

## 三段跳における試技間の自己の運動観察と客観的パフォーマンス指標の関係

学籍番号 4123026

氏名 外所 晴貴

### 【目的】

本研究では陸上競技の三段跳に着目し、各被験者における試技間の自己の運動観察内容と客観的なパフォーマンス指標の関係を明らかにする。

### 【方法】

被験者は三段跳を専門としている男性競技者6名及び女性競技者5名の計11名とした。中助走(9～13歩)での三段跳を3試技実施した。各被験者は1試技を終えるごとに自己観察能力に関する口頭でのインタビューが行われ、3試技が終了するとインタビューに加えて振り返りシートの記入を実施した。被験者にはあらかじめ「3本目にできる限り一番いい跳躍となるように一本一本改善するように」という指示を行った。客観的なパフォーマンス指標として、跳躍距離、助走速度と最大助走速度の出現距離、ストライド、ピッチ、ホップの跳躍角度を測定した。

### 【結果】

客観的指標の跳躍距離においては有意な主効果( $p=0.011$ )が認められ、試技順1本目と比較して3本目の方が高かった( $p=0.015$ )。踏切1歩前のストライドに有意な主効果が認められ、試技順1本目と比較して3本目の方が長かった( $p=0.033$ )。跳躍の出来高に関する自己評価点数は有意な主効果( $p=0.002$ )が認められ、試技順1本目及び2本目と比較して3本目の方が有意に高かった( $p=0.005-0.017$ )。振り返りシートのAおよびB条件間の比較で全項目(36個)のうち9項目に有意な主効果が認められた。

### 【結論】

競技者の運動感覚と客観的指標のギャップは試技を重ねるごとに減少し、技術の習得が促進された。しかし、運動感覚の完全な一致には至らず、さらなる改善の余地があることが明らかとなった。自己の運動を振り返るのに動画を用いることによって技術的および心理的側面において有意な改善を与えることが示唆された。具体的には、動画を用いることによって跳躍に対する恐怖心の軽減、自己評価の向上、跳躍の流れ、ホップ、ステップ局面におけるフォームの改善、技術的精度の向上に寄与した。

## **Relationship between self-observation of movement during trials and objective performance indices in triple jump**

Student ID Number: 4123026

Name: TODOKORO, Haruki

### **[Purpose]**

This study focused on the triple jump in track and field and aimed to examine the relationship between each athlete's self-observation of their movements during trials and objective performance indicators.

### **[Methods]**

The study included 11 athletes (six males and five females), specializing in the triple jump. Each athlete performed three triple jump attempts using a medium approach (9-13 steps). After each attempt, participants were interviewed verbally about their self-monitoring ability. After completing all three attempts, they participated in a final interview and completed a reflection sheet. The participants were instructed to "improve each jump so that the third jump would be their best possible." The jump distance, approach speed, distance at which maximum approach speed appeared, stride, pitch, and jump angle of the hop were measured as objective performance indicators.

### **[Results]**

A significant main effect was observed for jump distance ( $p = 0.011$ ), with the third attempt surpassing the distance of the first attempt ( $p = 0.015$ ). A significant main effect was also observed for stride length one step before take-off, with the third attempt being longer than the first ( $p = 0.033$ ). A significant main effect was observed for self-evaluation scores of jump performance ( $p = 0.002$ ), with the third attempt scoring significantly higher than the first and second attempts ( $p = 0.005-0.017$ ).

When comparing conditions A and B on the reflection sheet, a significant main effect was observed for nine out of 36 items.

### **[Conclusion]**

The gap between the athlete's kinesthetic awareness and objective indicators decreased with each attempt, facilitating skill acquisition. However, it became evident that kinesthetic awareness did not fully align with objective performance, indicating room for further improvement, especially in approach speed and take-off timing.

It has been suggested that video-based self-reflection can significantly improve both technical performance and psychological aspects of training. This suggests that video analysis in triple jump plays a crucial role in enhancing athletic performance.