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Competition stress in sport performers: Stressors experienced in the competition environment

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Abstract
We examined the performance and organizational stressors encountered by elite and non-elite athletes within the competition environment. Twelve sport performers (6 elite, 6 non-elite) were interviewed about both performance and organizational-related demands experienced when preparing for competition. The framework presented identifies five performance (i.e. preparation, injury, expectations, self-presentation, and rivalry) and five organizational (i.e. 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) stress sources. A similar quantity of performance (*#PS*) and organizational (*#OS*) stressors were encountered by elite performers ($\#PS = 127$; $\#OS = 72$) as by non-elite athletes ($\#PS = 123$; $\#OS = 74$), with some demands being common and others unique to each group. Although the findings suggest that, prior to competing, sport performers encounter more stressors pertinent to performance than those emanating from the organization, these observations highlight that all the demands faced by athletes should be considered when preparing and implementing interventions to manage competition stress.

Keywords: *Performance, organization, elite, non-elite*

Introduction

Due to the challenging nature of the competitive environment, a substantial amount of research has now been conducted into the experience of stress in sport (Mellalieu, Hanton, & Fletcher, 2006; Woodman & Hardy, 2001a). Studies have focused on identifying the demands (i.e. stressors) encountered by performers (e.g. Gould, Jackson, & Finch, 1993; Noblet & Gifford, 2002; Scanlan, Stein, & Ravizza, 1991), understanding the appraisals and/or coping strategies employed by athletes when experiencing stressors (e.g. Dugdale, Eklund, & Gordon, 2002; Giacobbi, Foore, & Weinberg, 2004; Holt & Hogg, 2002; Nicholls, Holt, & Polman, 2005; Thelwell, Weston, & Greenlees, 2007), and examining the subsequent emotional response to appraisals (e.g. Uphill & Jones, 2007) and competition in general (e.g. Hanin & Syrjä, 1995; Jones & Hanton, 2001; Robazza & Bortoli, 2003; Ruiz & Hanin, 2004).

Several reviews have also been published that evaluate the impact of these, and other, empirical investigations in furthering the understanding of competition stress (e.g. Hanton, Neil, & Mellalieu, 2008; Neil, Fletcher, Hanton, & Mellalieu, 2007). Drawing on the work of Fletcher and colleagues (Fletcher, Hanton, & Mellalieu, 2006), Neil and co-workers observed that stress research in sport is increasingly adopting a transactional perspective (cf. Lazarus, 1991; Lazarus & Folkman, 1984); a conception that considers a more dynamic relationship between an individual and his or her environment, and that may help to better explain how factors within this stress process, such as demands, cognitions, and emotions, affect performance. Performers may experience a number of different emotions, all of which can be preceded by different appraisals of a variety of stressors, and that may have diverse action tendencies (cf. Hanton et al., 2008).

Fletcher et al. (2006) identified a number of conceptual issues that have important implications for study design and data interpretation within the area of competition stress (cf. Neil et al., 2007). One of these issues relates to the stressors that have been presented in the literature. Specifically, some investigations labelled performers' cognitive and

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emotional responses to demands as sources rather than consequences of the stress process. Hanton et al. (2008) highlighted the following examples: *treated unfairly by the coach* (Anshel & Sutarso, 2007), *negative thoughts* (Dugdale et al., 2002), and *anxious about defending because we are anxious to protect the goal* (Holt & Hogg, 2002). Employing such statements as stressors may cloud psychologists' understanding of the stress process because the initial demands that precede such appraisals or emotions could be overlooked.

The conception of stress aside, additional concerns exist regarding the research that has examined the stressors experienced by performers. Specifically, some investigators have not considered the origin of these demands – that is, whether they emanate from competitive or organizational sources (Fletcher et al., 2006; Woodman & Hardy, 2001b). For example, issues that are not normally related to sports performance (e.g. finances) should not be regarded as competitive stressors, although they might be organizational stressors. In contrast, issues directly related to sports performance (e.g. opponents, preparation) are deemed competitive stressors. Consequently, it is pertinent to consider competition stressors that originate from *both* performance and organizational-related sources (Neil et al., 2007), as there may be differences in the cognitive processes underpinning the responses to these demands, which may, therefore, require contrasting interventions (cf. Fletcher & Hanton, 2001, 2003; Hanton, Fletcher, & Coughlan, 2005). Furthermore, through the identification of conceptually accurate competition stressors, practitioners will be better equipped to design suitable primary stress management interventions that attempt to alleviate some of the stressors that occur before a competition.

Turning to the research that has considered the origin of demands, only three studies have conceptually distinguished between, and investigated, both competitive and organizational sources (i.e. Hanton et al., 2005; McKay, Niven, Lavallee, & White, 2008; Thelwell, Weston, Greenlees, & Hutchings, 2008). Using an elite sample, Hanton et al. (2005) found that athletes experienced and recalled more stressors associated with the sport organization than with competitive performance. Between-participants analyses also found that performers identified different organizational stressors but similar competitive stressors. It was argued that these differences were due to organizational demands being essentially extraneous and widely distributed, whereas performance stressors are, by definition, inherent and endemic to elite sport (Hanton et al., 2005). McKay et al. (2008) and Thelwell et al. (2008) also employed elite samples in their attempts to identify the demands encountered by track athletes and coaches respectively. These studies found that participants' recalled similar numbers of performance and organizational stressors, while many demands were unique to each individual.

The findings of the most recent research examining stressors in sport (i.e. Hanton et al., 2005; McKay et al., 2008; Thelwell et al., 2008) have benefited from the conceptual distinction between the specific origins of demands (cf. Fletcher et al., 2006; Neil et al., 2007). However, these studies are limited in that their focus was at a macro level across their participants' entire careers and was also restricted to the experiences of individuals currently operating in elite sport. To elaborate on the macro limitation, the stressors identified were not clearly contextualized within a specific time period. The adoption of a time period that spans the performers' exposure to the competition environment could, therefore, provide more precise insights into performers' pre-competitive experiences, and offer valuable information for further theoretical and practical developments in this area. Furthermore, other researchers in this area have tended to focus on the anxiety response to upcoming performance (Jones, 1995; Woodman & Hardy, 2001a) and have failed to consider the wider range of stressors and potential emotions that may affect an athlete's performance in competition. Research that specifically focuses on the nature of the competition environment is, therefore, needed to better understand the complexity of elite athletes' emotional responses in this arena, and ultimately account for a greater proportion of performance variance. To this end, studies should also go beyond the sole analysis of elite athletes' experiences by investigating the encounters of those competing at a lower level. The main aim of this study, therefore, was to examine the competition stressors encountered by a variety of elite and non-elite sport performers within the competition environment. Due to a lack of information regarding the demands experienced by non-elite performers, a secondary aim was to compare the stressors identified by elite and non-elite performers.

Methods

Participants

Based on the recommendations of Lincoln and Guba (1985) and Patton (2002), participants were sampled purposefully with the intention of providing ''information-rich'' cases whose study would elucidate the research question under investigation. The selection criteria involved maximum variation (heterogeneity) sampling with a matrix created to identify the specific dimensions of sports. This permitted a diverse range of disciplines to be covered by

acknowledging the unique characteristics of each sport. Specifically, by identifying whether the participant competed in a sport that was contact, non-contact, self-paced, externally paced, open skilled, closed skilled, and so on, disparity within each skill level was assured. Patton (2002) highlighted that this method enables the identification of any common patterns (shared experiences) that may emerge from investigating such a varied sample (i.e. different sports). The selection of individuals in this manner also allows for the collection of any unique sporting incidents that each athlete may experience within their context-specific setting.

Twelve athletes deemed worthy of the selection criteria were contacted and invited to participate in this study, all of whom agreed. The participants ranged in age from 19 to 56 years ($M = 23.67$, $s = 10.32$). Six of the participants met the criteria for elite standard as they had competed at major national and international championships, such as United Kingdom (UK), European, and World Championships (see Hanton & Connaughton, 2002). Three of the participants were female, competing in the sports of rowing (participant A), hockey (B), and swimming (C), and three were male, competing in snooker (participant D), rugby union (E), and mountain biking (F). Based on Hanton and Connaughton's suggested criteria, the remaining six participants that completed the sample selection were of non-elite status, with standards ranging from district to UK national schools/university level. These included three females, competing in the sports of soccer (participant G), surf-lifesaving (participant H), and tennis (I), and three males, competing in soccer (participant J), badminton (K), and hockey (L). All participants provided voluntary written informed consent.

Procedure

Preliminary inductive generalization. To identify the stressors apparent in the hour before competition, an interview guide was developed that was based on the extant competition stress literature. This was achieved through several stages. First, an extensive search of the competitive stress literature was performed using relevant electronic databases (i.e. Psycharticles, Psychinfo, Sportsdiscus, PubMed, and Science Direct). Articles that had investigated the stressors experienced by sport performers were then reviewed ($N = 43$), with a content analysis undertaken that incorporated the actual demands reported within these studies and the higher-order themes to which the researchers proposed the stressors belonged. This initial process concluded with the production of an exhaustive list of all raw data (i.e. stressors) shown in the respective content analysis. The stressors ($n > 500$) were then categorized into higher-order themes on which interview questions could be based. Specifically, the stressors were analysed using a form of inductive generalization where raw items were generalized into higher-order themes and then into common themes of greatest abstraction of generality (see Gould et al., 1993; Hanton, Cropley, Neil, Mellalieu, & Miles, 2007). In an attempt to validate the themes, triangulation by researcher was sought (see Denzin, 1978). Four sport psychologists trained in qualitative methods independently identified themes and discussed the developed frameworks until agreement was reached. Once consensus on all identified themes had been reached, questions for the interview guide were formed.

Interview guide. Based on the higher-order themes, an interview guide was developed to explore the stressors experienced by performers in the hour before competition. The guide contained two main sections: performance stressors and organizational stressors. Within performance stressors, subsections covered topics relating to physical preparation, mental preparation, technical preparation, tactical preparation, injury, goals, performance problems, pressure, self-presentation, and opponents. The organizational stressors section focused on topics surrounding the coach, team-mates, competitive environment, and external factors such as media and time demands.

A pilot study of the interview guide was conducted with two elite and two non-elite athletes. The purpose of these interviews was to ensure that the interview guide covered all the issues that might contribute to the experience of competition stress and further enable the researcher (i.e. second author) to practice and refine his interview skills and techniques. Advice and guidance on conducting interviews was received from two members of the research team who were trained in qualitative methods to graduate level and possessed recent experience of interviewing sports performers (i.e. Hanton et al., 2007; Mellalieu & Juniper, 2006).

Interview protocol. All interviews were performed face-to-face, tape-recorded, and lasted between 90 and 120 min. Each interview was conducted within the time frame of each performer's competitive season (see Edwards, Kingston, Hardy, & Gould, 2002) and was carried out away from the competitive environment so as to minimize bias (cf. Eddy & Mellalieu, 2003). Using a semi-structured format, each individual was led through an identical set of questions that were asked in a similar manner. However, the structure of the guide did remain sufficiently open and flexible to permit exploration of

factors not recognized by previous research, thus continuing to be emergent even after the data collection had begun (Patton, 2002). Flexibility in the ordering of questions when reacting to and exploring relevant issues at the moment also enhances the fluency of the discussion and the richness of the information gained (Patton, 2002). Based on Patton's recommendations for conducting interviews, clarification (e.g. ''I'm not entirely sure what you mean, could you please go over that again?''), elaboration (e.g. ''Could you please explain that in more detail?''), and general (e.g. ''What affect did that have?'') probes were used to investigate issues in greater depth. At the end of each section, interviewees were asked whether there was anything else they could add concerning what had just been discussed.

Data analysis

The tapes from the interviews were transcribed and yielded 576 pages of text. The transcribed interviews were then formatted for analysis in the *QSR N5* (QSR, 2000), the fifth version of the Non-numerical Unstructured Data Indexing Searching and Theorizing (NUD*IST) software for qualitative data analysis. Data were then analysed through a combination of inductive and deductive content analysis (see Patton, 2002). Specifically, deductive analysis involved the investigator ensuring that answers discussing specific content were related to the question being asked. These questions, in turn, were derived from the inductive generalization procedure that was conducted on the existing competitive stress literature. Through analytic induction (Patton, 2002, p. 493), the responses to each question were then integrated into the original themes identified within the inductive generalization, with any new emergent themes included.

Further inductive analysis involved two investigators who were trained in qualitative methods. Within this procedure, extracts from the transcripts (i.e. quotes representing a meaningful point made by the interviewee) were independently ''sifted out'' and then clustered around common factors, which were then developed into raw data themes (Patton, 2002). This process was then repeated with the identification of further common themes, which resulted in the establishment of first- and second-level dimensions, labelled ''higher-order themes''. For example, the raw stressors ''not enough time to see physiotherapist'' and ''not enough time to complete physical preparation (warm-up)'' were integrated into ''inadequate physical preparation'', which in turn was integrated into physical preparation and then preparation. Based on the current literature (e.g. Hanton et al., 2005), these final emergent themes were then deductively categorized under one of the following two general dimensions: performance stressors and organizational stressors. Once completed, cross-checking and cross-validation of each investigator's analysis was sought, with triangular consensus required for the concluded themes (i.e. by the research group).

For the purpose of this study, a comparative quantitative analysis was included (see Hanton et al., 2005). This procedure involved recording the number of performance stressors (#*PS*) and organizational stressors (#*OS*) reported by elite and non-elite performers, complemented by a frequency analysis to illustrate the number of participants who mentioned each stressor. In addition, the summated number of mentioned stressors (Σ) and the average number of participants mentioning individual performance and organizational stressors (M) were calculated.

Verification and trustworthiness. For the purpose of verification, the findings, including interview transcripts, raw data themes, higher-order themes, and general dimensions, were presented to an independent researcher to act as devil's advocate. This allowed the ''outside'' researcher to read and re-read the findings and question or raise concerns about any of the researchers' interpretations or inferences made through the analysis (cf. Creswell, 1998). For this process, an experienced sport psychologist trained in qualitative interview methods and versed in the competitive stress literature served as an independent researcher. Any comments, concerns or queries raised by the independent researcher regarding the analysis were then acted upon.

In line with guidelines for best qualitative practise (see Murphy, Dingwall, Greatbatch, Parker, & Watson, 1998; Patton, 2002), a reflexive journal was kept by the second author throughout this study. Being reflexive involves self-questioning and self-understanding, an ongoing examination of *what I know* and *how I know it*, with the perspective of the researcher being part of the context for the findings in a qualitative inquiry (Patton, 2002). The analysis of the research data should therefore involve careful reflection upon the ways in which the data have been shaped by the research process itself (Murphy et al., 1998). This allows insight into the researcher's own prior personal and theoretical biases in an attempt to reduce subjectivity and convey authenticity and trustworthiness. The reflexive journal kept by the second author was also presented to the independent researcher, extracts of which included reflections on new demands that were identified and descriptions of how stressors were screened to ensure that they were demands and not appraisals, emotions or behaviours.

Results

A total of 283 distinct performance stressors (#*PS* = 173) and organizational stressors (#*OS* = 110) emerged from the interview transcripts. These were abstracted into 23 higher-order categories and subsequently organized into a coherent and representative framework of performance and organizational stressors (Figures 1–10). Higher-order themes were categorized under one of the following five performance stressor *post hoc* dimensions: preparation, injury, expectation, self-presentation, and rivalry. For organizational stressors, higher-order themes were categorized under one of the following five *post hoc* dimensions: factors intrinsic to the sport, roles in the sport organization, sport relationships and interpersonal demands, athletic career and performance

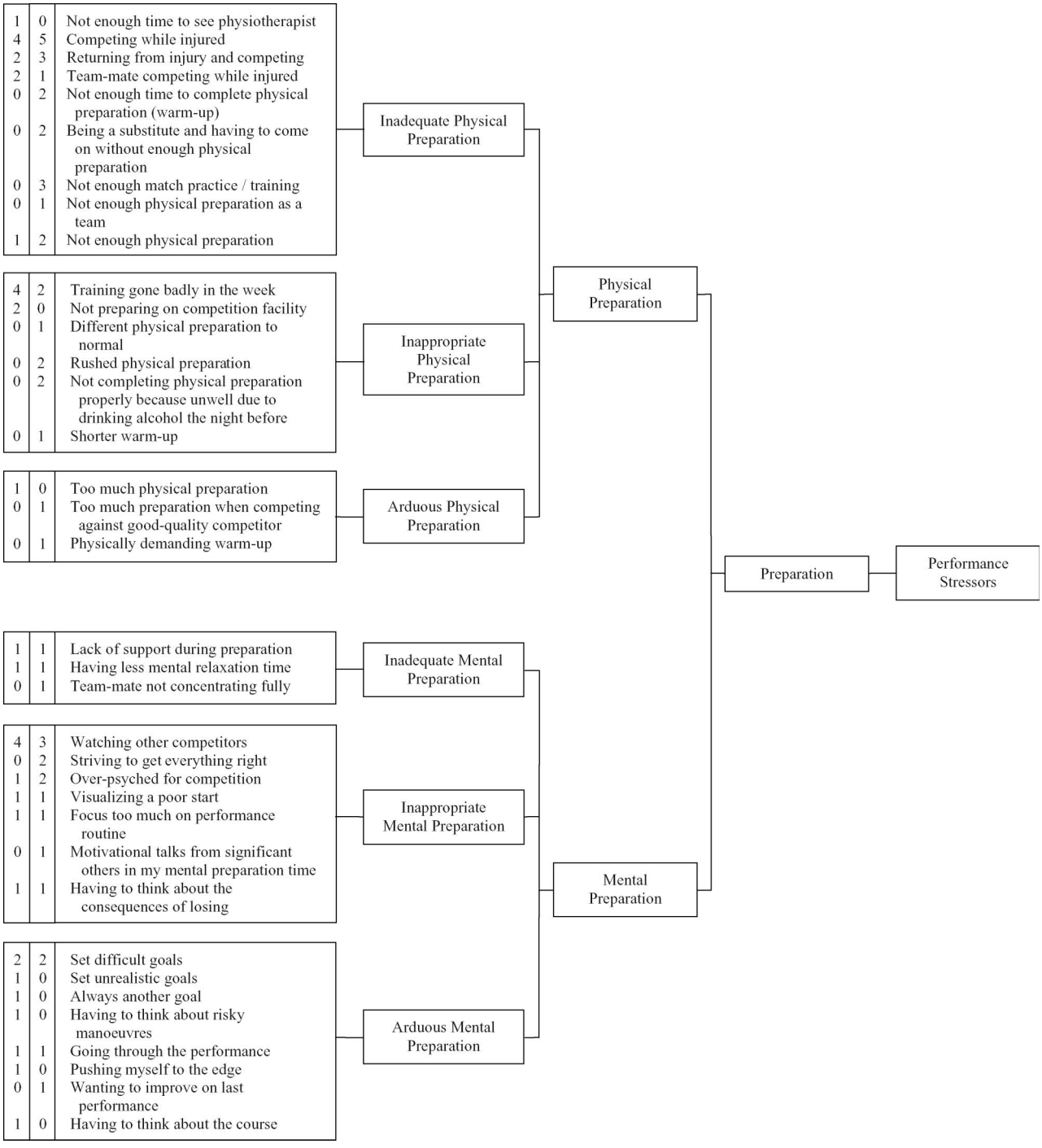

Figure 1. Performance stressors in sport performers: Preparation.

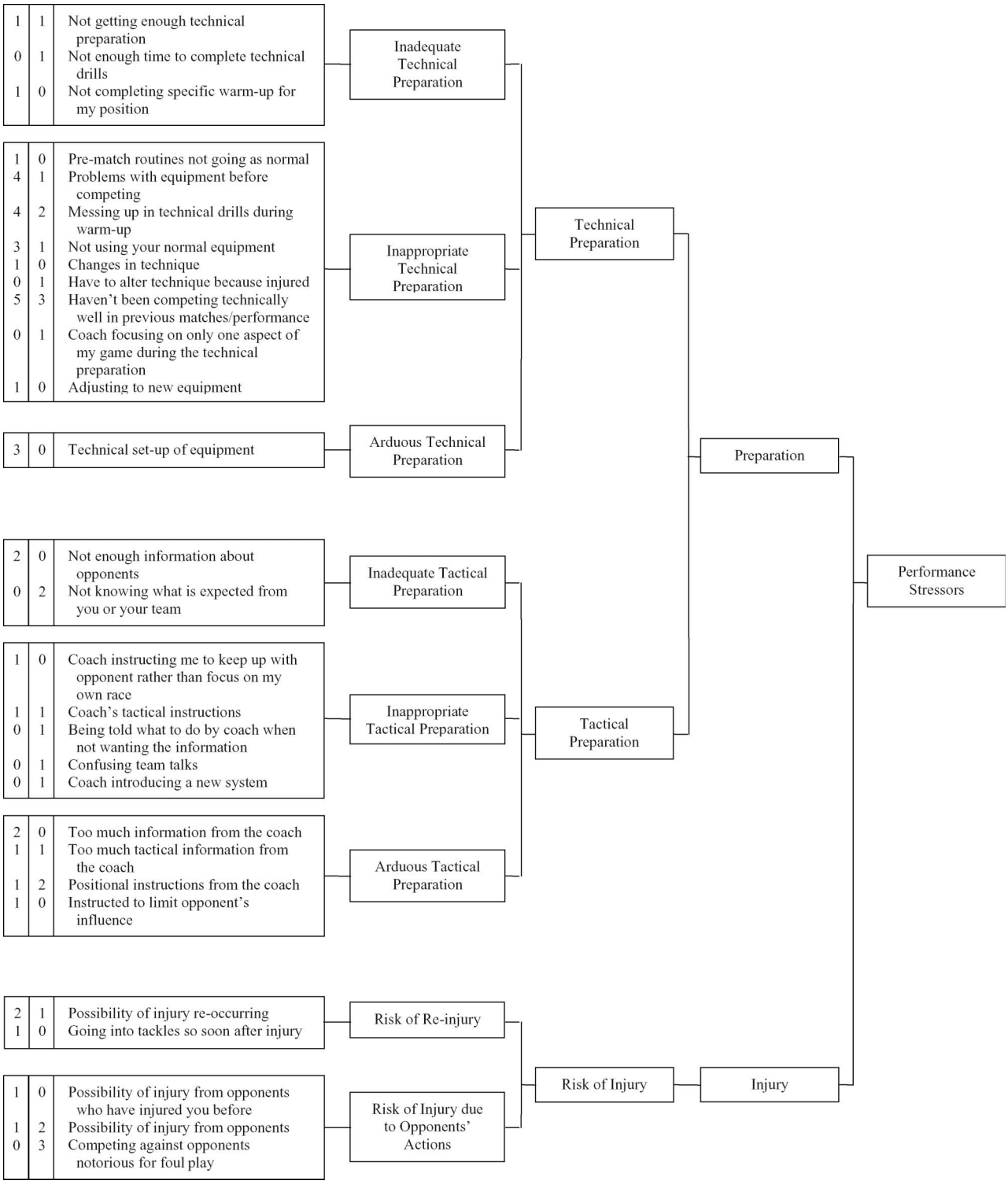

Figure 2. Performance stressors in sport performers: Preparation (continued) and Injury.

development issues, and organizational structure and climate of the sport (Fletcher et al., 2006).

In terms of the number of stressors identified across skill levels, data analysis revealed that elite performers encountered a similar quantity of performance ($\#PS = 127$) and organizational stressors ($\#OS = 72$) as non-elite athletes ($\#PS = 123$; $\#OS = 74$), with some demands being in common and some unique to each group (a frequency analysis is provided in the first two columns of each figure to illustrate the number of elite and non-elite performers mentioning each stressor). The frequency analysis revealed that elite participants mentioned a similar amount of performance ($\Sigma = 213$) and organizational

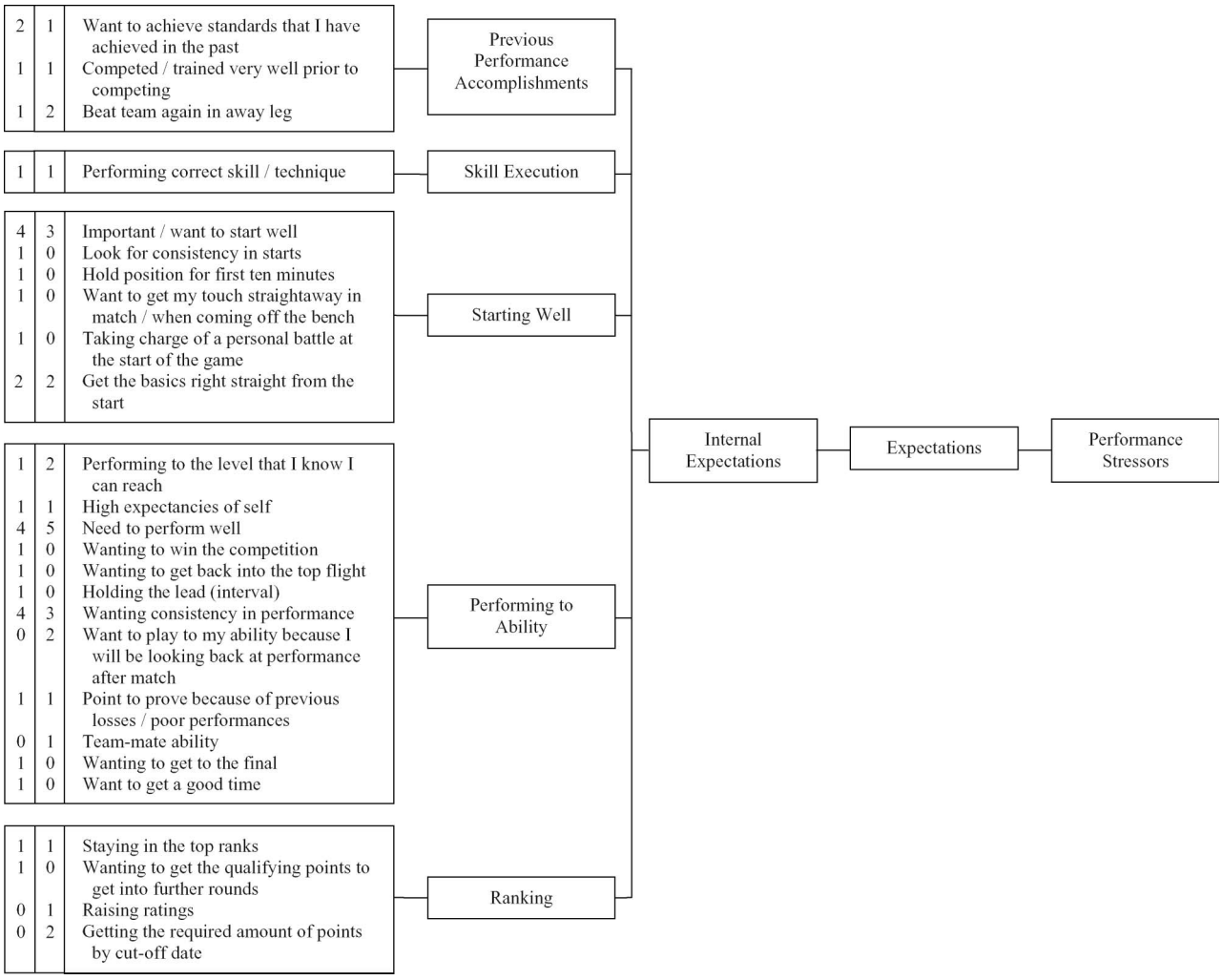

Figure 3. Performance stressors in sport performers: Expectations.

stressors ($\Sigma = 105$) as non-elite athletes (*PS*, $\Sigma = 217$; *OS*, $\Sigma = 115$). Further analysis within these groups showed that the average number of elite performers citing individual performance ($M = 1.68$) and organizational stressors ($M = 1.46$) was similar to non-elite performers (*PS*, $M = 1.76$; *OS*, $M = 1.55$).

The following narrative summarizes the framework presented in Figures 1–10 and includes findings reported largely in the form of ''thick descriptive'' quotes. This method was adopted to facilitate understanding and a feeling of empathy, on the part of the reader, for the context of the performers' stress experience (Creswell, 1998; McKenna & Mutrie, 2003; Patton, 2002).

Performance stressors

The general dimension of performance stressors encompasses all of the demands directly pertaining to competitive performance (see Figures 1–6). The general categories within this dimension were: *Preparation, Injury, Expectations, Self-presentation,* and *Rivalry*.

Preparation was dichotomized into ''physical'', ''mental'', ''technical'', and ''tactical'' preparation. The most frequently cited themes within these categories were ''inadequate physical preparation'' and ''inappropriate technical preparation''. The importance placed on preparing sufficiently appears to be shared by both elite and non-elite performers. The emphasis on preparation is illustrated in the following quote from participant B:

> You are quite wary sometimes if you haven't got the information on the opponent, because you don't know what kind of formation they are going to use and how they are going to play ... and it does put you off a bit, because if you do know about them, you'll go in and you prepare ... you have all the analyses beforehand ... if you haven't got that you do feel a little bare ... you do not know what is going to happen.

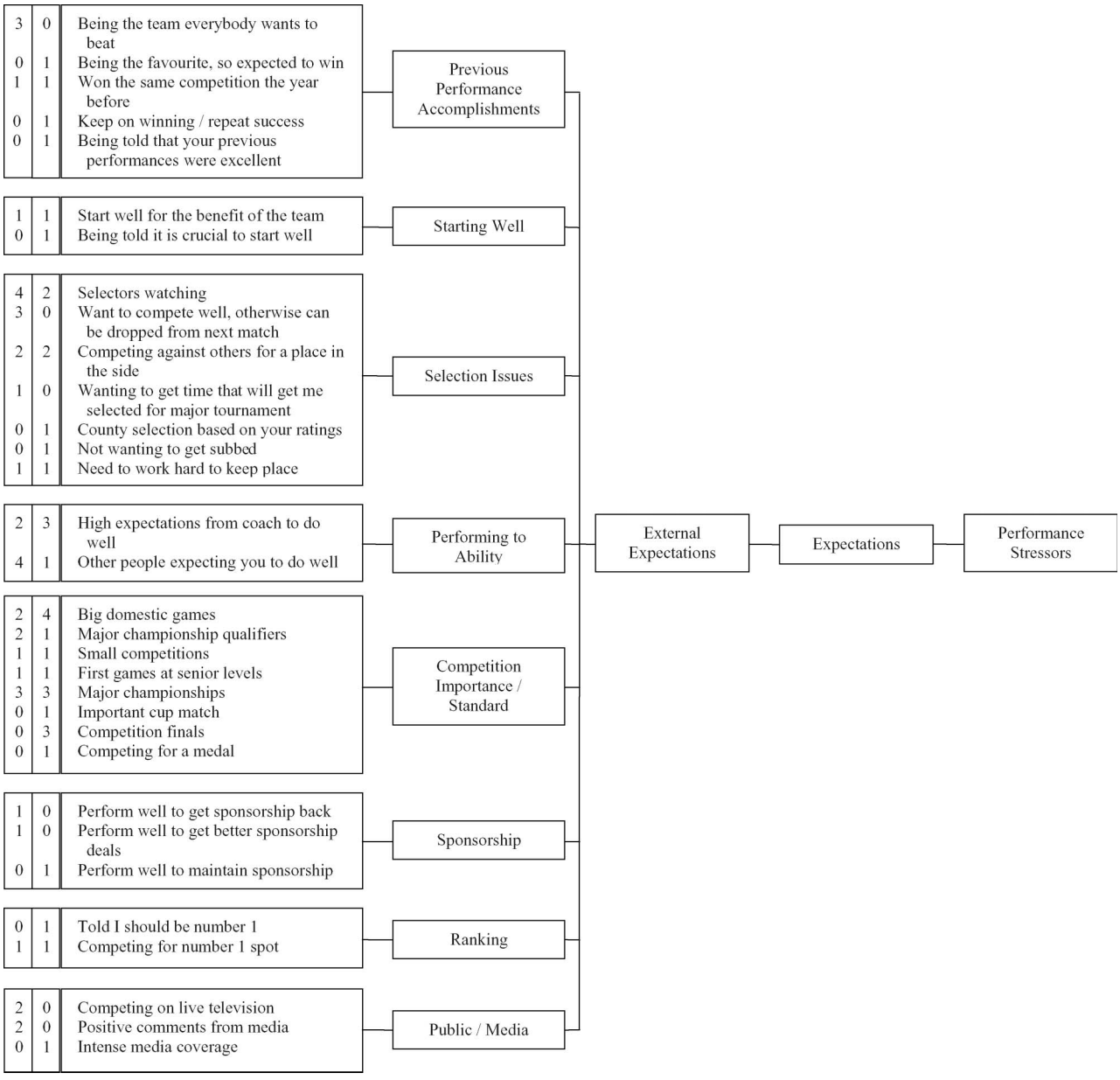

Figure 4. Performance stressors in sport performers: Expectations (continued).

The only higher-order theme within the general category of *Injury* was ''Risk of injury'', with ''risk of injury due to the nature of the sport'' and ''risk of injury due to the opponents' actions'' the only lower-order themes cited. The risk of sustaining an injury was identified as an issue for many performers, especially when competing and currently carrying an injury (quote from participant I):

> I hope they don't give me a lot of backhands, because that is what really hurts. The forehands I can hit all the day, but my backhand hurts just so much and I didn't play much for a while, but in the first match back, obviously I could still run, but I didn't do much, so I got pissed off because all I wanted to do was go and play tennis.

The general category of *Expectations* was broken down into ''internal'' (i.e. stressors that the performer places on his or herself) and ''external expectations'' (i.e. stressors placed on the performer by an external source). The most frequently cited themes were ''performing to ability'', ''competition importance/standard'', and ''selection issues''. Expectations, whether internal or from external sources, are natural in competitive sport, as the following quote from participant G suggests:

> ... especially when it [the expectation] is from the whole team, ''Oh [name], you had a cracking game last week, do it again this week'', and that is when it gets a little bit too much ... because then you put too much pressure on yourself.

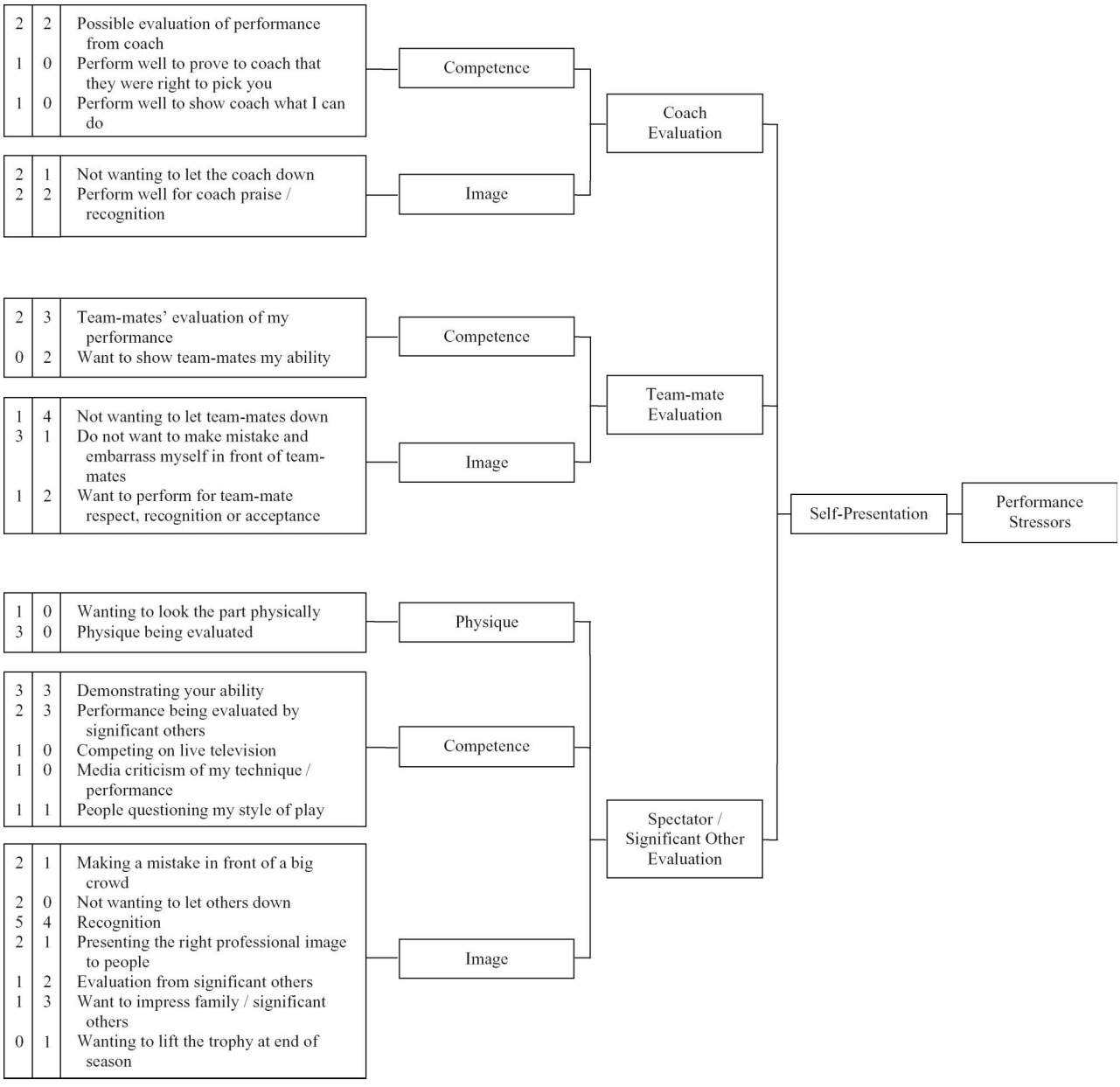

Figure 5. Performance stressors in sport performers: Self-presentation.

Higher-order themes within *Self-presentation* were ''coach evaluation'', ''team-mate evaluation'', and ''spectator/significant other evaluation''. The only lower-order themes cited were related to the athlete's ''physique'', ''competency'', and ''image'' when performing. The importance placed upon the appearance of the athlete and the perceptions of other individuals is demonstrated by participant D in the following quote:

> I thought it [self-presentation] was important, but this is because of the previous players that had done it, and you felt that that is the right thing to do. I had a dickie-bow, I had my dress suit, my hair, I'd have to get my hair perfect, I'd get everything perfect . . . everything would have to be right . . . especially now the sport is on TV all the time.

Rivalry was dichotomized into the higher-order category ''opponents''. Lower-order themes were ''new opponents'', ''opponent behaviour'', and ''opponent ability/standard''. Opponents are an inherent part of the competitive experience and were a regularly cited demand for all of the performers interviewed within this study. This is evident in the following quote from participant E:

> Yeah, there are good performers who you have marked, or when there are people that you know

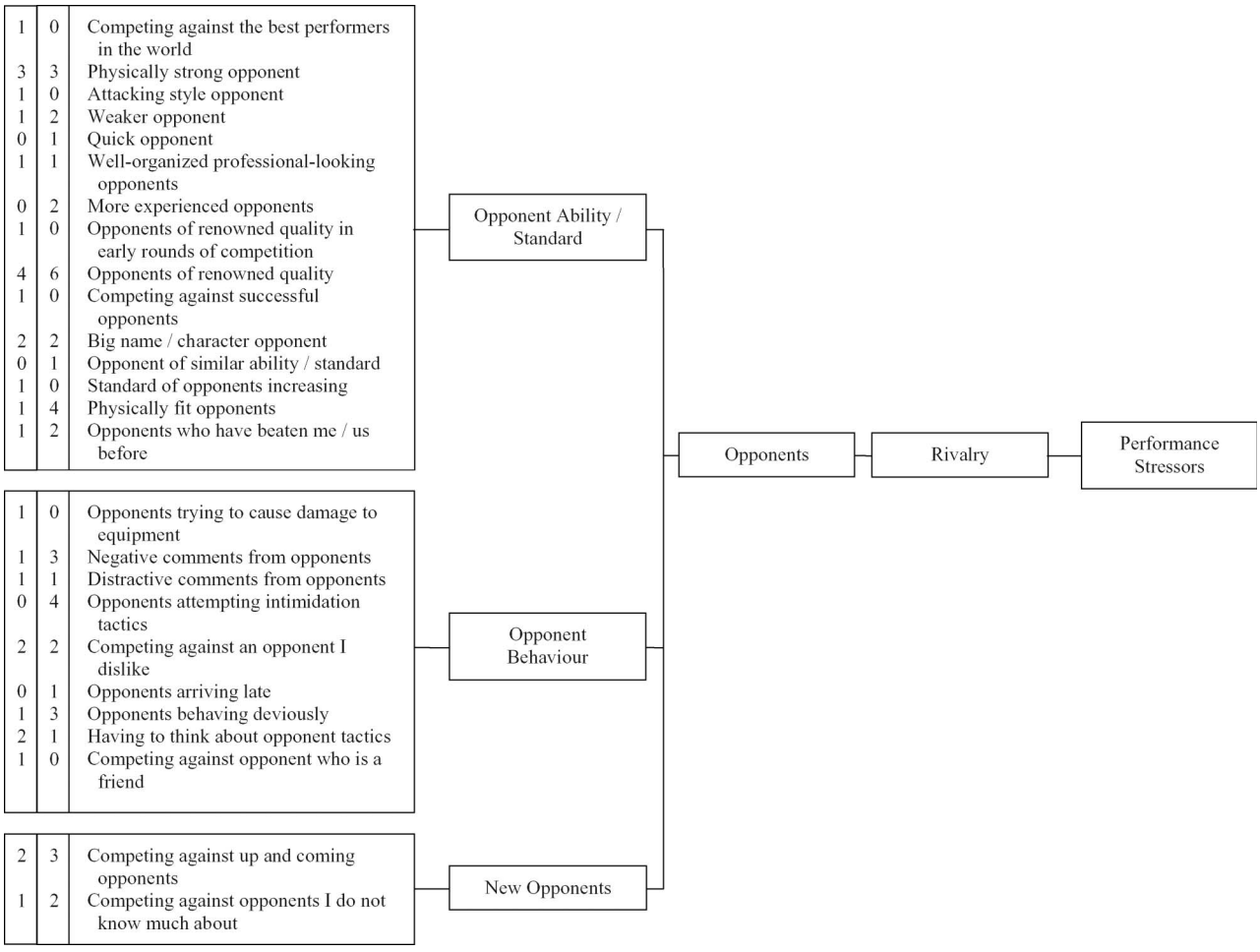

Figure 6. Performance stressors in sport performers: Injury.

what they are like as well . . . that play for the bigger teams . . . that does play on your mind . . . you just know that they are going to be good.

Organizational stressors (Figures 7–10)

Factors intrinsic to the sport considered issues pertaining to the ''competition environment'', ''competition format'', and ''nutritional issues''. The most frequently cited themes within these higher-order categories were ''facilities'', ''weather conditions'', and ''format of competitive performance''. Issues pertaining to the environment, and the organization of that environment, in which performers prepare and then compete provide constant stressors for sport performers. Indeed, the following quote from participant F highlights the importance of maintaining a set timetable of competition:

> Some races get postponed by a couple of hours and by the end of the day you have been practising and you get into the zone from practising. Half an hour later you are really looking forward to it and then it is postponed by like an hour or two hours and your motivation is like, ''well I want to go home now'', and that has happened quite a few times.

The only higher-order theme within *Roles in the sport organization* was ''responsibility''. The most frequently cited lower-order themes were ''role in the team'' and ''time management/planning''. Effective planning to provide efficient preparation is fundamental for any sports performer, as is the role that performer actualizes within the structure of the team. The following quote from participant K identifies the demands that may be placed on a performer due to the role that they may play:

> Everybody looks up to the best player in the team. In badminton, the first player in the team goes on and plays singles first, that is how it works. So everybody is looking at you and watching that game. So if you win, everybody is going to get a motivation boost from that; if you lose, then

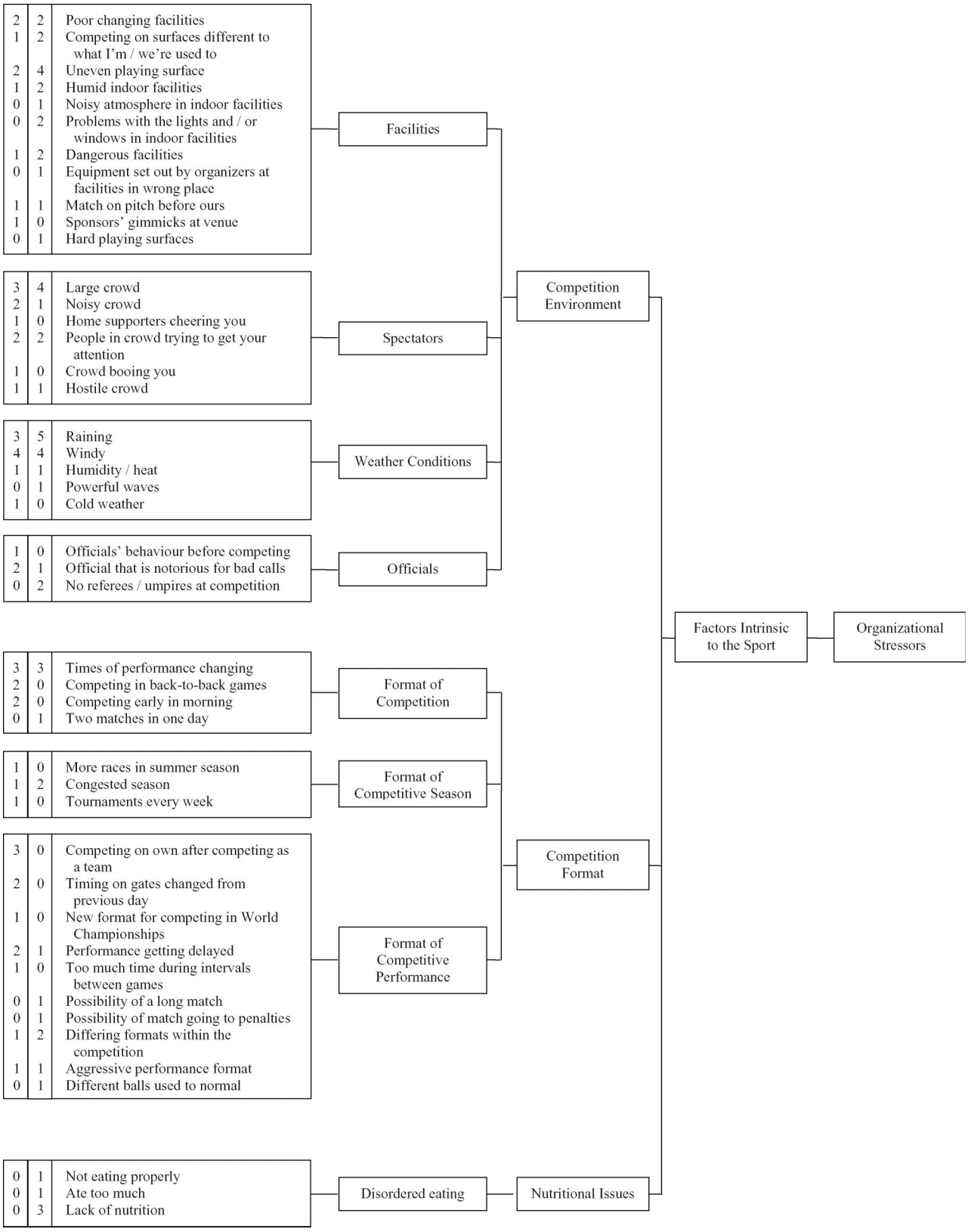

Figure 7. Organizational stressors in sport performers: Factors intrinsic to the sport.

everybody is going to be down on that. So I kind of felt pressure, but it was always a bonus for me though. I liked it, because I had the confidence that I would go on and win. I liked that pressure of everybody being there and looking to me to win all the time.

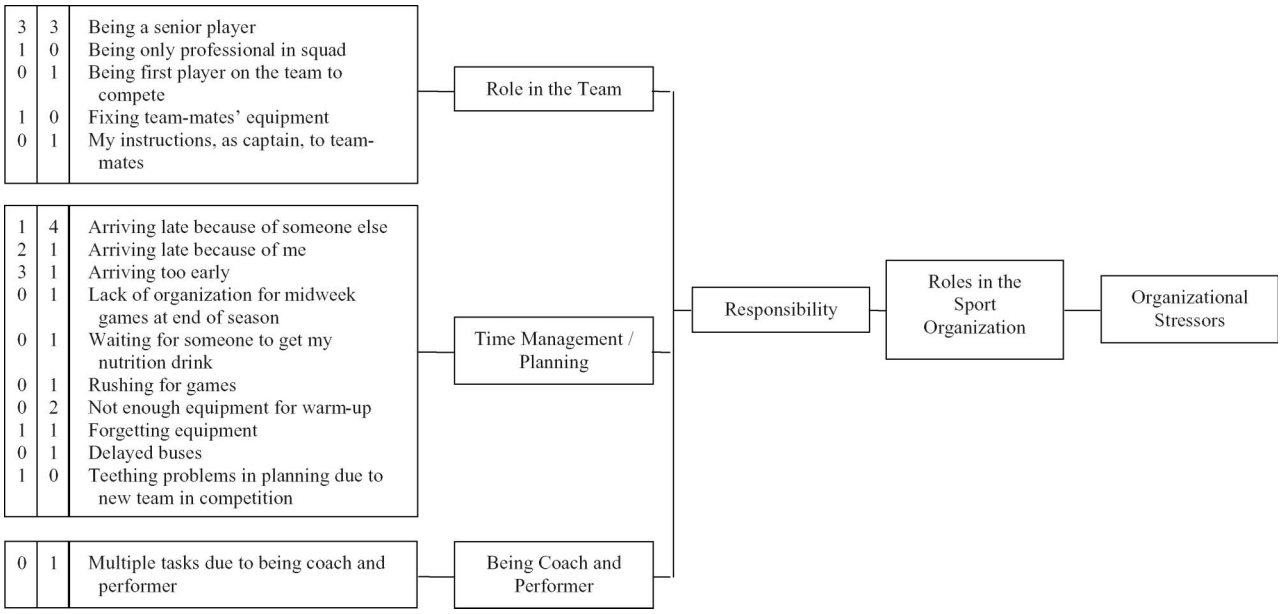

Figure 8. Organizational stressors in sport performers: Roles in the sport organization.

Sport relationships and interpersonal demands was dichotomized into the higher-order categories of ''personality type'', ''leadership'', ''interpersonal interaction'', and ''self-presentation''. The most frequently cited lower-order themes were ''social interaction'' and ''task interaction''. The relationships between team members were perceived as a significant stressor for performers prior to competing. This is demonstrated in the following quote from participant B:

> You do think about that [argument] . . . sometimes, if you've had an argument with one of your team-mates . . . it is hard . . . you've got to try, if you are not getting along with them, you've got to try and put it behind you and carry on, but it is sometimes hard to put it behind you and get on with it . . . especially if one of you can do it, but then the other person can't . . . you try and not let it get into the team situation, but it is difficult sometimes.

The higher-order categories within *Athletic career and performance development issues* were ''position security'', ''income and funding'', and ''career and performance advancement''. The most cited lower-order theme was ''selection''. Although selection issues have been identified as performance stressors, these demands are based on the need to perform well to achieve or maintain selection. As an organizational stressor, selection refers to being relegated to the bench or competing in a different position to that of normal (quote from participant A):

> I wasn't really up for doing it [competing], because I had to row in a really horrible position in the boat . . . I was like . . . ''I don't really want to do it'' . . . but I had to do it in the end.

The only higher-order theme within *Organizational structure and climate of the sport* was ''cultural and political environment''. The most frequently cited theme within this category was ''team management''. Although not often regarded as a stressor within this study, issues relating to the level of support from team management were highlighted in the following quote from participant B:

> I mean, some teams look so organized sometimes . . . I mean we look organized, but some of them look so drilled and organized. I do think sometimes, why haven't we had the support that they have? We have physios, but they had physios, they had doctors, they had all these analysis people there. We didn't have any of that.

Discussion

This study extends competition stress research by identifying and examining both the performance and organizational stressors experienced by elite and non-elite athletes within the competition environment (i.e. the preparation phase). By employing a sample of athletes from a variety of sports, an extensive framework is provided that highlights the stressors that exist within the competition arena. This framework shows that during the preparation phase (i.e. within an hour prior to competing), performers not only encounter demands directly related to the upcoming performance, but also experience stressors pertinent to the

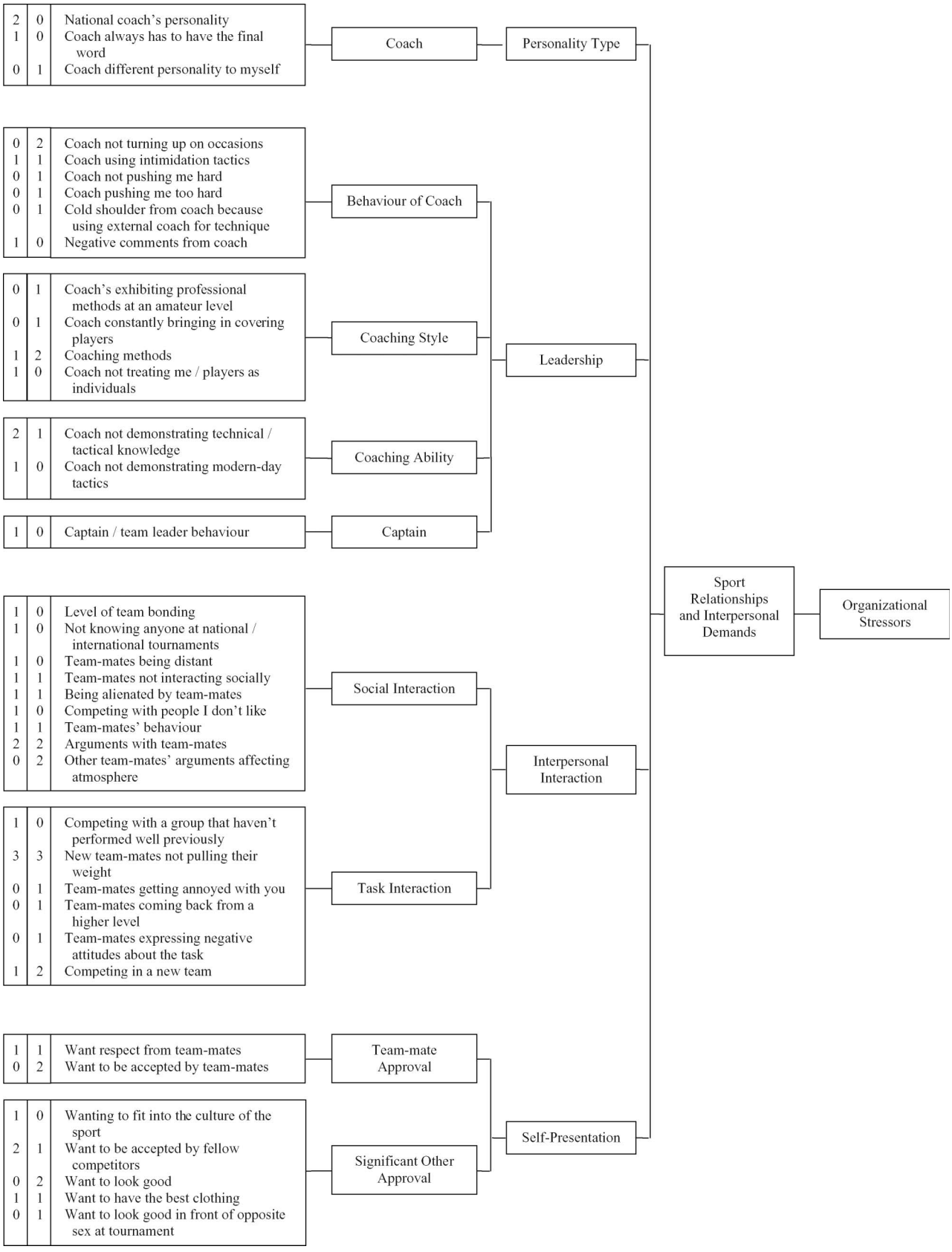

Figure 9. Organizational stressors in sport performers: Sport relationships and interpersonal demands.

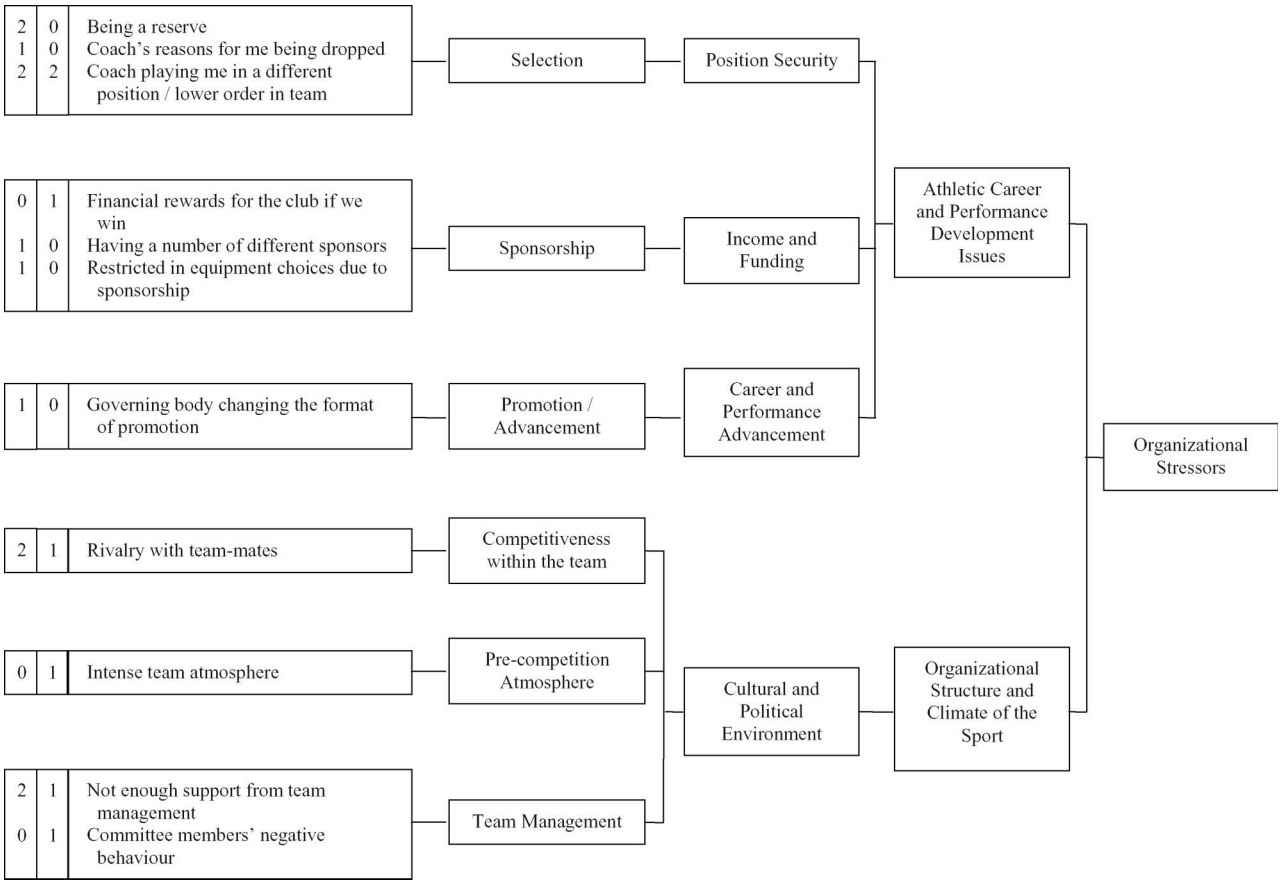

Figure 10. Organizational stressors in sport performers: Athletic career and performance development issues and Organizational structure and climate of the sport.

organization. Within this period, researchers in competition stress have traditionally considered athletes' responses (i.e. emotions) to the upcoming performance alone (e.g. Jones & Hanton, 2001; Robazza & Bortoli, 2003). The findings presented here, however, suggest that when investigating stressors or responses within the competition environment, researchers should also consider performers' reactions to organizational issues.

As a secondary aim, a comparative quantitative analysis was conducted of the frequency of reported stressors between elite and non-elite performers. This examination was appropriate as no previous study has considered the stressors encountered by non-elite performers. The findings showed that the total numbers of performance and organizational stressors were similar between the elite and non-elite groups. Closer examination revealed that even though some stressors were encountered by both elite and non-elite performers, some stressors may be specific to, or at least more prevalent in, each of the two groups. For example, nutritional issues and a rushed or shortened warm-up were highlighted only by non-elite performers, whereas not having enough information about opponents, not preparing on the competition facility, and factors related to the technical set-up of the performance equipment were identified solely by elite athletes. These differences demonstrate that practitioners need to be aware of the unique demands that each performer may experience, and not accept that the same stressors will be encountered at every competitive skill level.

Further differences were found to exist between the two skill groups and participants within these groups. More specifically, the analysis highlights demands that are indicative of the sport organization and playing position, thus accentuating the unique experiences of performers within their respective competitive environment. For example, at the elite level, only the rugby professional (i.e. participant E) highlighted the ''governing body changing the format of promotion'' as a possible stressor, whereas ''instructions to limit the opponent's influence'' was relevant for participant B alone (i.e. hockey performer). In addition, the non-elite surf-lifesaver (participant H) was the only individual to identify ''powerful waves'' and ''equipment set out by organizers at facilities in wrong place''.

The findings also demonstrate the stressors that are commonly encountered by sport performers.

These include ''competing while injured'', ''watching other competitors'', ''needing to perform well'', ''large crowds'', ''times of performance changing'', and various weather conditions. The comprehensive framework provided in this study complements previous research by recognizing that both performance and organizational demands are prominent features of performers' lives in the lead up to competition (see, for example, Hanton et al., 2005; McKay et al., 2008; Thelwell et al., 2008). The stressors in the present study are similar to those reported in previous investigations. However, the elite and non-elite performers in our study identified more performance stressors than those emanating from the organization, findings that are in contrast to previous research. This inconsistency may, however, be explained by the different temporal periods examined within each study's method. Specifically, research has considered the demands faced by performers at a macro level (i.e. throughout their careers), whereas the present study focused solely on the competition environment. Therefore, research findings suggest that athletes, certainly at higher standards of performance, encounter more organizational stressors in their day-to-day lives (Hanton et al., 2005) but, in the competition arena, performance stressors become a more salient feature of their stress experience.

From an applied perspective, the findings of this study highlight the importance of practitioners effectively preparing performers for the variety of demands that they may face in the competition environment. An emphasis on the performer's focus on what can and cannot be controlled is vital when such a range of stressors could be experienced at any one time, and when some of these demands are due to external factors that the performer has no influence over (see Maddi & Khoshaba, 2005). Additionally, when performance-related stressors are encountered, practitioners may need to focus on interventions that facilitate the use of effective appraisal and coping strategies (Neil et al., 2007). Alternatively, where organizational-related stressors are experienced, the sport psychologist may attempt to work closely with the organization and performer(s) to identify and prevent any possible crises and/or to create contingency plans (see Fletcher & Hanton, 2003). For example, if an athlete competes in a sport where the ''times of performance'' are susceptible to change, practitioners can help the performer to prepare for this organizational stressor by working through such scenarios via role play. Within this practice setting, the sport psychologist can assist the performer in identifying and implementing a variety of pre-performance routines that cater for the different preparation times forced upon the individual. In addition, strategies to alter the focus of the individual away from the issue of time change can be introduced, with mechanisms included to ''switch'' the focus of the performer back towards the relevant stimuli when required to prepare once more.

The identification of the demands endured by performers is crucial in the understanding of competition stress, as it provides insight into the factors that instigate cognitive, emotional, and behavioural responses, which, consequently, influence performance (Hanton et al., 2008). It is therefore important for researchers to consider how individuals respond in relation to the stressors experienced prior to competition. Specifically, this can be achieved by acknowledging the transactional perspective advocated by Lazarus (1991; Lazarus & Folkman, 1984) and the notion of emotional orientation (Fletcher & Fletcher, 2005; Fletcher et al., 2006), where the conjoining of both environmental demands and personal characteristics to generate cognitive-evaluative reactions and ascribe meaning to an encounter and subsequent emotions are considered.

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