HONORS THESIS

ATHLETIC INJURY ANXIETY ASSESSMENT

BY

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ABSTRACT

It was the purpose of this study to determine if there are any changes among an athlete's anxiety level pre-post injury. Nineteen men's and women's varsity basketball players took part in the study. The Competitive Sport Anxiety Inventory was used as the measure. No significant findings were found among any of the variables, even though this is the case in this study, research is needed in this area.
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Stress and anxiety are inherent parts of society, and their effects on our behavior have been widely investigated for years. With the growth of sports psychology, the study of stress and anxiety, factors associated with stress and anxiety, and motor performance relationships has been extensive. The relationships between stress and anxiety and athletic performance are only partially understood; however, there seems to be a general belief among professionals that certain types of anxiety do inhibit performance.

Medical journals take two clear positions on stress and illness. The first deals with stress and how it may provoke illness and the second position deals with illness and how it provokes stress in patients. It was the latter position that was of greatest concern to me as an athletic trainer. In a recent article, Phylip Pritchard (1981) stresses the fact that every form of illness has "emotional significance" to the patient. He states that these stressors should never be overlooked by people working in the health care field. In athletics, where physical performance is the sole determinant in advancement, it would seem that any injury might create stress. Therefore, studies that concern injury and stress are important.

One study by Gould, Horn, and Spreeman (1983) showed that the greatest source of stress among junior elite wrestlers was
the concern of performing up to their level of ability. After athletic injury, it is physically very difficult if not impossible for an athlete to achieve his highest level of performance. Pain, swelling, and the injury itself are all factors which determine the extent to which the athlete will inhibit his range of motion or in severe cases, lose function of the injured area. Depending on the seriousness of the injury, total rehabilitation can take anywhere from days to years. May (1985) stated that in his work psychological consequences of athletic injury are frequent barriers to physical recovery. He found that athletes often experience increased anxiety, depression, and reduced self-esteem as a result of their health problems.

Steadman J.R. (1980,81) has gone as far as to suggest that the increased anxiety, depression, and reduced self-esteem discussed by May can greatly impede the rehabilitation process. An athlete's self-concept is largely based on body image, so when the athlete is ill or injured, self-esteem can drop markedly. This could lead to a prolonged and poor recovery and this could also produce factors in future health and performance problems. That is why it is important to not just concentrate on the medical and surgical treatment, but it is also important to implement psychological intervention which would help break this chain of events and return the athlete to his prior level of performance. One of the values of this approach would be that both physical and psychological variables are included in the research.
It is the purpose of this experiment to measure the change in anxiety in athletes from pre- to post-injury. The Competitive State Anxiety Inventory-2 (CSAI-2) will be used as the measure. It is a relatively new test with measures that are designed to assess psychological constructs in a sports setting. The CSAI-2 is multidimensional in nature. The first two dimensions are cognitive and somatic anxiety tests. The third is labeled self-confidence and should be negatively related to the other two dimensions. Adequate information as to the reliability and validity of the CSAI-2 has been presented by Martens and his Colleagues (1983).

METHODS

Subjects and Instruments

The subjects in this study were all members of the 1985-86 men's and women's varsity basketball teams at Ball State University. The group consisted of ten males and nine females. They ranged in age from 18 to 24. Permission to conduct this study was granted by each of the head coaches of these two teams. The scale used in this study was The Competitive State Anxiety Inventory-2. It is a multidimensional scale which measures anxiety and self confidence in an athletic setting.

Procedure

The tests were administered first to the teams as part of a regular practice. The tests were given one day prior to a competition during the midseason. The tests were then administered again one day prior to their final competition. After the season was completed, scores from the first testing were compared to
the scores of the second testing. A simple analysis of variance was used to determine any changes between the injured and uninjured athletes on the tests. Before an athlete was considered to have suffered an injury, he had to miss three full days of practice.

It was hypothesized that there should be an increase found in anxiety over time, but that there should be a decrease in self-confidence over time. Also, the changes over time should be much more significant among the injured athletes as opposed to the uninjured athletes. No differences were expected to be found among the males and females.

RESULTS

The results showed that there was no significant difference between any of the variables. This supports the hypothesis that there are no differences between the males and the females. However, this also shows that there were no differences over the time between the first and second testings. The biggest misfortune for this study, was that there was not a large enough N for the injured athletes to conduct a statistical comparison between the two groups (injured N = 4). Because of this the heart of the research was taken away.

DISCUSSION

This study failed to demonstrate that there would be any differences in anxiety and self-confidence among those athletes who had suffered an injury and those who had not. There were many problems with this study. The choice of the team to participate was a poor one for two reasons. First, the number of players who travelled and competed were too
small. The next time a study of this type is attempted there should be more athletes who participate on the teams. Second, although basketball is a rough sport, it is not a contact sport. Because of this, there is a possibility for severe injury, but it is not that great. This proved to be the case with this study. Two better teams to have been used would have been the men's football team and the women's gymnastics team. Both have a high rate of injury (at one point in this year's gymnastic's season 100% of the competitors were being treated for injury) and a large number of athletes who compete.

Another problem was that the severity of the injury was not defined well. Missing three days of practice can be due to a wide variety of injuries. Some of which would have lasting effects and some which would not. Because of this, the athlete may have totally recovered from the injury both physically and mentally. So this experiment does show that the effects of injury on an athlete's psyche are not long lasting. However, this study in no way disproves that there may be effects initially.

When the study was first proposed, there was to be an attempt to measure the athletes prior to their first competition after injury. However, it became impossible because the experimenter had left it up to the trainers of the individual teams to administer the test when appropriate. The trainers sometimes forgot to administer the tests. In order to do this study again the experimenter must do all the administering of the scales, that is the only way it can be guaranteed to be completed on time.

One last problem to be discussed was that the test was
administered during the mid-season. The first problem with this is that this is traditionally a low point for the players. In basketball they have all ready been traveling for 5 weeks, at mid-season they have another 5 weeks to go plus now they start competing within their conference. One other problem with this is that there have already been injuries suffered. So the people making up the uninjured may have been injured prior to the testing. The only way this could be prevented would be if the athletes were tested their first day of practice.

The next time a study of this type is attempted, the author proposes that the experimenter should use several different teams. By not limiting the experiment to one sport, it will produce a larger N which will help the statistical calculations. Also using teams in and out of contact sports will produce a broader base for the findings. Next it is vital that the athletes be measured just prior to their return to athletics, this will give you the initial effects of the injury on competition. Also, increase the days lost from practice so that it will test only those athletes who have suffered a more severe injury, one which is more likely to produce longer lasting effects. Finally, the experimenter has to be in complete control, he or she should never depend on the work of others.

Just because this study failed to produce any significant findings, it does not mean that work in this area should be discontinued. As it is clear to see, this was a poor study. It was mishandled and mismanaged from the beginning. Other experiments should follow, for the work in this area can prove to be vital for the sports psychologist and the athletic trainer.
Athletics is becoming a science, any information that can be gathered in proper care and treatment of athletic injuries is important to the field as a whole.
REFERENCES


