A Comparison of Mental Toughness of Male Volleyball Players of Different Positions

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ABSTRACT: Objective: One of the important and scientific dimensions of sports, is sport psychology, the objective of which is to identify factors affecting athletic performance and to provide functional strategies. Sport psychology has been emphasized as one of the psychological factors affecting athletic performance. However enough attention has not been paid to it, so the objective of current research is to compare mental toughness of male volleyball players of different positions.

Method: 100 male volleyball players of universities of Tehran were selected from four positions of libero, setter, power spiker, speed spiker, 25 people for each position (in skill levels of university, super league, and division 1, with age range of 18-25 years, and competition experience above 5 years), and completed mental toughness questionnaire. Result and Conclusions: Despite functional differences of various positions, the results did not show significant difference in terms of mental toughness among the players.

Keywords: Mental factors, Sport, Sport psychology

INTRODUCTION

Mental toughness is considered as one of the most important determinants of peak of athletic performance. Therefore sport psychologists and coaches are trying to update programs for developing and improving mental toughness. Gucciardi at al (2009) defined mental toughness as a set of values, methods, perceptions, and inherent excitements which is acquired via general and specific athletic experience as a method used by person to investigate and respond conflict, challenge, and pressure [1]. In the study of Tracey et al (2006) mental characteristics affecting success of a professional kick boxer were identified and mental toughness was one of the basic and important factors in their success [2]. Also these results are in accordance with other research [3, 4]. In previous studies mental toughness has only been studied in individual sports, and finally in 2013 Milavic et al investigated differences in psychological characteristics such as state and cognitive anxiety, self-confidence, and skill of confronting stress among 160 male volleyball players and 108 female volleyball players of various positions and in the end they found no significant difference among psychological characteristics in different positions of volleyball in the groups [5]. On the other hand no investigation and comparison of this quality for different volleyball positions has been conducted in our country (Iran) and since team sports need high coordination of players, harmony of several skills, possessing techniques and tactics, and also since volleyball is a popular sport, the objective of conducting this research was to answer the question if there was a difference in mental toughness of different positions of volleyball.

MATERIAL AND METHODS

The current research is applied and scientific-comparative one. Statistical population of this research consists of all male volleyball players of Tehran in 1394 (2015) who had participated in competitions of League of Tehran. Considering lack of access to exact volume of research community (infinity of volume of statistical population) to reach sample volume 100 male volleyball players of universities of Tehran were selected in four various positions of libero, setter, power spiker, speed spiker, 25 people per position (in skill levels of university, super league, and division 1, with age range of 18-25 years, and competition experience above 5 years), and completed sport mental toughness questionnaire. This questionnaire contains 14 questions, among which, 6 questions assess confidence sub-measure, 4 questions assess stability sub-measure, and 4 questions evaluate
control sub-measure. Validity of questionnaire has been reported by Kashani (1392) [6]. Obtained results show desirable validity and reliability of Persian edition of the questionnaire of mental toughness (confidence 0.79, stability 0.78, and control 0.72). To analyze data descriptive and inferential statistics were used. First descriptive indicators of central tendency and standard deviation were used for descriptive and structural status of subjects and in order to evaluate data distribution manner and homogeneity of variances Kolmogorov-Smirnov and Levine tests were respectively used. Then inferential statistics methods and ANOVA test were used.

**RESULT**

To have a better access to information, Table 1 has been used for descriptive information of the samples.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Setter</th>
<th>Libero</th>
<th>Power spiker</th>
<th>Speed spiker</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (year)</td>
<td>1.6 ± 7.84</td>
<td>1.57 ± 21.18</td>
<td>1.65 ± 22.32</td>
<td>1.75 ± 22.64</td>
</tr>
<tr>
<td>Height (cm)</td>
<td>1.57 ± 21.68</td>
<td>6.70 ± 173.14</td>
<td>5.3 ± 179.24</td>
<td>7.13 ± 181.37</td>
</tr>
<tr>
<td>Weight (kg)</td>
<td>8.11 ± 74.77</td>
<td>13.10 ± 71.15</td>
<td>8.11 ± 74.77</td>
<td>11.10 ± 75.55</td>
</tr>
<tr>
<td>History of competition (year)</td>
<td>2.32 ± 8.08</td>
<td>1.6 ± 7.84</td>
<td>1.93 ± 8.68</td>
<td>1.8 ± 9.04</td>
</tr>
</tbody>
</table>

According to Table 2 the results do not show significant difference in level of mental toughness among players (P≤0.05).

<table>
<thead>
<tr>
<th>Conclusion</th>
<th>P</th>
<th>F</th>
<th>Variable</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Not significant</td>
<td>0.123</td>
<td>1.971</td>
<td>Confidence among groups</td>
<td></td>
</tr>
<tr>
<td>Not significant</td>
<td>0.148</td>
<td>1.822</td>
<td>Control among groups</td>
<td></td>
</tr>
<tr>
<td>Not significant</td>
<td>0.689</td>
<td>0.492</td>
<td>Stability among groups</td>
<td></td>
</tr>
</tbody>
</table>

**DISCUSSION AND CONCLUSION**

The objective of this study was to compare mental toughness of male volleyball players in different positions. Despite functional differences of various positions, results do not show significant difference in mental toughness level of players. Comparing means of any of sub-measures of mental toughness in volleyball positions, no difference was observed among control, stability, and confidence of different volleyball positions (table 2). It seems that other factors are involved in position differences. The results of current research match with those of the only research conducted on this field by Milavic et al in 2013, investigating the differences of psychological characteristics such as state and cognitive anxiety, self-confidence, and skill of stress conflicting among various positions of 160 male and 108 female volleyball players where no significant difference in various volleyball positions was observed among groups in terms of psychological characteristics (6). Findings of the current research and review of literature show that the mostly used variable for volleyball expertise are anthropometry or movement ability and their psychological characteristics have the lowest role. It is recommended to conduct a long-term research on position differences considering three factors of anthropometry, psychological, and motional-functional.

**REFERENCES**


