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**THE LOGISTICAL MANAGEMENT OF THE
ORGANIZATIONAL STRESS OF ELITE “PIPELINE”
ATHLETES: INTERVENTIONS OF NATIONAL
PERFORMANCE DIRECTORS IN AN OLYMPIC YEAR**

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Abstract

Numerous research studies have examined the relationship between organizational stress and organizational effectiveness, especially in relation to athlete performance. The purpose of this case study was to investigate the process by which National Performance Directors (NPDs) of a single U.S. Olympic sport program attempted to prevent and manage the organizational stress of their athletes in preparation for and participation in international competition in an Olympic year. Results indicated the NPDs were aware of the causes of stress identified in the literature. Despite a lack of formalized sport psychology training, the NPDs assumed responsibility for managing these stressors, relying on past personal experience as elite athletes to guide them. Critical to prevention and management of stress were facilitating environments conducive to maximizing athlete performance, creating ample support structures, communicating among constituent groups, and managing relationships through the development of social cohesion.

Introduction

Organizational performance is one of the most important constructs in sports management. Fletcher and Hanton (2003) stressed, “sport organizations and personnel working with elite performers need to be aware of and sensitive to the complex social and organizational environment they are constantly shaping” (p. 193). One key element that is relevant to performance in sport is stress. Stress, and how organizations manage and control stress for athletes, can have considerable effects on the athletes’ behavior both in training and competition. In 1982, Shirom defined the term *organizational stress* as “work-related social psychological stress” (p. 21). It was not until more than a decade later that researchers began to study organizational stress in sport environments. Mirroring Shirom’s definition of organizational stress, Woodman and Hardy (2001) clarified that organizational stress encompasses only the stress that stems directly from an athlete’s relationship with the sport organization. When not managed appropriately, organizational stress can have a detrimental impact on performance (Woodman & Hardy, 2001).

Ioana et al. (2012) warned that stress could lead to an athlete’s inability to concentrate and actively participate in the activity at hand. Adapting to the specific conditions of the competitive environment can also be affected by the presence of stress. Therefore, sport organizations that are serious about supporting athletes at the elite level should pay careful attention to the environment within which their athletes are operating and how their organizational processes minimize negative stress for competitors (Fletcher & Hanton, 2003). This is especially important when it comes to supporting high performance program, or *pipeline* athletes, a subset of elite athletes who some National Governing Bodies (NGB’s) feel have the most realistic chance of making an Olympic team.

Often, the effectiveness of a sport organization is defined by its ability to manage organizational stress. *Organizational effectiveness* refers to an organization’s ability to successfully manage its internal and external affairs and achieve positive outcomes (Richard, Devinney, Yip & Johnson, 2009). In the sport

setting, organizational effectiveness can pertain to the management of team travel, marketing and fundraising efforts, public relations requests, and maximizing athlete performance through coaching, nutrition, injury management, and psychological interventions. Organizational effectiveness can also include aspects of support pertaining to athlete performance such as "...organizational culture, resources and support, communication and atmosphere, long-term planning, internal procedures, activity level, efficiency of throughput process, realization of aims, interest in athletes, and caliber of board and external liaisons" (Hanton, 2011, p. S180). It is believed that effective organizations may have a competitive advantage because athlete distractions are minimized. Research has suggested that organizational stressors can negatively impact athletes' performance specifically when organizations do not provide opportunities to enhance feelings of perceived control (Hanton, Wagstaff, & Fletcher, 2007).

Minimizing stress in elite athletes, especially those select few who are considered as pipeline athletes, has become a focal point for National Performance Directors (NPDs) in sport. Fletcher and Arnold (2011) found that NPDs invest a considerable amount of time in identifying and articulating a vision and argued that it is important for elite sport leaders to not only establish and express a team's ultimate aspiration, but also to disseminate its vision, role model its message, and inspire individuals to invest in it. Similarly, Gould and Maynard's (2009) literature review of research on Olympic athletes suggests that organizational effectiveness and support can have a large influence on the performance of athletes. The findings of this study suggest that successful Olympic athletes generally reported their sport organizations positively impacted their performance through the following: (a) providing appropriate support personnel (i.e., coaching staffs and sport psychologists), (b) facilitating a supportive team atmosphere, (c) helping athletes create realistic performance objectives, and (d) minimizing distractions from sources within the host city.

While there have been several studies that have investigated the sources of organizational stress on elite athletes at international competition (Fletcher & Hanton, 2003; Woodman & Hardy, 2001),

Fletcher and Wagstaff (2009) warned that there is not sufficient research regarding performance management in elite sport. They recommended researchers explore how sport leaders and managers create, optimize, and maintain a high performance environment. Therefore, the purpose of this case study was to investigate the process by which NPDs of a single U.S. Olympic sport program attempted to prevent and manage the organizational stress of their high performance, or pipeline, athletes in preparation for and participation in international competition during an Olympic year. While there have been several studies that have investigated the source of stress on elite pipeline-level athletes, especially at the Olympic Games (Woodman & Hardy, 2001; Fletcher & Hanton, 2003), this study is significant because it is the first to examine the way that NPDs perceived stress and attempted to prevent and manage it within a single Olympic sport program. The exploration of this topic will be valuable for NPDs and other sport managers who deal with competition logistics. While limited to one sport, we feel the results of this study can assist other sport leaders as they attempt to minimize athlete stressors and maximize performances.

Methods

This qualitative study followed an interpretive case study approach. Case studies are defined as an “intensive, holistic” approach to research that provides an “in-depth understanding of a single unit or bounded system” (Baumgartner & Hensley, 2006, p. 210). According to Yin (2003), a case study approach is an appropriate framework to use when investigating an individual organization. Further, case studies analyze people, events, decisions, periods, projects, policies, institutions, and/or other systems that are studied holistically by one or more methods while contextually analyzing a limited number of events or conditions and their relationships (Marshall & Rossman, 2006; Thomas, 2011). Researchers have used the case study research method for many years across a variety of disciplines. Social scientists, in particular, have made wide use of qualitative research methodology to examine contemporary real-life situations and provide the basis for the application of ideas (Yin, 2003). Interpretive paradigms suggest that

the social world is subjective and complex and that "...people define their own realities" (Silk, Andrews, & Mason, 2005, p. 7).

Therefore the interpretive case study approach that we utilized in this study allowed us to investigate the participants' subjective meaning in relation to their experiences of organizational effectiveness and stress.

Participants, Instrumentation and Procedures

We recruited and obtained interviews from two National Performance Directors (NPDs) and a Senior-Level Administrator (SLA) from a single NGB of sport affiliated with and supported by the United States Olympic Committee (USOC). NPD1 had worked with the NGB for six years previous, while NPD2 was in his first year, although he had also served in a similar capacity with another country's NGB for ten years prior to being recruited to come assist the United States' team. Additionally, both NPDs had prior histories of competing in the sport at an elite level. The SLA who participated in this study had been with the organization for 14 years prior to the start of this study, overseeing the sport's administration at both the grassroots and elite levels.

To gain an understanding of the methods used to prevent and manage organizational stress of their pipeline athletes, we used an in-depth, semi-structured interview approach along with participant observation. Prior to data collection, an interview guide was constructed based off of previous research related to the impact of organizational stress on athletes. Areas of specific concern related to (a) organizational issues, (b) environmental issues, (c) personal issues, (d) leadership issues, and (e) team issues (Fletcher & Hanton, 2003; Woodman & Hardy, 2001). The semi-structured interview protocol allowed us to explore specific areas of interest pertaining to the purpose of the study while also allowing for a flexible conversational style interview to occur (Patton, 1990). Interviews were conducted in person at the start of the 2012 international competition season (May) and again at the conclusion of the season (October). In addition to the personal interviews, we were able to observe the NPDs and athletes at three separate international events spread across the 2012 competition season (including the Olympic

Games in London) in order to shed light on information obtained from the onsite, semi-structured interviews. While we were restricted access to the athletes at the events and were only able to observe the interactions of the athletes and NPDs from a distance, we were able to conduct multiple personal onsite interviews with the NPDs at each of the venues, with the exception of the Olympic Games. We were able to interact onsite with the NPDs for no fewer than two days but not more than five days leading up to each event, most often at the team's hotel or at practice venues, and through the day after each event. These interviews lasted anywhere from ten minutes to two hours in length. We recorded and transcribed all interviews and returned those transcripts to the interview participants via electronic mail for verification. The observation techniques used in this study were helpful in triangulating the data acquired from the interviews. According to Patton (1990), observational data permits us to understand a program or treatment to a greater extent when compared to only conducting interviews. Simply stated, detailed researcher observation provided us with the opportunity to identify and make sense of the "complex interactions" that describe a social situation (Marshall & Rossman, 2006, p. 99). As part of the observation, we also recorded field notes during each of our observations. These field notes included both descriptive and reflective content. While the field notes helped us recall some of the specific details surrounding each race day, their usefulness was limited as this study purported to merely examine the way that NPDs perceived stress and their attempt to prevent and manage it. Therefore, the interview transcripts proved to be much more valuable than the field notes in this retrospective study. We were also provided with full access to the NPDs electronic communications with athletes throughout the year. This included all documentation of team and athlete itineraries for the year, coaching and training logs, and travel details. The NPDs also granted us an open line of communication throughout the year, both by phone and e-mail correspondence. To provide additional perspective, the SLA gave us access to the NGB's financial reports and organizational bylaws for review.

Data Analysis

After the participants verified the interview transcripts electronically, a process of a priori coding commenced. This analysis process was deemed appropriate as the purpose of this study was not to build theory but, rather, to investigate and describe the elements of organizational effectiveness and stress that had been predefined in the literature that occurred in this specific case. This is a preliminary step in the theory building process. As Eisenhardt (1989) suggests, “A priori specification of constructs...is valuable because it permits researchers to measure constructs more accurately” (p. 536). The previously identified categories cited by Fletcher and Hanton (2003) and Woodman and Hardy (2001) provided the themes for organizing the interview transcripts. Thus, there were five themes: *Organizational Issues* (subthemes of sport development and support), *Environmental Issues* (subthemes of team selection, finances, training environment, travel, and competition environment), *Personal Issues* (subthemes of nutrition, injury, and goals and expectations), *Leadership Issues* (subthemes of coaching and coaching styles), and *Team Issues* (subthemes of team atmosphere, support networks, and communication). The subthemes presented were also consistent with the a priori themes identified by Fletcher and Hanton (2003) and Woodman and Hardy (2001). Then, we each jotted comments beside the raw content to note salient phrases that related to the a priori categories previously identified. Afterwards, we collaboratively reviewed their independent transcript notes and compared the data across thematic categories. We conducted parallel coding and then solicited the critique of a senior qualitative researcher uninvolved with other aspects of this study to verify the constructs as a quality control measure. No inter-rater reliability statistics were computed, as the goal of this analysis was not to test the investigators’ ability to identify common themes, but to establish a common understanding of the meaning of the various themes through extensive exploration and discussion of the participants’ views and actions. Biddle et al. (2001) suggested that readers should be provided with an opportunity to evaluate and interpret interview data in a way that is most meaningful to them. Therefore, the findings of this study are

presented using both hierarchical content trees and direct quotations. Review of the provided organizational documents and bylaws helped us understand those processes more holistically. Specifically, the bylaws helped provide background information and helped us understand the overarching principles that guided the organization. Other documents, including budgets, financial reports, travel logs, and elite athlete newsletters helped us understand the grand scale of day-to-day operations, including general expenditures, athlete endorsements, travel itineraries, nutritional logs, coaching methods, and Olympic team selection.

Results

As stated, previous research indicated there were five main categories of organizational stress that affected elite athletes: organizational issues, environmental issues, personal issues, leadership issues, and team issues (Woodman & Hardy, 2001; Fletcher & Hanton, 2003). As stated, these overarching themes and subsequent subthemes were specifically targeted during the interview and observation process (Table 1).

Table 1. Thematic Constructs
Examples of Raw Data Themes and Subsequent Subthemes and Major Themes

Raw Data	Sub Theme	Theme
The sport was added to the Olympics in 2000 and it was a game changer.	Sport Development	Organizational Issues
There isn't a strong culture for the sport in the United States.		
There has been a focus on youth and junior oriented programming to help create talent for the future.		
We start 2016 preparation at the same time we are sending our 2012 athletes to the Olympics.		
It helps that our numbers are small.	Support	
In theory you could have a staff of 10, but it's just not practical		
Criteria announced several years in advance.	Team Selection	Environmental Issues
We have right of performance and history of performance.		
Through the Athletes' Advisory Council, the athletes participate in decision-making.	Finances	
Athlete who is more of a medal contender may get more – not always a democracy.		
It's about pre-empting as well as [knowing] who are the individuals on the team and what are their personal traits		
We arranged the travel.	Travel	
Discourage stay at Olympic Village.		
Just entering the village becomes like getting into Fort Knox...		
We try to make things familiar to the athlete.	Competition Environment	
We can only control the things we have control over.		
We reinforce psychological strategies (such as visualization).		
We actually had somebody...who served in our role as being the key nutritionist for our team.	Nutrition	Personal Issues
USOC support	Injury	
We vet and hire local professionals, if needed.		

To consistently produce podium finishes in international competition.		
Most athletes have their own coaches.	Goals & Expectations	
We become their surrogate coach.	Coaching	Leadership Issues
It's just about communicating with athletes' coaches.		
It's about knowing the athletes and knowing what makes them tick.	Coaching Styles	
We [try to] deliver a world-class practice and educate the athlete so they don't have a dependency on the program if we're not there.		
We know the relationship history with each athlete.		
Create a culture around the team...of mutual respect.	Team Atmosphere	Team Issues
I really like the concept of social cohesion as opposed to team cohesion.		
We have many roles to play.		
It's not practical to have a large support structure of personnel.	Support Networks	
We communicate with coach		
Internal communications (Athletes Advisory Committee, team meetings, electronic)	Communication	

Organizational Issues

According to Woodman and Hardy (2001), organizational stress is a construct that describes the “interaction between the individual and the sport organization within which that individual is operating” (p. 208). Therefore, the major theme of Organizational Issues discusses systemic organizational matters that may cause stress for an athlete and impact performance. Within the category of organizational issues, two subthemes were explored. These were (a) sport development, and (b) support.

Sport development. The SLA noted he considered his sport relatively young and said that it had only been included in three Olympic Games (prior to London). NPD1 acknowledged considerable growth of the sport since Olympics inclusion, calling it

a “game changer.” The SLA cited the NGB’s grassroots membership at just over 155,000. Ongoing relationships with the United States Olympic Committee (USOC), including a residency program at the U.S. Olympic Training Center in Colorado Springs, also benefitted the organization and its athletes. Established NGB bylaws guide the organization’s governance. NPD1 felt the sport’s culture in other parts of the world was stronger than in the United States and attributed the lack of development groups to the historical lack of pipeline athlete performance results. The NGB has worked on developing its “High Performance” program in recent years. This program provides coaching and financial support to youth and collegiate aged athletes who meet established performance standards. NPD1 clarified that “we start 2016 preparation at the same time we are sending our 2012 athletes to the Olympics.”

Support. In addition to administrative, membership, marketing and communications, events, and sport development staff, the organization supported two performance directors to oversee logistical management of the NGB’s National Team. Their duties included some coaching. Both NPD1 and NPD2 acknowledged the small number of athletes they work with “helps.” NPD2 summarized the duties of his position related to the Olympic Games:

It’s an overseeing role. It’s a decision-making role at times, and it’s a role to make sure that the athletes and their coaches, who have worked very hard over four years, walk away...knowing that they did everything that they could and the results will be what they be. Having viewed all the races this year and having viewed all the races for the last ten years, I try to put that knowledge into place and make sure that the athletes are ready to go and stick to their plans, that they’re best equipped heading into the race, and, specifically on race day, they’re prepared to handle whatever unfolds during the race.

The NPDs managed other types of funding-related stress in a number of ways. One way was through the provision of support services. One of the NPDs had previously served in a similar capacity in

another country. His experience, he said, helped him identify a wide variety of support services that many pipeline athletes in the sport would like to use for performance. However, he said due to finance issues, such services might not be a realistic use of organizational funding. The NGB had more than 400 athletes it recognized as being *elite*, or worthy of competing against other professionally tiered athletes at some international level. However, not all 400 of those elite athletes were considered by the NGB to be capable of performing well at the highest level of international competition. Approximately 40 of those athletes classified as elite competed internationally in top-tiered events, and 17 were considered by the NGB as *pipeline* athletes, or those the NGB targeted as having the most realistic shot at making their Olympic team, based on their sport's international qualification criteria. Due to the relatively small size of the sport, the NGB only staffed two performance directors to oversee these Olympic prospects. The NPDs were aware that a perceived lack of support personnel could cause stress for certain athletes:

In theory you could have a staff of 10, but it's just not practical.... Although the athletes would like their [own] individual [support personnel], they're pretty quick to point out that [at the NGB] there's maybe more staff than athletes. [They question if] the money is being well spent.

Thus, additional personnel resources (such as sport physiologists and psychologists) were allocated to the NGB by the USOC, as requested and indicated.

Environmental Issues

Within the category of environmental issues, the following subthemes were identified in the literature review to be sources of athlete stress and were therefore addressed: (a) team selection, (b) athlete funding, (c) travel, (d) training environment, and (e) competition environment (Woodman & Hardy, 2001).

Team selection. Since Olympics inclusion in 2000, the NGB had only produced one Olympic medal and had failed to produce

pipeline athletes that consistently ranked among the world's elite. Improvement in this area was clearly identified as a primary focus by both the SLA and the NPDs. The SLA also stated that his organization clearly outlined criteria for athletes to qualify for its National Team, and that criteria was guided by an "Athletes' Advisory Council" (AAC), as mandated by the organization's bylaws. Three athlete directors (which include the two NPDs) and four elite athletes serve as members of the AAC. The purpose of this council was to "broaden communication between [the NGB] and all its athletes" (not just the subset of elite athletes the NGB considers to be pipeline athletes) and to "make recommendations to the Board of Directors on issues related to the needs and concerns of elite athlete members." When discussing National Team program selection, the SLA referred us to the stated goals and objectives of the program:

The goal of the [name of NGB] National Team program is to have consistent podium performances on the international stage at the highest competitive level. It is a three-tiered system which provides administrative, performance, and financial support to assist athletes in achieving optimal results for themselves and the Team at the Olympic Games, Pan Am Games, and [name of world championship events]. The National Team is composed of those athletes with proven performance capability at the most competitive international level and is not intended to serve as a development pathway.

Secondarily, as part of its High Performance Program, which caters mostly to the organization's pipeline athletes, the NGB supported an initiative intended to "bridge the gap between Junior Elite athletes, Collegiate Elite athletes and the National Team Program [current and future pipeline athletes] in the [name of NGB's] pipeline." The SLA reported this program aimed to "prepare athletes for the advancement through each level of [international competition] events...and entry to the National Team Program." Athletes were selected to these programs based on history of athletic performance and established performance standards.

A more specific area of athlete stress that was discussed and subsequently managed by the NPDs and SLA was that of Olympic Team selection. Again, the AAC assisted the NGB in outlining the procedure for team selection. The sport's International Federation (IF) determined the number of Olympic slots each country would have based on world championship rankings and NGB participation at international events, with a maximum allocation of three slots per gender, per country. It was determined by the IF that the United States would be allocated three starting positions for women and two for men.

To address this potential source of athlete stress, the NGB clearly outlined the qualification criteria for the 2012 Olympic Team 18-months prior to the first selection event, a timeline required by the USOC. This process was, in part, further restricted by criteria set forth from the sport's International Federation. In early 2010, the process of team selection was communicated to pipeline athletes in three ways: (a) through the NGB's website, (b) through the NGB's printed national magazine publication, and (c) through a separate publication sent to all elite athletes affiliated with the NGB. The top two performing American athletes in each gender at a pre-determined international event in 2011 were given "automatic" berths on the 2012 Olympic Team, providing they placed in the top nine overall at that event. At another event in early 2012, eligible athletes placing in the top nine at this event would automatically claim the remaining slots. Should fewer American athletes place in the top nine overall than Olympic Team slots available, the NGB would award those slots on a discretionary basis. Going into the 2012 event, the NPDs discussed how the organization had a good idea, based on past performances, which athletes would make the team:

While there are 17 [USA] athletes here...generally speaking the athletes who are most apt to qualify for our team are athletes who we already have down. So, it's very rare in our sport that somebody comes out of nowhere to qualify for the Games.

This performance expectation was a significant factor in managing organizational stress for athletes because these athletes had been working with the NPDs for a long period of time, and therefore the relationships between the two groups were considered strong. As NPD1 stated, “Really for the last two, if not even four years or longer we've been following [those athletes] with a degree of attentiveness to understanding how they work, how they operate, and what they need.”

Athlete funding. Another area frequently related to athlete stress was athlete funding. The NPDs acknowledged considerable expenses were incurred by both the NGBs and by athletes looking to compete at the highest levels. In 2012, the NPDs personally supported approximately 40 High Performance and National Team members at eight international events spread across four continents, and also five athletes at the Olympic Games. The SLA reported total expenses of the NGB to be just under \$11.8 million for 2011 with approximately \$2.2 million directed specifically to its High Performance program. Since the sport was included in the Olympic Games in 2000, the NGB has seen enormous growth in both grassroots and elite membership as well as total revenue. The total dollars spent on the High Performance program has increased substantially over these same years, however, the High Performance allocation in relation to overall NGB expenses has decreased. The SLA also stated that the Athletes Advisory Council participates in decisions regarding funding of specific High Performance athletes, and the AAC has additional athlete representation on the NGB’s Budget Committee.

NPD1 reported that “anywhere between a quarter and a third” of his sport’s funding came from the USOC. The rest of the financial resources were acquired primarily through the sport’s grassroots membership (which consisted of more than 155,000 in 2012) and events (more than 3,500 in 2012), through marketing efforts, and through corporate sponsorship agreements. During the 2012 Olympic year, the NGB had access to five on-campus resident spots in Colorado Springs and also had the ability to fund two off-campus residence spots. Externally funded scholarships provided an additional eight off-campus residences. While off-campus residents

were required to pay their own housing expenses, they were able to have access to train and eat at the Olympic Training Center.

Through the USOC, NPD1 said there was additional funding available for those High Performance athletes considered as “medal contenders.” Such athletes were provided with health insurance plus a “living stipend” or “cash contribution” to help offset the costs with full-time, year-round training. “It’s kind of like when an athlete qualifies for a scholarship at a university and they live off-campus versus on-[campus],” NPD1 said. “They get a set amount that’s supposed to cover living expenses. And so the athlete can use it for rent, or for a car payment, or for gas, or for whatever. It’s to help them not have to worry about having a job on top of it.” Other elite athletes outside that top tier of pipeline athletes received health insurance with a more limited stipend and are forced to solicit private sponsorships to pay the enormous expenses that result from international training and travel. NPD1 explained how his NGB’s partnership with the USOC dictates some facets of athlete funding:

They basically give us one spot per Olympic spot that we could obtain [top level funding]. The third major contribution from the USOC would be providing a residence athlete spot where they have the ability to access and use the Olympic Training Center from a facilities standpoint, room and board, etc. Those are the three key things an athlete might receive from the USOC. The USOC also gives us some funding to run our program. So that’s where our decision-making comes in.

The athletes represented on the National Team had a considerable amount of input related to their own individual funding to supplement living expenses. Prior to the competition season, each athlete’s individual coach presented the NGB with a competition and performance plan that clearly identified what races and training camps they planned to attend and at what cost. The NGB reviewed each proposal to ensure alignment to the organization’s goals and expectations and allocated additional funding, as indicated. NPD1 noted that his organization considered the potential for “performance

and return on investment” as the deciding factors for additional funding requests.

The NPDs frequently discussed a concept called “right of performance” that guided how the organization made decisions about funding certain athletes:

The grant money we get from the USOC coupled with our revenue streams or budget we allocate for our athletes [is distributed] as we see fit for travel to races or [to fund] supporting specialists that might focus on nutrition or biomechanics or dialing in [equipment]. Those would be the areas where we take a look at performance plan for an athlete for a season and identify and determine what are the key, critical races [and] what are the things that [the athletes] really need from a development standpoint or an improvement standpoint or a maintenance standpoint.

Both NPD1 and NPD2 acknowledged an additional fiscal challenge associated with funding other developmental elite athlete programs within their NGB. The SLA reported assistance to this program involved management staffing along with the development of talent through mentorship and coaching relationships. They contended that such developmental programs, which ranged from junior elite programs through post-collegiate elite programs, were vital in order to ensure the NGB’s long-term international success in the sport.

Travel. As noted earlier, the NGB paid for its elite pipeline athletes to travel to top-tiered international competition. This consisted of all travel expenses consistent with the competition and performance plans submitted to the NGB prior to the season, and assistance with travel logistics (airline and hotel). Because the athlete’s trained and resided in cities that spanned the globe, the athletes had the ability to choose their own travel itinerary, but that itinerary had to be approved by the NGB. This approval process gave the NPDs an opportunity to ensure all travel-related stress (such as a lengthy airport layover) was avoided. In most cases, all athletes stayed at the same designated hotel.

Prior to arriving in London, each athlete was provided with a “Performance Guide,” which outlined a number of specific areas of interest. Included in the guide was all information relative to logistics. This included (a) lodging accommodations and contact information, (b) local weather, (c) local currency, (d) airline arrivals and departures of the entire team and support staff, and (e) ground transportation schedules for each athlete for the duration of the trip. Contact information for each athlete and the NGB’s support staff (NPDs, chiropractor, massage therapist, and personal coaches) was also included. Each staffer’s roles and responsibilities were clearly described. General information relative to athlete processing, participation in Opening Ceremonies, allocation of team apparel was also provided along with how the athletes could access the Internet and obtain guest passes to the Olympic Village. Drug testing policies were described in detail. Information surrounding the team’s pre-race “training camp” outside of London was provided, complete with photos of all indoor and outdoor training facilities. Training schedules for each day were meticulously documented, as were London-based schedules leading up to the events. Race information highlighted specifics related to the sport venue, and a list of other competitors (hyperlinked to full athlete profiles) was provided. Finally, an itinerary highlighted the full activities of the team (including meals, training activities, Games-related activities, and media commitments) for each day while in England.

While these guidelines were clearly in place for the athletes, things did not always happen according to plan. In one case, the NPDs were faced with an issue related to the late arrival of one of their athletes to London for the Olympic Games. At the advice of her coach, the athlete elected not to travel to London until three days prior to her event. She forewent the team’s training camp outside of London, choosing instead to do all pre-race preparations in the same European town she resided and trained in year-round. Her flight into London arrived the night before the athletes’ pre-race briefing, and the NGB support staffer who picked her up forgot to bring the athlete’s credential. In order to attend that briefing and have the opportunity to practice at the sport venue the next morning, she needed to have her athlete credential validated. There were only two

sites in London where athletes could have their credentials validated at night. These were at the airport and at the Olympic Village. This meant after the athlete arrived from the airport at the team hotel, she had to be immediately taken to the Olympic Village to have her credential validated. By the time this occurred, it was late at night and she had to navigate through large crowds. NPD1 summarized, “It was a long day of travel for her and then a late night running around. It certainly wasn’t the best situation for her to deal with two days before the biggest race of her life.”

Housing for the Olympics presented unique challenges, as well. While staying at the Olympic Village was an option, the NPDs contended staying there posed enormous logistical issues for training that would inevitably lead to considerable stress and potentially impact performance. Therefore, NPD1 described why the decision was made at the administrative level to not have the athletes stay in the Olympic Village:

Just entering the village becomes like getting into Fort Knox from the standpoint of getting through the metal detectors and having credentials checked and re-checked and triple checked. One of the simple reasons we're not staying in the village for the duration of our competition is the fact that it's kind of hard to leave and come back to the village a number of times throughout the day. If you are going to go out [to train] it's not in a quiet ...friendly environment.... There [might be] some [training] you could do...relatively nearby, but [it would be difficult] for them...to get to the security exit [and] then leave and then get through throngs of people.

Training environment. Another notable source of environmental stress that the NPDs attempted to prevent and manage was that of the training environment. To prepare for the climate and conditions of international settings, the NGB sponsored and promoted “training camps” and “preparation camps” in regions where athletes could train with other international athletes on courses that resembled those they had seen or would see in international competition. These camps occurred throughout the

calendar year, including in the weeks leading up to the Olympic Games.

When managing training activities while at international competition sites, NPD1 noted, “Most of the time achieving performance is anything but easy,” and even though he was only responsible for a total of five athletes at the Olympic Games, he acknowledged it “was about having five different people having five different things going on,” and that it would be “easier to have them all doing the [same] thing but that was not always realistic.

The NPDs were well aware of the various stresses associated with competition environments and how they can potentially impact athlete stress and performance. The NPDs suggested that the staff needed to know each athlete on an individual level in order to manage this stress from an organizational standpoint:

What we work on doing is identifying and evaluating what are the greatest needs to athletes and we provide support mechanisms to cover those. We know there’s not a mold that’s going to work for everyone.... I think one of the big things from the vantage point of the athlete that freaks them out is the unknown. It’s coming in and being out of their comfort zone because of things that don’t know. We really work hard to eliminate some of the unknowns. We come down here and we give them as much information as we can that we think is relevant to [each of] them... we feed that information out so there’s a familiarity before they get here.... It’s about pre-empting as well as [knowing] who are the individuals on the team and what are their personal traits [and] what are the kinds of questions we are going to get from them. We know who gets anxious and who doesn’t get anxious and we know why certain individuals get anxious. So we target certain areas so that we can keep certain people happy in certain areas. Then it’ll be easy [for those athletes].... If we know our athletes correctly then we can pretty easily come up with solutions to things that come up against that we maybe didn’t see coming.

Within the National Team, the performance directors recognized that many of their Olympic prospects had their own competitive coaches. While it was essential to plan team workouts, adapting to the needs of these coaches was also of paramount concern to ensure minimal stress affected each athlete:

If they want to get a general...workout in a day, they may be very comfortable just going out and doing it on their own. They may grab a teammate casually. They may have a personal coach here with them.... So, we make sure they have access to the things they're going to need. And then for the things we think can be more loosely structured, we put the onus of responsibility on them and let them know if they need more structure we can help provide more structure.... With 17 people being coached by, I think, 16 different coaches, there's a little bit of everything thrown in there. So, you kind of provide the basic template so that everyone can paint [his or her] own picture.

Training in foreign countries presented unique challenges. While preparing for the Beijing Olympics in 2008, NPDs said the Olympic chaos along with air pollution proved to be a significant factor that affected the team's ability to train. Because of that, the team traveled to South Korea to finalize race preparations. For the 2012 Games, the NPDs arranged for both the men's and women's teams to stay approximately 40 kilometers southwest of the city of London from the day after the Opening Ceremonies until two days prior to the event. This gave the athletes the opportunity to focus on their training in a more less populated, quiet area. NPD1 had traveled to the area one year prior to the Games to secure the arrangements, which included a hotel, indoor and outdoor training facilities, catering, and a private transport company that would provide athlete, equipment and other personnel transport into and out of the city of London and sport venue. Two days prior to each event, the team moved to and headquartered at a hotel near the sport venue.

Competition environment. When it came to the actual competition, NPD1 again acknowledged that communication with the athletes' coaches was critical:

There [are] some common things that are fundamental, whether it's cues, how do they motivate their athlete, what are the tools the athlete might use or what do they do, what do they use on a daily way that they might need to be reminded on. It might be, 'Have you done your visualization, because your coach tells me that every day you visualize before you [work out]?' So, it's just promoting that stuff and in some cases you get the opportunity to enhance the performance.

Still, NPD2 acknowledged that many things related to race performance are outside of the NPDs control:

You have to hand it over at a certain stage and say, 'We have done everything we can. We have facilitated your needs.' At some point you need to hand it over and say, 'It's up to you now!' That's one of the benchmarks I'll use.... Before the race starts we go over the checklist and ask if we did all the things beforehand that we know contribute to performance. If I can say 'yes', then actually my job is done. If the athletes win, fantastic! If they don't, it's probably something that was on their side of the fence as far as getting ready.

The Olympic environment was reported to be more stressful for athletes. The role of the NPDs was to structure that environment so that it resembled a typical race setting:

It's about continuing routine and keeping it pretty simple and keeping them on track. [You remind the athletes], 'This is what you do', you know, and [help them in] identifying what their needs are. In coming to the Games, it's about creating an environment that addressed all their needs and empowering them.

NPD2 added, “We are sometimes held hostage. We can have the world’s best organization but you can only look as good as your athletes perform.”

Personal Issues

Within the category of personal issues, three subthemes were shown by previous researchers to cause athlete stress. These were (a) nutrition, (b) injury, and (c) goals and expectations (Woodman & Hardy, 2001).

Nutrition. The NPDs each acknowledged that nutrition was a personal choice for their athletes. However, the vast amount of international travel done by the 17 pipeline athletes posed a unique challenge when it came to maintaining consistent diets. As stated, a caterer was contracted for the London Games and provided meals planned by USOC nutritionists three times daily. NPD1 said they concentrated additional attention on making support staff available to the athletes in an effort to help them make appropriate nutritional choices when traveling internationally, including to the Olympic Games:

[In] Beijing, the nutrition aspect was so much different than London. We actually had somebody who happened to be an advisor to an athlete who also used to work for the USOC who served in our role as being the key nutritionist for our team. Because of both the concern about food sourcing and the concern about heat and humidity, he played the role of being the urine analysis person [and tested] hydration at several points during the day for each athlete and [he also] focused on nutrition.

Injury. The NPDs discussed that part of managing this stress is also related to making sure that appropriate medical and physiological support staff are on hand in foreign locations. For the Olympics in London, only five credentials were provided to the NGB. This limited the number of support personnel that could accompany the team. NPD1 said the allocation of those five credentials were to a “team leader, head coach, chiropractor,

massage therapist, and then our fifth one was actually more for the public vs. for us. It was the media person who kind of led the telling of the story.” During non-Olympic international events, such staffers typically did not travel with the team. In those cases, if additional medical support networks were deemed necessary, the NGB chose to find appropriately qualified personnel in the remote setting. NPD2 added, “If I know that someone needs, say, a chiro[practor] once... we get off the plane and, we can [out]source a chiro[practor] locally who speaks English and we've vetted that they're qualified, they're insured, we know they're very capable... setting up those networks [is important].”

Goals and expectations. Another source of stress for athletes that the NPDs discussed for athletes was managing personal goals and expectations. Individual athletes and their coaches consistently managed goals and expectations on a monthly, weekly, and daily basis. However, it became clear that, while in the competition environment, the NPDs also helped athletes manage those goals and expectations. The NPDs said key to accomplishing this was “knowing the individuals [and] knowing what makes them tick.” From a managerial standpoint, however, the NPDs noted the individual goals of athletes also had to be balanced with the goals of the organization:

Within [the] group you might have an athlete who, due to right of performance, is more of a medal contender than someone else.... On race day there will be one person to stand on the top of the podium and ideally...you would like that [to be] your athlete.... Whatever you have invested you [need] to get a return on that investment. So, you do focus on...whatever it takes to maximize the potential and minimize the risk of not getting that performance on race day.

Leadership

Within the category of leadership, the subthemes of (a) coaching and (b) coaching styles were explored. Each was

previously identified as a potential source of stress for elite athletes (Woodman & Hardy, 2001).

Coaching. As stated previously, many of the elite pipeline athletes within the NGB elected to have their own individual coach. Allowing for this and working collaboratively with each coach was viewed as important by the NPDs. One strategy they used was getting to know the coaches personally:

Coaches can be the hardest.... It's knowing the coaches, knowing how they work and how they like to operate, [and] knowing how they operate [with]in their home environment. We pick [the athletes] up when a lot of the work has been done. So, all our job is to, it's not even enhancing, it's actually just trying to replicate what it is that they do well at home so again when they come in it's not foreign.

At events where the athlete's individual coach could not be present, the NPDs assumed the coaching duties. NPD1 referred to this as becoming "surrogate coaches":

We become the person who facilitates what the coach would normally do...you know if they were there. And there are a variety of reasons why coaches actually wouldn't go or the athlete wouldn't want them to go and I think it's one of the things in this organization is creating the opportunities where, especially for the Olympics, and my interest in the Olympics is if you can just replicate what you've done many times before then you probably will have good performance.

NPD2 reiterated the importance of knowing each athlete and his/her unique personality and needs. He stated, "It's just about that concept of making sure there's minimal anxiety here that's in our control. If we know our athletes correctly then we can pretty easily come up with solutions to things that come up against [them] that we maybe didn't see coming." NPD2 added that having insight to the strategies utilized by each athlete's coach also helps:

It's just about communicating with the coach, and there [are] some common things that are fundamental, whether it's cues, how do they motivate their athlete, what are the tools the athlete might use or what do they do, what do they use on a daily way that they might need to be reminded on. It might be, 'Have you done your visualization?' So, it's just promoting that stuff and in some cases you get the opportunity to enhance the performance.

Coaching styles. The NPDs discussed that the athletes and coaches, sometimes, have very unique relationships in that they may not live in the same city. Therefore, some of the coaching occurred via distance (i.e., training plans sent electronically along with telephone communications). At the past two Olympic Games, The NGB's NPDs invited the athletes' personal coaches to come to the event hoping this would have a positive impact on the athlete. However, NPD1 found this sometimes had the opposite effect on some athletes:

There are some athletes who I think benefit from that and some athletes who probably don't benefit from having the coach there. Some of it is time in the sport; some of it is the daily interaction.... We have some coaches who don't live in the same city as their athletes, so the athletes don't deal with them 365 days out of the year. So, all of a sudden they've gone from seeing their coach maybe one day a month or one day every three months, maybe talking regularly, but not...you know, what happens when you throw them in the environment where they're on top of each other 10, 12, 15, 20 days in a row getting ready for the biggest competition of their lives.

NPD2 added the stress of the Olympics added to the challenge faced by the NPDs. He stated,

Not many people step-up in [our sport] but a lot of people step down.... If you want to find someone who wins, you

actually have [to find] someone who doesn't bring anything more on [Olympic] race day than what they've done [at other competitions]. There are many athletes who, for whatever reason, under the pressure of the Games, which is a really unique environment, [fail to perform well].... There are variables that you've just got to have a plan for - every single one. You always hope that you don't ever have to deal with that, but you've got an answer for every scenario. Rehearsal is the key and that's why it's good to have the coaches [at the Olympics].

One aspect of coaching style discussed by the NPDs was the need they felt to help their athletes become more independent and to develop skills to manage their own stress and issues that happen in competition settings. As NPD2 said, "At some point you need to hand it over and say, 'It's up to you now!'" This level of leadership transcends into mentoring and helping to create athletes who are mentally prepared for the stressful events that they will encounter when racing on an international circuit. The NPDs discussed the concept of wanting the athletes to be able to function and perform well in high stress situations even when their coach or the NPDs were not there to support them. NPD2 clarified, "I'm not big on dependency, so you want to have that environment so that if something happens and their coach isn't there that the athlete isn't dependent on the coach."

While the concept of managing athlete stress was described as a complex and dynamic issue, it was singly focused on athlete success. Each of the NPDs discussed how this leadership leads to athlete success by helping to eliminate or control the pressures of the competitive environment. The ways in which NPDs work with athletes to manage the unique types of stress associated with the magnitude of the Olympic Games aligned nicely to the concept of creating an independent athlete. NPD2 mentioned, "People get... a bit star-struck by it and they tend [to] veer away from what they [normally] do. And so you start saying, 'Why are you doing that because you never do that?'" There can also be added stressors that arise once the athlete leaves the NPD and enters "the clean zone"

where only those with athlete credentials can go. According to NPD2, it is an ongoing challenge in sport psychology:

So, you know, how do [we get] the athletes [to] get on the start line [and be] immune to the pressures and the uniqueness of the Olympics in a negative sense [while experiencing]...double the positives.... so that [to them] it just feels like it's another event where they can just [compete] to the best of their ability.

Team Issues

The final major theme to emerge from the interviews was the concept of managing team issues. Within this theme, three subthemes were explored. These consisted of (a) team atmosphere, (b) support networks, and (c) communication (Woodman & Hardy, 2001).

Team atmosphere. While their sport is contested individually, there were team elements that posed unique challenges for the NPDs. These contradictory factors had the potential to create issues with social and team cohesion, especially when athletes were competing for highly coveted spots on the Olympic Team.

NPD2 discussed how this team component was managed by helping the athletes develop a sense of social empathy. He stated, "It's just about creating respect and empathy across your peers what would you do and what would you like to have done in that situation? It's a real mutual thing across your peers." Further, both NPDs suggested that creating an effective social environment for the athletes is also based on a level of trust that the athlete knows the organization has the best interest of the athlete at heart. NPD2 said, "You create a culture around the team that everyone knows that we've got their best interests at heart and we're going to do the best we can at getting them to the races and putting them on the start line ready for the best performance they can.... The reality is that it's about the athletes."

However, this empathic approach was not always realistic and, therefore, managing team dynamics and the stress involved sometimes became quite complex. Again, the NPDs mentioned that

knowing the athletes on an individual level and carefully monitoring the social environment helps them avoid creating undue stress for athletes:

There may be two athletes who whether you know it or don't, and hopefully you do, that those athletes wouldn't be the best roommates for one another. [You have to make] sure you understand the situation. Some things are unpredictable or unknown. You roll a van up, or two vans up, and the two people that probably hate each other the most, and [you] end up with one bench left and they end up having to sit next to each other. I mean, some things you can control like roommate situations and some you can't, like that. Just being aware and being alert and be able to look around and see and evaluate the environment to understand and know the issues and be as pre-emptive as possible to eliminate those factors that could cause problems [is important].

During major competition such as the Olympic Games, the NPDs mentioned that the social cohesion can serve as a unique and positive source for performance if all of these factors are managed well:

It's driven by this common denominator, and that's the beauty of going to the [Olympic] Games and [it is] also the pressure of going to the Games. It actually unites the group around the realities of what it [means] to go to an Olympic Games. For most groups, actually...it is a bond that's hard to explain that actually enhances things.

Support networks. As stated earlier, funding dictated the provision of support networks, in particular in areas of medical and physiological support. The NPDs contended that considerable cost could arise from the provision of additional support personnel for the athlete. While most athletes require minimal outside support, NPD1 said he had some athletes who needed a more robust mechanism of support. This included access to biomechanists, personal chefs and sport psychologists. Some athletes he has worked with in the past

needed as many as 15 people in their support network, while others find two or three sufficient. Again, understanding each athlete's needs was critical to the NPDs ability to optimally support them, as was ample communication with each athlete's private coach.

Accommodating the needs and desires of the athletes' families also became a focal point for the NPDs. While accessibility to the athletes and to the races seemed easy to obtain during two of the international competitions, this was not the case at the Olympic Games. In London, we recognized the limitations of the NPDs in this area. With five athletes competing and tickets scarce, athletes' families were forced to view the competitions from public areas. Often, this meant competing with more than a million spectators for optimal vantage points of the race.

Communication. As repeated throughout this paper, communication between the NGB, the NPDs and the athletes and athletes' coaches was critical. Methods of communication varied. Representation on the Athletes' Advisory Council and monthly meetings of the AAC ensured ongoing, two-way communication between the National Team members and the NGB's administration.

Communication between the NGB, its NPDs, the athletes, and the athletes' coaches was on going throughout the year. The geographic diversity of the athletes posed a challenge. NPD1 explained there were four primary methods of communication. First, a monthly newsletter was sent electronically to all elite athletes. This newsletter highlighted program updates, issues related to rules and or IF sport governance, event information, and changes in NGB protocols and/or staffing. Second, mass marketing materials were distributed quarterly and mailed to all the NGB's members. These publications highlighted programs, event results, organizational issues, and provided athlete features. The materials were posted on the organization's website, as well. Third, the NPDs met with each National Team athlete and his/her coach on a monthly basis. Each athlete and his/her coach was required to provide monthly status updates. NPD1 referred to this as "guaranteed monthly contact." Fourth, additional communication was administered either in person or by phone and sent electronically to elite athletes. In many cases, this communication was related to event specific topics.

Discussion

The purpose of this case study was to investigate the process by which NPDs of a single U.S. Olympic sport program attempted to prevent and manage the organizational stress of their high performance athletes in preparation for and participation in international competition in an Olympic year. Previous research has identified main inhibitors of athlete success were lack of funding, facilities, sports science and medical support, specialist high-level coaching, team structure and organization, training and competition, and lifestyle (Duffy, Lyons, Moran, Warrington & McManus, 2006; Fletcher & Hanton; 2003; Woodman & Hardy, 2001). All of these areas were confirmed as sources of stress targeted by the NPDs in our study.

In order to fully contextualize the results of this study, it is important to understand the growth of the sport that was studied and how that growth has impacted the NGB's philosophy on preparing athletes. As noted, the sport was added to the Olympic program in 2000, and since that time, the organization had evolved from an unstructured, almost *laissez faire* approach to a highly structured, business-like approach. In that time, the organization has also evolved its ability to be effective in the areas of team travel, marketing and fundraising efforts, public relations requests, and maximizing athlete performance through coaching, nutrition, injury management, and psychological interventions. As such, we should also be reminded of Gould and Maynard's (2009) review of literature on Olympic athletes that suggested (a) providing appropriate support personnel (i.e., sport psychologists and coaching staff), (b) facilitating a supportive team atmosphere, (c) helping athletes create realistic performance objectives, and (d) minimizing distractions from sources within the host city can help to reduce athlete stress and maximize performance outcomes.

Researchers have suggested that organizational structure provides an essential function in optimizing athlete success. It has even been suggested that ineffective sport organizations compromise athletic performance (Lee, Christopher, Fletcher & Hanton, 2007). In their study of performance leadership and management in elite sport, Fletcher and Arnold (2011) discovered that one of the main roles of

a NPD was the management operations within the team, involving financial management, strategic competition and training planning, athlete selection for competition and upholding rules and regulations. Thus, NPDs have a critical role in not only managing their High Performance Program development but also in optimizing resources and processes. The results of this study supported this notion. Both NPDs employed with the NGB noted previous experience as an elite athlete. This is congruent with the findings of previous researchers who found that, “coach credibility (e.g. elite status and knowledge), reciprocal trust and respect, understanding the athlete’s needs and responding accordingly, and caring about an athlete as a person and not just a performer” were critical factors in building coach-athlete relationships (Gould & Maynard, 2009, p. 1398). The NPDs discussed a high level of concern with clarifying athlete selection for the both the National Team and the Olympic Games, being consistent and fair with athlete compensation, and providing a critical support role when it came to managing and creating a comfortable and well-organized competitive environment that could foster a foundation for athlete success.

Multiple internal and external stakeholders or constituent groups can make competing or conflicting demands, which can in turn pose a threat to an organization’s ability to be effective. The NPDs in this study acknowledged that they were “spread thinly” at times, and that the athletes who consistently performed at higher levels often were the subjects of the most attention. The NGB featured in this study was challenged with the enormous task of managing more than 400 elite athletes in various elite athlete subgroups within the NGB, along with managing the sport’s grassroots operations, which consisted of more than 155,000 members and 3,500 separate domestic events. The SLA of the NGB studied presented a clear hierarchical structure in which elite athlete operations were separate from grassroots operations. Additionally, within its elite athlete structure, focus groups concentrated on the facilitation of athlete development at a variety of age levels, thereby ensuring the continuation of the pipeline for future success. Being able to focus on such a “small” group was cited as being helpful to the NPDs. As indicated by previous research, when organizations are

forced to manage and satisfy the demands of various subgroups, sub-optimal performance may result.

Maximizing Athlete Performance

Gould, Flett, and Bean (2009) purported that cognitive, emotional, and behavioral strategies athletes and teams use is related to optimal psychological states and peak performance. The results of this study suggest that the NPDs of this NGB attempted to help increase the organizational effectiveness, as defined as athlete performance, by helping to manage the factors related to organizational stress for athletes in international competition, including at the Olympic Games. Some of these factors were within the NPDs control, while others were not.

The results of this study certainly suggested that the NGB's NPDs were attempting to create a culture of performance among their athletes while recognizing the sources of organizational stress. These stressors have been well documented in the literature as having a negative impact on athlete, specifically in international athletic settings (Kristiansen & Roberts, 2010). Fletcher and Arnold (2011) predicted that, the "best practice for leading and managing Olympic teams involves the development of a vision, the management of operations, the leadership of people, and the creation of a culture" (p. 236). The NGB attempted to systematically implement an efficient, yet succinct, support structure to manage athlete stress at major international competitions with the overall goal of helping the athletes attain a very high level of success. Such focus on athlete stress has been shown to be a major factor in athlete success and a large component of how an organization fares in international competition (Fletcher & Wagstaff, 2009).

The NGBs ultimate goal of having their athletes perform consistently at the international level left little room for subjective assessment of success. Athlete performance outcomes failed to produce consistent podium finishes in 2012. On the women's side, Americans placed in the top three on three occasions in eight international races. U.S. women finished in the top ten on nine different occasions. On the men's side, no athlete placed among the top three and only three times throughout the season did American

men eclipse the top ten. At the Olympic Games, no American medaled. The top American female finished 4th, while the top American male finished 14th (out of 55 in each field). These data suggest that, since 2008, performance appears to be improving somewhat on the women’s side but diminishing on the men’s side (Table 2)

Table 2

National Team Performance History at International Events

	2009	2010	2011	2012
International Race Top 3 Finishes – Men	1	0	0	0
International Race Top 3 Finishes – Women	0	0	2	3
International Race Top 10 Finishes – Men	5	8	1	3
International Race Top 10 Finishes – Women	8	9	9	9
World Championships Top 3 Finishes – Men	0	0	1	0
World Championships Top 3 Finishes – Women	0	0	1	0
World Championships Top 10 Finishes – Men	1	0	0	0
World Championships Top 10 Finishes – Women	1	1	2	2

One might question whether or not the less-than-desirable performance outcome of the NGB's athletes in 2012 was the result of the organization's inability to minimize athlete stressors. After all, Gould and Maynard (2009) found that more successful teams and athletes were able to prepare themselves mentally to deal with unexpected events and stressors. Gould and Maynard (2009) also reported that, "unsuccessful teams and athletes were found more often to deviate from plans and preparation routines at the Games" (p. 1402). Certainly, the NGB might be able to obtain increased athlete performance if it funded their High Performance program more proportionately. In many sports, money has been known to fuel championships. For example, the Miami Heat of the National Basketball Association (NBA) committed a reported \$208 million in salaries in 2010 to sign superstars LeBron James (\$17.5 million/year) and Chris Bosh (\$17.5 million/year) to join Heat veteran Dwayne Wade (\$17 million/year). In four years, the threesome led the Heat (\$84 million total team salary payout/year) to four NBA finals appearances and two championships. With the recent success, the team is valued at \$770 million, up from \$364 million in 2009. (Forbes, 2014a). In NASCAR, Rick Hendrick fuels his five-car Sprint Cup race team with a reported \$18.6 million a year. In the past seven years, he has amassed six Sprint Cup championships (all won by driver Jimmie Johnson's car) and the value of his operation is a reported \$348 million, according to Forbes (2014b). The Los Angeles Dodgers of Major League Baseball (MLB) doubled their 2012 payroll and doled out \$230 million in player salaries in 2013 and \$217 million in 2014. The move has certainly made the Dodgers more competitive in the MLB. The New York Yankees have a history of having the highest MLB payroll, at just over \$228 million in 2014, while the Houston Astros have the league's lowest, at just over \$26 million. Records speak for themselves: the Yankees have been a perennial powerhouse; the Astros have not made it to the postseason since 2005 (Los Angeles Times, 2014).

Nonprofit organizations like NGBs are limited in their ability to generate revenue, however. Because of this, they have limited financial resources. In 2012, the USOC paid out a total of just over

\$23 million in grants to support the athletes involved in high performance programs within its 37 summer NGBs (31 of which were Olympic programs). This direct athlete support included stipends for some athletes, health insurance, prize money for top place finishes, and tuition assistance for some of those athletes pursuing a college degree. Most athlete stipends range between \$400 and \$2,000 per month (Crumpton, 2013). The amount of funding is typically based on individual athlete results and what the USOC or NGB's performance directors deem as the athlete's potential. The USOC also awards cash incentives for athletes who medal at an Olympic Games: \$25,000 for gold, \$15,000 for silver, and \$10,000 for bronze, but these prizes are hardly the pay day athletes like LeBron James, Chris Bosh or Dwayne Wade see simply by playing a single season game.

The USOC's total expenses in 2012 were \$249 million, with \$101 million of that directed towards Sport Programming and \$74 million allotted to NGB support (United States Olympic Committee, 2014). With their allowance, each NGB has the option of paying additional athlete stipends, although the vast majority of their money is also directed towards supporting their sport programming efforts and facilitating training centers. Three priority categories determine the amount of USOC funding. In the order of those that receive the most funding, they are (a) those NGBs characterized as *foundation* organizations whose athletes can generate the most medals at an Olympic Games, (b) those NGBs described as *medal opportunities* whose athletes have a legitimate chance at earning some medals at an Olympic Games, and (c) those NGBs described as *development* organizations whose athletes are unlikely to medal. It is important to note, also, that NGBs, as non-profit organizations, also have the ability to generate their own additional revenue through independent sponsorships and fundraising efforts (Crumpton, 2013).

Given the additional monetary resources the NGB in this study received from the USOC prior to the 2012 Olympic Games, their athletes could be exposed with greater training opportunities, a larger array of support personnel and services, and additional stipends. Such resources could potentially attract more elite pipeline-worthy athletes to the sport, and they could further enhance

developmental programs. But, even though none of their athletes stood atop the podium at the end of the season, NPD1 was satisfied with their overall performance of the athletes and the communication and quality of support provided to them. As evidence, he pointed to the NPDs ability to address individual differences among the athletes and meet each athlete's individual and unique needs, all while balancing the needs and chemistry of the team.

One key to success is the ability of an athlete to control his or her own response to stress. Taylor, Gould, and Rolo (2008) studied 176 members of the U.S. team at the 2000 Sydney Olympic Games and found that medalists exhibited greater emotional control and automaticity, or habitual patterning, than non-medalists. The NPDs interviewed for this study recognized the additional stress that can surround an athlete while participating in the Olympic Games. They reported a history of observing athletes under stress and understood their role in preparing athletes for "unknown" variables. The NPDs also understood their responsibility to help athletes develop coping strategies to deal with these psychological stressors. Preparing and encouraging their athletes to psychologically adapt to high-pressure situations was critical; automaticity was encouraged. Additionally, the NGBs worked to create a consistent routine for their athletes in the hopes of preventing additional (especially Olympic-related) stress.

The Role of Communication

Throughout the NGB structure, communication was stressed. Both Woodman and Hardy (2001) and Fletcher and Hanton (2003) pointed to a lack of communication between the athletes and managers as a cause of significant athlete stress, along with "perceived unfairness" in the selection process and "ambiguous selection criteria" (Fletcher & Hanton, p. 181). Certainly, the representation of elite (including pipeline) athletes in NGB's decision-making regarding funding, travel and team selection along with the representation of the NPDs on the Athletes' Advisory Council helped to minimize some athlete stress. The four-tiered approach to communication, which stressed monthly contact between the NPDs and the athletes and their coaches, provided

similar prevention. Similarly, the management team and athletes shared responsibility in terms of the development of the NGB's vision. This supported Fletcher and Arnold's (2011) assertion that such collective input would stimulate shared ownership within the organization (Fletcher & Arnold, 2011).

Managing Relationships/Creating Social Cohesion

One interesting factor discussed by the participants in this study was helping athletes manage relationships. The NPDs discussed the importance of creating an environment that was socially cohesive and could help foster the development of both the individual athlete and the organization. Decreasing the stress that can inevitably hurt interpersonal relationships and have a negative effect on professional performance was also cited as an integral part of the NPDs duties (Hall, Hall & Abaci, 1997). This finding was consistent with previous researchers who suggested the creation of the team's culture was viewed as central to effective performance leadership and management (Fletcher and Arnold, 2011). Gould and Maynard (2009) reported that, "team cohesion and harmony factors were identified by athletes and coaches as critical for Olympic success" (p. 1403). The participating NPDs placed great focus on cultivating positive relationships. These relationships consisted of those with coaches from outside the NGB and those with other athletes inside the organization.

In an attempt to help alleviate some of the stress that the athletes may have experienced while negotiating social dynamics, the NPDs described how they attempted to create a productive training and social environment for the athletes by getting to know them as individuals and also by monitoring the social situation closely while at international competitions. Further, they mentioned that they attempted to encourage athlete empathy as much as possible so that the athletes could develop a level of accountability for each other and for their training environment. These actions are in line with previous research that has suggested that coaches and leaders can positively impact the social and task cohesion of a group by getting to know athletes on a personal level as well as helping

athletes understand their roles and responsibilities in a team environment (Weinberg & Gould, 2010).

As noted, while the sport studied rewarded top individual placements, there were team aspects involved within racing that provided conflicting viewpoints. While researchers have reported that there is a positive level of both task and social cohesion related to performance in team-related (inter-dependent) sports (Verma, Modak, Bhukar, & Khumar, 2012; Tziner, Nicola, & Rizac, 2003), there is less research investigating the impact of social cohesion on the performance of individual sport (intra-dependent) sport athletes. This unique sport context can pose distinctive issues related to the issue of social cohesion. The NPDs in this study felt this was an important construct to understand. Researchers have suggested that athletes respond to organizational stressors, such as the management of athlete relationships, through a highly complex process and tend to reflect deeply upon the personal meaning of the stressors. Further, athletes can also spend valuable time and energy evaluating their resources to deal with that situation (Hanton, Christopher & Fletcher, 2012).

Supporting Structures

While the NPDs assumed the role of surrogates on occasion, coaches external to the organization were cited as those individuals primarily responsible for the skill development of National Team athletes. It was recognized that coaches performed a critical role in athlete development, and it was also noted that those external coaches served as a source of negative stress for athletes, on some occasions. Fletcher and Arnold (2011) found that, “coaches tend to focus on improving athlete or team performance, whereas NPDs are tasked with managing logistics that enable performance development to occur” (p. 235). One of these management tasks was being able to balance the individual needs of an athlete with the goals of the organization.

Outside of helping to negotiate organizational issues and manage relationships, the NPDs interviewed for this study also suggested that they attempted to alleviate athlete anxiety related to organizational stress. These organizational stressors included

managing training facilities on-site at competitions, helping to coordinate outside support through the provision of nutritional guidance and medical support, and organizing housing facilities that limited athlete stress. Again, this was consistent with what researchers say is important when attempting to prevent or manage stress (Gould & Maynard, 2000). The NPDs were keenly aware of the negative impact of organizational stressors and lack of information can have on athletes and managed them as best they could.

Application

This study provided information on how NPDs of a single U.S. Olympic sport program attempted to both prevent and manage elite athletes' stress during international and Olympic competition in 2012. This is unique in that most research has looked at systemic organizational support, but not at how support is provided in a specific sport setting. The information revealed provides insight to the inner workings of NGBs, and more specifically to the roles of NPDs as it pertains to reaching organizational goals of athlete success. It may also provide other NGBs with information on how to provide similar support.

The results of this study point toward three broad applications in sport. First, while alleviating athlete stress is a systemic organizational issue that must be addressed at all levels, the people who have consistent contact with both the athletes and the organizational leaders (such as the NPDs) are those who can, often, assuage stress for athletes most effectively. These entities can do this through honest and open communication about critical issues such as the selection process, being sensitive to team and social dynamics, and by getting to know athletes on an individual level. Second, the results of this study also suggest that those who are in organizational leadership positions take seriously the communication issues that may occur and impede athlete performance. The multi-tiered communication approach utilized by this NGB was successfully implemented. While a limitation of this study was that athletes, themselves, were not interviewed about their sources of stress, the communication strategy used by the NPDs who had

consistent communication with the elite athletes was deemed successful. Finally, in relation to major competitions such as national and world championships and the Olympic Games, the results of this study suggest that organizational leaders should implement a reliable and consistent support structure that includes the management of personal issues (such as travel, training, nutrition, and injury) that athletes may face during these critical contests.

Suggestions for Future Research

Based upon the findings of this study, the authors would suggest further exploration in several areas related to this research. First, given the statistics that show the lack of improved performance, the perceptions the athletes have on this specific NGB's support structures, including its NPDs ability to prevent or manage athlete stress, should be studied. Second, future research should investigate the presence and/or breadth of training National Performance Directors have received in the area of applied sport psychology. This study revealed that NPDs have a clear duty to manage athlete stress by relying a multitude of tactics. The NPDs interviewed for this study both acknowledged not having any formalized training in this area. In that absence, they said they instead relied on personal experience as elite athletes and recalling what worked well for them when they competed. Third, the SLA and NPDs involved with this study acknowledged the relative youth of its sport and the growing pressures placed upon them by the USOC to produce Olympic medal contenders. To this end, in addition to running its grassroots program, the NGB has developed a strongly supported set of developmental High Performance athlete groups who participate in elite international competition, thereby ensuring the continuation of a worthy future pipeline. The long-term benefits of allocating such resources toward development will be evident by future performance outcomes, however it would be interesting to understand the breadth of such efforts. Lastly, sport psychologists may be interested in pursuing correlational research of social/task cohesion in a mixed inter-dependent/intra-dependent sport context.

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