

ANALYSIS OF MENTAL TOUGHNESS AMONG SUB - ELITE FIELD HOCKEY PLAYERS

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ABSTRACT

Comprehensive preparation is the key to success at any level of sports participation, hence the amount of time and money invested by professional players to ensure sufficient adequate technical knowledge, well-rehearsed match strategies and highly trained physiological capacities. At elite level, however, the difference between good and great players is often their level of psychological preparation and how well they can apply their skills in high-pressure situations. An important part of this psychological preparation is the development of the ability to cope with the psychological stress that accompanies elite sports participation. In this coping process there is individual variability in people's responses to stress, which means that each individual will probably deal with the stressful situation in his own way. This is due to the fact that there are a number of adaptive resources and coping strategies which individuals could utilize in dealing with high stress/pressure (Holahan & Moos, 1994; Moos & Shaefer, 1993). The subjects were divided in to four groups according to their performance in south zone Hockey inter- university held at Tirunelveli 2011. Total number of subjects was 72 and in each group consists of 18 subjects. Seven mental toughness characteristics evolved through this qualitative research. These factors include: Self Confidence, Negative Energy, Attention Control, Visual & Imagery Control, Motivational Level, Positive Energy, and Attitude Control. ANOVA statistical was used to analysis the difference between the groups. This paper provides what has been desperately lacking in the area of mental toughness - definition and conceptualization. The scientific rigour employed by this study to ensures that our understanding of mental toughness is sound. With an understanding of mental toughness firmly in hand, investigations of measurement, development across a lifespan, and training methods are now viable. To truly understand how mental toughness unfolds in people's lives, future research would do well to investigate the interaction between personal characteristics (i.e., the seven mental toughness factor identified here), social support and the nature of the pressure or adversity.

KEYWORDS: Mental Toughness, Field Hockey.

INTRODUCTION

Comprehensive preparation is the key to success at any level of sports participation, hence the amount of time and money invested by professional players to ensure sufficient adequate technical knowledge, well-rehearsed match strategies and highly trained physiological capacities. At elite level, however, the difference between good and great players is often their level of psychological preparation and how well they can apply their skills in high-pressure situations.

An important part of this psychological preparation is the development of the ability to cope with the psychological stress that accompanies elite sports participation. In this coping process there is individual variability in people's responses to stress, which means that each individual will probably deal with the stressful situation in his own way. This is due to the fact that there are a number of adaptive resources and coping strategies which individuals could utilize in dealing with high stress/pressure (Holahan & Moos, 1994; Moos & Shaefer, 1993).

The question arises whether a specific selection of psychological skills exists that would facilitate exceptional sports performance when developed optimally. One factor that should be taken into account is that the type of sport that athletes compete in will determine the specific psychological skills that they will need in their quest for better performance (Martens, 1987).

METHODOLOGY

The subjects were divided in to four groups according to their performance in south zone Hockey inter- university held at Tirunelveli 2011. Total number of subjects was 72 and in each group consists of 18 subjects. After contacting coaches and athletes and getting their approval, PPI questionnaire which was administered. Seven mental toughness characteristics evolved through this qualitative research. These factors include: Self Confidence, Negative Energy, Attention Control, Visual & Imagery Control, Motivational Level, Positive Energy, and Attitude Control. The subjects were explained about the benefits of the test taken by the researcher, as the subjects were mostly from University

of Tamil Nadu the questionnaire was translated in to Tamil version to get correct data and for better response from the subjects.

ANOVA statistical was used to analysis the difference between the groups.

RESULTS AND DISCUSSION

TABLE – I
ANALYSIS OF VARIANCE OF POST TEST SCORES ON SELECTED VARIABLES AMONG SUB ELITE FIELD HOCKEY PLAYERS

| Sl. No | Variables | Source of Variance | Sum of Squares | df | Mean Squares | F-Value |
|--------|-----------|--------------------|----------------|----|--------------|---------|
| 1 | I | BG | 329.48 | 3 | 109.82 | 8.97* |
| | | WG | 832.38 | 68 | 12.24 | |
| 2 | II | BG | 568.55 | 3 | 189.51 | 11.82* |
| | | WG | 1089.88 | 68 | 16.02 | |
| 3 | III | BG | 125.37 | 3 | 41.79 | 3.93* |
| | | WG | 721.94 | 68 | 10.61 | |
| 4 | IV | BG | 88.59 | 3 | 29.53 | 2.20 |
| | | WG | 909.27 | 68 | 13.37 | |
| 5 | V | BG | 314.37 | 3 | 104.79 | 8.21* |
| | | WG | 867.61 | 68 | 12.75 | |
| 6 | VI | BG | 134.00 | 3 | 44.66 | 5.35* |
| | | WG | 567.77 | 68 | 8.35 | |
| 7 | VII | BG | 302.81 | 3 | 100.94 | 6.15* |
| | | WG | 1116.05 | 68 | 16.41 | |

Table F, df (3, 68) (0.05) = 2.73

In above table, the results of analysis of covariance on I (8.97), II (11.82), III (3.93), V (8.21), VI (5.35) and VII (6.15) were greater than the table value of 2.73 indicating that it was significant ($P < 0.05$) for the degrees of freedom (3,68) at 0.05 level of confidence.

Since the F value was significant, the scheffe's post-hoc test was further computed to find out which pair was better among others and the results are tabulated in the table II. The results of IV (2.20) was lesser than the table value of 2.73 indicating that it was not significant.

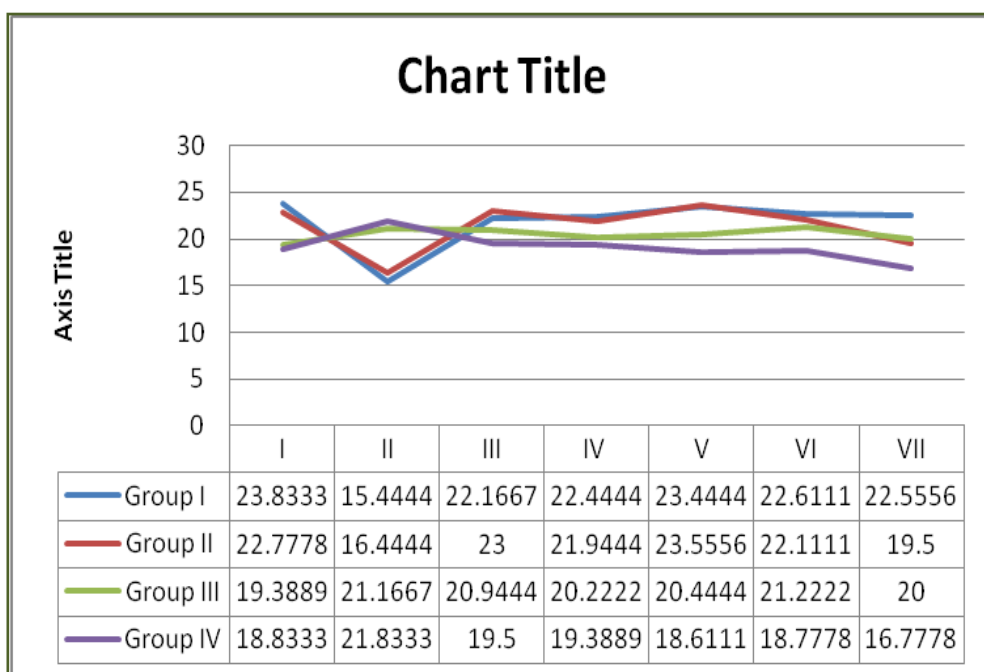
TABLE – II
SCHEFFE'S POST-HOC TEST

| Sl.No | Variables | Mean Differences | | | | | | CI |
|-------|-----------|------------------|-------|-------|-------|-------|-------|------|
| | | A & B | A & C | A & D | B & C | B & D | C & D | |
| 1 | I | 1.06 | 4.45 | 5.00* | 3.39 | 3.94 | 0.55 | 4.71 |
| 2 | II | 1.00 | 5.72* | 6.39* | 4.72 | 5.39* | 0.67 | 5.39 |
| 3 | III | 0.84 | 1.22 | 2.66 | 2.06 | 3.50* | 1.44 | 3.39 |
| 4 | V | 0.11 | 3.00 | 4.83* | 3.11 | 4.94* | 1.83 | 4.81 |
| 5 | VI | 0.00 | 0.89 | 3.34* | 0.89 | 3.34* | 2.45 | 3.19 |
| 6 | VII | 3.05 | 2.55* | 5.78* | 0.50 | 2.73 | 3.23 | 5.46 |

From the table II it can be seen that the mean differences of body weight between forwards & halfbacks, forwards & fullbacks and halfbacks & fullbacks (6.10, 12.40 & 6.30), iso-inertial strength of dominant arm between forwards & halfbacks and forwards & fullbacks (5.35 & 5.05), iso-inertial strength of non dominant arm between forwards & halfbacks (5.80) and hitting speed between forwards & halfbacks and halfbacks and fullbacks (8.85 & 9.95) respectively,

greater than the confidential interval value (6.25, 4.93, 5.79 & 3.76) respectively, which was significant at 0.05 level of confidence. The mean differences of iso-inertial strength of dominant arm between halfbacks & fullbacks (2.30), iso-inertial strength of non dominant arm between forwards & fullbacks and halfbacks & fullbacks (3.10, 2.70) and hitting speed between forwards & fullbacks (1.10) respectively, lesser than the confidential interval value which was insignificant at 0.05 level of confidence. From that it can be clearly noticed that there was a significant mean difference on body weight between forwards & fullbacks (12.40) having the maximum values followed by halfbacks & fullbacks (6.30) and then forwards & halfbacks (6.10), iso-inertial strength of dominant arm between forwards & halfbacks (5.35) having the maximum values followed by forwards & fullbacks (5.05), iso-inertial strength of non dominant arm between forwards & halfbacks (5.80) having the maximum values and in hitting speed between halfbacks and fullbacks (9.95) having the maximum values followed by forwards & halfbacks (8.85) respectively.

FIGURE –I



CONCLUSION

This paper provides what has been desperately lacking in the area of mental toughness - definition and conceptualization. The scientific rigour employed by this study to ensures that our understanding of mental toughness is sound. With an understanding of mental toughness firmly in hand, investigations of measurement, development across a lifespan, and training methods are now viable. To truly understand how mental toughness unfolds in people’s lives, future research would do well to investigate the *interaction* between personal characteristics (i.e., the seven mental toughness factor identified here), social support and the nature of the pressure or adversity.

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