Changes in Weight Affecting Mood Profile among Male Indian Olympic Boxers

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(Received 10 September 2015 – Accepted & Published 27 September 2015)

Abstract

The aim of the study was to assess the changes in different weight categories affecting mood profile among Indian Olympic boxers. The subjects for the study were five boxers who represented India in London Olympic Games 2012, ranging in the age group between 18 – 26 years. The data was collected at the time of the Pre London Olympic training camp held at Netaji Subhas National Institute of Sports, Patiala, India, from March, 2012 to July, 2012. The BRUNAL Mood Scale (BRUMS) questionnaire was applied to measure the mood profile of the boxers. Pre data was collected by filling questionnaire of Brunel Mood Scale (BRUMS), one week after subjects’ joined the National camp (March, 2012). Post data was collected by filling questionnaire of Brunel Mood Scale (BRUMS), three weeks prior (July, 2012) to the London Olympic Games 2012. For the purpose of the present study the subjects who reduced or gained their body weight were selected for the study. To see the changes in weight which affects mood profile (anger, confusion, depression, fatigue, tension and vigour), the descriptive statistics were applied in pre and post scores of the boxers. The findings of present research concluded that out of five Olympic boxers’ who gained their body weights, two boxers shown improvement in the mood status, two with no major change and one who reduced his body weight noticed with decreased mood control.

Key words: Weight reduction, boxers, mood, mood profile, anger, confusion, depression, fatigue, tension, and vigour.

INTRODUCTION

Boxing is a weight category sport where two contestant box with each other in same weight class with following certain rules. So, a little change (loss/gain) in his weight can affect the physical performance and physiology of a player which is directly related to the mood profile of a boxer. “Mood is defined as a set of feelings, ephemeral in nature, varying in intensity and durations, and usually involving more than one emotion” Lane and Terry (2000). Mood is proposed to be a more effective predictor of performance in sports of a short duration, when the sport involves open skills, and when performance is assessed through a self-reference criterion (Beedie, Terry, and Lane, 2000). Based on Mental Health Model (Morgan, 1980), it is proposed that positive emotional health and successful athletic performance are correlated.

Indeed, athletes who are less anxious, angry, depressed, confused and fatigued, and more vigorous are more successful than those who exhibit the opposite profile, as assessed by the profile of mood states. Terry and Slade (1995), classified winners and losers in karate according to their performance mood profiles and found high scores for anger in winners. It has been shown in some studies too much reducing weight by these methods can state of hypo hydration and continuous feeling of hunger and thirst may affect the working capacity and psychological condition through alerting the mood by increasing fatigue, tension, anger, confusion and decreasing vigour of athletes (Hall and Lane 2001). There are a number of risk associated with weight loss such as induce a physiological and psychological stress (Horsewill, C. A. et. al. 1990).
Research findings indicate that mood disturbance might be a reflection of a number of different problems. Firstly, mood has been shown to be an effective predictor of performance in combat sport. For example, in karate, 95% of winning and losing performance could be correctly classified from pre competition mood. Losing karate performance was associated with high scores of confusion, depression, fatigue, and tension coupled with low vigour scores. Secondly, research has found that negative mood comprising high anger, confusion, depression, fatigue, and tension coupled with low vigour is associated with an inability to cope with training demands.16 thirdly, recent research has found a link between mood, particularly depressed mood, and eating disorders in sport. A disordered eating attitude has been found to be associated with participating in weight making sports (Hall and Lane 2001). The present study was undertaken to see whether boxers attending national camp adjust their weights to get better performance in the competition would bring any change in their mood.

MATERIAL AND METHODS

Participants

The study protocol was approved by Sports Authority of India. The data were obtained from five National boxers who have been assessed at the time of their National camp at Netaji Subhas National Institute of Sports, Patiala, India from March, 2012 to July, 2012, who came to attend the pre London Olympic Games training camp, 2012. The purposively sampling was used to selects subjects. The average age of the subjects was 22 years. The research scholar has not given treatment as it was given under the controlled supervision of Indian Coaches and Specialists in Sports Sciences appointed by the Sports Authority of India in consultation with the Boxing Federation of India.

Procedure

The data was collected on mood status with the help of filling Brunel Mood Scale (BRUMS) Questionnaire by five subjects who were undergoing intensive training towards the preparation of Olympic Games in London 2012, in March phase 1st, the body weight and mood status were considered as pre data. The subjects were bare footed and wearing minimal positive cloths. Before weighing, the subjects were asked to void their bladders, body weight was measured with an electronic weighting scale (DS-415Series, Essaetaoaka Limited, 0.300 Kg) to the nearest of 0.1 kg. In second stage, the subjects were weighed again in July, 2012, and mood status was collect with the help of Brunel Mood Scale (BRUMS) Questionnaire (Peter C. Terry and Andrew M. Lane 2010).

The Brunel Mood Scale was developed to serve as a brief measure of mood states among adolescent and adult populations. Derived from the Profile of Mood States (Mc Nair, Lorr, & Droppleman, 1992), the BRUMS contains 24 simple mood descriptors, such as angry, energetic, nervous, and unhappy. Respondents indicate whether they have experienced such feelings on a 5-point scale (0 = not at all, 1 = a little, 2 = moderately, 3 = quite a bit, 4 = extremely).

DISCUSSION

Table no. 1: Descriptive Statistics of Pre and Post Data of Body Weight Changes Affecting the Mood Profile of Olympic Boxers

<table>
<thead>
<tr>
<th>Statistics</th>
<th>Body Weight</th>
<th>Anger</th>
<th>Confusion</th>
<th>Depression</th>
<th>Fatigue</th>
<th>Tension</th>
<th>Vigour</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pre Data</td>
<td>Post Data</td>
<td>Pre Data</td>
<td>Post Data</td>
<td>Pre Data</td>
<td>Post Data</td>
<td>Pre Data</td>
</tr>
<tr>
<td>Mean</td>
<td>63.82</td>
<td>63.80</td>
<td>4.00</td>
<td>5.40</td>
<td>2.60</td>
<td>2.40</td>
<td>1.60</td>
</tr>
<tr>
<td>Standard</td>
<td>11.93</td>
<td>12.49</td>
<td>3.08</td>
<td>4.16</td>
<td>2.97</td>
<td>3.36</td>
<td>1.67</td>
</tr>
</tbody>
</table>

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The descriptive statistics of pre and post data of body weight changes affecting the mood profile of five Olympic boxers those who reduced or gained their body weights during the camp is being presented in table no. 1, and shown that the mean values of pre and post data of body weight, anger, confusion, depression, fatigue, tension, and vigour were found to be 63.83±63.80, 4.00±5.40, 2.60±2.40, 1.60±3.00, 5.80±3.60, 1.60±2.60, 9.80±8.40 respectively. Whereas standard deviation of pre and post data of body weight, anger, confusion, depression, fatigue, tension, and vigour were found to be 11.93±12.49, 3.08±4.16, 2.97±3.36, 1.67±4.24, 3.42±4.16, 2.07±2.70, 3.70±3.78 respectively. The bar diagram presentation has been shown in figure no. 1a and 1b respectively.

![Figure 1a: Mean of pre and post data of body weight changes affecting the mood profile of Olympic Boxers](image1a.png)

![Figure 1b: Standard Deviation of pre and post data of body weight changes affecting the mood profile of Olympic Boxers](image1b.png)

**Table no. 2: The Raw Scores of Pre and Post Data of Changes in Weights Affecting Mood Profile among Olympic Boxers**

<table>
<thead>
<tr>
<th>Subjects</th>
<th>Body Weight</th>
<th>Anger</th>
<th>Confusion</th>
<th>Depression</th>
<th>Fatigue</th>
<th>Tension</th>
<th>Vigour</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pre</td>
<td>Post</td>
<td>Pre</td>
<td>Post</td>
<td>Pre</td>
<td>Post</td>
<td>Pre</td>
</tr>
<tr>
<td>OB1</td>
<td>50.4</td>
<td>51.0*</td>
<td>5</td>
<td>3</td>
<td>4</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>OB2</td>
<td>57.8</td>
<td>58.0*</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

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Note: OB1 represents the Olympic boxer 1 and so on
*Represents the increased level of Score

Table no. 2 shows, in case of individual findings it was found that after reducing weight to participate in their respective weight categories, Olympic boxer three (OB3) had shown the maximum changes in his mood status as all six mood variables shown an increased state of anger, confusion, depression, fatigue, tension, and vigour also. Whereas, OB1, OB2, OB4, and OB5 those who gained their body weights in different weight categories shown different states of mood. Olympic boxer one (OB1) noticed with decreased anger, confusion, fatigue, vigour, while tension remain constant and state of depression had increased. In case of Olympic boxer two (OB2) observed with decreased level of fatigue and vigour, but level of tension had increased whereas anger, confusion and depression were found to be unchanged. In case of Olympic boxer four (OB4), the mood variables like anger and vigour had increased, while depression and fatigue had decreased where confusion and tension remain similar. Olympic boxer five (OB5) had shown increased level of anger, confusion, and vigour, whereas fatigue and tension were constant and depression was decreased.

Figure 2a: The raw scores of pre and post data of body weights of five Olympic Boxers

Figure 2b: The raw scores of pre and post data of changes in weights affecting anger among Olympic Boxers
Figure 2c: The raw scores of pre and post data of changes in weights affecting confusion among Olympic Boxers

Figure 2d: The raw scores of pre and post data of changes in weights affecting depression among Olympic Boxers

Figure 2e: The raw scores of pre and post data of changes in weights affecting fatigue among Olympic Boxers
CONCLUSION

On the basis of the individual finding it was concluded that after reducing 4.30 percent body weight to participate in their respective weight category, the Olympic boxer three (OB3) had shown the maximum changes in his mood status as all six mood variables shown an increased state of anger, confusion, depression, fatigue, and tension which shows a negative sign for the performance. In the findings of Hall and Lane (2001), suggested that rapid weight loss strategies employed by boxers were associated with poor performance, increased anger, fatigue and tension resulting in negative mood profile. Filaire et. al., (2001); Horwill et. al., (1990); Steen and Brownell (1990); also suggested that the mood states of anger, fatigue, confusion, and tension were found significantly higher after an intake of inadequate diet, whereas vigour is found to be significantly lower. Wrestlers those who reduced more than four percent body mass were significantly resulted more confused as opined by Marttinen and Judelson (2011). But there is an increase was found in case of vigor, as they were preparing for London Olympic Games 2012 which is the highest competition of sports in the world, they were regular in the different types of training such as strength, speed, and explosive strength etc. that might have resulted in an increase in vigor which is a positive sign for the performance.
Whereas, OB1, OB2, OB4, and OB5 those who gained their body weights in different weight categories shown different states of mood. In case of Olympic boxer one (OB1) and five (OB5) had presented a mix match variation, but their mood variables ranged under normal state, only in case of Olympic boxer one (OB1) a higher state of fatigue in the pre state gradually decreased to normal. An average loss of 4.68 kg and 0.29 kg rapid weight loss and control group respectively, results indicated less positive effect was found in rapid weight loss in compared to control group just before the weigh-in Landers (2001).

On the other hand, Olympic boxer two (OB2) and four (OB4), had shown a less mood swing after a progressive weight gain during their training camp, which explains their mood remain constant or decreased positively. Among them Olympic boxer four (OB4) had shown a better controlled state of mood. A study conducted by Morgan (1980) suggested that successful elite athletes scored below average on tension, depression, anger, fatigue and confusion but scored above average on vigor.

References