



Left: Players who take less than one second to place the ball on the penalty spot score on about 58% of their penalties whereas those who take longer score on about 80% of their penalties

The BASES Expert Statement on the Psychological Preparation for Football Penalty Shootouts

Produced on behalf of the British Association of Sport and Exercise Sciences by Dr Mark Wilson, Dr Greg Wood and Prof Geir Jordet.

Introduction

Anxiety is the most significant contributing factor to performance failure in football penalty shootouts (Jordet *et al.*, 2007, 2012). Indeed, the penalty is one of very few occasions in this predominantly fast-moving, team sport when players are under individual scrutiny and have sufficient time to think about the consequences of failure (Jordet & Elferink-Gemser, 2012). Furthermore, unlike most other skills that are susceptible to choking effects (e.g., golf putting), the opposing team's goalkeeper increases uncertainty and has a direct influence on performance success. Among practitioners there is considerable confusion and controversy regarding the type, utility and effectiveness of practice and preparation for a penalty shootout. Indeed, penalty shootouts are often referred to as a 'lottery', with the outcome dependent on luck rather than skill. We argue that such an interpretation is potentially damaging to players' control beliefs and ultimately to their performance, and that interventions designed to increase perceptions of control might be useful.

Background and evidence

Penalty taking and pressure

Evidence for the effect of pressure on penalty taking performance comes from both observational and experimental studies. For example, Jordet and colleagues have examined almost 400 kicks from penalty shootouts held during major tournaments. They found that players score on fewer than 60% of their attempts when a miss will instantly result in a loss for the team compared to 92% of their attempts when a goal will win the game (Jordet *et al.*, 2007). Jordet and colleagues have suggested that penalty takers' perceptions of control may explain why some 'choke' under the pressure of the shootout and some players succeed. Players' perceptions of control are influenced by both beliefs about the role of skill or luck (contingency), and their beliefs about their penalty taking ability (competence). Players with low perceived competence and contingency (who believe the outcome is dependent on luck or the goalkeeper's actions rather

than skill) experienced more cognitive anxiety symptoms than those who perceived their competence and contingency level as high (Jordet *et al.*, 2006).

A body of experimental research suggests that the mechanisms behind choking in this task may be related to disruptions in visual attentional control. Three types of visual strategy are used in penalty taking (Wood & Wilson, 2010):

1. Keeper-independent (ignore the keeper and pick a spot)
2. Keeper-dependent (watch the keeper and make a decision based on his/her movements)
3. Opposite-independent (look one way and shoot to other side).

While performers are more accurate when adopting a keeper independent approach, the relationship between aiming intention, visual strategy and accuracy is disrupted when anxiety is increased. Specifically, anxiety increases the amount of attention paid to the goalkeeper and increases the likelihood that takers will produce shots that are hit significantly closer to the goalkeeper and therefore more 'saveable' (Wilson *et al.*, 2009).

What can be done?

Research evidence

By examining video footage of successful and unsuccessful penalty performance it is possible to determine behaviours that appear to be more productive than others. For example, players who take less than one second to place the ball on the penalty spot score on about 58% of their penalties whereas those who take longer score on about 80% of their penalties (Jordet *et al.*, 2009). Similarly, taking about a second or more to respond to the referee's whistle to initiate the shot is associated with a higher probability of scoring than immediately rushing towards the ball (Jordet *et al.*, 2009). Therefore, players need to take their time as

they prepare for the shot, rather than rushing to get the penalty over and done with.

Developing and practising a suitable pre-shot routine is a potentially useful way to guide these timings and help protect performance under pressure. Indeed, recent research by Wood and Wilson (2012) has suggested that learning a routine involving a gaze control element (look at the point where you want to shoot prior to the run-up) helped penalty takers in a shootout task to be more accurate, maintain effective visuomotor control and increase perceptions of psychological control and contingency. While it is virtually impossible to recreate the pressure experienced in a shootout, it is possible to fine-tune the skill of penalty taking in training. In the shootout itself, when anxiety will be exerting a powerful influence on attentional control and perceptions of contingency, such beliefs about competence should help strengthen perceptions of control and help to maintain performance.

Football is a team sport and it is worth noting that what a player does after scoring a penalty in a shootout can influence the performance of those taking arguably the more pressurised penalties afterwards. Jordet and colleagues (Moll *et al.*, 2010) found that on penalties taken when the score is tied, 82% of the players who substantially celebrate their goal end up on the winning team. The positive emotions from such a celebration seem to be contagious. Team meetings should also be held to discuss what players fear the most (i.e., missing a shot) and, more importantly, discussing strategies for dealing with these outcomes. Teams can develop 'What if' plans for each individual to deal with his/her missed kick and for the group to support those players who do miss (Jordet & Elferink-Gemser, 2012).

Conclusions and recommendations

In training:

- Have team meetings to discuss some of the known success factors in penalty shootouts (see above); the fears of the players; and plans to support individual and team failure.

- Develop and practise pre-shot routines (including the walk in from the centre circle) that have a gaze control element that promotes optimal aiming behaviour.
- Promote target-focused practice so that players can hit each of the four corners consistently (to increase competence/contingency).
- Coaches need to be innovative when designing ways to increase anxiety and distraction, and methods to challenge perceived control during training. For example, players could practise shooting while telling the goalkeeper which side they intend to shoot to. An accurate penalty is very hard to stop even if the goalkeeper knows which way it is going - so by practising in these conditions players can reinforce perceptions of control over the outcome.

In match:

- Don't rush: Place the ball properly on the spot and take a breath while focusing on where you intend to shoot, before starting the run-up. Taking a deep breath is likely to ease feelings of anxiety and provides a temporal cue to ensure that sufficient processing of target-related information is enabled.
- Trust your technique and routine – pick a spot and hit it.
- Celebrate! It will help your team-mates who have to take the subsequent penalty kicks.

It is hoped that this synthesis of research into penalty taking might help alleviate some of the learned helplessness that appears to be rife in football concerning the mental and physical preparation for football penalty shootouts. Penalty takers need to regain control of this situation, rather than allowing themselves to be victims of the environment, their lack of preparation, or the antics of the goalkeeper. Penalty shootouts don't have to be a lottery! ■



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References:

- Jordet, G. & Elferink-Gemser, M.T. (2012).** Stress, coping, and emotions on the world stage: The experience of participating in a major soccer tournament penalty shootout. *Journal of Applied Sport Psychology*, 24, 73-91.
- Jordet, G. et al. (2006).** The "Russian roulette" of soccer?: Perceived control and anxiety in a major tournament penalty shootout. *International Journal Sport Psychology*, 37, 281-298.
- Jordet, G., Hartman, E. & Sigmundstad, E. (2009).** Temporal links to performing under pressure in international soccer penalty shootouts. *Psychology of Sport and Exercise*, 10, 621-627.
- Jordet, G., Hartman, E., Visscher, C. & Lemmink, K.A.P.M. (2007).** Kicks from the penalty mark in soccer: The roles of stress, skill, and fatigue for kick outcomes. *Journal of Sports Sciences*, 25, 121-129.
- Moll, T., Jordet, G. & Pepping, G.J. (2010).** Emotional contagion in soccer penalty shootouts: Celebration of individual success is associated with ultimate team success. *Journal of Sports Sciences*, 28, 983-992.
- Wilson, M.R., Wood, G. & Vine, S.J. (2009).** Anxiety, attentional control and performance impairment in penalty kicks. *Journal of Sport and Exercise Psychology*, 31, 761-775.
- Wood, G. & Wilson, M.R. (2010).** Gaze behaviour and shooting strategies in football penalty kicks: Implications of a 'keeper-dependent' approach. *International Journal of Sport Psychology*, 41, 293-312.
- Wood, G. & Wilson, M.R. (2012).** Quiet-eye training, perceived control and performing under pressure. *Psychology of Sport and Exercise*, 13, 721-728.

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