



Performance blocks in sport : recommendations for treatment and implications for sport psychology practitioners

BENNETT, Jennifer and MAYNARD, Ian <<http://orcid.org/0000-0003-2010-5072>>

Available from Sheffield Hallam University Research Archive (SHURA) at:

<http://shura.shu.ac.uk/13824/>

This document is the author deposited version. You are advised to consult the publisher's version if you wish to cite from it.

Published version

BENNETT, Jennifer and MAYNARD, Ian (2016). Performance blocks in sport : recommendations for treatment and implications for sport psychology practitioners. *Journal of Sport Psychology in Action*. (In Press)

Repository use policy

Copyright © and Moral Rights for the papers on this site are retained by the individual authors and/or other copyright owners. Users may download and/or print one copy of any article(s) in SHURA to facilitate their private study or for non-commercial research. You may not engage in further distribution of the material or use it for any profit-making activities or any commercial gain.

1

2

3

4

5

6 Performance blocks in sport: Recommendations for treatment, and implications for sport

7 psychology practitioners

8

9

10

11

12 April 2016

13

14

15

16

17

1 **Abstract**

2 Sport psychologists are increasingly confronted with performance difficulties where athletes
3 mysteriously lose the ability to execute automatic movements (Rotheram, Maynard, Thomas,
4 Bawden & Francis, 2012). Formerly known as *performance blocks*, these problems appear to
5 manifest in locked, stuck, and frozen movements, loss of fine and/or gross motor control, and
6 debilitating anxiety (Bennett, Hays, Lindsay, Olusoga & Maynard, 2015). A recent
7 investigation examined the effectiveness of *eye movement desensitisation and reprocessing*
8 (EMDR) with graded exposure to treat two performance block-affected individuals (Bennett,
9 Unpublished doctoral dissertation, 2015). Evaluation of the interventions showed improved
10 performance of the affected skills and reduced anxiety in both cases. Interview data collected
11 on completion of each intervention confirmed that associated symptoms were also alleviated.
12 The success of these two interventions offers considerable value to sport psychologists, the
13 implications of which the current paper hopes to address. Specifically, the manuscript
14 provides an overview of current research pertaining to performance blocks, followed by
15 recommendations for treatment, and implications for sport psychologists, highlighting the
16 importance of involving clinical psychology support in formulation and treatment processes.

17

18 *Key words:* trauma, anxiety, yips, lost move syndrome, performance blocks.

19

20

1 **Introduction**

2 Performance blocks are thought to manifest in locked, stuck, or frozen movement,
3 with sudden, and temporary loss of fine and/or gross motor control (Bennett, Hays, Lindsay,
4 Olusoga & Maynard; 2015). Affecting an athletes' ability to execute previously automatic
5 movements, such severe problems have caused long-term loss of skills, and retirement from
6 sport (Bawden & Maynard, 2001). The current paper presents an overview of existing
7 research pertaining to performance blocks. Specifically, psychological characteristics of
8 performance blocks are outlined, followed by treatment recommendations, practical
9 implications, and considerations for sport psychologists. Particular focus is paid towards the
10 importance of collaboration between clinical and sport practitioners in the formulation and
11 treatment of performance blocks.

12 Until recently, performance blocks have been described in the sport psychology
13 literature with disparity. For example, in artistic sports this type of affliction has been referred
14 to as *lost move syndrome* (LMS; Day, Thatcher, Greenlees & Woods, 2006), whereas in golf
15 and cricket individuals are said to suffer from the *yips* (McDaniel, Cummings & Shain, 1989).
16 Bennett and colleagues (2015) addressed this disparity in an effort to understand the
17 underlying psychological components of these disorders, and ultimately produce generic
18 terminology that might facilitate the identification and treatment of these problems. They
19 conducted a series of qualitative interviews to explore the lived experience of the yips and
20 LMS, revealing several emotional, cognitive, and physical components that were common
21 features of both. Indeed, the only factor distinguishing between the yips and LMS was their
22 physical presentation (e.g., movement breakdown affecting muscles required for a putting
23 stroke in golf, or a forward twist in diving). A central component of both these disorders was
24 the heightened level of cognitive and somatic anxiety, coupled with complete momentary loss

1 of cognitive control. It was postulated that the momentary loss of cognitive control might
2 signify the involvement of subconscious processes.

3 It also emerged that certain characteristics might be involved in the longevity of these
4 problems. For example, participants reported obsessive patterns of thought, involuntary
5 behaviours, reinvestment in solving the problem, and self-critical thinking related to the
6 experience. Furthermore, it was reported that attempts to overcome problems using cognitive
7 methods had produced only mild, temporary relief of symptoms at best. In a follow-up study,
8 Bennett, Rotheram, Hays, Olusoga, Maynard and Lindsay (2016) adopted psychometric
9 measures of perfectionism, rumination, reinvestment, and subjective stress response to
10 explore potential vulnerability factors. Findings revealed that levels of perfectionism,
11 rumination, and reinvestment were greater in individuals experiencing the yips and LMS, than
12 in matched control groups. Furthermore, those suffering from the yips/LMS also reported
13 higher levels of stress in response to their worst performance experience than their non-
14 suffering counterparts, and these levels were comparable to minor trauma experience (Bennett
15 et al., 2016). This is consistent with previous research associating the yips and LMS with
16 significant life-events, and/or trauma (e.g., Day et al., 2006; Rotheram et al., 2012). Bennett
17 and colleagues (2015; 2016) suggested that the yips and LMS are perhaps one and the same
18 form of anxiety-based disorder, and that their classification ought to be reconsidered
19 accordingly. As such, *performance blocks* were put forward as an appropriate descriptor.

20 Previous research has suggested that emotionally significant, or traumatic life-events
21 might be associated with the onset and development of performance block type problems
22 (e.g., Rotheram, Maynard, Thomas, Bawden & Francis, 2012). Similarly, the experience of
23 trauma throughout the life-course has been associated with the development of various
24 anxiety-based disorders (Scaer, 2014; Shapiro, 1999; 2012). Anxiety is said to play a major
25 role in the course of events following a significant life-experience (Scaer, 2014). Specifically,

1 it is thought that early life-events involving psychological, behavioural, and/or
2 psychophysiological distress, can lead to a range of somatic and cognitive disturbances years
3 later (Lohr, Lillienfeld & Rosen, 2012; Stokes, 2009). Research has demonstrated that
4 environmental stimuli, even vaguely threatening, and/or associated with an early memory can
5 reactivate memories of disturbing life-events years after the event occurred, causing aspects
6 of the initial event to resurface in the form of physical and psychological distress, but without
7 further context (McFarlane & Yehuda, 2000; Shapiro, 2001). This would certainly explain the
8 self-perpetuating nature by which performance blocks develop, if, similarly to anxiety
9 disorders, individuals become trapped in a cycle of anxiety experience associated with a past
10 memory, the details of which they are unable to comprehend. It is thought that the level of
11 emotion attached to traumatic, threatening experiences overwhelms the brain's capacity to
12 attend to all incoming stimuli, and therefore process the event appropriately (Stokes, 2009).
13 Thus, details of the experience often remain hidden, and the memory itself is stored in the
14 form of somatic, cognitive and emotional symptoms experienced during the initial event
15 (Scaer, 2014). Bennett and colleagues (2015) reported that individuals suffering from
16 performance blocks described being unable to visualise execution of the affected skill, and/or
17 visualising getting stuck, or only being able to recall certain aspects of the skill. Due to the
18 heightened levels of emotion and distress involved in performance blocks, it is perhaps not
19 surprising that loss of memory and mental blocks were common occurrences.

20 Given the lack of success achieved through cognitive therapy alone in treating
21 performance blocks (e.g., Bennett et al., 2015; Philippen, Legler, Land, Schuetz & Schack,
22 2014; Rotheram, Thomas, Bawden & Maynard, 2007), Bennett (Unpublished doctoral
23 dissertation, 2015) conducted an intervention-based study to identify an appropriate treatment
24 method for performance blocks, specifically targeting the psychological, and subconscious
25 components evidently involved. Considering the similarities between performance blocks and

1 other anxiety-based disorders, the efficacy of treatment methods for anxiety-disorders was
2 explored. Two separate case studies were conducted to investigate the effectiveness of *eye*
3 *movement desensitisation and reprocessing* (EMDR; Shapiro, 1999; 2001) with graded
4 exposure to treat two performance block-affected individuals. The findings from this study
5 provide further evidence for a relationship between significant life-events, anxiety, and
6 subconscious processes (i.e., loss of cognitive control) associated with development of
7 performance blocks, thus supporting the notion that these problems are similar forms of an
8 anxiety-based disorder.

9 **Practical Implications**

10 Based on existing research, it appears that performance blocks are a form of
11 psychological, anxiety-based disorder involving a sub-conscious component. To our
12 knowledge, only one study has effectively addressed the treatment of performance blocks in
13 sport (Bennett, Unpublished doctoral dissertation, 2015). In their study, the effectiveness of a
14 combined intervention using EMDR and graded exposure was applied to two individuals
15 suffering from performance blocks. Treatment focussed on reprocessing memories of
16 significant life-events, reframing negative cognitions, and reducing anxiety levels, all of
17 which were believed to have contributed to the development and maintenance of performance
18 block symptoms. Reprocessing these memories using EMDR, and addressing associated
19 symptoms underpinned by anxiety, resulted in the elimination of dysfunctional thoughts,
20 feelings and behaviours, and improved ability to execute the affected skills in both cases.
21 Social validation data collected on completion of each intervention confirmed that these
22 benefits had transferred to training, competition, and improved social functioning.

23 The unique context of elite sport dictates that several practicalities need to be
24 considered before this type of intervention can be delivered. First and foremost, it appears that
25 the most effective form of treatment includes the use of two methods (e.g., EMDR and graded

1 exposure), one of which (EMDR) is currently outside the realms of traditional sport
2 psychology, and therefore requires clinical expertise. The involvement of a clinical
3 psychologist in Bennett's (Unpublished doctoral dissertation, 2015) is testament to this.
4 Specifically, it was demonstrated that the prescription of EMDR delivered by a clinical
5 psychologist allowed previous trauma experience to be processed, subsequently providing
6 relief from symptoms associated with the performance block. The EMDR therapists involved
7 in this research discussed the importance of involving an experienced clinician when treating
8 any psychological disorder involving trauma-related symptoms, and that appropriate
9 supervision should be in place throughout treatment. It is therefore advised that suitable
10 support is in place for sport psychology practitioners, and that clinical experts are involved in
11 the formulation and treatment of performance block difficulties.

12 The importance of using treatment plans that are adaptable to individual needs and can
13 be shaped accordingly as treatment progresses is paramount. Bennett's research demonstrated
14 the importance of the sport psychologists working closely with EMDR therapists to ensure
15 comprehensive understanding of the environment, and effective integration of each aspect of
16 the interventions. In each case the sport psychologists ensured all individuals involved (e.g.,
17 coach, athlete, practitioners) were kept informed, and involved throughout each stage of
18 treatment. Additional considerations specific to the context include individual training and
19 competition demands. For example, each intervention had to be scheduled in such a way that
20 it did not interfere with training loads. Possible side effects of EMDR treatment include
21 emotional and cognitive fatigue (Shapiro & Forrest, 2004), and therefore each session should
22 precede an appropriate period of recovery time for the individual. Furthermore, sleep
23 disturbance (e.g., dreaming, flashbacks) and memory recall are also common side effects of
24 EMDR, and so the individuals environment and support network must be fully equipped to
25 manage these effects.

1 It is clear that the initial perception and interpretation of any significant life-
2 experience is imperative to what follows. Indeed, this research highlights the importance of
3 sport psychologists considering the impact of significant life-events (sporting or otherwise) on
4 athletic performance. Specifically, whether a significant event is effectively processed and the
5 emotional content appropriately managed. The importance of talking through the physical,
6 cognitive, and emotional experience of a significant-event with an individual is necessary to
7 facilitate appropriate processing of the overwhelming emotional content attached to the
8 experience in a safe, supportive environment. It is also recommended that relevant personnel
9 (e.g., coaches, performance support team, psychologist) are educated on effective debriefing
10 of significant life-events with athletes, in both the training and competition environments.

11 Bennett's research has demonstrated that performance blocks also have a negative
12 impact on social functioning (e.g., avoidance towards the affected environment, disturbed
13 sleep, isolation, bouts of depression). This research opens the door for education programs to
14 be developed so that coaches and athletes can recognise and understand performance blocks
15 better, and subsequently manage environments to promote healing and prevent further
16 distress. Isolation, confusion, avoidance, and fear associated with not understanding the
17 problem were all reported in Bennett's (Unpublished doctoral dissertation, 2015) study. Thus,
18 educating individuals on appropriate language used in reference to these problems might
19 prevent associated symptoms being further exacerbated.

20 Individuals suffering from performance blocks have revealed high levels of
21 perfectionism, rumination, and reinvestment (Bennett et al., 2016). Hence, some form of
22 assessment of these attributes might be beneficial for practitioners working in sport, and allow
23 for preventative measures to be put in place to help avoid development of performance
24 blocks. Furthermore, addressing whether an individual reflects perfectionism in a
25 dysfunctional manner, and exploring the content of ruminative thinking patterns, might also

1 indicate the impact these characteristics have on the development of performance blocks.
2 Taking these factors into consideration, educational sessions could be developed to raise
3 awareness of the potential negative impact of perfectionism, and to develop skills such as
4 rationalising, or countering debilitating perfectionistic and/or ruminative thinking patterns.

5 This study supports the growing evidence suggesting EMDR is a fast and effective
6 treatment method for processing emotional and/or traumatic memories, and that addressing
7 the major emotional component involved in the performance blocks facilitates performance
8 improvement. It is recommended that future research look to examine the prevalence of these
9 problems in other sports to establish if athletes experience similar symptoms to those
10 presented. For example, it might be that individuals in other sports experience the same
11 psychological, emotional, and behavioural symptoms associated with performance blocks,
12 and that the physical manifestation affects the muscles involved in execution of the affected
13 skill (e.g., finger spasms in shooting, fore-arm/wrist muscles in racquet sports). Indeed,
14 previous research has referred to movement disruption in sports such as archery (Thomas,
15 2008), darts (Rotheram et al., 2007), and baseball (Hooke, 2005). However, the majority of
16 these reports are anecdotal and lack scientific research evidence, and it is therefore
17 recommended that future research investigate these further.

18 **Summary and Concluding Remarks**

19 Before the commencement of this program of research, performance blocks had been
20 considered as entirely distinct performance issues according to sport (e.g., the yips/LMS), and
21 there was yet to be an effective treatment method developed. We are now much closer to
22 understanding the pathology of these issues and therefore their appropriate diagnosis. This
23 research has demonstrated that EMDR with graded exposure offers an effective treatment for
24 performance blocks, the fundamental components of which are anxiety, loss of cognitive and
25 motor control, and physical movement disruption. It is recommended that treatment consist of

1 EMDR with graded exposure. Implications for sport advocate that the language associated
2 with these problems ought to be reconsidered towards the generic classification performance
3 block. Second, education programs should be developed so that coaches, athletes, and sport
4 psychologists can have a better understanding of these problems, and therefore more
5 effectively manage the athletes environment to promote healing and avoid exacerbating
6 symptoms. If sport psychologists are to address performance blocks it is recommended that
7 further training be provided on the pathology of these problems, and that treatment involves a
8 collaborative approach between sport psychologist and clinical psychologist as a minimum.

9

10

11

12

13

14

References

- 1
- 2 Bennett, J., Hays, K., Lindsay, P., Olusoga, P., & Maynard, I.W. (2015). Yips and lost move
3 syndrome: Exploring psychological symptoms, similarities, and implications for
4 treatment. *International Journal of Sport Psychology*, 46, p61-82.
- 5 Bennett, J., Rotheram, M., Hays, K., Olusoga, P., Maynard, I.W. & Lindsay, P. (2016). Yips
6 and Lost Move Syndrome: Assessing impact and exploring levels of
7 perfectionism, rumination and reinvestment. *Sport and Exercise Psychology*
8 *Review*, 12.
- 9 Bennett, J. (2015). The Psychology of yips and lost move syndrome in sport. *Unpublished*
10 *Doctoral Dissertation*, Sheffield Hallam University. Sheffield, UK.
- 11 Bawden, M.A.K., & Maynard, I.W. (2001). Towards an understanding of the personal
12 experience of the yips‘ in cricketers. *Journal of Sports Sciences*, 19, 937- 953.
13 doi: 10.1080/026404101317108444.
- 14 Day, M.C., Thatcher, J., Greenless, I., & Woods, B. (2006). The causes of and psychological
15 responses to lost movement syndrome in national level trampolinists. *Journal of*
16 *Applied Sport Psychology*, 18, 151-166. doi: 10.1080/10413200600653782.
- 17 Hooke, R. (2005). Basketball, baseball, and the null hypothesis. In J. Albert, J. Bennett, & J.
18 J. Covchran (Eds), *Anthology of Statistics in Sports* (pp. 241-243). ASAIAM
19 Series on Statistics and Applied Mathematics. Philadelphia, PA: Society for
20 Industrial and Applied Mathematics.
- 21 Lohr, J. M., Lilienfeld, S. O., & Rosen, G. M. (2012). Anxiety and its treatment: Promoting
22 science-based practice. *Journal of Anxiety Disorders*, 26, 719-727. doi:
23 10.1016/j.janxdis.2012.06.007.
- 24 McDaniel, K.D., Cummings, J.L., & Shain, S. (1989). The ‘yips’: A focal dystonia of golfers.
25 *Neurology*, 39, 192–195. PubMed. doi:10.1212/WNL.39.2.192.

- 1 McFarlane, A.C., & Yehuda, R. (2000). Clinical treatment of posttraumatic stress disorder:
2 conceptual challenges raised by recent research. *Australian and New Zealand*
3 *Journal of Psychiatry*, 34, 940-953. doi: 10.1046/j.1440-1614.2000.00829.x.
- 4 Philippen, P. B., Legler, A., Land, W. M., Schuetz, C., & Schack, T. (2014). Diagnosing and
5 measuring the yips in golf putting: A kinematic description of the involuntary
6 movement component that is the yips. *Sport, Exercise, and Performance*
7 *Psychology*, 3, 149. doi: 10.1037/spy0000020.
- 8 Rotheram, M., Thomas, O., Bawden, M., & Maynard, I. (2007). Understanding the ‘yips’ in
9 sport: A grounded theory interview study. *Journal of Sports Sciences*, 25, 323–
10 324.
- 11 Rotheram, M. Maynard, I.W., Thomas, O., Bawden, M., & Francis, L. (2012). Preliminary
12 evidence for the treatment of ‘Yips’: The efficacy of the Emotional Freedom
13 Techniques. *The Sport Psychologist*, 26, 551-570.
- 14 Scaer, R. (2014). *The body bears the burden: Trauma, dissociation, and disease*. Routledge.
- 15 Shapiro, F. (1999). Eye movement desensitization and reprocessing (EMDR) and the anxiety
16 disorders: Clinical and research implications of an integrated psychotherapy
17 treatment. *Journal of Anxiety disorders*, 13, 35-67. doi: 10.1016/S0887-
18 6185(98)00038-3.
- 19 Shapiro, F. (2001). *Eye Movement Desensitization and Reprocessing*. (2nd ed). Guildford
20 Press: New York, NY.
- 21 Shapiro, F. (2012). EMDR therapy: An overview of current and future research. *Revue*
22 *Européenne de Psychologie Appliquée/European Review of Applied*
23 *Psychology*, 62, 193-195. doi: 10.1016/j.erap.2012.09.005.
- 24 Shapiro, F., & Forrest, M. S. (2004). *EMDR: The breakthrough therapy for overcoming*
25 *anxiety, stress, and trauma*. Basic Books.

1 Stokes, T. (2009). *What Freud Didn't Know: A Three-step Practice for Emotional Well-being*
2 *Through Neuroscience and Psychology*. Rutgers University Press.

3 Thomas, K. (2008, August, 1). The secret curse of expert archers. *The New York Times*,

4 *DI*. Retrieved from

5 <http://www.nytimes.com/2008/08/01/sports/olympics/01archery.html>

6