A Comparative Study of Sports Competition Anxiety
Between Male and Female Cricket Players of Gujarat

Introduction

Competition is a situation in which two or more individuals or groups struggle for complete or larger share of a particular goal in which the successor their performance is related to each other. Thus, sports competition may be considered--as an open conflict when the individual or group makes effort to surpass the other individual or the group in any sporting activity for which the competition is held. Anxiety has both positive as well as negative effects on the performance of athletes. Anxiety refers to that emotional state of mind where a fear of danger or loss of hearing is a prominent feature. It generally arises as a result of fear of something unknown that creates tension and disturbance in the homeostasis on the individual (Kocher & Pratap, 1972). It is evident from the review that numerous investigations have been conducted by the contemporary researchers taking into account psychological parameters important in competitive sports. However, the studies in regard to weight lifters are scanty. Since, in order to fill the existing gap, present work has been designed.

MATERIALS AND METHODS

Subjects

For the purpose of this study 40 weight lifters (male = 20, female = 20) who have participated in the national championships were selected as subjects.

Tools

For measuring the anxiety of the subjects a questionnaire developed by Martens (1977) was used. It is a three point likert type scale having 15 items. It is a popular tool being used by the psychologists for measuring the anxiety level. Its reliability has been reported as 0.85 according to its norms.

Procedure

The questionnaire was administered on the subjects during coaching camp at Junagadh (Gujarat), jointly organized by Sports Authority of Gujarat (SAG) and Directorate of Youth Affairs and Sports, Gujarat.

Data Analysis

The data thus collected were given to statistical treatment computing t-ratio to find out the difference if any, between the experimental groups on competition anxiety. The obtained results have been presented in the following table:

| Table 1: Indicating the mean difference on competition anxiety between male and female cricket players of Gujarat |
|----------------------------------|
| Variable: Sports Competition Anxiety |
| Experimental Groups | Mean | Standard Deviation | t' Value |
| Male | 20.85 | ± 3.18 | 0.83 |
| Female | 20.85 | ± 3.88 | 0.83 |

Hypothesis:

It was hypothesized that there may not be significant relationship of selected anthropometric and biomechanical variables to the performance of players in off spin bowling in cricket.

Delimitation:

The study was delimited to 5 male cricketers of 18 to 23 years of age of inter-varsity level. The biomechanical variables, selected in the study were angles of wrist, elbow, shoulder, knee and ankle joint, and the height of centre of gravity of the body at moment release. The selected anthropometric variables were height, sitting height, arm length, leg length, body weight and height of release of ball.


Tools and Apparatus: To obtain reliable measurements, standard and calibrated equipments like, camera, steadiometer, weighing machine, steel tape etc were used in order to establish the reliability of the test for anthropometric measurements, which were taken on two consecutive days, test retest method was used. The coefficient of correlation was calculated. The results had shown high degree of reliability. The camera used for biomechanical purpose was a standard Nikon EM (with motor drive).

Collection of Data and Analysis of Film: Sequential photographic technique was employed for the biomechanical analysis of bowling. The camera used for this purpose was a standard Nikon EM (with motor drive). For obtaining individual photographic sequence, the subjects were photographed in controlled conditions. The distance of the camera from the subject was 11.05 meters, and was fixed on the tripod at 1.07 meters height. A hurdle was filmed prior to filming of subjects for reference of height and distance. The camera was operated by an expert professional photographer on the basis of the sequential photographs obtained the investigator developed the stick figures from which various biomechanical variables were taken. The stick figures were developed by using joint point method in which the body projection at the joints facing the camera were considered. The C.G. of each subject was located using segmentation method. The Anthropometric variables were represented by the Anthropometric Measurements such as Height, Sitting Height, Leg Length, Arm Length and Weight.

Statistical technique: The relationship of selected anthropometric and biomechanical variables with the performance of cricket playing ability was calculated by using Pearson’s product moment correlation. For testing the hypothesis the level of significance was set at 0.05.

Results: As shown in Table-I that the obtained values of coefficient of correlation in case of height (r= 0.93), leg length (r= 0.88) and height of release (r= 0.90) were found significant at 0.05 level of significance. Since these values were higher than the tabulated value of 0.878 for 3 degree of freedom at the selected level of significance. All other selected anthropometric variables did not show significant relationship with the performance of cricketer in off spin bowling because they obtained values were less than the required value to be significant at selected level of significance.

Table –I shows the relationship of few selected anthropometric variables to the performance of players in off spin bowling. It may be because of small size of the sample. It is a known fact that greater radius of rotation creates greater momentum but angle at elbow joint bowling arm did not exhibit significant relationship which may be due to other reasons. As a whole the variables which have shown high relationship with the performance must have contributed towards the performance of subject in off spin bowling. The coefficient of correlation of selected biomechanical variables has shown the significant relationship with the performance of players in off spin bowling. The relationship of selected biomechanical variables to the performance of players in off spin bowling is as stated earlier that there may not be significant relationship of such variables with the performance might have been due to the small size of the sample and non availability of sophisticated equipment. Since the results have shown significant relationship of few selected anthropometric variables to the performance of players in off spin bowling, the hypothesis is rejected. However in case of other variables the hypothesis is accepted.

Conclusions: Based on the analysis and within the limitations of the present study the following conclusions can be drawn. In anthropometric variables height and leg length has shown positive effect on performance of players off spin bowling. Height of release has shown positive effect on performance of off spin bowling. None of selected biomechanical variable has shown the significant relationship with the performance of cricketers in spin bowling.

| NO | Variables | Coefficient of Correlation |
|----|-----------|---------------------------|
| 1  | Height(CMS) | 0.93*                     |
| 2  | Sitting Height(CMS) | 0.20                     |
| 3  | Arm Length(CMS) | 0.35                     |
| 4  | Leg Length | 0.88*                     |
| 5  | Body Weight(KG) | 0.04                     |
| 6  | Height of Release(CMS) | 0.90*                   |

*Significant 0.05(3) =0.878