Getting to the Heart of the Matter:
A Diary Study of Swimmers' Appraisals of Organisational Stressors

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Abstract

We explored sport performers' cognitive appraisals of organisational stressors. The relevant demands and transactional alternatives that athletes experience in relation to the situational properties were identified. Thirteen national standard swimmers completed semi-structured, interval-contingent daily diaries for a 28 day period. A combination of inductive and deductive content analysis was used to organise and analyse the diary entries with a focus on the following areas: organisational stressors; their underlying situational properties; and the swimmers' transactional alternatives. One hundred and thirty-one of the organisational stressors were appraised as threat, 41 as challenge, and 83 as harm/loss. Support was found for the majority of Lazarus and Folkman's (1984) situational properties with the only exception being temporal uncertainty. Imminence was associated with the greatest number of threat appraisals (47), novelty was associated with the greatest number of challenge appraisals (17), and duration was associated with the greatest number of harm/loss appraisals (22). It is concluded that appraisal plays a pivotal role in sport performers' experiences of their organisational environment. Swimmers' transactional alternatives are influenced by the situational properties of the stressors encountered.

Keywords: cognitive, diaries, situational properties, transactional alternatives, sport

Introduction

Organisational stress has been defined as "an ongoing transaction between an individual and the environmental demands associated primarily and directly with the organisation within which he or she is operating" (Fletcher, Hanton, & Mellalieu, 2006, p. 329). Within the field of sport psychology, researchers have provided insights into various components of the organisational stress process; namely, the stressors encountered in sport-related situations (see, for a review, Arnold & Fletcher, 2012), the cognitive and emotional responses to these stressors (e.g., Fletcher, Hanton, & Wagstaff, 2012; Tabei, Fletcher, & Goodger, 2012), the coping strategies individuals employ to manage these stressors and their responses (see Kristiansen & Roberts, 2010; Kristiansen, Murphy, & Roberts, 2012; Weston, Thelwell, Bond, & Hutchings, 2009), and the effectiveness of these strategies (see Levy, Nicholls, Marchant, & Polman, 2009).

Cognitive appraisal is the intra-individual mechanism that "bridges the gap" between stressors and coping, and lies at "the theoretical heart of psychological stress" (Lazarus, 1999, p. 61). Appraisals are an essential aspect of contemporary definitions of stress and, when viewed from a transactional perspective, they are conceived as evaluations of situations that are influenced by an individual's beliefs, values, and/or goals (cf. Lazarus & Folkman, 1984). In an organisational context, appraisal refers to an individual's evaluations of organisational-related demands and the meaning he or she ascribes to such encounters.

According to Lazarus and Folkman (1984), primary appraising refers to evaluations of whether an encounter is relevant or significant to one's beliefs, values, goal commitments, and situational intentions (Lazarus, 1999). Lazarus and Folkman proposed that *stressful* appraisals occur when a situation is evaluated as being significant to the individual's well-being. If an individual perceives the encounter to be significant, and thus stressful, there are three possible appraisals: *harm/loss; threat;* and *challenge* (Lazarus & Folkman, 1984).

These appraisals are known as *transactional alternatives*, which refer to the very essence of stressful appraisals and to the specific ways an individual evaluates his or her environment. According to Lazarus (1999), harm/loss appraisals occur when damage to the individual has already occurred, threat appraisals occur when there is a possibility of such damage occurring in the future, and challenge appraisals occur when the individual feels enthusiastic towards the struggle that will ensue. Harm/loss and threat appraisals are associated with negative emotions and subsequent behaviour, whereas challenge appraisals are associated with positive outcomes.

Lazarus and Folkman (1984) proposed eight situational properties which provide a taxonomy of the factors that, when considered in relation to various person factors, determine the potential for a stressful evaluation of a demand. These are: 1) *novelty*, which refers to the effect of prior knowledge; 2) *predictability*, which implies that there are predictable environmental characteristics that can be discerned, discovered, or learned; 3) *event uncertainty*, which pertains to the probability of an event occurring; 4) *imminence*, which refers to the amount of time before an event occurs; 5) *duration*, which relates to how long stressful events persist; 6) *temporal uncertainty*, which pertains to situations when the individual is unsure of the precise timings of an event; 7) *ambiguity*, which refers to situations where the necessary information required to make an appraisal is unavailable or insufficient; and 8) *timing in relation to life cycle*, which is concerned with the contextual properties that define the timing of an event. Thatcher and Day (2008) proposed two further properties specific to sporting contexts: *self and other comparison* was defined as "comparing any physiological, psychological, or social aspect of performance with that of another individual" (p. 332) and *inadequate preparation* as feeling unprepared for competition.

Although Dewe (e.g., 1992) and colleagues (e.g., Troup & Dewe, 2002) have examined individuals' appraisal of organisational stressors, it is only recently that sport

psychology researchers have begun to examine athletes' appraisals of these types of stressors (Hanton, Wagstaff, & Fletcher, in press; Neil, Hanton, Mellalieu, & Fletcher, 2011). Neil et al. provided insights into athletes' transactions with their competition environment, including some organisational-related demands, and the relationships between appraisals, emotions, further appraisals, and subsequent behaviour. In terms of the organisational stressors experienced, the findings indicated that athletes respond negatively to such events, although they have the potential to interpret their emotions in a positive way in relation to their performance. Although this study distinguishes between positive and negative appraisals of organisational stressors, it does not examine cognitive-evaluative processes in the depth required to understand the transactional alternatives (i.e., harm/loss, threat, and challenge; Lazarus & Folkman, 1984) experienced by the athletes. Hanton et al. attempted to address this limitation in their recent diary study of athletes' appraisals of organisational stressors. Their results supported and extended Neil et al.'s work by showing that sources of organisational strain are predominantly appraised as threatening or harmful, with little perceived control, and few coping resources available. Hanton et al.'s findings need to be treated with a degree of caution since the sample size (n=4) was small and the situational properties of the organisational stressors were not examined.

It is becoming clear that appraisal mechanisms are an important component of the organisational stress process in competitive sport (Fletcher et al., 2006; Hanton et al., in press; Neil et al., 2011). Recent research has called for more focused analytical work in this area; in particular, the examination of the transactional alternatives that athletes experience in relation to the situational properties of stressors (Fletcher et al., 2012) and the situational characteristics that contribute to positive and negative appraisals (Hanton et al., in press). The purpose of this study was to explore sport performers' cognitive appraisals of organisational stressors. To this end, it was important to identify the relevant demands and investigate the

transactional alternatives that athletes experience in relation to each situational property (e.g., novelty, imminence, duration). As Lazarus and Folkman (1984) pointed out, situational properties are a critical factor in understanding appraisals and how individuals react to stressors. However, although the only published sport psychology paper in this area (viz. Thatcher & Day, 2008) examined situational properties in some detail, it did not relate them to the different transactional alternatives that sport performers' experience. This is a noteworthy limitation of Thatcher and Day's (2008) research because omitting an examination of the transactional alternatives that individuals experience overlooks the very essence of stressful appraisals. Furthermore, linking transactional alternatives to the situational properties of stressors provides greater insight into the complexity of factors that determine the potential for a stressful evaluation of a demand (cf. Lazarus & Folkman, 1984).

Although some psychometric instruments exist to assess cognitive appraisal, the validity and reliability of such measures have been questioned (Schneider, 2008). To capture the dynamic nature of the appraisal process, alternative research methods are required. An approach that better examines these aspects of the stress process is diaries, which have been described as "self-report instruments used repeatedly to examine ongoing experiences . . . . [that] recognise the importance of the contexts in which these processes unfold" (Bolger, Davis, & Rafaeli, 2003, p. 580).

Method

Participants

Eight male and seven female (M_{age} = 20.20, *SD* = 3.43 years) high standard swimmers ($M_{experience}$ = 8.70, *SD* = 3.09 years) participated in this study. Purposeful sampling was used to recruit "information rich" participants who met the criteria of having qualified in the last year for national championships or having competed in at least one international competition (cf. Thatcher & Day, 2008). Written informed consent was provided by all participants and

an ethical clearance checklist was approved by the lead institution.

Materials

A diary booklet was adapted for this study from Hanton et al.'s (in press) Stress Appraisal Log (SAL), which is a method of monitoring appraisals of organisational stressors. The booklet consisted of instructions, examples of organisational stressors, a written informed consent form, a participants' demographic form, diary prompts, a completed diary example, and blank diary sheets. Available space precludes the presentation of the diary booklet but it can be obtained from the corresponding author. With the aid of the blank diary sheets, participants were required to identify and describe the organisational-related demands they encountered and reflect on their evaluation of these stressors. Specifically, the diary sheets consisted of a landscape table with structured headings requesting participants to firstly "write down all the organisational demands you encountered today" and to secondly "write down how you evaluated the demands you wrote in the previous column", thus directing the participants to experiences pertaining to the research question.

The theoretical underpinning of the diary design was in transactional stress theory (Lazarus, 1999; Lazarus & Folkman, 1984). Since the specific focus of this study was on the transactional alternatives that athletes experience in relation to each situational property, emphasis was placed on primary appraisal and in particular *importance* and *uncertainty* since they are "key components of primary appraisals" (Schneider, 2008, p. 153). In its broadest sense, primary appraising refers to the personal importance of the event, which in turn denotes whether a stressor is attended to (Lazarus & Folkman, 1984). Uncertainty amplifies the stress response since if the significance of an event is vague, it will be more difficult for an individual to evaluate the personal relevance of an event.

Pilot Study

Two national standard swimmers completed the diary on a daily basis for five

consecutive days. This acted as a pilot study and the aim was twofold: first, to ensure that the diary contained appropriate prompts capable of eliciting information that addressed the research question, and second, to enable the researchers to receive feedback on the diary design and structure. The diary entries were scrutinised and, following discussions between the researchers and the pilot participants, amendments to the diary were made accordingly. Specifically, this involved providing additional clarification of terms and presenting examples of organisational stressors to better direct the participants toward the issues being investigated.

The Data Collection Period

Data were collected on a daily basis between 23rd January 2010 and 19th February 2010 (i.e., 28 days), which represented a period of training, competition and recovery. The participants trained an average of 12 hours per week, involving five pool-based sessions and two land-based sessions and competed in regional and national standard competitions. These competitions were qualification meets for the national championships at the end of the season.

Procedure

After making contact with the director of a swimming team, the nature of the study was explained and the researchers were granted permission to approach the coaches and swimmers. The team's swimming squads were then contacted and the purpose of the study was outlined. Each swimmer who volunteered to participate was given a copy of the diary booklet. The interval-contingent registration of diaries, which involves individuals recording their experiences at regular, predetermined intervals (Reis & Wheeler, 1991), was explained to the participants. In order to minimise retrospective recall and disruption to personal activities, the researchers and participants agreed a completion time of 18:00 every evening (cf. Day & Thatcher, 2009).

After using diaries with youth rugby players, Nicholls and Polman (2007) suggested that "future researchers should develop and implement additional techniques to try and increase the number of returned diaries" (p. 215). Therefore, one of the authors attended every training session for the 28 day period in order to offer support to the participants, maintain adherence, reduce data manipulation, collect completed diary sheets, and give personal feedback regarding their diary completion (e.g., "thank you for completing your diary on time and in such detail" and "thank you for returning your completed diary sheet. I would have liked to hear more about your experiences of fatigue due to overtraining. I don't know much about the situation and want to learn, in detail, about your experiences"). Maintaining researcher visibility was deemed important since previous researchers using diaries have argued that the level of support provided will impact on the quality of the data (Day & Thatcher, 2009). A short message service (SMS) via mobile telephone was sent to each participant every evening at 18:00 to prompt diary completion.

At the end of the data collection period, participants engaged in a social validation procedure which involved answering three questions about their involvement in the research. These were: 1) How did you find the diary completion process? 2) Did you feel supported throughout the 28-day period? 3) Do you feel that the diary method allowed you to write about your organisational stress experiences in a way that was meaningful and relevant to you? The participants reported that they found the diary completion process time-consuming but worthwhile, felt supported throughout the 28-day period, and wrote about their organisational stress experiences in a way that was meaningful and relevant.

Data Analyses

A combination of inductive and deductive content analysis was used to organise and analyse the diary entries (Côté, Salmela, Baria, & Russell, 2004; Krippendorff, 2004). The diaries were read and re-read to ensure familiarity with the data (Maykut & Morehouse,

1994) and the entries transcribed verbatim into a Microsoft® Excel® document for analysis (cf. Meyer & Avery, 2009). The data were examined for conceptual similarity which resulted in the creation of manageable, organised *meaning units* (Côté et al., 1993) representing organisational stressors, their underlying situational properties, and the swimmers' transactional alternatives.

Stressors were categorised and then inductively analysed with a view to eliciting their situational properties. All of the identified properties could be classified under Lazarus and Folkman's (1984) existing categories and, therefore, a deductive approach was deemed appropriate whereby the existing terms were used to label the emergent meaning units. The situational property termed predictability was omitted from the data analysis procedures because, in accordance with Lazarus and Folkman (1984), this situational property refers to animal (nonhuman) models of stress and the situational property of event uncertainty was proposed as an alternative for human cognitive models of stress. Self and other comparison and inadequate preparation (cf. Thatcher & Day, 2008) were also omitted from the data analysis procedures because of their questionable conceptualisation as *situational* properties. Specifically, rather than pertaining to some aspect of an environmental demand, self and other comparison refers to intra-individual *cognitions* specific to performance and inadequate preparation refers to *feeling* unprepared for competition. Unlike Lazarus and Folkman's original conceptualisation of situational properties, it is problematic to apply Thatcher and Day's (2008) 'properties' across the numerous potential stressors an athlete may encounter. Due to the substantial conceptual and empirical evidence that supports the transactional alternatives proposed by Lazarus and Folkman (1984), appraisal meaning units were labelled as threat, challenge, or harm/loss.

The analysis was conducted by the first named author. The second named author then verified the analytical decisions by crosschecking the categorisation of each meaning unit

with the definitions of organisational stressors (see Fletcher et al., 2006), situational properties (see Lazarus & Folkman, 1984), and transactional alternatives (see Lazarus & Folkman, 1984). Verification was sought from an independent analyst who is an expert in the area of qualitative data analysis and organisational stress in sport in order to minimise the effect of possible bias. This individual was provided with a random selection of meaning units and the definitions, and asked to categorise the data accordingly. The analytical decisions were then compared and resulted in 100% consensus between the independent analyst and the researchers.

Results

The attrition rate for this study was 13% because two of the original 15 participants withdrew due to other commitments. The remaining 13 participants (M_{age} = 20.31, *SD* = 3.68 years; $M_{experience}$ = 8.73, *SD* = 3.33 years) completed a diary sheet every day over the data collection period, resulting in a total of 364 sheets being returned. Training days comprised 251 days, rest days comprised 97 days, and competition days comprised 16 days of the total. In order to examine sport performers' cognitive appraisals the relevant organisational stressors encountered by the participants were identified. A total of 341 stressors were identified, which were abstracted into 42 lower-order themes, 14 higher-order themes, and the following four general dimensions: logistical and environmental issues, cultural and team issues, performance and personal issues, and leadership and personnel issues (cf. Arnold & Fletcher, 2012).

A total of 255 of the stressors were discussed in relation to their appraisal and categorised according to their transactional alternative: one hundred and thirty-one were categorised as threat (see Figure 1), 41 as challenge (see Figure 2), and 83 as harm/loss (see Figure 3). As illustrated in Figures 1-3, support was found for the majority of Lazarus and Folkman's (1984) situational properties with the only exception being temporal uncertainty.

Novelty was the most frequently cited property (67). Imminence was associated with the greatest number of threat appraisals (47), novelty was associated with the greatest number of challenge appraisals (17), and duration was associated with the greatest number of harm/loss appraisals (22). The remainder of this section focuses on each property and the transactional alternatives that the athletes experienced (see Figures 1-3).

Novelty

All of the participants cited novelty as a property underlying stressful transactions. The total number of meaning units pertaining to situations that the participants had not previously experienced was 66. Thirty of these were categorised as threat appraisals (see Figure 1). One participant described how a change in the sport's rules regarding swimming attire was appraised as threatening: "[There is] pressure as I need to qualify for National Championships. Despite being used to this kind of pressure, this is . . . the first meet without racing suits [which] means times will be harder to meet now."

Seventeen of the 66 meaning units relating to novelty were categorised as challenge appraisals (see Figure 2). The following diary extract illustrates how one swimmer perceived a new situation as a challenge: "It was a completely new situation: a new pool in [country], a new team environment, an outside pool . . . But it was positive: I was looking forward to [this] new situation." Nineteen meaning units within this property were categorised as harm/loss appraisals (see Figure 3).

Event Uncertainty

Ten participants (77%) cited event uncertainty as a property underlying stressful transactions. The total number of meaning units pertaining to situations where the occurrence of an event was uncertain was 35. Nineteen of these were categorised as threat appraisals (see Figure 1). The following quote demonstrates a participant's perceived lack of control associated with potential changes to his training programme, which could result in a

reduction in his swimming time: “I felt that I had no control . . . because swimming is a sport which needs daily attendance to remain in shape. No activities could replace the feel of water – even if I ran every day I would still swim awful.”

Five of the 35 meaning units relating to event uncertainty were categorised as challenge appraisals (see Figure 2). One participant described her evaluation of the uncertainty surrounding whether a training session would occur: “I felt tired from maintaining effort but not mentally exhausted. The way I evaluated it was positive. I didn't spend much time thinking negatively.” Eleven meaning units within this property were categorised as harm/loss appraisals (see Figure 3). The following diary extract demonstrates how a participant was unsure about her attendance at training sessions due to an injury from overtraining and the subsequent sense of harm/loss: “[I'm] really worried about the situation – I’m new to the squad and I don't want to be suffering from injury and having to have time off.”

Imminence

Ten participants (77%) cited imminence as a property underlying stressful transactions. The total number of meaning units pertaining to the amount of time before an event was 62. Forty-seven of these were categorised as threat appraisals (see Figure 1). This diary extract demonstrates how one participant felt threatened as he was entered into a swimming event at late notice: “I’ve been entered into a race for [swimming team] on Friday. All of the decent swimmers will be there . . . I’m feeling the heat and have to manage the pressure. If I swim slowly I will let the team down.”

Eight of the 62 meaning units relating to imminence were categorised as challenge appraisals (see Figure 2). One participant described how late selection for a relay elicited a positive evaluation: “I’m feeling a little bit stressed today. [The swim meet] is coming up but I am more excited than afraid. I want to do well and therefore should be able to.” Seven

meaning units within this property were categorised as harm/loss appraisals (see Figure 3).

Duration

Nine participants (69%) cited duration as a property underlying stressful transactions. The total number of meaning units pertaining to how long events persisted was 39. Fifteen of these were categorised as threat appraisals (see Figure 1). One participant described a negative appraisal of a reoccurring illness linked to overtraining: "All these persistent problems are making me not want to train . . . The less I train the more unfit I get. I felt like getting out. Giving up. Going home. I'm not enjoying training."

Two of the 39 meaning units relating to duration were categorised as challenge appraisals (see Figure 2). This quote illustrates how one swimmer, with the help of a teammate, appraised a long and intensive training session as a challenge: "I knew I could get through the doubts. I said something like "f***, this hurts" but the guy I was racing with said "you can" – which encouraged me. I'm tired, physically and mentally, but positive that I have managed it."

Twenty-two meaning units within this property were categorised as harm/loss appraisals (see Figure 3). This diary extract describes a sense of harm/loss due to illness from overtraining: "I ached and hurt; as a result I had lots of negative thoughts. Constant feelings of hopelessness. The training session made me feel vulnerable and inadequate. Missing previous training meant . . . I was unfit and was going to struggle anyway."

Ambiguity

Six participants (46%) cited ambiguity as a property underlying stressful transactions. The total number of meaning units pertaining to situations where the environment provided insufficient information to make an appraisal was 21. Eight of these were categorised as threat appraisals (see Figure 1). One participant recalled how a lack of situational clarity prior to a training session was appraised as a threat: "At first I wasn't sure where I had to be . . . I

was confused . . . which worried me because the session was a sprint session so times were important and I needed to be prepared so I could swim well."

Three of the 21 meaning units relating to ambiguity were categorised as challenge appraisals (see Figure 2). This swimmer described how insufficient communication between the athlete and coach led to a lack of situational clarity surrounding the format of a competition and a positive appraisal: "I didn't know what I should be doing or which lane I should be swimming in. However, I saw the situation as a challenge and ended up quite enjoying it!" Ten meaning units within this property were categorised as harm/loss appraisals (see Figure 3). This diary extract illustrates how one swimmer appraised ambiguity regarding tension between teammates with a sense of harm/loss: "It was stressful . . . I didn't know how severe the tension between my teammates was. This has already affected me negatively."

Timing in Relation to Life Cycle

Eleven participants (85%) cited timing in relation to life cycle as a property underlying stressful transactions. The total number of meaning units pertaining to the contextual properties that define the timing of an event was 32. Twelve of these were categorised as threat appraisals (see Figure 1). One participant described how the timing of a strenuous training session in the season elicited a threat appraisal: "This early in the training cycle it's tough to keep going in threshold sets, especially after resting over Christmas. Towards the end of the workout it's hard mentally to keep going because it hurts…a lot."

Six of the 32 meaning units within this property were categorised as challenge appraisals (see Figure 2) and 14 were categorised as harm/loss appraisals (see Figure 3). The following diary extract demonstrates how missing a training session close to a competition gave rise to a sense of loss for one swimmer: "I was so fatigued that I slept through my morning alarm for training...I felt quite bad about missing training knowing that it would have been a good speed set to do because I'm racing at the weekend."

Discussion

We explored performers' cognitive appraisals of organisational stressors. Using daily diaries, the organisational-related demands encountered by high level swimmers were identified and the transactional alternatives that they experienced in relation to each situational property were investigated. In view of the subjective nature of the organisational stress process in sport, the methods employed attempted to capture the swimmers' perceptions and evaluations of their organisational environment. The results demonstrate that swimmers cognitively react to organisational stressors in different ways and that positive and negative appraisals may be experienced in response to similar situations. Furthermore, an individual swimmer may experience challenge in reaction to a particular stressor on one occasion yet appraise that same demand as a threat on another occasion.

The results of this study support and extend previous research examining athletes' appraisals of organisational stressors. In line with Neil et al. (2011), the findings reported here demonstrate that athletes respond negatively to organisational-related demands. In addition, the data show that threat and harm/loss appraisals were predominantly experienced in response to these stressors, supporting Hanton et al.'s (in press) work which found that sources of organisational strain were predominantly appraised as threatening or harmful. This study extends Neil et al.'s (2011) and Hanton et al.'s (in press) research by providing a more detailed examination of cognitive-evaluative processes to better understand the transactional alternatives experienced by sport performers. This is important because transactional alternatives represent the very essence of appraisals and an understanding of these cognitive-evaluative processes is pivotal in understanding the overall stress process. Furthermore, our sample size was large compared to Hanton et al.'s (in press) sample and, for the first time in the published literature, the situational properties of organisational stressors in sport were examined. Our results indicate that it is the situational property of the stressor, rather than the

demand per se, that is fundamental to understanding athletes' appraisals.

Support was found for the majority of Lazarus and Folkman's (1984) situational properties with the only exception being temporal uncertainty. Of these six properties, three were typically appraised by swimmers in a particular way. Imminence was associated with the greatest number of threat appraisals, with participants reporting an increase in threat appraisals as the period of time before the event decreased. This supports and extends previous psychosomatic laboratory-based research that has demonstrated that anticipation (imminence) is influential in the stress process (e.g., Kudielka & Kirschbaum, 2005). From a sport perspective, Thatcher and Day (2008) suggested that the period of time when an event is anticipated is an important factor in determining an athlete's appraisal of a stressor. One of the possible explanations as to why the amount of time before an event appears to be associated with threatening appraisals relates to human judgment and decision making (cf. Svenson & Maule, 1993). Individuals are required to complete a sequence of mental steps prior to the execution of a decision and must continually balance the demand for fast decisions with the demand for accurate decisions. Research findings suggest that when under time pressure and a demand is imminent, the search for an evaluation of information becomes shallower (Maule & Svenson, 1993). More specifically, individuals tend to increase the breadth of their search across all possible outcomes but decrease the depth of their evaluation of the alternatives. If an individual perceives that there is time pressure to make a decision, he or she is likely to become preoccupied with potential outcomes that have the potential to threaten his or her well-being, resulting in erratic judgments (Svenson & Maule, 1993) and increased levels of psychological stress (Maule & Hockey, 1993).

Novelty is another situational property that was typically appraised by swimmers in a particular way. In contrast to imminence, situations that the participants had not previously experienced were associated with the greatest number of challenge appraisals. This finding is

somewhat surprising given that the fear of the unknown is linked to the context of novel events (Harpel, 2008). Nonetheless, the swimmers who participated in this study had an average of over eight years of competitive experience and described the majority of the novel situations as relative (i.e., situations where they had similar but not directly comparable previous experiences) rather than absolute (i.e., situations where they had no similar previous experiences) in nature. It appears that the participants' extensive bank of contextual information, developed through actual and vicarious experiences (Bandura, 1977), enables them to draw on similar situations when confronted with a novel event. Lazarus and Folkman (1984) hypothesised that if a situation is completely novel with no aspect of that situation being previously connected with harm or mastery/gain, then the respective transactional alternatives of threat or challenge cannot occur. Since each novel situation was linked by the participants to a specific transactional alternative, it appears that experienced swimmers are able to utilise their own and others' experiences to appraise stressors as a challenge.

The third situational property typically appraised by swimmers in a particular way was duration. The results demonstrate that how long events persist was associated with the greatest number of harm/loss appraisals. It is generally accepted that enduring events will fatigue an individual both physically and psychologically and that prolonged exposure to stressors may lead to exhaustion and negative health effects (Segerstrom & Miller, 2004). Kudielka and Kirschbaum (2005) found that persistent stimulation of the stress system results in cumulative toll on the body which, in the long term, results in a number of negative health outcomes such as hypertension. The findings reported in this study indicate that some organisational stressors, such as training load and overtraining, have the potential to be an enduring experience for athletes. These demands were predominantly appraised by the swimmers with a sense of harm/loss. To illustrate, when appraised as harm/loss, the volume and intensity of training, combined with inadequate and/or ineffective recovery, led some

swimmers to experience negative physical, emotional, and behavioural responses.

Although imminence, novelty, and duration were typically appraised by swimmers in a particular way, no consistent patterns of appraisal were evident in relation to the remaining three situational properties: event uncertainty, ambiguity, and timing in relation to life cycle. This is not to say that these properties are unimportant, but rather swimmers appear to react to stressors of this nature in a more inconsistent fashion. As noted earlier, the only situational property not identified in this study was temporal uncertainty. The swimmers described how training sessions and competition events were scheduled a number of weeks before they occurred and thus, they were generally aware of when they would encounter significant demands in their preparation for performance. It may be that other types of sport, which take place in more unpredictable, outdoor settings (e.g., cricket, skiing), are more susceptible to postponement than swimming, thus casting uncertainty over the precise timing of events.

Two important implications emerge from the findings. The first relates to the situational properties underlying the organisational stressors that sport performers encounter and how, where possible, these should be managed to optimise preparations for training and competition. To illustrate, since imminence and duration were most often evaluated as threatening and harmful stressor properties respectively, applied consultants should pay careful attention to the timing of organisational stress management interventions. To expand, practitioners need to be aware of the potential for increased threat appraisals as events approach and the potential for increased appraisals of harm/loss as events persist over time. More specifically, consultants and coaches should encourage athletes to focus on effective preparation for training and competition rather than on the proximity of the event. The implementation of well-practiced yet flexible preperformance routines may facilitate preparation and encourage athletes to appraise imminent events as a challenge as opposed to a threat. One way in which organisations can help to alter negative appraisals of enduring

events is to create a performance environment that recognises and accommodates individuals' specific needs and their idiographic tolerances to intense training over a prolonged period of time. To this end, it is important that athletes perceive that they are able to communicate their individual requirements and limitations to their support team.

The second implication relates to the transactional alternatives that sport performers ascribe to an organisational-related event. What is clear from the findings reported here is that although some organisational stressors are an inevitable feature of participation in high level sport, performers have an element of choice as to how they react to these demands. Interestingly, some of the participants in this study reported that, by merely participating in the data collection and diary completion phase, they became more self-aware of their thoughts and feelings which led to greater reflection on how stress affects them and their performance. We believe that such self-awareness is an important precursor to athletes challenging the maladaptive thought patterns (e.g., with cognitive restructuring) that underpin the negative personal and performance consequences (e.g., compromised well-being) of stress. However, even though it may be beneficial to increase self-awareness through diary methods, careful monitoring by the practitioner is required to protect participants from potentially maladaptive outcomes that can occur as a consequence of such data collection procedures. Notwithstanding the above, it is likely that applied consultants will need to target *both* the organisational environment (with organisational level stress management, for example) and the individual athlete (through cognitive behavioural therapy, for example) if they are to elicit significant and sustained change in this area of psychosocial preparation for competition.

A noteworthy strength of this study relates to the sample size and characteristics. Previous sport psychology studies that have employed diaries have solicited between one (viz. Levy et al., 2009) and 12 (viz. Polman, Nicholls, Cohen, & Borkoles, 2007) participants

that are either male or female and generally compete across a range of standards, whereas the current study recruited 13 (six male and seven female) swimmers who were competing at senior national level and above. Another strength was the timeframe in which the data was collected. More specifically, a close proximity to the participants' stress experiences was maintained through the use of daily diaries, thus minimising vagaries of memory, retrospective censorship, and reframing. Bolger et al. (2003) remarked that a significant benefit of diary methods is "the dramatic reduction in the likelihood of retrospection, achieved by minimising the amount of time elapsed between an experience and the account of this experience" (p. 580). However, stress researchers have noted that allowing a small amount of time between a stressful event and the recording of that event enables participant reflection and therefore a more complete account of the event (Folkman & Moskowitz, 2004). These were important considerations in the agreement of a completion time of 18:00 every evening with the participants.

Despite these strengths, the results of this study should be considered in light of potential methodological limitations. A possible drawback is self-selection bias since diary studies tend to attract people with certain characteristics, such as youth and intelligence, which may result in biased samples (cf. Thiele, Laireiter, & Baumann, 2002). When using methods that rely on personal recordings, the veracity of data may also be questionable due to the possibility of artificiality. Furthermore, diaries rely on participants being able to articulate their thoughts and feelings at the appropriate times and in sufficient detail (Day & Thatcher, 2009). There is also the risk of honest forgetfulness where participants do not remember to complete their diaries at the scheduled response time. Bolger et al. (2003) have identified this as a potential drawback of diary research, since participants may then be tempted to rely on (benign) reconstruction or (deliberate) fabrication to complete missed entries at a later date. Regarding the data analysis procedures that were implemented in this study, a combination of

inductive and deductive approaches were used in an attempt to allow novel themes to emerge and align the findings with relevant theory and research. Nonetheless, although this approach appeared to satisfactorily and accurately portray the emerging themes, the use of deductive procedures can sometimes compromise the novelty of the findings.

This study has advanced understanding of how sport performers appraise organisational stressors, with a particular focus on the transactional alternatives that athletes experience in relation to each situational property. However, person factors such as positive/negative affect (Spector, Zapf, Chen, & Frese, 2000) have the potential to influence the appraisal process. In future researchers should examine these factors and attempt to provide a more detailed understanding of cognitive-evaluative mechanisms in athletes. In attempting to explain the findings reported here, it has become apparent that the psychosomatic perspective of stress (Kudielka & Kirschbaum, 2005) offers sport psychologists the opportunity to advance knowledge of organisational stress in sport performers. In future researchers should also focus on changes in organisational stress and appraisals over time, and the temporal patterning of appraisals in response to individual stressors and properties. These lines of inquiry, together with investigation of reciprocal patterns between components of the stress process, will not only help build a more robust body of literature in this area, but also provide evidence-based recommendations to support athletes suffering from the adverse effects of stress.

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625

Figure Captions

Figure 1. Threat appraisals experienced by the swimmers (the frequency is provided above each diagonal line to illustrate how many times each situational property was associated with each appraisal).

Figure 2. Challenge appraisals experienced by the swimmers (the frequency is provided above each diagonal line to illustrate how many times each situational property was associated with each appraisal).

Figure 3. Harm/loss appraisals experienced by the swimmers (the frequency is provided above each diagonal line to illustrate how many times each situational property was associated with each appraisal).