



## Organizational psychology in elite sport: Its emergence, application and future

David Fletcher<sup>a,\*</sup>, Christopher R.D. Wagstaff<sup>b</sup>

<sup>a</sup> School of Sport and Exercise Sciences, Loughborough University, Ashby Road, Loughborough, Leicestershire LE11 3TU, United Kingdom

<sup>b</sup> Cardiff School of Sport, University of Wales Institute, Cardiff, United Kingdom

### ARTICLE INFO

#### Article history:

Received 15 March 2009

Accepted 17 March 2009

Available online 25 March 2009

#### Keywords:

Athletes

Occupational

Olympic

Performance

Professional practice

Service delivery

### ABSTRACT

**Objectives:** The rapid development of elite sport in Europe and across the world has had far-reaching psychosocial ramifications for those operating within its sphere of influence. Whilst sport psychologists in the latter part of the 20th century largely focused on the cognitive determinates of elite performance, the findings of recent research suggest that sport psychologists in the 21st century will need to better understand the organizational influences on world-class athletes. The purpose of this paper is, therefore, to discuss the emergence, application and future of organizational psychology knowledge in elite performance sport.

**Method:** Narrative review and commentary.

**Results and conclusion:** The review discusses the findings of six lines of inquiry that point to the salience of organizational issues in elite sport: i) factors affecting Olympic performance; ii) organizational stress in athletes, coaches and parents; iii) perceptions of roles within sports teams; iv) organizational success factors in sport and business; v) performance environments in elite sport; and vi) organizational citizenship behavior in sport. The commentary then focuses on the theoretical underpinnings and practical implementation of organizational service delivery in elite sport, and concludes by reflecting on how developments in this area have the potential to inform future practice and research relating to the psychology of elite sport.

© 2009 Elsevier Ltd. All rights reserved.

Elite sport in Europe is currently embroiled in a “global sporting arms race” (Oakley & Green, 2001, p. 100) that, it is argued in this paper, has far-reaching psychosocial ramifications for those operating within its sphere of influence. Over the past decade it has become clear that the power struggle between nations to win medals in major international competitions has intensified. Governments and national sporting organizations (NSOs) throughout the world have invested increasing sums of money in their quest for success at the highest levels (Green & Houlihan, 2005). Furthermore, it is now essential for nations to adopt a systematic and strategic approach to the development of their elite athletes in order to gain a competitive advantage over rival countries (de Bosscher, Bingham, Shibli, van Bottenburg, & De Knop, 2008; Houlihan & Green, 2008).

Within the sport management literature, there have been a number of attempts to identify the characteristics of successful elite athlete development across a range of nations, including European countries such as United Kingdom, France, Spain, the former East Germany, Netherlands, Belgium, Norway, and Italy (de

Bosscher et al., 2008; Green & Houlihan, 2005; Oakley & Green, 2001). Houlihan and Green (2008) argued that it is possible to organize these characteristics into three reasonably distinct clusters: contextual (e.g., support for the full-time athlete), processual (e.g., a hierarchy of competition opportunities centered on preparation for international events), and specific (e.g., elite facility development and the provision of coaching, sports science and sport medicine support services). It is important to recognize, however, that these policy and strategic level developments alone will not guarantee international success; to attain and sustain successful outcomes such initiatives need to be inspirationally led, effectively managed, and competently executed. Oakley and Green (2001) emphasized that “clearly, further research is required in order to better understand the *how* and *why* underpinning the policy rationales behind [elite sport development]” (p. 100). However, to date, sport management researchers have neglected a detailed examination of these factors: “the one crucial element missing in all of the previous attempts to model policy influences on success has been the involvement of athletes and coaches, as the key stakeholders responsible for delivering success in their nation” (de Bosscher et al., 2008, p. 20).

Not surprisingly, sport psychology researchers have taken a different approach to examining success in elite sport, focusing

\* Corresponding author. Tel.: +44 15 0922 3271; fax: +44 15 0922 6301.

E-mail address: [d.fletcher2@lboro.ac.uk](mailto:d.fletcher2@lboro.ac.uk) (D. Fletcher).

largely on the intra-individual mental states and processes of world-class performers, including their motivations (Mallett & Hanrahan, 2004), beliefs (Hays, Maynard, Thomas, & Bawden, 2007), and emotions (Pensgaard & Duda, 2003). However, similar to their contemporaries in sport management, the tendency has also been to overlook the climatic and cultural factors associated with the optimal development of athletes. For example, Hardy, Jones, and Gould (1996) prefaced their text by noting that “one limitation of the book is that, in focusing strongly upon the psychological preparation of *individual* elite performers, it does not seriously consider group dynamics, or other social and organisational factors which might influence performance” (p. 7) and concluded by acknowledging that “elite athletes do not live in a vacuum; they function within a highly complex social and organisational environment, which exerts major influences on them and their performances” (pp. 239–240). Sport psychologists are increasingly researching some of these social influences (Beauchamp & Eys, 2007; Carron, Hausenblas, & Eys, 2005; Jowett & Lavallee, 2007) but the broader organizational context and dynamics have been comparatively underexplored. This is somewhat surprising because a number of psychologists (viz. Fletcher, Hanton, & Mellalieu, 2006; Jones, 2002; Males, 2006; Terry, Hardy, Jones, & Rodgers, 1997; Timson, 2006) have observed that international athletes frequently seek advice from consultants on managing the organizational-related issues that accompany their participation in elite sport.

It has become clear that a need exists to better understand the pivotal role that sport organizations play in preparing athletes for Olympic and world competition. Broadly speaking, sport management researchers have examined governance-level factors, while sport psychology researchers have focused on individual-level factors. Hence, a “twilight zone” has existed which envelops the organizational culture and climate in elite sport, together with how personnel and the environment are managed, and how individuals and the team interact with the broader organization. Fortunately, this blind spot in our understanding is gradually becoming illuminated as researchers have recognized the relevance of organizational functioning in competitive sport. The purpose of this paper is, therefore, to discuss the emergence, application and future of organizational psychology knowledge in elite performance sport. It is hoped that reviewing and synthesizing what is known in this area will help stimulate reflection, provide a conduit through which to better inform practice, and act as a springboard for future development. To this end, the narrative is partitioned into three main sections. The first considers the emergence and significance of organizational issues in athletes’ preparation for and performance in major international competitions. The second discusses the potential application of this knowledge in organizational service delivery in elite sport. The final section offers a selection of promising themes for developing practice and research in this area.

## Emergence

The emergence of organizational psychology in elite sport is the result of a confluence of sport policy factors, such as the necessity for a systematic and strategic approach to elite sport development, and recent psychology research that is increasingly highlighting the impact of organizational-related issues on athletes’ well-being and performance. Whilst sport psychologists in the latter part of the 20th century largely focused on the cognitive determinates of elite performance and viewed athletes largely as “active processors of information” (Jones, 1990, p. 20), the findings of recent work suggest that sport psychologists in the 21st century will need to better understand the organizational impact brought about, at least in part, by the rapid progress in elite sport development and

management. A perusal of the sport psychology literature indicates that the findings of six lines of inquiry point to the salience of organizational issues in elite sport: (a) factors affecting Olympic performance; (b) organizational stress in athletes, coaches and parents; (c) perceptions of roles within sports teams; (d) organizational success factors in sport and business; (e) performance environments in elite sport; and (f) organizational citizenship behavior in sport.

## *Olympic performance factors*

The effects of the “global sporting arms race” are perhaps easiest seen at the quadrennial festival of each Olympiad, namely the Olympic Games. Some athletes and teams thrive in this arena and attain peak performances, while others with similar talent and preparation falter and under-perform. In an attempt to better understand why this occurs, the United States Olympic Committee (USOC) commissioned a large-scale evaluative research project designed to discern the positive and negative factors that influence Olympic performance (Gould, Greenleaf, Chung, & Guinan, 2002; Gould, Greenleaf, Guinan, Dieffenbach, & McCann, 2001; Gould, Guinan, Greenleaf, & Chung, 2002; Gould, Guinan, Greenleaf, Medbery, & Peterson, 1999; Greenleaf, Gould, & Dieffenbach, 2001). One of the most consistent findings throughout this body of work was that the management of organizational-related issues is a significant distinguishing factor in achieving Olympic success.

The first paper in the research project summarized results from in-depth focus group interviews conducted with Olympic athletes and coaches (Gould et al., 1999). Teams that met or exceeded expectations participated in resident training programs and perceived support. Teams that failed to meet expectations perceived planning and team cohesion problems, faced travel problems, and perceived coaching problems. A second qualitative study used in-depth interviews to explore in greater detail the experiences of Olympic athletes (Greenleaf et al., 2001). Major variables perceived to have positively influenced performance included using support services and support facilitation, and having high quality coaching and positive coach–athlete relationships. Major variables perceived to have negatively influence performance included departing from normal routine, facing media distractions, and encountering coach issues. The third paper in the research project employed surveys with athletes in an effort to determine the frequency and magnitude of the specific variables that they thought influenced their Olympic performance (Gould, Greenleaf, et al., 2002). Results revealed that numerous variables were perceived to influence performance, including several notable organizational factors such as strong cohesion, positive coach–athlete relationships, coach’s ability to deal with crises, coaching expectations, general social support, ticketing arrangements, venue transportation difficulties, and Olympic village distractions. The fourth and final study also adopted surveys but on this occasion with Olympic coaches (Gould, Guinan, et al., 2002). A large number of variables were perceived by coaches to have influenced athlete performances, which included having plans for dealing with distractions, strong team chemistry and cohesion, loud and enthusiastic crowd support, and fair and effective team selection. Perhaps the most important and novel message to emerge from this research project is that, whilst Olympic performance is undoubtedly a multifaceted phenomenon, the organizational culture and climate appears to have a significant impact on competition outcome. Reiterating calls from Hardy and Jones (1994; Hardy et al., 1996; Jones, 1995), Greenleaf et al. (2001) recommended that further research examining the impact of organizational stressors (such as late team selection or NSO politics) on performance is needed.

### *Organizational stress in elite sport*

In 2001, Woodman and Hardy published the first study specifically designed to explore the organizational stressors that elite performers encounter in their preparation for major international competitions. Their work, together with subsequent research also examining British athletes but from a wider range of sports (Fletcher & Hanton, 2003b; Hanton, Fletcher, & Coughlan, 2005), collectively helps to identify the range of environmental demands encountered by world and Olympic performers. Four main organizational categories were examined: environmental issues, personal issues, leadership issues, and team issues. The main environmental issues that emerged were selection, finances, training environment, accommodation, travel, and competition environment. The main personal issues were nutrition, injury, and goals and expectations. The main leadership issues were coaches, and coaching styles. The main team issues were team atmosphere, support network, roles, and communication. A later study by McKay, Niven, Lavalley, and White (2008) broadly supported these findings in a sample of elite British track athletes and highlighted five main stress categories: training issues, negative aspects of interpersonal relationships, governing body factors, environmental conditions in competition, and personal issues related to the organization. In addition to this growing data on performers' experiences, the most recent research in this area indicates that these types of stressors may be an endemic feature of elite sport, since coaches who work with, and parents who support elite athletes both appear to encounter numerous organizational-related demands associated with their roles (Harwood & Knight, 2009; Thelwell, Weston, Greenlees, & Hutchings, 2008).

In recognizing the potential impact of organizational stressors in elite sport, Fletcher and Hanton (2003a; Fletcher et al., 2006) developed a conceptual framework of organizational stressors in sport performers. The empirical foundations of this structure were grounded in data from the fields of sport psychology and organizational science (see, for a review, Cooper, Dewe, & O'Driscoll, 2001). Specifically, the model consists of a three-level hierarchical framework of organizational stress sources. Based largely upon Cooper et al.'s work, the general dimensions were labeled: factors intrinsic to the sport, roles in the sport organization, sport relationships and interpersonal demands, athletic career and performance development issues, and organizational structure and climate of the sport. The stressors encapsulated within these dimensions could be described as the "fallout" from the "global sporting arms race" with the potential to have a devastating affect on elite athletes' well-being and performance (cf. Fletcher et al., 2006). Furthermore, Hanton and Fletcher (2005) questioned whether applied sport psychologists are able to effectively intervene when such issues occur and suggested that, as a profession, we will likely need to broaden our competencies in order to address the overall stress experience in performers (see also Timson, 2006).

### *Roles within sports teams*

A reoccurring theme to emerge from the organizational stress studies is the prominence of individual roles in organizational functioning. Taking its lead from organizational psychology, the research on roles in sport has tended to focus on negative perceptions of role ambiguity, efficacy, conflict, or acceptance (for recent reviews, see Eys, Beauchamp, & Bray, 2006; Eys, Schinke, & Jeffery, 2007). Findings have highlighted the cognitive, affective, and behavioral importance of role perceptions in sports teams; however, the majority of this research has employed nonelite samples.

In one of the few role-related investigations in elite sport, Moore and Collins (1996) used a case study approach to investigate the implications of incongruent perceptions of role responsibilities for individual and team functioning. Elite athletes reported contrasting perceptions of the administrative and social support roles they expected coaches and managers to fulfill, with such conflicts having implications for the execution of duties and team dynamics. Collins, Moore, Mitchell, and Alpress (1999) extended these findings using interviews with physiotherapists operating in international and/or professional sport. They identified a number of key issues in the provision of effective support including the importance of medical and scientific staff roles and their interrelations with coaches and performers. The main issues were role conflict in medical support personnel, conflicts of ethical duty to athletes, and impression management. As a consequence, Collins et al. (1999) recommended that ethical conflicts be tackled and resolved quickly, and that lines of communication, role responsibility, and issues of confidentiality be clarified. Comparable findings were reported by Reid, Stewart, and Thorne (2004) in their reflections on developing multidisciplinary sports science teams in Australian elite sport. Among their recommendations was the importance of clarifying coaches', scientists' and medics' roles, particularly where areas of professional overlap exists. Collectively, these findings suggest that whilst it has become a necessity to 'arm' elite sports teams with multifaceted and multidisciplinary support teams, this development can often create and compound role-related problems in elite sport. It has, therefore, become important for performance management teams (e.g., directors and coaches) and scientific and medical support teams (e.g., physiotherapists and psychologists) to communicate and reinforce their vision for individual roles in order to engender group harmony and optimize organizational functioning.

### *Organizational success factors*

A common feature of the research reviewed so far has been individuals' perceptions of their own experiences and performance. It is, however, important to consider how at a broader level organizations function and succeed in the world of elite sport. With the increasing financial investment at government level, NSOs are becoming more accountable against key performance indicators, not least delivering medals at major international competitions. Recognizing the distinction between performer and organizational achievement, Weinberg and McDermott (2002) designed a study to examine the factors that are critical to organizational success. They interviewed twenty sport and business leaders about their perceptions of organizational effectiveness in the area of group dynamics, including leadership, group cohesion, and communication. Results revealed that most sport and business leaders were in agreement on the factors relating to organizational success. The main leadership factors were: leader characteristics, interpersonal skills, and leadership skills. An important theme to emerge was the ability to flexibly employ various leadership styles, an approach which appears to require interpersonal competencies such as listening, empathy and trust. The main group cohesion factors were: benefits of cohesion, types of cohesion, people enhancing cohesion, techniques fostering cohesion, and barriers to cohesion. These factors highlight the influential role of antecedents (e.g., role acceptance, mutual respect, and a shared vision) and barriers (e.g., personality differences, social pressures, and communication failures) to developing cohesive groups in sport and business. The main communication factors were: message characteristics, communication benefits, communication techniques, and communication barriers. The importance of communication to organizational success was illustrated by the participants citing

numerous examples of how these factors could “make or break” an organization’s effectiveness.

In line with the specific purpose of their research, [Weinberg and McDermott \(2002\)](#) focused their discussion of the results on the similarities between successful sport and business organizations, but what the findings also underscore in the context of this discussion is the importance of performance leadership and management in contemporary elite sport. More specifically, the implication is that head coaches, team managers, and performance directors need to possess an array of complex managerial skills, including the ability to inspire and motivate others, build a unified team of administrators and technical staff, and maintain clear lines of communication. Importantly, these competencies will likely differ from the technical skills typically used by coaches and the political acuity commonly exhibited by directors.

#### *Performance environments*

Building upon much of the research reviewed so far, UK Sport commissioned a study of the performance environment in competitive sport. Adopting a similar approach to Gould and colleagues’ work on Olympic performance factors, [Douglas and Carless \(2006a, 2006b\)](#) interviewed athletes about the personal, lifestyle and environmental factors that affect sporting performance. While the research has a number of significant limitations (e.g., failing to specify the performance level of the sample, over half of the participants being retired at the time of data collection) its findings do highlight the important role of relationships with significant others, access to funding, and communication within the team. More rigorous research conducted by [Pain and Harwood \(2007, 2008\)](#) developed the concept of the performance environment via two studies examining the England youth soccer team. In the first study, data from interviews with players, coaches and support staff revealed that organizational factors were perceived as having both a potentially positive (e.g., planning and preparation for the competition environment and opposition, effective rest, and entertainment time) and negative (e.g., boredom and lack of information about opposition) affect on performance. These findings were supported and extended by [Pain and Harwood \(2008\)](#) using a survey with a larger sample of players, coaches and support staff. This approach enabled data to be collected relating to the extent and magnitude with which environmental factors affected performance. Despite the authors’ assertion that organizational issues had the least impact on performance, a closer examination of the reported data indicates that the opposite is true with factors such as training facilities, role understanding, and inadequate nutrition all influencing performance. This highlights an important point that researchers and practitioners working in this area should clarify; namely, what constitutes the organizational environment in elite sport? Conceptual precision will be critical in the development of valid and reliable measurement instruments in this area, and also the robustness of consultants’ diagnostic tools at an organizational level.

#### *Organizational citizenship behavior*

The final line of inquiry relates to the study of organizational citizenship behavior (OCB) in sport. While to the best of our knowledge there has only been one study (viz. [Aoyagi, Cox, & McGuire, 2008](#)) in this area – which examined athletes performing below elite level – it is included here since it represents a noteworthy example of sport psychology researchers importing organizational psychology knowledge to better understand psychosocial dynamics in athletic groups. [Organ \(1988\)](#) defined OCB as “individual behavior that is discretionary, not directly or

explicitly recognized by the formal rewards system, and that in the aggregate promotes the effective functioning of the organization” (p. 4) and identified five categories of OCB: helping, conscientiousness, sportsmanship, courtesy, and civic virtue. According to [Organ \(1988\)](#), these categories help characterize the actions of individuals who go beyond the expected behavior of their role in contributing to the effectiveness of an organization. In [Aoyagi et al.’s \(2008\)](#) study, athletes from U.S. universities completed a variety of measures to assess OCB, athlete satisfaction, team cohesion, and leadership behavior. Structural equation modeling revealed that leadership was related with cohesion, satisfaction, and OCB; cohesion with OCB; and satisfaction with cohesion. Hence, it appears that the promotion of certain citizenship behaviors amongst athletes and staff can help develop key indicators of organizational functioning that in turn promote overall effectiveness. These promising initial findings suggest that further research is required regarding the applicability of OCB in elite sport contexts.

Before progressing to a discussion of the potential application of this research in elite sport, it is worth noting the trend that emerges in terms of the researchers active in this area and their geographic locations. Specifically: Gould, Weinberg, Cox and their respective colleagues are based in United States of America; Fletcher, Hardy, Harwood, Collins and their respective associates in the United Kingdom; Eys, Beauchamp and their co-workers in Canada; and Reid and her collaborators in Australia. In view of the specific focus of this special edition of the *Psychology of Sport and Exercise*, continental European sport psychologists are conspicuous by their absence and have yet to contribute to the emergence of organizational psychology knowledge in elite sport. This is particularly surprising given the elite sport developments that have occurred in European nations over the past decade ([de Bosscher et al., 2008](#); [Green & Houlihan, 2005](#); [Oakley & Green, 2001](#)) and the likely effect these have had on the psychosocial dynamics of those operating in these country’s sport organizations.

#### **Application**

Despite the growing recognition that organizational-related issues play a pivotal role in elite athletes’ lives, the amount of attention given by sport organizations and psychologists to addressing this area has been limited, particularly when compared to the substantial literature on psychological skills training and performance enhancement strategies (see, for recent reviews, [Krane & Williams, 2006](#); [Vealey, 2007](#)). A number of practitioners have reflected on their experiences of consulting in sport organizations (i.e., [Collins, 2008](#); [Jones, 2002](#); [Neff, 1990](#); [Smith & Johnson, 1990](#)), and others have made recommendations for working effectively in this milieu ([Fletcher et al., 2006](#); [Gardner, 1995](#); [Hanton & Fletcher, 2005](#); [Perna, Neyer, Murphy, Ogilvie, & Murphy, 1995](#); [Poczwardowski, Sherman, & Ravizza, 2004](#); [Woodman & Hardy, 1997](#)), but such commentaries are not only sporadic and scarce in the sport psychology literature, they are also restricted to North American and United Kingdom consultants’ reflections. Furthermore, this work fails to present any empirical data relating to the application of organizational knowledge nor does it attempt to evaluate the psychological or performance outcomes of interventions in this area. Notwithstanding these limitations, this section provides a discussion of the theoretical underpinnings and practical implementation of organizational service delivery in elite sport.

#### *Organization service delivery theory*

As elite sport development has become increasingly complex and sophisticated (cf. [de Bosscher et al., 2008](#); [Green & Houlihan,](#)

2005; Houlihan & Green, 2008), sport psychology service delivery must be considered not only at the individual level but also at intra-group, inter-group and organizational levels. Consequently, it is proposed that service delivery should focus on a number of levels of social aggregation:

- *Organizational level*: Are the sport organizations' policies and strategies conducive to achieving elite sport success? Has the wider sociopolitical and economic environment been understood and taken into account?
- *Inter-group level*: Do the various groups (i.e., administrative, technical and support staff) within the sport organization share a common understanding of the organization's goals, and communicate and co-operate effectively?
- *Intra-group level*: Does the sport organization provide the environment and resources necessary for the members of administrative, technical and support teams to work in unison and effectively?
- *Individual level*: Is each individual role defined in a way that does not create overlap or confusion and are individual needs and competencies considered and managed?

An important aspect of this approach is that these levels of service delivery represent an isomorphic approach to consultancy. Rousseau (1985) states that "isomorphism exists when the same functional relationship can be used to represent constructs at more than one level" (p. 8). Hence, the focus of assessment and intervention will commonly be at multiple levels of the schema, with change cascading down and permeating throughout an organization. An example in elite sport might be a motivational intervention program that aims to change key performance indicators at an organizational level, the motivational climate at a group/team level, and individual performers' goal involvement during training and competition. Another important consultancy consideration is that concepts such as organizational strategy and team readiness should not lead to the erroneous view that sport organizations are independent abstract entities, without recognizing the important functional role of the individuals who compose that organization. To change a sport organization, consultants will need to target the beliefs and behavior of individuals who operate at all layers of the organization. While the role and responsibilities of the chief executive officer will be different to a head coach, which will in turn differ from the team captain, all members of the sport organization will have an impact on its functioning and effectiveness.

#### *Organization service delivery practice*

At this juncture, it is worth exploring some of the practical issues and guidelines relating to the implementation of organizational service delivery. Information in elite sport is relatively scant in this area, but the few accounts that exist (e.g., Gardner, 1995; Myers, 1997; Neff, 1990) tend to highlight the barriers that consultants encounter:

At an organizational level, there exists little respect for what [sport psychologists] do. Recently, I was told a story that (true or not) illustrates all too well this sad point. An influential owner of a professional sports team asked the Olympic Training Center Sports Science people to put together a team of consultants to work with his team during the preseason. At the last minute, the owner canceled the psychologist member of the consulting team and said, "I'll handle that part myself". This is the same burden that applied psychologists have carried for generations – most people seem to believe that anyone can offer helpful counsel to those in need. So why should anyone,

or any organization, expend precious financial resources on sport psychology? (Myers, 1997, p. 466)

There are many reasons why consultants may encounter barriers when attempting to implement organizational-level interventions in elite sport. These appear to relate predominately to a lack of knowledge on the part of senior management, keeping the size of support team staff to manageable levels, the historical emphasis of placing the onus for psychological development on athletes, senior management's beliefs about the impact of the organizational environment on performers, and the financial, legal and political repercussions of making organizational-level changes (Fletcher et al., 2006; Gardner, 1995). According to Gardner (1995), it is not uncommon for personnel within a sport organization to view psychologists in their mental health-psychotherapy capacity and label them as "shrinks". He also notes that a reluctance in elite sport to have large numbers of people involved with the team acts as a further barrier to organizational-level intervention. When elite sport has engaged psychological support, the focus has tended to be on mental skills training to enhance athletes' performance (see, e.g., Gould, Tammen, Murphy, & May, 1989; Hacker, 2000). Our intention here is not to undervalue such individual-orientated approaches but simply to highlight that these may not be sufficient in addressing the expanding needs of those operating in contemporary elite sport. It may be that this situation has arisen due to the heavy bias that exists in many sport psychology accreditation programs toward psychological skills training and performance enhancement techniques (Hanton & Fletcher, 2005; Woodman & Hardy, 2001). Another contributory factor may be that, from a managerial perspective, such strategies are often less costly and can be more readily implemented than longer-term organizational restructuring (Fletcher et al., 2006). Interestingly, Cooper et al. (2001) also suggested that, in the business domain, fear of litigation might have resulted in management abnegating their responsibilities in an attempt to circumvent the legal and political ramifications of excessive organizational strain. Regardless of the specific underlying reasons, a climate and culture has prevailed in elite sport where organizations have tended to resist change when it involved alterations to their practices and procedures.

When organizational-level interventions can be implemented, research from other areas of psychology indicates that they are generally most effective when implemented systematically and as a result of careful monitoring of the environment (Burke, 1993; Ivancevich & Matteson, 1987; Murphy, 1988). The processes of assessment and evaluation are important here. Rather than involving intermittent snapshot analysis, assessment should be an ongoing process of continued analysis that includes self-monitoring, behavioral observation, self-report inventories, survey questionnaires, interviews, and organizational profiling. Turning to the process of evaluation, a range of surveillance indicators and research methods can be employed to assess the impact of organizational interventions on individuals' well-being and performance. These methods should, of course, not only be valid, reliable and feasible but also produce findings that are understandable and meaningful to those operating within the organization. This is particularly important if consultants adopt an "organizational empowerment approach" (Smith & Johnson, 1990) which involves educating one or more individuals within the sport organization to disseminate psychological-related information to others members of the organization. This approach, which appears to have potential to contribute to organizational service delivery in elite sport, involves the consultant overseeing the program and providing ongoing supervision of the organizational change (cf. Perna et al., 1995; Poczwadowski et al., 2004).

Finally, consultants attempting to implement organizational service delivery should remain cognizant of Ravizza's (1988) recommendation that they pay careful attention to the constantly unfolding "organizational politics" within elite sport. Of central importance is identifying the key decision-makers within an organization and the personnel (e.g., performance directors) whose input will likely influence any potential interventions (Gardner, 1995). Hardy et al. (1996) also noted that it is worth identifying who within the organization is receptive to psychological support. The extent of commitment from all layers of the organization – the executive board, managerial committees, technical and support staff, coaches, athletes – to implementing best practice is critical to the success of organizational-level interventions. However, consultants should maneuver with caution in the milieu of organizational politics and not confuse an informed awareness with over involvement:

Effective consultants, then, must become politically astute so they can understand and hopefully circumvent potential politically based problems. However, in the authors' experience, it is usually a grave mistake for consultants to become involved in organizational politics, so being politically astute certainly should not be interpreted as meaning being politically active. (Hardy et al., 1996, pp. 292–293)

## Future

Over a decade ago, Gardner (1995) remarked that "for further development of the knowledge base of sport psychology, it is suggested that greater attention be paid to the literature in the field of organizational psychology" (p. 173) and Jones (2002) later reinforced this point from an elite performance perspective when he observed that "sport has a considerable amount to learn from excellence in business" (p. 279). This has begun to occur in the areas of organizational stress, role dynamics, and organizational citizenship behavior, but many other organizational psychology concepts remain unexplored in the context of elite sport. This section focuses on how developments in this field have the potential to inform policy and training relating to applied sport psychology, and provide some direction for theoretical and research advancement in the psychology of elite sport.

### Policy and training

Whilst being mindful that the knowledge base in this area is in its embryonic stages, it is perhaps timely to reflect upon the implications of research findings for wider policy development. In Britain, as in much of what is now the European Union, the 1990s was a period of great change not only in our understanding of organizational psychology but also in society's determination to manage the risks of stress to individuals and to their organizations. The European Framework Directive on Health and Safety at Work (89/391EEC), which came into force in January 1993, made it mandatory for organizations within its member states to assess the health and safety of its employees. A key obligation of this directive is that employers engage with full consultation and participation rights to workers on matters affecting workplace health and safety (Cartwright & Cooper, 1996). These statutory requirements have far-reaching implications for NSOs and those operating within them, including athletes, coaches and support staff. Those governing and managing elite sport have a duty of care to protect and support the mental well-being of its employees and members.

In addition to these statutory requirements, NSOs also have an ethical obligation to create performance environments which

facilitate individual and group flourishing. This may be undertaken by using the implications of organizational stress and team roles research to inform the development of formal and informal team agreements. For example, athlete charters (cf. Collins et al., 1999) which clearly outline and communicate role expectations and potential sources of strain, have been successfully employed by some NSOs to enhance organizational functioning. In addition, the formulation of psychological contracts (cf. Rousseau, 1996; Rousseau & Schalk, 2000) which represent the beliefs, expectations, and informal obligations between an individual and organization is also an approach which could help to enhance relationship dynamics.

From a training and development perspective, it could be argued that accreditation programs for applied sport psychologists need to better incorporate the techniques and approaches commonly employed by organizational psychologists. For example, the British Association of Sport and Exercise Sciences (BASES) requires prospective accredited practitioners to demonstrate competency in biological psychology – which has very little evidence-base pertaining to elite sport – but no requirements for the demonstration of organizational psychology knowledge or application. The research findings reviewed in this paper, together with consultants' personal reflections (i.e., Jones, 2002; Males, 2006; Terry et al., 1997; Timson, 2006), suggest that this represents a major omission in the training and development of those working in elite sport, and may partly explain why sport psychology remains generally undervalued and poorly received at the highest levels.

### Theory and research

To advance our understanding of organizational psychology in elite sport, there exists an urgent need to develop a measure that accurately reflects the nature of the organizational environment, culture and climate. Careful attention will need to be paid to: (a) the phrasing of items, (b) the scoring of response scales, and (c) the manner in which psychometrics are established. Researchers should be wary of measurement confounding and ensure that inventories do not purport to assess one construct (e.g., an environmental demand) when in reality they tap into another (e.g., an affective emotion). In addition to these psychometric issues, sport psychologists should also attend to the design of organizational-level interventions that are well-grounded in empirical evidence and utilize multi-method approaches. Strategies for conducting organizational-level intervention research do exist and are likely to provide insightful findings (see Briner & Reynolds, 1999; Lammontagne, Louie, Ostry, & Landsbergis, 2007; Richardson & Rothstein, 2008). In terms of the elite sport literature, Hanton and Fletcher (2005) suggested that psychologists consider the following points when conducting evaluations of organizational stress management interventions:

- Identify the stressors within a sport organization and to what extent they cause strain among performers
- Employ multiple methods to assess a range of psychological, physiological and behavioral indexes of strain
- Use experimental or quasi-experimental research designs that ascertain the specific effects of interventions
- Conduct longitudinal evaluations that incorporate a time-series analysis to examine treatment effects and persistence

Two areas of inquiry that merit further research in contemporary elite sport are performance management and organizational resilience. At its simplest, performance management has been conceived as "the means by which individual performance is managed so as to contribute to organizational effectiveness" (Williams & Fletcher, 2002, p. 135). The findings of the research

reviewed here indicate that the way individuals are led and managed will become an increasingly important factor in determining NSO's success in Olympic competition. Related to the notion of performance management is organizational resilience, which can be defined as an organization's propensity to absorb, deflect or exploit the demands on, and threats to, its efficient and effective operation. Since international level sport has never been so competitive, NSOs will likely need to meet the challenges, adversities and changes associated with the developments in elite sport governance. Despite these observations, there is currently no rigorous research that specifically addresses performance management or organizational resiliency in elite sport.

In addition to the research suggestions outlined above, scholars may also benefit by focusing their attention on organizational factors which promote excellence. The findings from several of the studies reviewed here (e.g., Pain & Harwood, 2008; Weinberg & McDermott, 2002) indicate that social cohesion may be a more important component of successful performance environments than task cohesion. Future research should explore the psychosocial mechanisms that mediate, and the individual differences that moderate, the interrelationships between individuals, teams and organizations. For example, the behavioral constructs of positive deviance (Spreitzer & Sonenshein, 2004) and virtuousness (Cameron, 2003) may help better explain the relationship between OCB and organizational functioning. Similarly, the exploration of capacity-based constructs that advocate the importance of social and interpersonal skills, such as emotional intelligence (Salovey & Mayer, 1990) and emotion regulation (Thompson, 1994), may shed light on the individual skills which promote organizational functioning.

Finally, future scholars in this area should consider broadening the research methods they employ since, to date, there has been apparent bias toward qualitative interviews and surveys. Whilst such techniques help chart the organizational landscape and point to its prominent features, the time has come to design longitudinal, and maybe even quasi-experimental, studies of organizational influences in elite sport. Qualitative research still has much to offer this area, but will need to expand beyond the sole use of content analysis techniques to approaches that better capture individuals' experiences in complex organizational transactions (cf. Sparkes, 2002). As alluded to above, well-designed inventories and interventions that target specific indicators of organizational functioning and performance will not only provide a valuable aid for consultants in their work, but also help promote the efficacy of psychological support in elite sport. Indeed, if sport psychology is to become more valued in elite sport, new approaches to knowledge generation are required based on a "problem-solution" approach that is characterized by the inclusion of a wider range of stakeholders and the joint construction of questions. We foresee a future whereby psychological knowledge generation in elite sport is a process involving a continuous feedback loop until a problem is resolved, rather than the traditional linear scientific process that moves from theory to application.

### Concluding remarks

It appears that the "global sporting arms race" has had both positive and negative consequences for those operating in elite sport. A convergence of evidence points to the organizational environment as having the potential to significantly impact on individuals' well-being and performance. It also indicates that the climate and culture in elite sport requires careful and informed management in order to optimize individuals' experiences and organizational flourishing. However, the body of knowledge is still in its early stages and restricted to largely non-European nations.

More research is needed to understand sport organization functioning in continental Europe and the complex relationships between individual, group and organizational performance and effectiveness. Questions remain as to whether applied sport psychologists currently possess the authority and competencies to meaningfully intervene at an organizational level, but for those who overcome these barriers the potential to effect change is considerable. The landscape that has revealed itself to sport psychologists to explore is vast, the opportunities to elucidate the complex relationship between individuals and organizations are inviting, and the research agenda that beckons is exciting.

### References

- Aoyagi, M. W., Cox, R. H., & McGuire, R. T. (2008). Organizational citizenship behavior in sport: relationships with leadership, team cohesion, and athlete satisfaction. *Journal of Applied Sport Psychology, 20*, 25–41.
- Beauchamp, M., & Eys, M. (2007). *Group dynamics advances in sport and exercise psychology: Contemporary themes*. Oxford: Routledge.
- de Bosscher, V., Bingham, J., Shibli, S., van Bottenburg, M., & De Knop, P. (2008). *The global sporting arms race: An international comparative study on sports policy factors leading to international sporting success*. Oxford: Meyer & Meyer.
- Briner, R. B., & Reynolds, S. (1999). The costs, benefits, and limitations of organizational level stress management interventions. *Journal of Organizational Behavior, 20*, 647–664.
- Burke, R. (1993). Organizational-level interventions to reduce occupational stressors. *Work and Stress, 7*, 77–87.
- Cameron, K. S. (2003). Organizational virtuousness and performance. In K. S. Cameron, J. E. Dutton, & R. E. Quinn (Eds.), *Positive organizational scholarship: Foundations of a new discipline* (pp. 48–65). San Francisco: Berrett-Koehler.
- Carron, A. V., Hausenblas, H. A., & Eys, M. A. (2005). *Group dynamics in sport* (3rd ed.). Morgantown, WV: Fitness Information Technology.
- Cartwright, S., & Cooper, C. L. (1996). Public policy and occupational health psychology in Europe. *Journal of Occupational Health Psychology, 1*, 349–361.
- Collins, D. (2008). Running the world-class programme in athletes. *The Psychologist, 21*, 682–683.
- Collins, D. J., Moore, P. M., Mitchell, D., & Alpress, F. (1999). Role conflict and confidentiality in multidisciplinary athlete support programmes. *British Journal of Sports Medicine, 33*, 208–211.
- Cooper, C. L., Dewe, P. J., & O'Driscoll, M. P. (2001). *Organizational stress: A review and critique of theory, research, and applications*. Thousand Oaks, CA: Sage.
- Douglas, K., & Carless, D. (2006a). *Performance environment research: Research report*. London: UK Sport Performance Environment Research.
- Douglas, K., & Carless, D. (2006b). *The performance environment: A study of the personal, lifestyle and environmental factors that affect sporting performance*. London: UK Sport.
- Eys, M. A., Beauchamp, M. R., & Bray, S. R. (2006). A review of team roles in sport. In S. Hanton, & S. D. Mellalieu (Eds.), *Literature reviews in sport psychology* (pp. 227–255). Hauppauge, NY: Nova Science.
- Eys, M. A., Schinckel, R. J., & Jeffery, S. (2007). Role perceptions in sport groups. In M. Beauchamp, & M. Eys (Eds.), *Group dynamics advances in sport and exercise psychology: Contemporary themes*. Oxford: Routledge.
- Fletcher, D., & Hanton, S. (2003a, April). Research in organisational stress and British Olympic athletes: conceptual, theoretical and practical issues. In S.J. Bull (Chair), *Building and supporting an Olympic management team*. Symposium conducted at the meeting of the British Olympic Association Psychology Advisory and Steering Group, Milton Keynes, UK.
- Fletcher, D., & Hanton, S. (2003b). Sources of organizational stress in elite sports performers. *The Sport Psychologist, 17*, 175–195.
- Fletcher, D., Hanton, S., & Mellalieu, S. D. (2006). An organizational stress review: conceptual and theoretical issues in competitive sport. In S. Hanton, & S. D. Mellalieu (Eds.), *Literature reviews in sport psychology* (pp. 321–374). Hauppauge, NY: Nova Science.
- Gardner, F. (1995). The coach and team psychologist: an integrated organizational model. In S. M. Murphy (Ed.), *Sport psychology interventions* (pp. 147–175). Champaign, IL: Human Kinetics.
- Gould, D., Greenleaf, C., Chung, Y. C., & Guinan, D. (2002). A survey of US Atlanta and Nagano Olympians: variables perceived to influence performance. *Research Quarterly for Exercise and Sport, 73*, 175–186.
- Gould, D., Greenleaf, C., Guinan, D., Dieffenbach, K., & McCann, S. (2001). Pursuing performance excellence: lessons learned from Olympic athletes and coaches. *Journal of Excellence, 4*, 21–43.
- Gould, D., Guinan, D., Greenleaf, C., & Chung, Y. C. (2002). A survey of U.S. Olympic coaches: variables perceived to have influenced athlete performances and coach effectiveness. *The Sport Psychologist, 16*, 229–250.
- Gould, D., Guinan, D., Greenleaf, C., Medbery, R., & Peterson, K. (1999). Factors affecting Olympic performance: perceptions of athletes and coaches from more and less successful teams. *The Sport Psychologist, 13*, 371–394.

- Gould, D., Tammen, V., Murphy, S., & May, J. (1989). An examination of US Olympic sport psychology consultants and the services they provide. *The Sport Psychologist*, 3, 300–312.
- Green, M., & Houlihan, B. (2005). *Elite sport development: Policy learning and political priorities*. London: Routledge.
- Greenleaf, C., Gould, D., & Dieffenbach, K. (2001). Factors influencing Olympic performance: interviews with Atlanta and Nagano US Olympians. *Journal of Applied Sport Psychology*, 13, 154–184.
- Hacker, C. M. (2000). Women's World Cup: performance enhancement through mental skills training. *Professional Psychology: Research and Practice*, 31, 363–364.
- Hanton, S., & Fletcher, D. (2005). Organizational stress in competitive sport: more than we bargained for? *International Journal of Sport Psychology*, 36, 273–283.
- Hanton, S., Fletcher, D., & Coughlan, G. (2005). Stress in elite sport performers: a comparative study of competitive and organizational stressors. *Journal of Sports Sciences*, 23, 1129–1141.
- Hardy, L., & Jones, G. (1994). Current issues and future directions for performance related research in sport psychology. *Journal of Sports Sciences*, 12, 61–90.
- Hardy, L., Jones, G., & Gould, D. (1996). *Understanding psychological preparation for sport: Theory and practice of elite performers*. Chichester, UK: Wiley.
- Harwood, C., & Knight, C. (2009). Understanding parental stressors: an investigation of British tennis-parents. *Journal of Sports Sciences*, 27, 339–351.
- Hays, K., Maynard, I., Thomas, O., & Bawden, M. (2007). Sources and types of confidence identified by world class sport performers. *Journal of Applied Sport Psychology*, 19, 434–456.
- Houlihan, B., & Green, M. (Eds.). (2008). *Comparative elite sport development: Systems, structures and public policy*. Oxford, UK: Butterworth-Heinemann.
- Ivancevich, J., & Matteson, M. (1987). Organizational level stress management interventions: a review and recommendations. *Journal of Organizational Behavior Management*, 8, 229–248.
- Jones, G. (1990). A cognitive perspective on the processes underlying the relationship between stress and performance in sport. In G. Jones, & L. Hardy (Eds.), *Stress and performance in sport* (pp. 17–42). Chichester, UK: Wiley.
- Jones, G. (1995). More than just a game: research developments and issues in competitive anxiety in sport. *British Journal of Psychology*, 86, 449–478.
- Jones, G. (2002). Performance excellence: a personal perspective on the link between sport and business. *Journal of Applied Sport Psychology*, 14, 268–281.
- Jowett, S., & Lavallee, D. (2007). *Social psychology in sport*. Champaign, IL: Human Kinetics.
- Krane, V., & Williams, J. M. (2006). Psychological characteristics of peak performance. In J. M. Williams (Ed.), *Applied sport psychology: Personal growth to peak performance* (pp. 207–227). Boston: McGraw-Hill.
- Lamontagne, A. D., Louie, A. M., Ostry, A., & Landsbergis, P. A. (2007). A systematic review of job-stress intervention evaluation literature, 1990–2005. *International Journal of Occupational and Environmental Health*, 13, 268–280.
- McKay, J., Niven, A. G., Lavallee, D., & White, A. (2008). Sources of strain among elite U.K. track athletes. *The Sport Psychologist*, 22, 143–164.
- Males, J. (2006). Reflections on Athens: delivering sport psychology provision at the BOA headquarters. *Sport and Exercise Psychology Review*, 2, 12–16.
- Mallett, C., & Hanrahan, S. (2004). Elite athletes: why does the 'fire' burn so brightly? *Psychology of Sport and Exercise*, 5, 183–200.
- Moore, P. M., & Collins, D. J. (1996). Role conflict in team sports settings. In H. Steinberg, & J. Annett (Eds.), *Workshop report on teamwork*. Leicester, UK: British Psychological Society.
- Murphy, L. (1988). Workplace interventions for stress reduction and prevention. In C. L. Cooper, & R. Payne (Eds.), *Causes, coping and consequences of stress at work* (pp. 301–339). New York: Wiley.
- Myers, A. W. (1997). Sport psychology service to the United States Olympic Festival: an experiential account. *The Sport Psychologist*, 11, 454–468.
- Neff, F. (1990). Delivering sport psychology services to a professional sport organization. *The Sport Psychologist*, 4, 378–385.
- Oakley, B., & Green, M. (2001). The production of Olympic champions: international perspectives on elite sport development. *European Journal for Sport Management*, 8, 83–105.
- Organ, D. W. (1988). *Organizational citizenship behavior: The good soldier syndrome*. Lexington, MA: Lexington Books.
- Pain, M. A., & Harwood, C. G. (2007). The performance environment of the England youth soccer teams. *Journal of Sports Sciences*, 25, 1307–1324.
- Pain, M. A., & Harwood, C. G. (2008). The performance environment of the England youth soccer teams: a quantitative investigation. *Journal of Sports Sciences*, 26, 1157–1169.
- Pensgaard, A. M., & Duda, J. L. (2003). Sydney 2000: the interplay between emotions, coping, and the performance of Olympic-level athletes. *The Sport Psychologist*, 17, 253–267.
- Perna, F. P., Neyer, M., Murphy, S. M., Ogilvie, B. C., & Murphy, A. (1995). Consultations with sport organizations: a cognitive-behavioral model. In S. M. Murphy (Ed.), *Sport psychology interventions* (pp. 235–252). Champaign, IL: Human Kinetics.
- Poczwardowski, A., Sherman, C., & Ravizza, K. (2004). Professional philosophy in the sport psychology service delivery: building on theory and practice. *The Sport Psychologist*, 18, 415–429.
- Ravizza, K. (1988). Gaining entry with athletic personnel for season-long consulting. *The Sport Psychologist*, 2, 234–274.
- Reid, C., Stewart, E., & Thorne, G. (2004). Multidisciplinary sport science teams in elite sport: comprehensive servicing or conflict and confusion? *The Sport Psychologist*, 18, 204–217.
- Richardson, K. M., & Rothstein, H. R. (2008). Effects of occupational stress management intervention programs: a meta-analysis. *Journal of Occupational Health Psychology*, 13, 69–93.
- Rousseau, D. M. (1985). Issues of level in organizational research: multi-level and cross-level perspectives. *Research in Organizational Behavior*, 7, 1–37.
- Rousseau, D. M. (1996). *Psychological contracts in organizations: Understanding written and unwritten agreements*. Newbury Park, CA: Sage.
- Rousseau, D. M., & Schalk, R. (2000). *Psychological contracts in employment: Cross national perspectives*. Thousand Oaks, CA: Sage.
- Salovey, P., & Mayer, J. D. (1990). Emotional intelligence. *Imagination, Cognition, and Personality*, 9, 185–211.
- Smith, R. E., & Johnson, J. (1990). An organizational empowerment approach to consultation in professional baseball. *The Sport Psychologist*, 4, 347–357.
- Sparkes, A. C. (2002). *Telling tales in sport and physical activity*. Champaign, IL: Human Kinetics.
- Spreitzer, G. M., & Sonenshein, S. (2004). Toward the construct definition of positive deviance. *American Behavioral Scientist*, 47, 828–847.
- Terry, P., Hardy, L., Jones, G., & Rodgers, S. (1997). Psychological support. *British Journal of Sports Medicine*, 31, 79.
- Thelwell, R. C., Weston, N. J. V., Greenlees, I. A., & Hutchings, N. (2008). Stressors in elite sport: a coach perspective. *Journal of Sports Sciences*, 26, 905–918.
- Thompson, R. A. (1994). Emotion regulation: a theme in search of definition. In N. A. Fox (Ed.), *The development of emotion regulation and dysregulation: Biological and behavioral aspects. Monographs of the Society for Research in Child Development, Vol. 59* (pp. 25–52).
- Timson, S. (2006). Reflections on Athens: delivering sport psychology at the BOA Cyprus holding camp. *Sport and Exercise Psychology Review*, 2, 20–24.
- Vealey, R. S. (2007). Mental skills training in sport. In G. Tenenbaum, & R. C. Eklund (Eds.), *Handbook of sport psychology* (3rd ed.). Hoboken, NJ: Wiley.
- Weinberg, R., & McDermott, M. (2002). A comparative analysis of sport and business organizations: factors perceived critical for organizational success. *Journal of Applied Sport Psychology*, 14, 282–298.
- Williams, R., & Fletcher, C. (2002). Performance management and organizational effectiveness. In I. T. Robertson, M. Callinan, & D. Bartram (Eds.), *Organizational effectiveness: The role of psychology* (pp. 135–158). Chichester, UK: Wiley.
- Woodman, T., & Hardy, L. (1997, Winter). Getting the management right. *Coaching Focus*, 36, 17–18.
- Woodman, T., & Hardy, L. (2001). A case study of organizational stress in elite sport. *Journal of Applied Sport Psychology*, 13, 207–238.