

A Comparative Study of Sports Competition Anxiety Between Male and Female Weight Lifters of Gujarat



Physical Education

KEYWORDS:

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Introduction

Weight Lifting, a feat performed by 'Iron-men's generally regarded as the deed of the world's strongest human beings. The Herculean effort of the erstwhile Soviet Union's Validly Alekseev at the 1972 Munich Olympic Games who proved himself the strongest super-heavyweight lifter, making a total of 640 kg, and thus to create a new Olympic record. However, by the time of the 1976 Montreal Olympic Games, Alekseev easily won the gold in heavyweight class with an incredible lead of 35 kg (Raja, 1982). Performance is byproduct of one's biological, psycho-social, and physical make-up. In games and sports, psycho-physiological factors play a significant role in determining the performance level of a player. However, greater importance is assigned to psychological parameters in competitive sports (Khan & Ali, 2010; Abrahamson & Pensgaard, 2005; Bawa & Senath, 2001; Wittig, 1984).

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.

MATERIALS AND METHODS

Subjects

For the purpose of this study 40 weight lifters (male = 20, female =20) who represented Gujarat state in the national championships were considered as subjects

Tools

For measuring the anxiety of the subjects a questionnaire developed by Martens (1977) was used. It is a three point liker 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 India (SAI) and Directorate of Youth Affairs and Sports, Gujarat.

Data Analysis

The data thus collected were given to statistical treatment computing '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 national level male and female weight lifters of Manipur

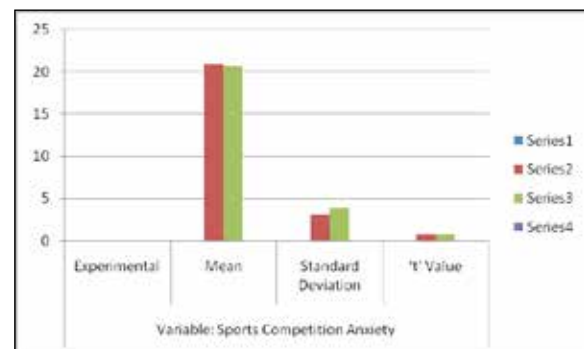
| Variable: Sports Competition Anxiety | | | |
|--------------------------------------|-------|--------------------|-----------|
| Experimental Groups | Mean | Standard Deviation | 't' Value |
| Male | 20.85 | + 3.18 | 0.83 |
| Fe Male | 20.65 | + 3.88 | 0.83 |

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.



Material and methods

Participants:

Five male cricket players who had participated in the west Zone inter-varsity Cricket Tournament held at Rajkot in January 2003 were selected as subjects for this study. Since the player had been trained for a considerable period of time, they were considered skilled and their technique was treated as stabilized. All the subjects were explained the purpose of the study and were requested to put in their best during each attempt.

Criterion Measures:

The performance of off spin bowling of each selected subjects was taken as the criterion measure for the purpose of present study. The performance was recorded on the basis of twenty point scale. 5 point awarded in run up, 5 point awarded in placement of foot, 10 point awarded in Execution, 10 point awarded in Trajectory and 20 point awarded in line, length and spin.

The performance of the subjects on off spin bowling was collected on the basis of three judge's evaluation. The averages of three judges were considered as the final point obtained by each bowler. Further, to make the calculation easier it was reduced out of 10 point.

Tools and Apparatus:

To obtain reliable measurements, standard and calibrated equipments like, camera, stadiometer, weighing machine, steel tape etc were used in order to establish the reliability of the tester 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.

Statistical technique:

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 is case of height (r=.93), leg length (r=.88) and height of release (r=.90) were found significant at 0.05 level of significance. Since these values were higher than the tabulated value of.878 for 3 degree of freedom at the selected level of significance.

TABLE I

Relationship of Selected Anthropometric Variables with the Performance of Players In Off Spin Bowling

| S.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

TABLE - II

Relationship of Selected Biomechanical Variables with the Performance of

Player in Off Spin Bowling

| S.NO | Variable | Coefficient of Correlation | Mean |
|------|-----------------------------------|----------------------------|-------|
| 1 | Wrist. | .62 | 157.4 |
| 2 | Ankle joint Left Leg | .74 | 109 |
| 3 | knee joint Left Leg | .53 | 165 |
| 4 | Elbow joint | .11 | 175.4 |
| 5 | shoulder joint | .02 | 162 |
| 6 | Ankle Joint Right Leg | .02 | 102.4 |
| 7 | Knee Joint Right Leg | .07 | 132.4 |
| 8 | Height of Centre of Gravity (mts) | .80 | 0.92 |

Table -II indicates that none of the Biomechanical variable namely angles of Left Ankle joint (frontlet), Right Ankle joint (rear leg), Elbow joint (bowling arm),

Shoulder joint (bowling arm), Left knee joint (front leg), Right Knee Joint (rear leg) and Height of centre of gravity at moment release have significant relationship with the performance of the subjects in off spin bowling. Even though the value of coefficient of correlations in case of wrist joint (bowling arm) and Height of Centre of Gravity has exhibited quite high but were not found significant at the selected level of 0.05.

Discuss:

The obtained value of coefficient of correlation of selected anthropometric variables at the moment release Only the height and leg length have significant relationship with the performance of subjects in off spin bowling. In case of biomechanical variables none of the biomechanical variable has exhibited significant relationship with 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. Along with these variables, other motor components also must have contributed to the performance.