

The Effect of Perceived Control Reinforcement on Male Amateur Penalty Shootout Performance

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1. Introduction

Purpose: Although anxiety is the most significant contributory factor to performance failure in penalty shootouts (Jordet et al., 2007), the extent to which one believes they can control the outcome of an event may play a role in performance breakdown under pressurised circumstances (Wood & Wilson, 2012).

3. Method

Participants and Design: This study used a between-participants experimental design. Penalty practice was completed under two conditions; Perceived Control (PC) vs Normal Practice (NP). Following a baseline test (BL: 10 penalties), 20 male amateur footballers (26 ± 1.3 yrs., mean playing years = 14) were sequentially assigned to either the PC ($n=10$) or NP ($n=10$) group based on BL performance rank. All gave written informed consent and the study was approved by the local ethics committee.

Task and Measures: Participants completed penalty kicks from standard distance towards a standard goal. Performance was measured as number of goals scored. Participants were asked to rate their perceptions of success before every block of 10 kicks during practice and retention.

Perceived Control Intervention: Participants practiced shooting while telling the goalkeeper which direction they intended to shoot prior to the penalty. Implementing this type of intervention may reinforce perceptions of control over the outcome and improve penalty shootout performance (Wilson, Wood & Jordet, 2013).

Procedure: Penalty training was conducted after normal training session over a four week period (one training session per week). Ten kicks were taken per session with same keeper present. A retention test (10 kicks) was conducted one week later under normal penalty conditions.

4. Results

A 2 (Group) x 4 (Practice Trial) Repeated Measures ANOVA indicated main effect for Group ($F_{(1, 18)} = 6.07, p = 0.024, \eta p^2 = 0.25$). The PC group performed worse than the NP group in practice conditions whereas the PC group performed statistically better ($M=19 \pm 9.05$) than the NP ($M=4 \pm 13.76$) in the final retention test: $t(18) = 2., p = 0.049$ (82% v 63% success) (Fig 1). There was a significant relationship between mean retention expectancy of success and mean retention total success ($p = 0.001$) (Fig 2).

5. Conclusion

Practice using PC reinforcement positively affected penalty performance, as predicted by Wilson et al. (2013). Perceived control appears to be a critical and trainable characteristic that warrants further investigation.

6. References

Jordet, G., Hartman, E., Visscher, C., & Lemmink, K. (2007). Kicks from the penalty mark in soccer: the roles of stress, skill, and fatigue for kick outcomes. *Journal of Sports Sciences*, 25(2), 121-9.
Wilson, M., Wood, G., & Jordet, G. (2013). The BASES Expert Statement on the Psychological Preparation for Football Penalty Shootouts. *The Sport and Exercise Scientist*, 38, Winter 2013.
Wood, G., & Wilson, M., (2012). Quiet-eye training, perceived control and performing under pressure. *Psychology of Sport and Exercise*, 13(6), 721-8.

2. Aim

This study investigated whether the introduction of a perceived control reinforcement intervention would influence subsequent performance of penalty takers.



High Pressure Situation



High Expectation



35% higher chance to miss



Figure 1: Mean Penalty Success

*Significant difference ($p < 0.05$).



Figure 2: Changes in Control Beliefs

*significant difference ($p < 0.05$)