

The Study of Sports Injuries and Rehabilitation for Engineering Students in Karnataka State

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Abstract – A great number of injuries occur in the context of recreational physical activities and competitive athletics. Adherence to sport injury rehabilitation means an injured athlete's compliance to sports medicine/injury personnel's instructions of participating in a rehabilitation programme in a clinic, and/or doing rehabilitation exercises at home. It has emerged as an area of interest among physiotherapists and other allied professionals (i.e. sport trainers, physicians). This article reviews compliance among injured athletes in the recovery process by presenting the protection motivation theory, personal investment theory and models of cognitive appraisal. Also it reviews key research findings about these three theoretical models. In addition practical guidelines and specific strategies are offered to sport injury rehabilitation personnel to enhance an athlete's adherence to injury rehabilitation. Sports medicine/injury personnel should educate athletes about their injuries and rehabilitation and increase effective communication and active listening. Also sports medicine/injury personnel should provide social support and encourage positive beliefs of injured athletes. In addition, coping with pain and setting short-term goals help athletes to increase their compliance to programmes of rehabilitation.

INTRODUCTION

Athletic participation often results in musculoskeletal injury. In the UK, sport and exercise is the single leading source of injury, accounting for approximately 33% of all injuries. In the US child and adult participants in sport and recreation sustain an estimated 3–17 million injuries annually. As a result athletes seek medical assistance from physicians, physiotherapists and sports trainers. For these sports medicine/injury rehabilitation personnel, the goal is to return injured athletes to competition as safely and quickly as possible. The success of a sport injury rehabilitation programme is contingent on following prescribed protocol.

Accordingly, compliance with injury rehabilitation programmes has emerged as an area of interest in sports medicine and sports psychology. The aim of this article is to present the literature on the theories and models of adherence to sports injury rehabilitation, and discuss the application of these in rehabilitation settings by identifying evidenced-based strategies. Adherence to sports rehabilitation refers to the degree of an injured athlete's compliance to a sports medicine/injury professional's (i.e. physiotherapist, physician, sport trainer) instructions on participation in a rehabilitation programme. The

majority of research in this area has used prospective research designs to investigate the predicted factors associated with injured athletes' compliance to their rehabilitation.

SIGNIFICANCE OF SPORTS:

Health is Supreme: No matter what sport you play, you are bound to have better health than people who avoid sports. No other activity is as productive in gaining endurance, strengthening of muscles and overall physical fitness as sports. To attain a fit body and pleasing attractive personality, you need to play sports.

Productive Time Utilization:

When we are playing, we actually utilize our free time in doing something good. In fact, parents who scold their kids for playing, instead of mugging up books in afternoons, must realize that the kid gains nothing from disinterested studying, while they gain good health and better psyche from games.

Super Brain: Playing increases sharpness of mind and mental strength. Sport teaches you how to handle failures with dignity, while enjoying victories to the maximum. Also, it trains people to handle

crunch situations, where stress can try and pull them down. All positive traits for a healthy mind and a healthy person can be gained from sports.

Team Player: Most of the popular games are team events and those played individually also have team versions. Playing team games makes a person more comfortable with others. It improves the interpersonal skills and makes a person efficient as a team player. He generates positive vibes that help him to work in any scenario with different people, who have different senses and sensibilities.

OBJECTIVES OF THE STUDY:

The study is undertaken with the following objectives.

1. To study the sports related injuries.
2. To study the psychological issues in sports injury and rehabilitation.
3. To suggest the policy recommendations in the light of the findings.

METHODOLOGY AND DATABASE:

The study is based on both primary data and secondary data. Primary data includes collection of information from physiotherapy doctors and physiotherapy students at Alva's Health Centre Moodbidri, Mangalore, Engineering students, sports persons in Alva's Engineering College Moodbidri and secondary data collected from Published books, Journals and reports.

USEFULNESS OF THE STUDY:

The study would be useful to all the sports persons. It is useful to understand and study the psychological issues in sports injury and rehabilitation.

Analysis on psychological issues in sports injury and rehabilitation:

Psychological aspects of athletic injury:

As noted, a sport-related injury can often bring about certain psychological aberrations that prohibit the patient from recovering as planned. Such negative affective responses tend to be global in nature, as evidenced by elevations on multiple scales of the Profile of Mood States. Conditions of concern may include psychological states and reactions such as general pain, stress/anxiety, exercise addiction, anger, treatment noncompliance, and depression. Fear is another common reaction in injured athletes: that is, fear of not recovering, of re injury, of losing positions, jobs, income, or family and friend support. Another common reaction is disbelief that an injury

has occurred. A recent review of sports medicine practitioners indicated that an athlete's psychological state before injury may affect how the athlete reacts to the injury. For example, athletes who express anger in the athletic arena may be prone to becoming depressed after an injury and frustrated with their inability to carry out their anger.

Of additional importance, the psychological characteristics of athletes, as they relate to the perception and reaction to injury, may vary in such areas as level of self-esteem, trait anxiety, and locus of control, self-efficacy, and motivation. Various situational factors such as the nature and extent of injury, type of sport, time during the season when the injury occurred, and the perceived context of the injurious situation may mediate and influence an athlete's response to injury as well. Moreover, some athletes' self-esteem and self-worth are often wrapped up in their bodies and their ability to perform with their bodies. This can become a major problem for an athlete whose entire identity is wrapped up in sports.

Models of adjustment to athletic injury:

To provide a basis from which to conduct empirical investigations, several models have been proposed. Generally, these models fall into two categories: stage and cognitive models. Stage models hypothesize that an injured athlete responds to injury by sequentially passing through various stages before positive adjustment occurs. Essentially, it is speculated that injury constitutes a "loss" to which the person will respond with grief reactions similar to those of the terminally ill. The proposed stages are: denial, anger, bargaining, depression, and acceptance.

Foremost, it appears as if psychological reactions to injury are more global in nature and more varied across individuals than stage models would be able to predict or account for. Cognitive models were developed in an attempt to account for individual differences. Notable here is the importance placed on how an individual perceives the injury, as opposed to the fact that it has occurred.

In this model, personal factors may include trait anxiety, self-esteem/motivation, coping skills, extroversion/introversion, psychological investment in the sport, and injury history. Situational factors are comprised of personal control over the injury, time of season, point in athletic career, pain, social pressures, type of sport, life-stress, duration of injury, and degree of sport performance impairment. The cognitive appraisal essentially asks: "What are you thinking in regard to the occurrence of this injury?" The emotional response, then, refers to what one is feeling, whereas the behavioural response deals with what the patient is going to do,

i.e., what are the behavioural rehabilitation consequences. Although most studies have used retrospective and/or cross-sectional research designs to examine the claims of cognitive appraisal models in the domain of athletic injury, research findings to date suggest considerable promise for an approach that examines the joint influence of personal and situational factors on psychological responses to injury.

Even though the cognitive model is one step closer to how individuals may actually respond to injury, it does not address the stress response as an antecedent to injury in any great detail. It is important to note that the stress response constitutes a bidirectional relationship between the person's cognitive appraisal of a potentially stressful situation and the physiological/attention aspects of stress. What this means is those athletes evaluate the demands of a particular situation, their ability to meet those demands, and the consequences of either failing or succeeding in meeting these demands. Any perceived imbalance between situational demands and personal response capabilities may result in anxiety reactions susceptible to altering the physiological/attention aspects of the athlete. Another shortcoming of the cognitive model is the inability to account for the mediating effects of psychological interventions.

For the aforementioned reasons, a modified version of the Anderson and Williams' model is proposed.

PATIENT ASSESSMENT:

To more clearly determine whether psychological interventions may be needed, sports medicine practitioners should give some consideration to the following 10 questions as part of their patient screening process.

1. Do fear and anxiety prevent the patient from following the prescribed rehabilitation regimen?
2. Is the patient depressed beyond what seems reasonable for the type of injury sustained?
3. Is the patient lacking a support system; eg, is the patient experiencing feelings of isolation?
4. Is the reality of the injury, course of rehabilitation, and/or return to sport clouded?
5. Although all physical indications are such, is the patient not recovering as expected?
6. Does the patient choose to not adhere to the rehabilitation procedures?
7. Does the patient express a desire to return to practice before the sports medicine team gives their OK?
8. Does the patient not believe that he/she is able to recover fully?
9. Is the patient "addicted" to exercise and unable to slow down as required?
10. Does the patient's self-worth seem "injured" as well? The presence of one or more of these psychological difficulties should be an indication to the sports medicine practitioner that some level of sport psychological intervention is warranted. It is recommended that medical personnel systematically use this 10-step checklist early in the physical rehabilitation process to promptly identify any psychological problems that the patient may be experiencing.

SPORTS CONCLUSIONS AND INTERCESSIONS

Athletes invest a great deal of time and energy in the pursuit of optimal performance. Therefore, any severe injury is likely to be perceived as a traumatic life event with physical and psychological ramifications. The psychological interventions that address the troubling aspects of injury may provide a valuable adjunct to the athlete's physical rehabilitation. 2' Some interventions would include the following.

Cognitive Restructuring, Here, one focuses on replacement of any unproductive thinking patterns that may contribute to psychological distress. One might point out how the injury could allow the athlete time to rest and catch up on other important aspects of life that have been neglected, reevaluate priorities, and enjoy the absence of constant training and competition pressures.

Rational Emotive Therapy, The athlete often holds on to irrational belief systems. Rational Emotive Therapy strives to attack these irrational perceptions and unchecked assumptions and offers patients an opportunity to replace them with more realistic and productive thoughts.

Systematic Desensitization; The athlete is helped to gradually adjust his/her thinking to overcome fear and/or apprehension. This technique starts with smaller goals and works up to more complex ones. Essentially, this technique entails a gradual adjustment of perception.

Panic Mitigation, Give hope to the athlete and mitigate the anxiety and panic. Talk about the athlete's assets (positive things in his/her life) and mention how other athletes with the same condition have healed and made comebacks. Also ask the athlete to make the recovery process a challenge rather than a devastating blow.

Coping Rehearsal, A performance-enhancing audiotape can help the athlete overcome obstacles. Essentially, the athlete prepares for challenges ahead by developing a very detailed script that covers all the pertinent experiences associated with competition and/or injury. Then, this information is recorded onto a tape. This allows the athlete to focus on those issues that may present challenges and ways to successfully deal with these challenges.

Career Adjustment Techniques; In the event that the injury precludes returning to the sport, athletes receive individual or group counselling dealing with the issues of leaving the competitive arena. This process may involve coping strategies, self-esteem development, and other techniques aimed at avoiding an identity crisis.

Confidence Training, Here the individual is introduced to "volition" and the will to choose. Fundamentally, the athlete is taught that being confident is a choice that anyone can make. The athlete is made aware of the internal and controllable elements of confidence.

Positive Self-Talk, Once injured, athletes often engage in negative thoughts and self-defeating internal dialogue. Redirecting these thoughts and statements into positive, task-oriented thoughts and affirmations can help provide direction and motivation to the rehabilitation process."

Thought Stoppage, Those athletes who seem to be bombarded with negative, self-defeating thoughts can be taught how to control these thoughts. The ultimate goal is to replace the negative thought patterns with positive affirmations.

Relaxation Skills, These skills can help the injured person cope with the stresses associated with injury. Relaxation can be attained by learning various skills, eg, breathing techniques or more physical relaxation skills such as progressive relaxation.

Imagery, This enables the patient to mentally practice those skills that may allow return to activities (eg., envision healing, pain management). Mental practice of physical and performance skills (mastery rehearsal) may also be used in the imagery sessions. Thus, motivation may be fostered if the athlete realizes that performance is facilitated by mental rehearsal during a time when he/she is unable to rehearse physically.

Motivation, Motivating the injured athlete to adhere to rehabilitation programs is critical. Several techniques can increase motivation. One effective way is through goal setting. Here, athletes can be directed to channel their energies toward achievement of rehabilitation objectives, and a degree of control over their rehabilitation can be instilled.

Concentration Skills, Teaching how to focus on the skills required to achieve success (eg, become healthy again, decrease the probability of further injury) can be achieved by sequentially attending to those aspects most relevant at specific times in the rehabilitation process. Typically, this sequence would entail teaching the athlete to attend to cues that range from broad, general, and external areas to those that are narrow, specific, and internal.

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