Perceptual Training Effects on Anticipation of Deceptive and Direct 7-Meter Throws in Team Handball

Alsharji, K, PhD & Wade M, PhD
College of Basic Education – Kuwait & University of Minnesota- USA

Introduction

- Perceptual training has been found to be effective for perceptual skills such as anticipation of forthcoming actions. This research investigated the effects of video-based perceptual training on the performance of handball goalkeepers when anticipating the direction of both direct, and indirect (deceptive) 7-meter throws (i.e., penalty throws).
- It was hypothesized that perceptual training would improve directional anticipation of both deceptive and direct 7-m throws. It was also hypothesized that anticipation of deceptive throws would show less improvement compared to direct throws.

Methodology

- Forty two Kuwaiti skilled handball goalkeepers participated in this study.
- Participants had an average age of 22.74 (SD = 7.1).
- All participants had normal or corrected-to-normal vision.
- Participants were randomly assigned to 3 matched-ability groups based on their pre-test performance:
  - Perceptual training: received video-based perceptual training over 7 consecutive days.
  - Placebo training: received video-based regular training.
  - Control group: received no training

Results

- The results demonstrated that perceptual training including a mix of direct and deceptive trials significantly improved directional anticipation of direct 7-m throws directions ($p = <.001$) and deceptive 7-m throws ($p = .001$ (Figure 1).
- The results also showed that compared to direct 7-m throws, anticipation of deceptive throws showed less improvement (Figure 2). There was a significant difference in performance between direct and deceptive throwing conditions.

Discussion & Conclusion

- The results support the hypothesis that perceptual training will improve directional anticipation of both direct and deceptive 7-m throws compared to both control and placebo training groups.
- The results also support the hypothesis that the anticipated direction of deceptive 7-m throws would show less improvement compared to anticipation of direct 7-m throws.
- In conclusion, specific perceptual training can improve directional anticipation of deceptive 7-m throws. Deception in handball is a challenging task that perceptual training can help minimize, but cannot eliminate its effect.

Email Address: khalsharji@gmail.com