What does the Olympics mean to you?

We asked the question; psychologists answered

Inclusion for learning disability

I've always loved sports, being a keen player and spectator. Yet I would not have predicted several years ago, how the words 'Olympics' and 'Paralympics' would come to impact upon my life. I've always held a firm belief about the connectivity between physical activity and psychological health, but the connection between my working life, sport, disability and psychology was advanced further than I could have imagined when I suddenly found myself involved in the Paralympics. It all began with a speculative e-mail sent some time ago to a tenuously linked contact in Canada.

Three years later I find myself involved in a multidisciplinary, international research group that has completed the first stages of an extremely ambitious research schedule. The resulting data from this group contributed to the International Paralympic Committee making a decision to re-include athletes with learning disabilities back into the Paralympics for London 2012. Some may recall that there was a scandal after the Sydney 2000 games, when it was discovered that cheating had occurred, such that athletes without learning disabilities entered, competed and won whilst posing as having learning disabilities. The result was exclusion for athletes with learning disabilities (ironic as it was not they who had cheated) and a fierce campaign for re-inclusion began.

To be re-included the sports federation that manages this group of athletes (INAS – the International Federation for sport for para-athletes with an intellectual disability; see www.inas.org), in partnership with the International Paralympic Committee (IPC) had to demonstrate that (a) this disability had an impact on sports performance i.e. there was a clear reason why people with learning disabilities could not compete in the Olympics, and (b) there were mechanisms in place to properly assess eligibility (i.e. that they did have a learning disability and we could test how it impacted on each specific sport). These were not easy questions to answer, and there is surprisingly little research in this area, but the eventual decision of re-inclusion by the IPC was based on a huge amount of work by a wide range of committed individuals from around the globe. This involved setting up a rigorous set of procedures to produce documentary evidence of an athlete's intellectual disability, which is then scrutinised by members of an international, independent panel of experienced psychologists. Only if this evidence meets stringent criteria is an athlete deemed eligible to compete in this group. They then need to go through sports classification which is specific to each sport. To develop this the research group produced a conceptual map of the types of intelligence involved in elite sports performance and then compiled a battery of

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established non-verbal cognitive tests to measure performance in these areas. This data is then supplemented by data collected from specific sports performance, such as pacing for running, stroke rate for swimming and ability to anticipate and play certain strokes in table tennis. Comparative data was collected from non-disabled athletes and a bandwidth approach was taken to assess if an athlete is performing in the range across the tasks below that of a non-disabled athlete but within the range expected for elite athletes with intellectual disabilities. To find out more about the technical aspects of this visit www.paralympic.org/Classification/Sports.

Intellectually, and at times politically, this has been one of the most challenging research projects in which I have been involved, requiring a massive expansion of understanding on my part, ranging from assessing sports intelligence to the workings of international politics. However, it has also brought me travel, many new friends, many beers and an increased ability to work in airport waiting areas.

My involvement in the research behind re-inclusion continues, but over this time my role has also expanded. As the London 2012 Paralympics approaches, I find myself the 'Head of Eligibility' in INAS. My specific responsibility is to manage the global system that examines the evidence, largely from psychologists, as to whether an athlete actually meets the initial criterion of having a learning disability and is therefore eligible to compete in this class at Paralympic events. Given this is where it all went wrong last time I write this with some trepidation. It has not been an easy route, and there remain many obstacles and fears ahead. If all goes well in London, events will be added to the next Paralympics in Rio, and also involvement in the winter games. Each different sport will need to be researched to show exactly how intellectual disabilities impact, and change the possible level of competence that can be achieved in that sport to meet the Paralympic as opposed to the Olympic criteria.

If you are planning to watch the Paralympics, look out for the events for athletes with learning disabilities in swimming (100m), table tennis and athletics (1500m, shot put and long jump). When you see athletes and do not immediately recognise them as having an obvious disability (physical or visual) they are likely to be the athletes with a learning disability. Take a moment to consider their journey to this event. Aside from years of training and some fortunate talent spotting along the way they will have had to overcome considerable impediments to learn, practise, compete and excel at their sport. Sport for people with learning disabilities is not a well-sponsored sector (see www.uksportsassociation.org for more information), and so they, their families, and supporters will have undergone considerable strain to raise the money to compete at this level. I hope that a little more understanding of this journey will attract greater attention, interest and ultimately the applause these athletes well deserve. As for me, having been lucky enough to have this involvement, after that speculatively sent e-mail, the words 'Olympics' and 'Paralympics' have now become much richer terms.

Jan Burns, *Professor of Clinical Psychology, Canterbury Christ Church University*

A role model for youth

> The true Olympic contender is the one whose physical perfection combines with high spiritual culture. The true Olympic contender must also be honest, generous, loyal to his homeland and patriotic (Pierre de Coubertin, cited in Klementjevs, 2008, p.49).

A 'role model' is a person who acts as an inspiration for others and is worthy to imitate. Even though role models are ordinary people, they possess distinguishable characteristics such as courage, determination, fortitude and the pursuit of excellence. What influences individuals to follow others, and what impact could Olympian role models have?

Observation is fundamental, as social learning is achieved by imitating others' behaviours. The attractiveness, competence, behaviour and attributes of the model, and the socio-demographic characteristics of the learner, will all have an impact on learning (Bandura, 1977). Moreover, learners are more likely to identify with certain role models when they feel able to imitate and carry out the model's behaviour, and thus experience self-efficacy.

Research suggests that role models coming from elsewhere than the family have a great impact on child behaviour (Fitzclarence & Hickey, 1998). A survey among primary and secondary education students in Europe revealed the reasons Olympic Champions are admired (Telama et al., 2002). The most prominent reasons were athletes' achievements, their national pride and showing moral behaviour in sports and in general. Interestingly, gender differences play a part: Biskup and Pfister (1999) reported that male pupils in Germany choose athletes as role models because of their strength, aggression and physical skills, whereas girls were more attracted by movie and pop-stars.

De Coubertin, founder of the modern Olympic movement, believed that the moral characteristics of young people could be developed through their sporting experiences and then extended into adult life (Dacosta, 2006). Athletes combine a highly dynamic and physically attractive personality. Moreover, they are often seen as ambassadors of ideals such as fair play and respect for the opponent regardless of racial, cultural and religious differences (Sollerhed, 2008). Consequently, Olympic champions embody ideals learnt on the

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sporting field that can then transfer into daily life and have a positive impact upon individuals and the community in general. Sport can also generate feelings through an exchange: the athletes give to the fans the gift of superior performance, and get in return their perceived loyalty through the support of certain sports teams, the spectatorship of sporting events or the purchase of sport-related products (Crosset, 2000).

On the other hand, a role model doesn't always have a positive influence on young people. The media keep some athletes in the spotlight, which often damages their reputation. Examples of deviant behaviour in sport include cheating and bribery, the use of performance-enhancing substances, and anger. Undoubtedly, parents would not want their children to imitate this type of behaviour. How can youngsters be provided with positive examples coming from the sporting field? The answer is: Olympic education.

Olympic education is a learning process for the teaching of Olympism, where participants are encouraged to learn, comprehend, experience and propagate the Olympic principles (Sermaki et al., 2003). It rests on a deep knowledge of the educational and cultural principles of Olympism and supports the notion that man constitutes an undivided unity (Arvaniti, 2000). For that reason, it harmoniously embraces the spiritual and psychosomatic activities of the individual. Moreover, it cultivates the spirit of sportsmanship and uses the Olympic athlete as a life model for young people to follow. In my view, both children and elite athletes need to be educated in the Olympic values in order for the latter in particular to understand their social responsibility towards the dissemination of positive attitudes.

Interestingly, Olympic medallists do recognise their role as mentors for youth. In a study by Georgiadis and Lioumpi (2008), all 22 Olympic medallists surveyed stated that they perceive themselves as ambassadors of Olympic ideals. The majority of the athletes expressed their willingness to enhance their Olympism-related knowledge in order to effectively communicate sporting values to young people through Olympic education programmes. Several countries have capitalised on this in order to develop schemes for motivating and engaging students via the Olympic values. For instance, in the UK the changingLIVES and the Sporting Champions schemes bring world-class athletes into schools across the country in order to inspire young people through their personal stories of success and struggle (Youth Sport Trust, 2011).

In sum, Olympic champions and elite athletes in general are being idolised by young people. Being a role model – positive or not – is inevitable for elite athletes, as sport epitomises high ideals and emotions that cannot be found elsewhere. Olympic athletes appear aware of their social responsibility and willing to foster the true meaning of Olympism, through undergoing proper training on Olympic education. Now it's up to the National Olympic Academies, schools and sports organisations to put this into practice.

Niki Koutrou, *PhD student, Institute of Sport and Leisure Policy, Loughborough University*

Olympic level learning

It's not just the 10,000 hours that makes an Olympic medallist. As Swedish psychologist Anders Ericsson has shown, just brute, mindless practice gets you nowhere fast. It is the quality of practice that matters. And that means elite performers have to be, above everything else, elite-level learners. They have to be able to suck every last drop of learning juice out of every two hours in the pool or on the track. And sports psychology has developed a valuable database for helping athletes and sportsmen and women to learn how to learn. They know when and how to amplify direct practice with mental rehearsal, and when to use a first-person perspective – being imaginatively inside your own body, feeling your own feelings and looking out through your own eyes – and when to stand back, in your mind's eye, and watch your performance from the outside. They know how to cultivate the kind of mental toughness that enables you to maintain your peak performance under the most intense pressure, and to bounce back from a bad session and regain your poise. They know how to orchestrate their own training sessions, when to do what and when to allow yourself breaks, so that the most learning happens in the least time. They know how to control their own attention, like a master meditator, so they can watch in minute detail what happens in their right shoulder as they do their tumble turns, or how their mindset regularly collapses during the third lap out of four in training (see Mellalieu & Hanton, 2009, for a good overview).

Some of the same kind of 'learning how to learn' training is going on in schools: but not enough. All youngsters, in their history lessons as well as their sports coaching, should learn to see learning itself as a learnable craft – something everyone can get better at, regardless of their so-called 'academic ability'. Why not use visualisation as a way of strengthening your revision? Taylor et al. (1998) have shown that doing so increases examination scores by 8 per cent. As Michael Caine never actually said, 'Not a lot of people know that' – but they should. And teachers should also know about all the useful advice they could pass on to their students from the world of sports. It's not just Usain Bolt who needs to know how to recover fast from frustration and disappointment: every eight-year-old could benefit from practising the same strategies. During a crucial game, champion snooker player Mark Williams sings loudly inside his own head to block the inner self-critical voice that threatens to undermine his concentration. Any group of GCSE art students might like to

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see if a similar strategy could work for them when they are drawing.

There is a wealth of psychological research from sport psychology, clinical psychology and many other branches of our discipline, that can contribute to a rich, robust and imaginative psychology to underpin what we have called 'expansive education': education that aims to build the confidence, capacity and appetite for learning in all young people, so they are well equipped to pursue their own version of greatness (Claxton, 1999; Lucas & Claxton, 2010). Their field of specialism might be skateboarding, hairdressing or cartooning, rather than dressage or hockey, but the same learning skills, attitudes and mindsets may well apply. As I say, it is plausible that many of the techniques and attitudes developed by elite athletes to boost and intensify their own development could transfer, with some adaptation, to the world of school. But there is an empirical field of research waiting to be mined: to what extent can four-year-olds learn to self-regulate in the way that 25-year-olds can? How can these learning skills be coached in a way that encourages maximum transferability? How much of Phillips Odowu's learned self-control in a triple-jump final rubs off when he is stuck in a traffic jam? The field of 'expansive psychology' is wide open – and the 2012 Olympics could be a very good stimulus for its development.

At the moment, the 'mental development' side of education is rather thin – 'thinking skills' on the one hand and 'social and emotional aspects of learning' on the other. And much of what passes for advice and training in the area of learning-to-learn is hackneyed, recycled and over-hyped. The psychology of education could take a leaf out of the Olympic coaching manual, and start applying what it already knows – as well as generating more evidence-based advice – to give all young people the wherewithal to learn fast and well in their chosen fields.

Guy Claxton, *Centre for Real-World Learning, University of Winchester*

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Olympic success, but not at the cost of participation or diversification

As both a sport psychologist and a fan, the Olympics hold a fascination for me, watching elite athletes at the zenith of their careers. I watch a gold medal-winning performance and ask: Was it innate abilities or deliberate practice that allowed them to reach the highest level? Was it early specialisation or early diversification? I think of some of the young athletes I know, many of whom specialise in one sport before 10 years of age, undergoing so much coaching they have no time for other sports or pastimes. Some pre-adolescent athletes are often committed to high-performance academies, leaving them no time even for formal schooling. I am simultaneously reminded that Tom Daley, an Olympian at 14 years old, fitted his training around a full schedule of GCSEs at a normal mainstream school. This creates a dilemma for the parents, coaches and organisers of youth sport programmes. What is the best way to develop young athletes?

In my recent experience I have seen a worrying trend in coaching toward the early-specialisation and deliberate-practice model first proposed by K.A. Ericsson and his colleagues (1993). The theory carries a substantial weight of credibility for me as a psychologist and has undoubtedly changed the face of research into athlete development. For coaches, parents and lay people it has been popularised by mainstream books such as *The Talent Code* (Coyle, 2007), *Outliers* (Gladwell, 2008) and *Bounce* (Syed, 2010). These books are entertaining and not without merit, but I fear their popularity has compounded a trend in coach education whereby the theory of deliberate practice and the

Little, Brown and Co.

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corresponding '10,000 hours' rule has been unquestioningly adopted by sports governing bodies keen to motivate coaches and produce a generation of Olympic champions and world-beaters. My concerns only echo the unrest over the specialisation culture that is already found among some experts and commentators. In the American media, the specialisation problem has been linked to the breakdown of community sport, as described by Alexander Wolff in *Sports Illustrated* (2002). Concerns in Britain have been publicly voiced by the likes of Andrew Flintoff and Glenn Hoddle, while the BBC television documentary *Is Professionalism Killing Sport?*, broadcast in 2010, addressed issues surrounding specialisation and over-coaching.

Gould and Carson (2004) succinctly outline some of the myths about talent development that have arisen among coaches and parents, leading to the belief that early specialisation is the best and perhaps only way to train an elite athlete. These fallacies include: that athletic talent can be predicted prior to puberty; that when it comes to training for talented children 'the more the better'; that fun has to be sacrificed if a child is to reach the elite level; and that talented children need different early sport programmes than their less talented counterparts (Gould & Carson, 2004). The detrimental effects of specialisation for pre-adolescent athletes are well documented. Physical consequences of early specialisation include increased risk of: overuse and repetitive stress injuries such as tendinitis, apophysitis, stress fractures; Osgood-Schlatter disease; Sever disease; medial epicondylitis; injuries to developing joint surfaces or immature spinal injuries (American Academy of Pediatrics Committee on Sports Medicine and Fitness, 2000). It is also known that, as well as these negative physical outcomes, early specialisation is also linked to athlete drop-out (Butcher et al., 2002; Wiersma, 2000) and burn-out (Coakley, 1992; Gould et al., 1996). Early specialisation has also been linked to a general reduction in the length of athletic careers, while early diversification allows for positive skill transfer and augmentation of the cognitive and physical abilities needed to help meet the demands of an athlete's primary sport (Baker, 2003).

In summary, it is not acceptable to sacrifice the well-being of young athletes in the pursuit of elite-level performance and Olympic success in the face of evidence demonstrating the negative consequences of early specialisation. Indeed, as Wiersma (2000) notes, because such a vast majority of children (even those labelled as 'talented') will not make it to the professional ranks, none should be denied the pleasure of playing a diverse range of sports. Goals for youth sport programmes should be based around diversity, enjoyment, sustained participation and long careers for young athletes. Coaches and parents must be made aware of potentially debilitating physical, psychological and social consequences of professional-style, deliberate-practice schedules imposed on pre-adolescent children. All these objectives must be prioritised over the goal to produce elite-level athletes capable of competing for Olympic medals. I am as keen as any other fan of sport to see Britain at the top of the medal table, but it must not happen at the expense of wide-ranging, healthy, sustained participation for all children, including those showing early aptitude. Focus on healthy diversification for all, and elite athletes will emerge.

Luke Regan, *Sport Psychology Consultant, London*

The Olympic journey

Since I was young, the Olympic Games have always seemed to me an awe-inspiring spectacle of sporting endeavour. To athletes in most sports, the games are the big one, the event that they completely commit themselves to, and as such the competition is always dramatic. Nowadays it's the stories and understanding the journey that leads athletes to the games that keep me enthralled.

Remembering Kathy Freeman's 400m victory always reminds me that elite athletes are still human. The hopes of the home nation rested on her shoulders and when she won all she could do was crouch down and cry – such was the emotion she felt. Perhaps this is a poignant reminder of the pressure for those British athletes preparing to win gold in front of a home crowd at London 2012?

When I watched Steve Redgrave win his fifth consecutive Olympic gold medal, I didn't really appreciate how outstanding an achievement that was and how his journey had been shaped over the preceding 20 years. I didn't even understand the sport, which was ironic considering how involved I have subsequently become in rowing! All I understood was that he had been champion on a number of occasions but that this time lots of people didn't think he could manage it. What I now understand is that his journey, his story, is a fascinating and unpredictable one.

So the stories are what the Olympics mean to me, and I am intrigued by the nature of the athletic journey as a pathway of development. Gould et al. (2002) found that at the highest levels of sport, psychological characteristics were greater predictors of successful performances than physiological characteristics. So the journey is in large part psychological. What, then, does the journey of a future Olympian look like?

Most sports governing bodies now have a player pathway based on the Long Term Athlete Development (LTAD) model (Balyi, 1990). This model considers what the pathway of a future Olympian might look like and attempts to break this down into different stages of development.

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Planning to become a champion, rather than leaving it to chance, is so important that having an LTAD plan is now a pre-requisite for receiving lottery funding for many governing bodies (Abbott et al., 2002). However, this model has received criticism (Black & Holt, 2009; Martindale, 2008), and these are focused on the lack of empirical evidence for the stages and the assignment of athletes to stages based on chronological rather than developmental or maturational age.

The model is principally based on physiological development and was designed to give governing bodies and coaches a guideline for how to structure long-term development from a primarily physical perspective. The growth of other disciplines, including sport psychology, has led to the incorporation of these fields into the LTAD. However, the model was never designed for this purpose, and as psychologists we should be cautious of excessive criticism of the LTAD. Instead we can also look to other sources for guidance on how we might account for the developmental pathway of future Olympians.

For example, Coté's (1999) model is perhaps more appropriate for describing psychological development. This was based on Bloom's (1985) earlier work investigating more generalised talent development across multiple domains, which included sport. Coté proposed that there were three discrete stages of development: sampling, specialising and investment; each of which was characterised by different environmental and psychological qualities. In short, Coté proposed that athletes began by sampling many sports at a young age, before reducing this number as they specialised and didn't commit to one sport until they invested at a much later stage. Unlike Balyi's (1990) model which only considers the development of athletes through one sport, Coté attempts to consider the broader athletic experiences of children and thus is perhaps more able to account for the development of psychological skills and qualities.

Ultimately the journey of any Olympic athlete is unpredictable and complex, and any attempts to model this journey are going to be problematic. Arguably, it is impossible to completely account for the complexity of the world in which an athlete develops. However, in attempting to understand what makes Olympic athletes and how they come to be competing at this level, we perhaps begin to ask better questions about the nature of athletic development and how we might begin to help future Olympic champions.

Douglas MacDonald, *University of Stirling*

An Olympics of practitioners

For some, the 2012 Olympic games in London will be a career highlight, for others, it will act as a watershed moment in their sporting lives. From a personal perspective, this summer will mark the culmination of four years of support to elite athletes in pursuit of their goals, with the sincere hope that the hard efforts of all involved will be repaid in the fulfilment of their sporting dreams. Since the announcement of the successful bid in July 2005, London 2012 has captivated the hearts and minds of all involved, the Olympic games are always special, but a home Olympics is truly a once-in-a-lifetime event.

Within my role as Lead Sport Psychologist (North of England) within the English Institute of Sport (EIS), I support various Olympic sports, including the GB Boxing squad, the British gymnastics teams and a number of individual athletes. Alongside my applied role, I act as technical lead for numerous practitioners and supervise four jointly funded PhD students that are based alongside me at the EIS in Sheffield.

In some ways, working at the Olympic games is no different from working with athletes in other competitive settings (McCann, 2000) – the need to be accessible but not in the way, adapting to the logistical and time pressures inherent in the environment, alongside providing support in less than ideal circumstances (the five-minute consult whilst queuing for meals, waiting in hotel lobbies, or on a coach). However, because of its scale, importance and build-up, the Olympics also brings with it a whole host of additional considerations that can cause some people to respond differently. When supporting and mentoring other practitioners and discussing how the Olympics (and its five rings) can affect people, I often use the analogy of Gollum from *Lord of the Rings* – once a normal hobbit, the need to possess the ring led to him becoming selfish and resentful. Likewise, some

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practitioners' perception is that attending the Olympics is a 'precious' career goal, and gaining an accreditation is the greatest of goals, as if it's an Olympics of practitioners (Gilbourne, 2006)! My own experience of similar environments is that they're rarely how you might initially imagine them. Away from the media-fuelled romanticism, the reality on the ground will be altogether harsher for all involved.

In July and August of 2012, during games time, I'm likely to be based at Team GB's support centre, travelling in to the Olympic village and competition venue each day. It will entail many bus and tube journeys, along with the necessary security checks. Pulled in opposing directions, there will likely be many times of resisting the temptation to intervene and regularly feeling like you should be doing more than you are.

Within the EIS psychology team, we consider competition psychology support to take various forms, including acting as a logical sounding board for key decision makers, ensuring that the agreed team processes are followed (e.g. debriefing, team meetings, time keeping, etc.), managing the emotional rollercoaster and being present to assist in crisis management. Our Head of Service for the psychology team within the EIS, Dr Mark Bawden, often says that the Olympic Games can act as a magnifying glass, skewing perception, over-emphasising key areas and restricting our wider field of view. As a result, my role during games time will be to ensure that the teams I support, and the practitioners I mentor, don't lose sight of the fact that this event does have many similarities to other competitions. Team GB's athletes will have competed against precisely the same opposition many times over recent years, the boxing ring and the gymnastics apparatus is the same as in their gyms at home.

When crises do inevitably occur, we have a simplistic mantra that we teach practitioners, which originated during Dr Mark Bawden's time at the 2000 Sydney Paralympic games – (i) De-escalate, (ii) Normalise, (iii) Simplify (Lindsay, 2008). Essentially, we teach practitioners to first remove the perception-skewing magnifying glass and logically examine the physical reality of the situation. We then find a way to normalise the situation, linking to prior experiences or similar challenges that others are facing (e.g. previous competitions, training sessions, it's the same for all the teams, etc.) and finally identify the simplest solution available. Often, we ask our practitioners who attend major tournaments the question, 'If you were to do nothing, would this still be a problem in 24 or 48 hours?'. We ask questions such as this as there are often times when a 'problem' simply passes without any intervention required, its just a normal part of a major multi-sport championships. At times like these, the real danger is the over-zealous practitioner, whose attempted solutions actually fuel the problem further (Watzlawick et al., 1974).

Alongside the above processes and roles, it's important to recognise that the Olympics isn't just any other tournament, and in particular, a home Olympics brings with it unique benefits and challenges. Numerous pieces of research have highlighted the 'home advantage' in terms of outcomes, particularly in subjectively scored sports (Balmer et al., 2001, 2003), but there can also be a disadvantage to competing at home. For instance, the media build-up is more prolonged, with sports stories normally contained within the back pages of the tabloids quickly becoming front page news due to the increased press exposure.

In autumn 2012, once the carnival has left London and moved on towards Rio, there will be athletes who have fulfilled their Olympic dreams, and others who have not. For both, the period following the Olympics can often be one of transition. Following the 2008 Beijing Olympics numerous athletes expressed feelings of deflation (Lee, 2008), and so whilst preparations will have been proactively put in place to aid athletes during this period, there will be some reactive support required. This support will be provided in the context of funding reviews for sports and thus for practitioners, and so my role as both applied practitioner and practitioner mentor will continue towards 2016.

It is hoped that the delivery of psychology support to Britain's athletes before, during and after London 2012 will deliver a legacy to our discipline, one which can help in taking our discipline to the next level.

Pete Lindsay, *Lead Sport Psychologist (North of England), English Institute of Sport*

Home advantage

As an avid sports fan and Chartered Sport and Exercise Psychologist with a particular interest in the home advantage, I am eagerly awaiting the London 2012 Olympic Games and hoping that the Great Britain competitors can capitalise on their opportunity to compete on their own territory.

The home advantage has a massive impact on national, continental and international competitions. Bookies determine their odds with the venue firmly in mind, and a team's stadium is often referred to as its fortress. Statistics consistently show better performance at home than away in virtually all team events, including basketball, hockey, baseball, cricket, and the variety of sports known as rugby and football. At the modern Olympics, according to figures gathered by Clarke (2000), the hosting country wins three times as many medals than its average when away, with 14 of the 17 hosts achieving their highest percentage of medals on their home turf.

A 2006 analysis by FIFA (the international governing body for football) of nearly 7000 international association football matches not played on neutral territory revealed 49 per cent home wins, with the remaining home results equally divided between draws and defeats. Even within a country, without the drawbacks of major travel upheaval and time zone changes, statistics are similar from Premier League down. The average goals scored at home and away in the 2010–11 season differed significantly at all levels (e.g. Premier League: 30.9 home, 22.3 away).

The reasons for the home advantage have long been debated in the psychological literature, but conclusions are far from definitive. The support of the crowd is often seen as the critical factor: players are believed to be more confident, invigorated and inspired to perform well in front of their fans. Thus the fact that 2012 Olympics audiences will be disproportionately British should theoretically help the GB athletes to perform optimally. Unfortunately, research suggests that these very crowds can prove to be distracting, especially if agitated during a critical event. Interestingly, performers are likely to assume incorrectly that the audience's encouragement has led them to perform well (see Wallace et al., 2005), even if they have performed better when jeered by hostile onlookers.

Evidence suggests that the crowd's effect on officials judging an event may be far more implicated in the home advantage. Analyses of both Winter and Summer Olympics results (see Balmer et al., 2003) throughout the 20th century reveal that the home advantage occurs mainly in events that are subjectively assessed by judges. It is possible that

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officials may be motivated to please or entertain the crowd and avoid the wrath of fans who are desperate to see a home victory. Dohmen (2005) found that referees in the German Bundesliga added more extra minutes at halftime and fulltime when the home team was behind by a goal, as well as showing less home bias when a running track separated the crowd from the pitch. But non-egoistic information-processing distortions are also likely. Nevill et al. (2002) found football referees only more likely to favour the home team when watching recordings of incidents accompanied by the noise of the crowd; the home bias was eliminated when the referees made their judgements without the accompanying sounds. In football, 40,000 concurrent shouts of 'Offside!' might persuade even the most confident referee that an infraction has indeed occurred.

At the London Olympics in 1908, two GB judges inexplicably called a foul and cut the tape at the finishing line just before two American athletes reached victory in the 400m race. The peeved Americans refused a rematch, leaving the third placed English athlete to win gold by running unopposed. Accusations of motivated and unconscious 'cheating' in such cases have led to moves to reduce subjectivity and within-nation judging wherever possible.

Other explanations for the home advantage focus on the benefits of insider knowledge and easier preparation for home competitions. Familiar foods, language, altitude, weather and facilities are likely to increase competitors' comfort and confidence. An inflated home advantage was experienced by the few teams who played on home artificial turf in the 1980s (Barnett & Hilditch, 1993). In addition, suffering tedious long journeys and adjusting to time changes can be unsettling and disrupt sleep in teams who do not have the funds to travel in style, arrive early and acclimatise. Some countries actually bring along familiar food supplies and encourage their players to pack their own pillows. So the conditions in London should be less perilous for the GB competitors, many of whom complained of 'Delhi-belly' at the 2010 Commonwealth Games in India.

Our own research (Neave & Wolfson, 2003) has shown a significant surge of testosterone among footballers before home matches compared to away games and baseline measures. Similar increases have been found in lower animals defending their territory, along with impressive improvements in their ability to triumph against larger and more powerful rivals. It is possible that once players don their GB logos, they will feel territorial in their home country and reap similar advantages.

This leads to a particularly unusual and intriguing aspect of this summer's Olympics. England, Scotland, Wales and Northern Ireland have historically fielded separate teams for European and international football competitions, but the International Olympics Committee only recognises a GB team. Ever since separate Football Associations for these countries were formed in the late 19th century, few instances of cooperative mergers have been witnessed, some rare exceptions being the 1947 Match of the Century, and more recently a testimonial for Stanley Mathews in 1965, where mixed GB teams played against the Rest of the World.

For various reasons – the indignity of fiercely competitive football nations uniting together in battle; the fear that the merger will give European and international governing bodies an excuse to prevent separate entries in future tournaments; the concern that fans' national social identity will be confused – bitter debate regarding the composition and very existence of a GB team has raged. Solutions have ranged from no team entry at all to a prior tournament for the four nations with only the victor going to the Olympics.

It appears, though, that GB will indeed enter a football team, and the details of the 18-man squad will be announced in March. Some high-profile non-English players have indicated their interest in being on the team. Will Ryan Giggs (Wales) and Stephen Fletcher (Scotland) feel territorial if they are selected for the GB team and reach the Wembley finals? Will English players feel equally at home in their group matches in Manchester and London as in the Millennium Stadium in Cardiff, or Hampden Park in Scotland? Football fans can only wait in anticipation as the drama unfolds.

On a related and final note, the Olympics have an added personal meaning for me. I have lived in England for more than two thirds of my life, but I remain an American citizen. There is absolutely no question that I'll support Great Britain in all events, but if disappointed I do have the luxury of finding some consolation when my 'second' national team performs well. Not in football, though. As a passionate football fan, consultant and researcher – and having endured the trauma of England's poor showing in the 2010 World Cup – I won't feel any satisfaction at all if the USA triumphs!

Sandy Woolfson, *University of Northumbria*

The Olympic legacy

The promise of a legacy of social and economic benefits was at the core of the London 2012 bid, with the LOCOG stating their intention to use the Games as a catalyst that would inspire people to lead more active lives, and a new generation of youth to greater participation in sport.

This is certainly a necessary ambition. Sport, exercise, and more general forms of activity are good for us in a multitude of ways, yet the vast majority of the UK population don't do enough of them. In London alone the healthcare cost of inactivity is estimated to be £105 million. Surely then, the £150 that the 2012 Games will cost every UK taxpayer is money well spent if it helps lessen this burden on the public purse by encouraging people to adopt physical activity habits now that might endure over their lifespan. But is this a realistic aim?

At best the findings are inconclusive. In Barcelona, the proportion of the local population doing physical activity at least once a week grew from 36 per cent in 1983, to 47 per cent in 1989. The opposite effect followed the Manchester Commonwealth Games, where sport and exercise participation decreased (McCartney et al. 2010). Participation in many sports also declined following the Sydney Games in 2000, with no change in general physical activity levels (Toohey & Veal, 2007). Of several health promotion projects in Greece around the 2004 Athens Games only two targeted physical activity, and no impact data has been published (Soteriades et al., 2006). Likewise, evidence is unavailable to assess whether the proportion of the Beijing population who participated in regular sports activities increased by the anticipated 5 per cent as a direct result of the 2008 Games.

Health behaviours can be influenced by economic determinants such as income, but host nations often suffer greater unemployment and inflation for several years following large sports events (Chengli et al. 2011). Nor is there much support for the notion that hosting major events has a significant effect of increasing mass sports participation at the grassroots level. No surprise, then, that our own government concluded that hosting an Olympic Games would not be 'an effective value-for-money method of achieving...a sustained increase in mass participation'.

That there is little evidence that major sporting events deliver enduring health benefits for the host population will come as no surprise to sport and exercise psychologists and other practitioners who specialise in health behaviour change. Those people who need to be more active are not likely to take up judo or diving simply because they watched those sports on television this year, not even when we have placed a shiny new sports facility in their community. Commonly, they will lack the self-confidence, self-efficacy, sense of autonomy, competence or control to even join a beginners' aerobics class. Host nations have presumably based their hopes for an increase in sport and exercise participation upon lay theories about how motivating it is to watch people perform sports at an elite level, or the notion that simply providing facilities encourages their use. What's missing is an attention to the processes by which people can be encouraged to begin and then sustain new healthy behaviours as a result of these Games, and the reasons why it might be important to them to consider doing so.

Here in the UK the local health authorities have acknowledged that we cannot assume a physical activity legacy will manifest itself merely as a result of hosting the Games, and have taken steps to understand how we can make it happen. The resultant review by Mike Weed and colleagues (SPEAR, 2009) included a systematic analysis of the barriers and drivers to physical activity, framed by models of health behaviour change and motivation. Importantly, there is the recognition that sport participation is unlikely to be the first step for a sedentary person to become more active. Instead, through several campaigns NHS London hopes to encourage people to make smaller changes in their lives, such as walking or cycling to work. Another significant strategy is the recommendation that we utilise the 'festival effect' to tap into people's sense of community, shared values, and desire to be part of something bigger. This approach can encourage self-determination through building relatedness within the community, and autonomy through the selection of more

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Do the Olympics ignite interest – or crash and burn?

culturally- and values-relevant activities. Building social capital within our communities can also help encourage and sustain other positive health behaviours on a longer-term basis. Communities that are rich in support, social trust and membership, provide information, and have appropriate norms, can facilitate the achievement of health goals and discourage risky health behaviour for individuals within them.

Thinking only about increased participation in physical activity is to take a rather impoverished view of the potential impact of sport and recreation activities on society, particularly when considering how we might secure a lasting legacy from the 2012 Games. A recent joint publication of the Academy of Social Sciences and the BPS, *Making the Case for the Social Sciences: Sport and Leisure* (2011), describes several projects that illustrate the potential of sport and recreation to contribute to positive social outcomes beyond improved health and fitness. Sport participation can be seen to enhance the lives of marginalised or excluded groups, plays an important role in developing young people's life skills, can reduce youth crime and truancy, and improve attitudes to learning. To harness the 2012 Games to capture these benefits would require considerably more thought and effort.

For the first time a host city has in place a comprehensive set of evidence-based strategies for raising physical activity levels, using the Olympic Games as a catalyst. However, the bulk of the effort has been to hit key performance targets by 2012 with little talk of what happens next. As the festival effect wanes, the challenge is to take this opportunity to produce longer-term sustainable behaviours beyond 2012. This will require coherent multi-agency strategies, and should include input from psychologists who specialise in this field. Sport and exercise participation has the potential to benefit us as individuals and as a society in so many more ways than the most immediately obvious ones. Unfortunately it seems likely that much of the potential of 2012 will not be harnessed adequately, in time, or at all.

Helen O'Connor, *Sport and exercise psychologist (in training)*

Olympic Games preparations in Scotland

In our preparations for London 2012 and at the sportscotland institute of sport, our philosophy of sport psychology service provision is based on underpinning theory and evidence-based guidelines, to provide a strong foundation upon which key support questions can be addressed. However, in the case of our Olympic preparations, targeted sport psychology support is also adapted and tailored to the unique circumstances and patterns of performance preparation behaviours that are involved.

At the forefront of our performance sport decision-making process i.e., when support is proposed and agreed, is the 'periodisation' of sport psychology support. Periodised performance sport training programmes provide explicit training phases and critical programme progressions leading into key events. There are recognisable benefits when integrating psychological preparation to targeted training phases in the periodised Olympic cycle (Blumenstein et al., 2005). Therefore, an explicit goal in our preparation for London is ultimately that the robustness of targeted sport psychology interventions is not over-challenged by the London 2012 environment or by surrounding circumstances.

The home game environment brings its own challenges, and the effects of a home games have previously been recorded by the Canadian Olympic Committee and their 'Own the Podium' programme. Lessons learned from this programme have recently been presented at UK Sport's World Class Coaching Conference. Athletes' performance can be influenced by home games pressures, therefore managing public expectations, and personal communication management within less obvious areas such as mobile phone calls and texts from family, friends and well wishers, will play a part.

Within the current four-year Olympic cycle to London, the sportscotland institute of sport provides sport psychology support to several Olympic and Paralympic programmes including GB Boccia (a Paralympic target ball sport belonging to the same family as petanque and bowls). The sportscotland institute's mechanism of recording key objectives and capturing periodised support solutions is delivered through project documentation. Underpinning this record is high-level planning information which provides both a landscape and detailed journey of milestone stages across preparation, competition and qualification events leading to London 2012. Support work typically focuses upon athlete processes such as decision making. Recording the influence of our support upon targeted decision-making needs, and then assessing decision-making progress within training and competitions, provides measured insight into how athletes are responding to our work.

Stephen McGuire – Olympic hopeful in Boccia

Whilst working with London 2012 athletes, we're also working with Rio 2016 in mind. Therefore, preparations include athletes who will recognise London as their first Olympics. However, for other athletes London may represent their final Olympics, or another Olympics in the series. Although there will be similarities throughout, interventions will be adapted and tailored to each individual's situation and environmental requirements. The intervention process often includes multidisciplinary objectives in order to create a best-fit solution. This circumstance may create an additional role for the sport psychologist, in integrating these interactions.

Every attempt will be made so that Great Britain's athletes are best prepared for and can cope with the performance requirements at the London Olympic Games such that they either meet or exceed their intended targets. This preparation includes medical, physical and technical support. Post-Olympics we will be assessing the efficacy of our input and solutions, and the evaluation process will include external review, for example the British Olympic Association review processes. This evaluation will occur in addition to sportscotland's internal review processes. External review is welcomed and lessons learnt will really inform our reflective practice, growth and evolution within the high-performance sport sector.

The sportscotland team: **Danielle Adams, Misha Botting, Laura Carey, Kris Dun, Malcolm Fairweather & John Marchant**