Athletic Injuries Essay, Research Paper

There are many psychosocial factors that contribute to the occurrence and severity of athletic injuries. Many studies have found that there is a relationship between the occurrence and severity of athletic injuries and stress. Stress affects everyone and it is because of this we need to be properly educated about it. It is the body s nonspecific response to any demand (Williams, 1996). Stress is composed of many factors and is often described as any feelings of nervousness or anxiety. It has been established that there is a direct positive relationship between stress and the severity and occurrence of athletic injuries (Hanson, McCullagh & Tonymon, 1992). The research provided in this paper examines what causes stress and what causes the stress levels to vary in an individual. The researchers are trying to identify the cause of stress and what moderates the stress levels in an individual. Many situations can produce a stressful response and researchers have attempted to determine why it will leave an athlete more vulnerable to injury. In addition, there are many pyschosocial variables that make athletes more susceptible to injury, and psychosocial events that occur after an athlete has experienced an injury.

Despite proper rehabilitation, many athletes are not psychologically equipped to cope with the impact of an athletic injury (Larson, Zaichkowsky, & Starkey, 1996). Advances in sports medicine have allowed remarkable physical recoveries, however, many members of the medical community are urging injured athletes to have the psychological aspects of their injuries treated as well. Initially, sport psychology was used as a catalyst to enhance athletic performance. There is a growing awareness of specific psychological risk factors that are associated with athletic performance. More frequently mental health professionals are needed to assist an athlete adjust to life after an athletic injury. The psychological impact of such an injury can vary depending on the severity and the situation of both the athlete and injury, but the emotional reactions are common. Given the uniqueness of individual perceptions, it is critical that an athlete s reactions to their injury are individually assessed and monitored before considering any other form of treatment. An athlete s mental response to an injury will affect how his body responds to physical rehabilitation. This ability to cope and rehabilitate from an athletic injury is important in an athlete s ability to once again function at their maximum capability both psychologically and physically on and off the field.

Many studies have attempted to determine whether psychological factors influence the severity or the number of injuries incurred by athletes. Kerr & Minden (1988) hypothesized that the rate and severity of injury in elite female gymnasts would be influenced by anxiety, locus of control, self-concept and stressful life events. A Gymnasts Injury Questionnaire and a similar Coaches Questionnaire were designed for the study. It asked the gymnasts to report the following: injuries occurred over the previous two years, a description of each injury and its occurrence, the timing of the injury in relation to the next competition, the number of days that the injury interfered with the regular training, and their opinion to what caused each injury. From these surveys Kerr and Minden (1988) reported that, in female gymnasts, there is a strong positive relationship between the frequency and severity of injury and stressful life events. The author suggested that, stressful life events caused athletes to use energy, leaving them fatigued and more prone to injuries because these life events commanded attention. Stress caused a change in a person s energy level, thus creating a change in a person s ability to focus. When a athlete s focus level decreased so did their ability to control what they are doing and therefore produced a greater chance of injury.

The framework proposed by Anderson and Williams (1988) was tested by Hanson, McCullagh, & Tonymon (1992) in an attempt to try and eliminate previous limitations of the study. The research of Anderson and Williams (1988) addressed, various predictor variables of athletic injury, examined possible mechanisms underlying the stress-injury relationship, and suggested specific interventions for reducing the risk of athletic injury (Hanson, McCullagh, & Tonymon, 1992, p.263). Each athlete was asked to fill out a background questionnaire that included age, height, weight, academic major, course load, track event, and injury history. The subjects reported any past injuries that had occurred in the previous twelve months, the severity of injuries that affected their training, and the number of months since they considered themselves recovered. Psychological published inventories were altered in order to better assess the psychological variables in the study. Stressful life events were defined by Anderson & Williams (1988) as positive or negative events that an individual perceives as threatening and stressful and that require an expenditure of energy and adaptive behavior. It is thought that as stress increases, a narrowing of the visual field occurs and a relevant cue in the environment may be overlooked, increasing the likelihood of injury.

A significant relationship was found between severity of injury and negative life stress. As stress increased so did the severity of the injury. The same relationship was found between positive life stress and the frequency of injuries. From this we know that stress can cause an increase in both the severity and the frequency of injuries. It is likely that the negative stress for an athlete causes them to use energy, leaving them fatigued and more prone to injuries because stress and stressful events demand your attention. A relationship was also found between competitive trait anxiety and severity of injury but the relationship was not significant. A distinct linear relationship between the two could not be determined. Coping behavior and social support have been shown to moderate the effects of life stress on both the physical and psychological outcomes (Hanson, McCullagh, & Tonymon, 1992). It was also concluded that the perceived available coping resources to an athlete can protect the athlete against injury. Athletes who were perceived to have higher coping resources were less likely to be injured than those athletes who were perceived to have fewer coping resources. The results of the study allowed the researchers to determine that the perceived amount of help and support available to an athlete can influence the frequency and the severity of injuries that occur over a season. The researchers concluded that there was a direct relationship between social support and the severity of injuries. They did not find a relationship between social support and the frequency of injury

If an athlete sees a situation as stressful, his or her history of stressors, personality characteristics and coping resources will work together or independently of each other to influence the stress response. Jean M. Williams (1996) hypothesized that an athlete s perception affects the degree of stress in a situation. Anderson and Williams (1988) developed a stress-injury model, this model serves as the foundation for organizing and summarizing past research on the relationship of stress and injuries. The central hypothesis of the model is that athletes who have high stress and few coping resources will often perceive competitive situations as very stressful. These individuals have a greater muscle tension and a loss of attention. Thus, an athlete can alter their potential for risk by altering the perception of the situation.

The history of stressors (which include life events, daily hassles, and previous injury history) were evaluated using the Social Readjustment Rating Scale (SRRS). The scale used in the SRRS is based on the concept that a change in life events result in the bodies need to adapt to the changing situation. This change and need for adaptation by the body causes the body to use up a large amount of energy and leaves it vulnerable to illness and injury. The researchers found that coping resources and social support given to athletes helped to prevent and protect athletes against injuries. The authors suggested that the presence of coping resources may cause some athletes to perceive fewer situations and events as stressful and this will allow athletes to have less sensitivity to stressors.

Many studies have examined the psychosocial factors that contribute to athletic injuries, but few studies have been conducted that test variables that interact with life stress and influence injury risk. Ford, Eklund, Gordon (2000) hypothesized that competitive trait anxiety, dispositional optimism, self-esteem, hardiness and social support would have significant moderator effects on the relationship between life stress and injury. They believed that when these potential moderator variables are considered individually, they would contribute uniquely to the relationship between life stress and injury. A moderator variable affects the direction or strength of the relationship between an independent and dependent variable (Ford, Eklund, & Gordon, 2000, p.301). Moderator variables moderate the influence of life stress that can alter either the vulnerability or the resiliency of a person to injury. These moderator variables were chosen to evaluate any contradictions in the research and to examine the variables that had not been investigated from Anderson and Williams (1988) stress-injury model. Using many different questionnaires and surveys the researchers were able to collect data and evaluate the psychological variables in each subject. Correlational analyses indicated that several variables had moderating effects. The results indicated that those athletes who had more optimism, hardiness or global self-esteem coped more effectively with life change stress, resulting in reduced injury vulnerability and recovery rates.

The role of psychosocial factors was examined by Bramwell, Masuda, Wagner, & Holmes (1975) in order to better evaluate life events and how they can affect stress levels in collegiate football players. The SRRS was modified to the Social and Athletic Readjustment Scale (SARRS) to better evaluate the psychosocial factors in the collegiate football players. First, the authors demonstrated that the SRRS could be developed into the SARRS to better test the impact of psychological factors in collegiate footballl players. Then using a correlational study, they used the SARRS to determine the players perceived life change over a one and two year period to better understand and define the injuries that were experienced. The results of the study found that there was a significant positive relationship between life events and athletic injuries. But the researchers were hesitant to publish the findings of the study. They hesitated because the researchers were wary of the measures they used when testing the psychosocial factors in the athletes. They believed there was a possibility that there were misuses in the experimental approach to the study of injury. Due to the competitive level of play and dreams of playing professional football, collegiate football players would have a higher perception concern and concern at the possibility of having an injury. It is because of this their perception of life events and injuries may be skewed, so the results of the questionnaire may not be as accurate as originally thought.

Previous to the research of Larson, Zaichkowsky, & Starkey (1996) no studies were conducted that surveyed the psychological strategies and techniques used by practicing certified athletic trainers (ATC) in their work with injured athletes. The results of the study gives sport psychologists a better understanding of an athletic trainers knowledge of sports psychology and their ability to help injured athletes. The Athletic Training and Sports Psychology Questionnaire (ATSPQ) examined the perceptions, techniques and abilities of ATCs in recognizing and treating the psychological aspects of athletic injuries. The study found that many ATCs thought that sport psychology is important in the treatment of athletic injuries. ATCs found that athletes encountered stress, anxiety and anger following athletic injuries. It would be beneficial for ATCs to learn how to treat and reduce stress, anxiety and anger in athletes after injury. Since ATCs are often the primary health care professional they should be better educated on the psychological responses of injured athletes and ways in which they could improve the recovery process with the aid of sport psychology.

Medical personal often overlook the cognitive and social damage that occurs after a loss in the ability to perform and participate in sports. Eldridge (1983) examined the symbolic importance of sports to athletes. Many athletes through their childhood view sports as significant both socially and psychologically. Adults often use sports to recapture real or fantasized images and events from youth that are used as personality enhancement that mask other insecurities (Eldrige, 1983). When injuries occur these identity confirming roles are damaged temporarily or permanently, depending on the significance and the injury. Individuals who have narrow self-concepts and hang on to self defining athletic roles, those who fail in other tasks outside the sports realm, and those who are oriented toward work, ambitious and competitive will most likely have the greatest difficulty coping with athletic injuries (Eldridge, 1983). Injuries can often prohibit the ability to function at peak performance, this destroys self-concepts of energy and strength. This is evident in athletes that are injured during middle age, it is difficult for many to deal with the aging process but an injury can antagonize feelings of unattractiveness and physical incapability which are associated with the aging process (Eldridge, 1983). An athletes physical wounds will often heal quicker than the psychological trauma that are a result of the injury.

It is important to refer athletes to psychological treatment. This treatment should have the patients understand the injury, share their feelings and the relative importance of sports. The treatment should also have athletes begin to use the injury as a learning experience. It should use the treatment to breakdown to evaluate the persons psychological foundations and the relationship to sports.

All of the studies found that there is a direct relationship between stress and the frequency and severity of athletic injuries. A majority of the studies used the stress-injury model (Anderson & Williams, 1988) as a basis for their research. Hanson, McCullagh, & Tonymon (1992) tested the Stress-Injury model by addressing previous limitations of the initial study investigating collegiate Track and Field athlete s personality characteristics, life stress and coping resources and the relationship to athletic injuries. Ford, Eklund, & Gordon (2000) examined moderator effects of six psychosocial variables that interact with life stress to leave an athlete more susceptible to injury. This study was conducted in an effort to eliminate inconsistencies that existed in previous research. These variables were also chosen to assess contradictory findings on the stress-injury relationship as well as address variables that had not previously been examined by the stress-injury model (Anderson and Williams, 1988). Williams (1996) evaluates her own model and the research of others to look for inconsistencies and to develop a method that will help to reduce injury vulnerability. All of these studies use similar techniques in an attempt to draw inferences of the influence of stress on the severity and frequency of injuries. These techniques often involved subjects filling out surveys and questionnaires that evaluated their own perceptions of variables that can influence the amount of stress in an individual.

Eldridge (1983) examined the psychological and social aspects of athletics and the importance they hold to an individual. When injuries occur it disrupts much of the psychological framework that has been developed over the years from significant athletic events that an individual uses to define them. When these events transpire many personality and identifying roles are upset and feelings of anxiety, anger, and sadness are felt. Deutsch (1985) concluded from his research that an individual can be open to both anxiety and trauma because athletic injuries can disrupt the adaptive patterns and defensive organization that has been developed over the years. Both these articles stated that sports are used as a defense mechanism to uncomfortable feelings and that they have taught individuals how to develop autonomy, self-concept and self-control. Thus when sports are taken away by injury, individuals are exposed to multiple problems that have been masked by sports and athletics. The research of Larson, Starkey, & Zaichkowsky (1996) allowed us to see and view the different psychological symptoms that athletes are at risk to develop after an athletic injury. Feelings of both stress, anxiety, and anger are examples of the common emotions that are a result of an injury.

Most of the studies used previously published inventories or developed or modified their own to assess the psychological variables and to collect information about an athletes past injuries. The method used to assess the athletes and their injuries was done effectively but some of the questions called for the need to remember certain feelings and events over a long period of time. There were inconsistencies in the measures of both Bramwell, Masuda, Wagner, & Holmes (1975), Kerr & Minden (1988) and Hanson, McCullagh, & Tonymon (1992). All three studies required the subjects to recall and interpret their levels of anxiety and stress over either a one or two-year period. Asking the subjects to use their memory is not a reliable technique because memory is not always valid. As a result of the poor measures that these studies used, the research of Bramwell et al., (1975), Kerr & Minden (1988) did not give enough specification to exactly what their studies were looking to find. The variables that they tested would make it extremely difficult to draw conclusive data to prove their hypotheses. It is possible to believe their research was not as clearly presented because their work was done before the stress-injury model (Anderson & Williams, 1988) was developed. Other studies that tested similar hypothesis but used the stress-injury model as a foundation for their work, were able to produce more concise results and conclusions because they were able to compare their results to the standard stress-injury model.

As a result of the extreme difficulty in trying to find conclusive evidence on what moderates the relationship between stress and injury none of the literature that I read was able to completely prove their hypotheses. Each researcher concluded that to replicate their research it would be necessary to take a multivariable approach and finding more accurate measures to evaluate stress and its effect on an athlete both psychologically and physiologically. Until a method is developed to control stress, then it will grow increasingly difficult to completely understand the effects that psychosocial factors have on stress and its relationship to the occurrence and severity of athletic injuries.

Source List

Bramwell, S.T., Masuda, M., Wagner, N.M., & Holmes, T.H. (1975). Psychosocial factors in athletic injuries: Development and application of the social and athletic readjustment rating scale (SARRS). Journal of Human Stress, 1(2), 6-20.

Deutsch, R.E. (1985). The psychological implications of sports related injuries. International Journal of Sport Psychology, 16, 232-237.

Eldridge, W.D. (1983). The importance of psychotherapy for athletic related orthopedic injuries among adults. International Journal of Sport Psychology, 14, 203-211.

Ford, I.W., Eklund, R.C., & Gordon, S. (2000). An examination of psychosocial variables moderating the relationship between life stress and injury time-loss among athletes of a high standard. Journal of Sports Sciences, 18(5), 301-312.

Gretchen, K., & Minden, H. (1988). Psychological factors related to the occurrence of athletic injuries. Journal of Sports & Exercise Psychology, 10, 167-173.

Hanson, S.J., McCullagh, P., & Tonymon, P. (1992). The relationships of personality characteristics, life stress, and coping resources to athletic injury. Journal of Sport & Exercise Psychology, 14, 262-272.

Larson, G.A., Starkey, C., & Zaichkowsky, L.D. (1996). Psychological aspects of athletic injuries as perceived by athletic trainers. The Sports Psychologist, 10, 37-47.

Williams, J.M. (1996). Stress, coping resources, and injury risk. International Journal of Stress Management, 3(4), 209-221.