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Getting to the Heart of the Matter:

A Diary Study of Swimmers' Appraisals of Organisational Stressors

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## 26 Abstract

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

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

## 43 Introduction

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

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

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

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

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

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

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

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



143 an ethical clearance checklist was approved by the lead institution.

#### 144 **Materials**

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

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

#### 166 **Pilot Study**

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



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

### 176 **The Data Collection Period**

177 Data were collected on a daily basis between 23<sup>rd</sup> January 2010 and 19<sup>th</sup> February  
178 2010 (i.e., 28 days), which represented a period of training, competition and recovery. The  
179 participants trained an average of 12 hours per week, involving five pool-based sessions and  
180 two land-based sessions and competed in regional and national standard competitions. These  
181 competitions were qualification meets for the national championships at the end of the  
182 season.

### 183 **Procedure**

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

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

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

#### 214           **Data Analyses**

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

218 1994) and the entries transcribed verbatim into a Microsoft® Excel® document for analysis  
219 (cf. Meyer & Avery, 2009). The data were examined for conceptual similarity which resulted  
220 in the creation of manageable, organised *meaning units* (Côté et al., 1993) representing  
221 organisational stressors, their underlying situational properties, and the swimmers'  
222 transactional alternatives.

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

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

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

## 251 **Results**

252 The attrition rate for this study was 13% because two of the original 15 participants  
253 withdrew due to other commitments. The remaining 13 participants ( $M_{\text{age}} = 20.31$ ,  $SD = 3.68$   
254 years;  $M_{\text{experience}} = 8.73$ ,  $SD = 3.33$  years) completed a diary sheet every day over the data  
255 collection period, resulting in a total of 364 sheets being returned. Training days comprised  
256 251 days, rest days comprised 97 days, and competition days comprised 16 days of the total.  
257 In order to examine sport performers' cognitive appraisals the relevant organisational  
258 stressors encountered by the participants were identified. A total of 341 stressors were  
259 identified, which were abstracted into 42 lower-order themes, 14 higher-order themes, and  
260 the following four general dimensions: logistical and environmental issues, cultural and team  
261 issues, performance and personal issues, and leadership and personnel issues (cf. Arnold &  
262 Fletcher, 2012).

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

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

### 273 **Novelty**

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

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

### 287 **Event Uncertainty**

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

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

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

### 306 **Imminence**

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

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

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

### 319 **Duration**

320 Nine participants (69%) cited duration as a property underlying stressful transactions.

321 The total number of meaning units pertaining to how long events persisted was 39. Fifteen of  
322 these were categorised as threat appraisals (see Figure 1). One participant described a  
323 negative appraisal of a reoccurring illness linked to overtraining: “All these persistent  
324 problems are making me not want to train . . . The less I train the more unfit I get. I felt like  
325 getting out. Giving up. Going home. I’m not enjoying training.”

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

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

### 337 **Ambiguity**

338 Six participants (46%) cited ambiguity as a property underlying stressful transactions.

339 The total number of meaning units pertaining to situations where the environment provided  
340 insufficient information to make an appraisal was 21. Eight of these were categorised as  
341 threat appraisals (see Figure 1). One participant recalled how a lack of situational clarity prior  
342 to a training session was appraised as a threat: “At first I wasn’t sure where I had to be . . . I

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

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

#### 354 **Timing in Relation to Life Cycle**

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

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



368

**Discussion**

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

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

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

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

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

418 somewhat surprising given that the fear of the unknown is linked to the context of novel  
419 events (Harpel, 2008). Nonetheless, the swimmers who participated in this study had an  
420 average of over eight years of competitive experience and described the majority of the novel  
421 situations as relative (i.e., situations where they had similar but not directly comparable  
422 previous experiences) rather than absolute (i.e., situations where they had no similar previous  
423 experiences) in nature. It appears that the participants' extensive bank of contextual  
424 information, developed through actual and vicarious experiences (Bandura, 1977), enables  
425 them to draw on similar situations when confronted with a novel event. Lazarus and Folkman  
426 (1984) hypothesised that if a situation is completely novel with no aspect of that situation  
427 being previously connected with harm or mastery/gain, then the respective transactional  
428 alternatives of threat or challenge cannot occur. Since each novel situation was linked by the  
429 participants to a specific transactional alternative, it appears that experienced swimmers are  
430 able to utilise their own and others' experiences to appraise stressors as a challenge.

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

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

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

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

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

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

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

493 that are either male or female and generally compete across a range of standards, whereas the  
494 current study recruited 13 (six male and seven female) swimmers who were competing at  
495 senior national level and above. Another strength was the timeframe in which the data was  
496 collected. More specifically, a close proximity to the participants' stress experiences was  
497 maintained through the use of daily diaries, thus minimising vagaries of memory,  
498 retrospective censorship, and reframing. Bolger et al. (2003) remarked that a significant  
499 benefit of diary methods is "the dramatic reduction in the likelihood of retrospection,  
500 achieved by minimising the amount of time elapsed between an experience and the account  
501 of this experience" (p. 580). However, stress researchers have noted that allowing a small  
502 amount of time between a stressful event and the recording of that event enables participant  
503 reflection and therefore a more complete account of the event (Folkman & Moskowitz,  
504 2004). These were important considerations in the agreement of a completion time of 18:00  
505 every evening with the participants.

506         Despite these strengths, the results of this study should be considered in light of  
507 potential methodological limitations. A possible drawback is self-selection bias since diary  
508 studies tend to attract people with certain characteristics, such as youth and intelligence,  
509 which may result in biased samples (cf. Thiele, Laireiter, & Baumann, 2002). When using  
510 methods that rely on personal recordings, the veracity of data may also be questionable due to  
511 the possibility of artificiality. Furthermore, diaries rely on participants being able to articulate  
512 their thoughts and feelings at the appropriate times and in sufficient detail (Day & Thatcher,  
513 2009). There is also the risk of honest forgetfulness where participants do not remember to  
514 complete their diaries at the scheduled response time. Bolger et al. (2003) have identified this  
515 as a potential drawback of diary research, since participants may then be tempted to rely on  
516 (benign) reconstruction or (deliberate) fabrication to complete missed entries at a later date.  
517 Regarding the data analysis procedures that were implemented in this study, a combination of

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

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

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626

## Figure Captions

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

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

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