory style is based on the premise that individuals have habitual ways of explaining events that occur in their lives [15]. Specifically, explanatory style refers to the ways that individuals explain their positive and negative life experiences [1]. The explanatory style construct emerged from the reformulation of

\* Address for correspondence: Gordon A. Bloom, Ph.D., Depart-