

1 Preparing To Take the Field: A Temporal Exploration of Stress, Emotion, and Coping

2 in Elite Cricket

3

4

5 Date of Submission: 13th October 2014

6 Date of 1st Re-Submission: 25th February 2015

7 Date of 2nd Re-Submission: 19th June 2015

8 Date of 3rd Re-submission: 10th July 2015

1 Abstract

2 The purpose of this study was to explore the stress, emotion, and coping (SEC)
3 experiences of elite cricketers leading up to and on the day of the first competitive
4 fixture of the season. Four elite male cricketers ($M = 21.25$, $SD = 1.5$) completed
5 Stress and Emotion Diaries (SEDs) for a 7-day period leading up to and on the day of
6 the first competitive fixture of the season. We then interviewed the cricketers to
7 explore the content of the SEDs in more detail. We used semi-structured interviews to
8 glean insight into the cricketers' stressors, cognitions (appraisals), emotions, coping
9 strategies, and behaviors. Inductive and deductive content data analysis provided a
10 holistic and temporal exploration of SEC underpinned by the cognitive-motivational-
11 relational theory of emotions (Lazarus, 1999). The results highlighted the ongoing and
12 continuous nature of the SEC process whilst illustrating the coping strategies (e.g.,
13 pre-performance routines, social support, self-talk, and humor) the cricketers used
14 leading up to and on the day of competition.

15 *Keywords:* Stress, Appraisal, Emotion, Coping, Self-Talk, Social Support

16
17
18
19
20
21
22
23
24
25

1 Preparing To Take the Field: A Temporal Exploration of Stress, Emotion, and Coping
2 in Elite Cricket

3 Contemporary research focusing on competition stress and emotion has been
4 informed by Lazarus and Folkman's (1984) transactional perspective of stress and the
5 cognitive-motivational-relational (CMR) theory of emotions (Lazarus, 1991, 1999,
6 2000). Essentially, Lazarus considered stress an ongoing transaction between the
7 environmental demands and a person's resources, with the process of cognitive
8 appraisal central to how the individual responds to transactions. This process involves
9 both primary and secondary appraisals. Within primary appraisal, life events are
10 constantly evaluated with respect to an individual's personal values, situational
11 intentions, goal commitments, and well-being. Secondary appraisal refers to a
12 cognitive-evaluative process that focuses on minimizing harm or maximizing gains in
13 line with an individual's coping potential (Lazarus, 1991). Lazarus (1999, 2000)
14 expanded this approach through the CMR theory of emotions and proposed that
15 following the appraisal process, emotional and behavioral responses (mediated by
16 actual coping strategies) will have an influence on actual [sport] performance (Hanton,
17 Neil, & Mellalieu, 2008; Neil, Fletcher, Hanton, & Mellalieu, 2007). For example, if
18 an individual does not believe they have the resources to deal with the demands
19 encountered in the competition environment, then he or she will perceive the situation
20 as threatening or harmful and experience negative emotions such as anxiety and anger.
21 This affective response may then be associated with negative behaviour (e.g., physical
22 tension) and performance (e.g., skill breakdown).

23 Lazarus further advocated that stress and emotion should be considered as one,
24 co-existing, and interdependent process in the CMR theory of emotions. Based on his
25 proposition, various types of stress appraisal (i.e., harm, benefit, challenge, or threat)

1 were suggested to evoke different emotions. For example, an individual may
2 experience anxiety when a stressor is appraised as an uncertain threat, while anger
3 may be experienced as a result of perceived personal harm. Thus an inability to cope
4 with such emotions can distract athletes from the task at hand during sporting
5 competition (Lazarus, 2000). Based on this notion, sport psychology researchers have
6 explored the different coping strategies used by athletes (e.g., Nicholls & Polman,
7 2007). In a systematic review on coping in sport, Nicholls and Polman reported five
8 primary coping dimensions used by athletes: problem-focused coping (e.g., seeking
9 information); emotion-focused coping (e.g. seeking emotional support); avoidance
10 coping (e.g., removing oneself from the situation); approach coping (e.g., increasing
11 effort); and appraisal coping (e.g., re-evaluation of the situation).

12 Sport psychology researchers have explored the various coping strategies used
13 by athletes in relation to numerous stressors (e.g., Devonport, Lane, & Biscoombe,
14 2013; Thelwell, Weston, & Greenless, 2007; Weston, Thelwell, Bond, & Hutchings,
15 2009). For example, Weston and colleagues (2009) examined the stressors and the
16 coping strategies used by five elite single-handed sailors. They highlighted a variety
17 of competitive, organizational, and personal stressors that were regulated through a
18 number of coping responses (e.g., problem-, emotion-, appraisal-, and approach-
19 focused coping). Similarly, Thelwell et al. (2007) explored the stressors experienced
20 and coping strategies used by elite cricketers. Cricket, by its very nature, exposes
21 players to a diversity of stressful situations that occur frequently over a period of
22 hours and, sometimes, days. Given the duration at which cricket matches play-out,
23 Thelwell and colleagues reported many stressors including personal issues, match
24 specific issues, and external factors that were attended to by a variety of coping
25 strategies including social support, reflection, and self-talk. In sum, the

1 aforementioned literature has illustrated provisional links between stressors and the
2 implemented coping strategies, however future researchers need to explore: 1) the
3 entire SEC process through an approach that encapsulates each component as an
4 interdependent transaction; and, 2) the coping strategies used to manipulate the stress
5 and emotion experience to enable the prevalence of helpful behaviors (e.g., Thelwell
6 et al., 2007; Weston et al., 2009).

7 Building on the research that isolated the individual components of the SEC
8 process, several scholars have taken a holistic approach and examined more of the
9 SEC process (e.g., Neil, Bayston, Hanton, & Wilson, 2013a; Neil, Hanton, Mellalieu,
10 & Fletcher, 2011; Nicholls, Polman, & Levy, 2012). To illustrate, Nicholls and
11 associates used path analysis and highlighted a sequential account of SEC experiences.
12 Their data supported the notion that stressors, appraisals, emotions, and coping are
13 highly related constructs. Using a qualitative approach, Neil and colleagues (2011)
14 provided insight into the transaction of both male and female athletes across multiple
15 sporting environments through interviews and single-case procedures. The data
16 revealed the relationship between initial appraisals, emotions, further appraisals, and
17 subsequent behavior, emphasizing the different influence of athletes' appraisals on
18 their emotional response(s). Further, athletes who viewed their emotional response as
19 positive increased their effort and concentration, and enhanced performance. In
20 contrast, athletes who viewed emotions as detrimental described performing poorly.
21 Similarly, Neil and colleagues (2013a) examined the influence of stress and emotions
22 on referee decision-making through identifying the stressors encountered, the
23 consequent appraisals, emotions, and adopted coping strategies. Data highlighted the
24 use of problem-focused and emotion-focused coping strategies to deal with the
25 negative appraisals and associated emotions, a process that enabled better decision-

1 In line with the recent SEC literature (e.g., Hanton, Wagstaff, & Fletcher,
2 2012; Neil et al., 2011), we used a purposive sampling approach to obtain the sample
3 for this study. Having approached the Cricket Team's management to gain
4 preliminary access to their players, the lead author gave a formal presentation to
5 explain the study. Specifically, the presentation included an outline of the our interest
6 in understanding the SEC experiences of elite cricketers, and how these experiences
7 influenced elite cricketers' behaviors in the 7-day period leading up to and on the day
8 of the first competitive fixture of the season. After verbally agreeing to participate in
9 the study, four elite male cricketers with ages ranging from 20 to 23 ($M = 21.25$, $SD =$
10 1.5) provided written informed consent to participate in this study.

11 **Data Collection**

12 **Stress and emotion diaries.** We collected data from the cricketers through
13 diaries completed for a 7-day pre-competition period and on the day of the Cricket
14 Team's first competitive fixture of the season. Using diaries has been described as
15 essential in capturing the temporal and dynamic nature of the SEC process (Lazarus,
16 2000). More specifically, we required an intensive monitoring process to illustrate the
17 plethora of demands an individual may encounter each day, the meaning they ascribe
18 to these encounters, and their attempts to cope (Dewe & Trenberth, 2004). Consistent
19 with previous research (e.g., Hanton et al., 2012; Neil, Hanton, & Mellalieu, 2013b),
20 we developed a standardized log for this study. The Stress and Emotion Diaries
21 (SEDs) included a page for each day that prompted the players to record stressors that
22 had affected their emotional state during each day. To reduce issues relating to
23 retrospective recall the cricketers completed the SEDs at the end of each day (i.e.,
24 prior to getting ready for sleep; Campbell & Jones, 2002). When recording the
25 stressors, we prompted the participants to report their thoughts concerning the stressor

1 (e.g., specifically, what were you thinking in relation to the stressor?) and the
2 resultant emotions (e.g., how did this stressor make you feel?). Prior to issuing the
3 SEDs, the lead author explained the requirements of the data collection process and
4 provided the participants with an information sheet containing example diary entries.
5 During data collection, the lead researcher attended the Cricket Team's training
6 session each day to answer any questions and help ensure adherence (e.g., Hanton et
7 al., 2012; Nicholls et al., 2005).

8 **Collection of video footage.** To promote accurate recall and reflection during
9 competition, video footage of each participant during competition was collected to use
10 alongside post-competition interviews. This approach has previously been successful
11 in providing a stimulus to encourage more vivid recollections (e.g., Miles & Neil,
12 2013; Smith & Harwood, 2002). With the Cricket Club's approval, the lead author
13 recorded footage of the competition on location using a 50Hz camera situated directly
14 behind the wicket from the media end of the ground (Miles & Neil, 2013).

15 **Video editing.** To explore the participants' SEC experiences, we used
16 Sportscodes to edit the video into 15-second clips representing each competitive
17 stressor identified within the SEDs. For all the participants, footage was also provided
18 of the warm up, taking the field, and bowling or batting performances.

19 **Interview process.** We interviewed the cricketers the day after competition to
20 reduce issues with retrospective recall. For the purpose of this study, we deemed an
21 open-ended, semi-structured interview technique as most appropriate to enable us to
22 explore newly emerging themes whilst gaining greater clarification and understanding
23 of participants' experiences (Patton, 2002). We tailored the interview guides for each
24 participant in-line with the data collected from the SEDs and divided the interview
25 guide into two sections. Section one contained a logical and progressive sequence of

1 questioning encouraging the participants to elaborate on the stressors (e.g., “you
2 mentioned the meeting was pointless, what made you record this?”), cognitions (e.g.,
3 “what specifically were you thinking when he told you this?”), emotions (e.g., “how
4 would you describe the way you were feeling at this point?”), coping strategies (e.g.,
5 “what did you do to help cope with these thoughts and feelings?”), and behaviors (e.g.,
6 “how would you describe your behavior at this point?”) emerging throughout the pre-
7 competition period. In sum, within the first section of the interview we explored the
8 participants’ SEC experiences throughout the 7-day period leading up to competition.
9 In section two we focused on the participants’ SEC experiences on the day of and
10 during actual competition. To minimize issues surrounding retrospective recall that
11 has limited previous studies within cricket (e.g., Thelwell et al., 2007), the questions
12 regarding competitive experiences were accompanied by video footage of each
13 participant during their performance.

14 **Pilot studies.** We piloted the SEDs with two recreational cricketers
15 throughout a 3-day period leading up to competition. Following the pilot we made
16 only cosmetic changes to the layout of the SEDs. The data collected over the 3-day
17 period created a template for a pilot interview guide. Based on this template, the lead
18 author then interviewed the same two recreational cricketers following competition.
19 This process enabled the interviewer to become familiar with the type of responses
20 the open-ended questions would provoke and ways to stimulate detailed descriptions
21 (Flick, Kardorff, & Steinke, 2004). We made minor amendments to the interview
22 guide following the pilot to promote better clarification (e.g., “I’m not entirely sure
23 what you mean, could you please go over that again?”) and elaboration (e.g., “could
24 you please explain that in more detail?”).

25 **Data Analysis**

1 Following all the interviews being transcribed verbatim, the lead author sent
2 copies of the transcripts to the participants. This process enabled the participants to
3 reflect on the interview and ensure the transcripts represented a valid description of
4 events. Following confirmation from the participants that the transcriptions were
5 accurate, we read and re-read the transcripts to improve our understanding of each of
6 the participants' unique experiences (Kvale, 2009). In-line with previous research
7 (e.g., Hanton et al., 2012), we identified and coded words, phrases, and quotes
8 associated with the stressors each participant encountered and the associated
9 cognitions, emotions, coping strategies, and behavioral responses. We then conducted
10 inductive and deductive content analyses (Côté, Salmela, Baria, & Russell, 1993),
11 with key components categorized into a Microsoft[®] Excel[®] document (Meyer &
12 Avery, 2009). To elaborate, the stressors and the associated cognitions, emotions,
13 coping strategies, and behavioral responses were inductively analyzed into
14 manageable *meaning units* (Côté et al., 1993) before being classified through
15 deductive means in line with previous literature – consequently adopting a post-
16 positivistic approach. For example, we categorized the stressors into competitive,
17 organizational, and personal sub-categories in line with existing stress literature (see
18 Fletcher, Hanton, & Mellalieu, 2006). We organized the cognitions and emotions
19 using Lazarus's (2000) existing categories; whilst the coping strategies were also
20 classified using Lazarus's (1999) model of coping that has been widely adopted
21 within the sport literature (Nicholls & Polman, 2007). Finally, the emanating
22 behaviors remained inductively organized and were recorded as quotes from each
23 participant. We then sent the raw data in the Microsoft[®] Excel[®] document and the first
24 draft of the results section of this paper to the participants for member-checking
25 procedures which verified our interpretations of the data.

1 **Results**

2 The data we collected highlights the types of stressors and subsequent cognitive,
3 emotional, coping, and behavioral responses that elite cricketers experienced
4 throughout the 7-day pre-competition period and on the day of the first competitive
5 fixture of the season. To clearly represent the large amount of data gathered during
6 this study, we display the data through temporal representations using Microsoft[®]
7 Visio[®] (see Figures 1-4). The representations give details of: the stressors; the
8 associated cognitions (appraisals); the subsequent emotions; the coping strategies; and
9 the behavioral outcomes. To facilitate a contextual understanding and provide an
10 empathetic view of the collective experiences of the players, we accompany these
11 representations with a selection of narrative and descriptive quotes (Smith & Sparkes,
12 2005).

13 **Pre-Competition Period**

14 From the 68 stressors recorded throughout the pre-competition period (see
15 Figures 1-4), 55 of the preceding SEC transactions concerned performance stressors.
16 In line with the stressors, all the players identified cognitions (appraisals) associated
17 with a variety of competitive stressors that resulted in either positive or negative
18 emotions, attempts to cope, and behavioral responses. To guide the reader through our
19 findings, we describe the players' experiences in four stages of the week leading up to,
20 and including, competition: 1) early in the week (Day 1-3); 2) throughout the middle
21 of the week (Day 4-6); 3) the day before competition (Day 7); and 4) the day of
22 competition. In each stage we illustrate the most frequently encountered stressors and
23 the subsequent components of the SEC process.

24 **Day 1-3**

25 Early in the week, the most frequently cited competitive stressor by each

1 player was team practice (including a practice fixture). When given the opportunity to
2 elaborate on his experiences, player C (Figure 3, Day 1) highlighted practice to be a
3 commonly reported stressor and his attempts to cope:

4 I know it is important to perform well in practice to show the coaches that I
5 have improved throughout the winter [*stressor*]. I often think about the
6 importance of hitting the ball well leading up to the first class match as it
7 increases your chances of selection [*threat appraisal*]. This leaves me feeling
8 slightly anxious [*emotion*]. When you are feeling like this it is important to try
9 and relax and watch the ball. This is something I will say to myself, ‘relax and
10 watch ball’ during batting practice as it helps me focus [*problem-focused*
11 *coping*] and, on this occasion during practice, I played well [*performance*
12 *behavior*].

13 The above quotation highlights the importance of displaying competence at each
14 practice to help the players achieve their overall goal of being selected for the
15 competition. The potential of performing poorly in practice was appraised as
16 threatening in relation to the chances of selection. In line with this appraisal and the
17 associated anxiety response, all of the players reported the value of coping. Pre-
18 competition routine was the most commonly used coping strategy to regulate anxiety
19 and redirect focus to the task. For example, player B reported that he would focus on
20 “the routine that [he] would use in the match” prior to going into bat (Figure 2, Day 1).
21 He continued, “...when you are feeling under pressure and anxious, it is important
22 that you have one constant routine that enables you to feel relaxed and focused”.
23 Although the components of each players pre-competition routines were different,
24 emphasis was placed on a systematic and “consistent routine” to cope with these
25 demands.

1 Although practice was the most commonly cited stressor throughout the week,
2 demands from outside of cricket were noted to affect the players' cognitions,
3 emotions, and behaviors at the start of the pre-competition period. On Day 2, player A
4 reported that he had recently broken up with his girlfriend and noticed himself
5 becoming particularly aware of his demands:

6 The break up made me realize I am at a big crossroad in my life [*stressor*]. I
7 don't know what will come after university... Will I play cricket? Will I get a
8 job? Will I get back with my girlfriend? Will I be living away from home? It
9 seems like I have a lot on my plate and I'm not sure how I'm going to handle
10 it, let alone focus on the match at the weekend [*threat appraisal*].

11 Feeling increasingly anxious [*emotion*], player A returned home to use his social
12 support networks. By confiding in his family, he was able to gain some perspective on
13 his situation [*emotional coping*] and appeared much more sociable and attentive
14 [*behavior*] (Figure 1, Day 2). When we asked player A how he was feeling the next
15 morning, he responded positively:

16 In the morning, all the worrying thoughts had gone and I was looking forward
17 to our practice fixture [*stressor*]. I was thinking 'cricket is the most important
18 thing in my life right now' [*benefit appraisal*] and I was really happy and
19 looking forward to the day ahead [*emotion*]. I returned to my normal self
20 [*behavior*].

21 Despite the temporary diversion of player A's attention, he later stated that "those
22 thoughts are still there, but being around the boys and striving for selection enabled
23 me to cope with it". The above quotation illustrates the value of social support as an
24 emotion-focused coping strategy and also highlights that cognitions can be diverted
25 towards other important goals (e.g., the goal of being selected for competition).

1 **Day 4-6**

2 Although the players recorded personal issues and demands associated with
3 displaying competence in practice, organizational stressors related to the coach's view
4 on selection became more frequent as the week progressed. All of the players
5 continually appraised their chances of selection as a consequence of coach perception.
6 Indeed, the demand of selection was most often timed at night following the days
7 practice. Half way through the week, three of the four players reported cognitions
8 associated with their chances of selection. Player C provided insight into the general
9 thoughts of the group on Day 4:

10 What the coach thinks of you [*stressor*] and where he sees your role in the
11 team is particularly concerning [*threat appraisal*]. You often end up feeling
12 anxious and frustrated [*emotion*] no matter how much reassurance you get
13 from your teammates throughout the week [*emotion-focused coping*]. Most
14 evenings I would find myself sitting in my room rather than socializing with
15 my housemates [*behavior*].

16 The above quotation shows player C's view on selection in relation to coach
17 perception(s) and the rationale for many of the cognitions that the players had
18 throughout the week. Regardless of how the players viewed their practice throughout
19 the week, organizational stressors concerning the uncertainty of the coach's opinion
20 was appraised as a threat given the importance of their selection for competition.

21 Towards the end of the week there were several occasions when the players
22 highlighted stressors that were perceived to enhance or diminish team values prior to
23 competition. To elaborate, player D illustrated an occasion on Day 5 where several
24 players jeopardized team values by wearing the wrong kit, which threatened the
25 prospects of a good practice session (Figure 4):

1 Three or four of the boys weren't wearing the right clothing and as soon as
2 they walked into the meeting you could see that the coach wasn't impressed
3 [*stressor*]. This was reflected by a poor start to our warm ups and could have
4 led on to a bad net session [*harm appraisal*]. Given how close we were to
5 competition, this made me angry [*emotion*]. I knew getting angry wouldn't
6 help so I started to joke with one of the lads that was wearing the wrong kit
7 [*emotion-focused coping*]. This helped my body language in the session
8 [*behavior*] and, slowly, the atmosphere improved.

9 The use of humor was highlighted on several occasions to enable coping with team-
10 related organizational stressors. To elaborate, player A explained why he used humor
11 to cope with one of his teammates making him late for practice on Day 6 (Fig.1):

12 We jokingly, yet seriously, let him know that we were annoyed. For example,
13 we were swearing and saying he's always late. Although I was annoyed,
14 having a joke made it a little easier. I think it gets the message across without
15 causing too many issues. I hope that he takes it well but learns his lesson from
16 it. If I didn't make a joke of it, it would have festered and I may have taken it
17 out on him later.

18 Both of these explanations highlight how the players used humor within the team
19 environment to maintain a positive team ethos whilst ensuring that their teammates
20 were aware of their misdemeanors.

21 **The Day Before Competition (Day 7)**

22 At the end of the week, three of the four players (A, B, and D) were selected
23 for the competition. Although player C missed out on selection for the competition, he
24 was named as 12th man. Given that the role of 12th man required player C to be
25 present at the competition, his experiences were recorded (Figure 3, Competition).

1 Upon receiving news of selection, all three of the selected players reflected upon their
2 week's preparation. Depending on the perception of their performances throughout
3 the week, the resultant cognitions represented a benefit or threat appraisal and
4 subsequently positive (i.e., happiness) or negative (i.e., anxiety) emotions. To
5 elaborate, player D provided insight into the experience he had on the night prior to
6 competition (Figure 4, Day 7):

7 I knew that I had been training well [*stressor*] all week and that gives you such
8 a confidence boost [*benefit appraisal*]. Reflecting on this made me feel really
9 happy [*emotion*] and confident going into the game. Despite these thoughts,
10 you sometimes find yourself thinking about letting yourself and your team
11 down [*threat appraisal*]. To counter this, I would tell to myself, 'you know
12 you are up to pace' and that helped me a lot as the game was so close
13 [*problem-focused coping*]. Despite the bursts of anxiety, I was very happy
14 [*emotions*] about my chances the next day and as a result I was buzzing and
15 full of energy whilst sat with my housemates [*behavior*].

16 The above quotation highlights the continual and fluctuating nature of the SEC
17 process. In addition, it highlights the use of positive reminders, through the use of
18 self-talk, as a form of coping to negate any feelings of anxiety. In particular, the
19 players would appear to find positives in stressors that were initially deemed to be
20 threatening (e.g., past performances in practice).

21 **Day of Competition**

22 Upon waking up on the morning of the competition, the players recorded their
23 thoughts surrounding the approaching competition [*stressor*]. Having spent the
24 majority of the week with concerns over selection, all the players initially appraised
25 the competition as a great occasion [*benefit appraisal*] that they could enjoy.

1 Typically, all of the players reported feelings of happiness [*emotion*] at the start of the
2 day. Specifically, the players drew upon their week's preparation as a source of
3 confidence to explain their feelings. To illustrate, player A stated:

4 Despite all the ups and downs you have in the week with thoughts concerning
5 your performance in practice, you actually become stronger and more
6 confident as a result. Being able to draw on this will be important as the day
7 goes on; it will particularly help when you are put on the spot to perform
8 [when batting or bowling].

9 The sentiments provided above were consistent with the three players who had made
10 the team for competition. However, as the morning progressed, it was apparent that
11 the players' goals had changed from gaining selection to performing well in the
12 competition. For example, player A gave more insight into this change:

13 For players on this scheme there are no bigger games than this. I think most of
14 the players would agree that this is the most important match of the season
15 [*stressor*]... Your focus changes quickly from getting in the team to wanting
16 to play well... It becomes important that you play well to make a name for
17 yourself [*threat appraisal*].

18 To cope with the reported anxiety [*emotion*] associated with their approaching
19 performance, all three of the cricketers who were selected for competition focused on
20 their pre-competition preparation and routines [*problem-focused coping*]. Player B
21 advocated the use of a pre-competition routine as it helped "stop any negative
22 thoughts creeping in and focused [him] on the task at hand". As a result he was "very
23 focused" in the morning's warm-ups and executed his pre-competition preparation
24 "really well" [*behavior*].

25 Specific to competition, the three selected players (A, B, and D) reported

1 different stressors associated to their individual roles. To elaborate, player A gave
2 insight into being asked to bowl by the captain (Figure 1, Competition):

3 I had been waiting for about 45 minutes when the captain asked me to bowl
4 [*stressor*]. Although you want to be excited, you can't help but feel anxious
5 [*emotion*] about the occasion given that you don't want to fail [*threat*
6 *appraisal*]. By concentrating on my pre-competition routine it helped me
7 focus on my skills rather than all the other thoughts you get [*problem-focused*
8 *coping*]. With my first ball, I fully committed to my routine and I got a wicket
9 [*competition behavior*].

10 Player A was not alone in his use of pre-competition routines to help him cope with
11 the demands of competition. All three participants reported pre-competition routines
12 as a valuable coping strategy during competition, as it enabled them to focus on their
13 skills as well as relax during times of increased anxiety. In addition, during periods of
14 self-doubt, the players used self-talk as a reminder of their preparation throughout the
15 week and their readiness to compete.

16 Discussion

17 This study adds to the extant literature by becoming the first to provide a holistic and
18 temporal exploration of SEC underpinned by the CMR theory of emotions (Lazarus,
19 1999). By addressing the call for more temporal designs to explore the SEC process
20 (Hanton et al., 2012), we have demonstrated some of the SEC experiences of elite
21 cricketers throughout a 7-day pre-competition period and on the day of the first
22 competitive fixture of the season. These data provide insight into the transactions that
23 cricketers have with their environment through: the stressors, cognitions (appraisals),
24 emotions, coping strategies, and eventual behavioral outcomes in the lead up to an
25 important competition. Consequently, data support existing literature that illustrated

1 athletes face a diversity of demands, appraise each demand in relation to their existing
2 goals, experience a myriad of emotions, and attempt to cope through a number of
3 different strategies, all of which ultimately affect performance behaviors (Neil et al.,
4 2011; 2013b).

5 Whilst the narratives provide specific insight into the SEC transactions that
6 arise during the lead up to, and during, competition, the temporal representations (see
7 Figures 1-4) also illustrate the ongoing and continuous nature of the SEC process over
8 a prolonged period of time. Specifically, the players in this study reported a number of
9 stressors across the week, some of which reoccurred in line with their existing
10 performance goals. Despite the emphasis on performance stressors, the players
11 continued to experience stressors that emanated from outside the performance
12 environment (Hanton, Fletcher, & Coulglan, 2005; Woodman & Hardy, 2001). That is,
13 organizational (e.g., team issues) and personal (e.g., relationships) stressors that
14 evoked a number of cognitions, emotions, coping responses, and behavioral outcomes.
15 Indeed, our data illustrate the need for athletes to continuously cope with numerous
16 demands from a variety of contexts to avoid conflict with their most salient goals (e.g.,
17 Fletcher et al., 2006; Mellalieu, Neil, Hanton, & Fletcher, 2009).

18 To cope with the stressors and the resulting cognitive and emotional responses,
19 the players reported using several coping strategies. Consistent with the CMR theory
20 of emotions, the coping strategies were implemented during threat and harm
21 appraisals (including negative emotional responses; Lazarus, 2000). In particular, the
22 players expressed the use of pre-competition routines, social support, self-talk, and
23 humor (e.g., Cotterill, 2011; Gaudreau, Blondin, & Lapierre, 2002; Miles & Neil,
24 2013; Thewell et al., 2007). Although the type of coping strategy used was specific
25 and unique to each player's appraisal, analysis of the data revealed several common

1 strategies. For example, pre-competition routines were regularly used to help cope
2 with many of the competitive stressors appraised as threatening (i.e., the need to
3 display competence) and evoked emotions perceived as detrimental to competition
4 (i.e., anxiety). Previous research on stress and coping in cricket has revealed the
5 importance of pre-match preparatory strategies to help overcome stress from self-
6 induced pressure and match-specific issues (Thelwell et al., 2007), a result that is
7 congruent with data in our study. Although existing research has indicated the
8 effectiveness of pre-performance routines on skill execution (e.g., Cotterill, 2011),
9 future researchers should continue to adopt more experimental methodologies to
10 explain why pre-performance routines assist performers in regulating the affects of
11 the SEC process on skill execution.

12 Regarding organizational or personal stressors that were appraised as
13 threatening or harmful to goal attainment, the players highlighted the value of social
14 support networks and the use of humor as useful coping strategies. Indeed, athletes
15 have been reported to seek support agencies comprising of teammates and coaches for
16 instrumental and emotional purposes (Bianco, 2001). Although our study provides
17 examples of using teammates as social support for concerns surrounding selection, the
18 data also offer evidence for the use of support networks external to the sports
19 organization (e.g., friends and family). The data indicate providers of social support
20 (from outside of cricket) were used more frequently as an emotion-focused coping
21 strategy since consulting with teammates or coaches was seen to have potential
22 implications for future selection (Bianco, 2001). These data align with previous
23 research exploring the efficacy of Personal-Disclosure Mutual-Sharing (PDMS)
24 intervention strategies on team functioning variables (e.g., Barker, Evans, Coffee,
25 Slater, & McCarthy, 2014). Through the use of PDMS, practitioners may aim to

1 enhance the quality of relationships and rapport among teammates and coaching staff
2 to further enhance the provision of emotional support. Similarly, the data from our
3 study also highlight humor as a potential coping strategy for team-related issues.
4 Comparable to the data of our study, the use of humor has recently been described as
5 a specific interpersonal emotion regulation strategy used in competitive situations
6 (Tamminen & Crocker, 2013). Therefore our preliminary data may provide a valuable
7 avenue for future researchers interested in understanding coping strategies to maintain
8 social relationships in the sport environment (Niven, Totterdell, & Holman, 2009).

9 The strength of this present study is based upon the combination of qualitative
10 techniques to more effectively understand the experiences of elite cricketers in the
11 period leading up to, and during, competition. Advancing on retrospective enquiry,
12 we gave the participants opportunity to reflect upon, and record, their SEC
13 experiences through the use of diaries (e.g., Hanton et al., 2012). Additionally, we
14 used innovative methods to delineate the players' SEC experiences over a prolonged
15 and significant period of time prior to competition. By adopting this approach, we
16 have demonstrated the ongoing and continuous nature of SEC (Lazarus, 1999; 2000),
17 and have highlighted the idiosyncratic nature of each SEC response is underpinned by
18 unique athlete goals. Whilst data have reinforced the credentials of the CMR theory of
19 emotions (Lazarus, 2000), we acknowledge that this study only provides provisional
20 insight into the athletes' goals and their SEC response in relation to performance
21 behaviours. Future researchers should consider investigating the specific goals of
22 athletes, their cognitive and emotional responses, and the effectiveness of specific
23 coping strategies (e.g., self-talk) on athletic performance.

24 In conclusion, this study is the first to provide a holistic and temporal
25 exploration of SEC underpinned by the CMR theory of emotions (Lazarus, 1999).

1 Through exploring the SEC experiences of elite cricketers, data indicate a variety of
2 stressors and subsequent cognitive, emotional, coping, and behavioral responses. In
3 particular, our data support the ongoing and continuous nature of the SEC process and
4 highlight the central role of appraisals (Lazarus, 1999). By using an approach that
5 illuminated the SEC process in its entirety, we have shown the types of coping
6 strategies that cricketers use to regulate their SEC responses and performance
7 behavior(s). Researchers are encouraged to adopt experimental approaches to examine
8 the effectiveness of coping strategies utilized by athletes to regulate their experiences
9 of stress and emotions during performance.

10

- 1 Mellalieu (Eds.), *Literature reviews in sport psychology* (pp. 321-374).
2 Hauppauge, NY: Nova Science.
- 3 Flick, W., Kardorff, E.V., & Steinke, I. (2004). *A companion to qualitative research*.
4 London: Sage.
- 5 Gaudreau, P., & Blondin, J-P., & Lapierre, A-M. (2002). Athletes' coping during a
6 competition: relationship of coping strategies with positive affect, negative
7 affect, and competition-goal discrepancy. *Psychology of Sport and Exercise*,
8 3(2), 125-150.
- 9 Hanton, S., Fletcher, D., & Coughlan, G. (2005). Stress in elite sport players: A
10 comparative study of competitive and organizational stressors. *Journal of*
11 *Sports Sciences*, 23(10), 1129-1141.
- 12 Hanton, S., Neil, R., & Mellalieu, S. D. (2008). Recent developments in competitive
13 anxiety direction and competition stress research. *International Review of*
14 *Sport and Exercise Psychology*, 1(1), 45-57.
- 15 Hanton, S., Wagstaff, C. R. D., & Fletcher, D. (2012). Cognitive appraisals of
16 stressors encountered in sport organizations. *International Journal of Sport*
17 *and Exercise Psychology*, 10(4), 276-289. doi: 10.1080/1612197X.2012.68237
- 18 Kvale, S. (2009). *Doing Interviews*. London: Sage Publication Ltd.
- 19 Lazarus, R. S. (1991). *Emotion and adaptation*. New York: Oxford University Press.
- 20 Lazarus, R. S. (1999). *Stress and emotion: A new synthesis*. London: Free Association.
- 21 Lazarus, R. S. (2000). How emotions influence competition in competitive sports. *The*
22 *Sport Psychologist*, 14, 229-252.
- 23 Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. New York:
24 Springer.
- 25 Mellalieu, S. D., Neil, R., Hanton, S., & Fletcher, D. (2009). Competition stress in

- 1 sport players: stressors experienced in the competition environment. *Journal*
2 *of Sports Sciences*, 27(7), 729-744. doi: 10.1080/02640410902889834
- 3 Meyer, D. Z., & Avery, L. M. (2009). Excel as a qualitative data analysis tool. *Field*
4 *Methods*, 21(1), 91-112.
- 5 Miles, A. J., & Neil, R. (2013). The use of self-talk during elite cricket batting
6 competition. *Psychology of Sport and Exercise*, 14(6), 874-881. doi:
7 10.1016/j.psychsport.2013.07.005
- 8 Neil, R., Bayston, P., Hanton, S., & Wilson, K. (2013a). The influence of stress and
9 emotions on association football referees' decision-making. *Sport & Exercise*
10 *Psychology Review*, 9, 22-41.
- 11 Neil, R., Fletcher, D., Hanton, S., & Mellalieu, S. D. (2007). (Re)conceptualizing
12 competition stress in sport players. *Sport & Exercise Psychology Review*, 3,
13 23-29.
- 14 Neil, R., Hanton, S., & Mellalieu, S. D. (2013b). Seeing things in a different light:
15 Assessing the effects of a cognitive-behavioral intervention upon the further
16 appraisals of golfers. *Journal of Applied Sport Psychology*, 25(1), 106-130.
- 17 Neil, R., Hanton, S., Mellalieu, S. D., Fletcher, D. (2011). Competition stress and
18 emotion in sport players: The role of further appraisals. *Psychology of Sport*
19 *and Exercise*, 12(4), 460-470. doi: 10.1016/j.psychsport.2011.02.001
- 20 Nicholls, A. R., & Polman, R. (2007). Coping in sport: A systematic review. *Journal*
21 *of Sports Sciences*, 25(1), 11-31.
- 22 Nicholls, A. R., Polman, C. J., & Levy, A. R. (2012). A path analysis of stress
23 appraisals, emotions, coping, and competition satisfaction among athletes.
24 *Psychology of Sport and Exercise*, 13(3), 263-270. doi:
25 10.1016/j.psychsport.2011.12.003

- 1 Niven, K., Totterdall, P., & Holman, D. (2009). A classification of controlled
2 interpersonal affect regulation strategies. *Emotion*, 9(4), 498-509.
- 3 Patton, M. Q. (2002). *Qualitative research and evaluative methods* (3rd Ed). London:
4 Sage Publications Ltd.
- 5 Smith, J. M. J., & Harwood, C. G. (2002). The transiency of goal involvement states
6 within match-play: A case study of an elite player. *Journal of Sports Sciences*,
7 20(1), 71-72.
- 8 Smith, B., & Sparkes, A. C. (2005). Analyzing talk in qualitative inquiry: exploring
9 possibilities, problems, and tensions. *Quest*, 57(2), 213-242.
- 10 Tamminen, K. A., & Crocker, P. R. (2013). "I control my own emotions for the sake
11 of the team": Emotional self-regulation and interpersonal emotion regulation
12 among female high-performance curlers. *Psychology of Sport and Exercise*,
13 14(5), 737-747.
- 14 Thelwell, R. C., Weston, N. J. V., & Greenless, I. A. (2007). Batting on a sticky
15 wicket: Identifying sources of stress and associated coping strategies for
16 professional cricket batsmen. *Psychology of Sport and Exercise*, 8(2), 219-232.
17 doi: 10.1016/j.psychsport.2006.04.002
- 18 Weston, N. J. V., Thelwell, R. C., Bond, S., & Hutchings, N. V. (2009). Stress and
19 coping in single-handed round-the-world ocean sailing. *Journal of Applied*
20 *Sport Psychology*, 21(4), 460-474. doi: 10.1080/10413200903232607
- 21 Woodman, T., & Hardy, L. (2001). A case study of organizational stress in elite sport.
22 *Journal of Applied Sport Psychology*, 13(2), 207-238.
- 23

1 **Figure Captions**

2 Figure 1. Temporal representation of the stress and emotion process of the 8-day
3 period leading up to, and including, competition for player A.

4

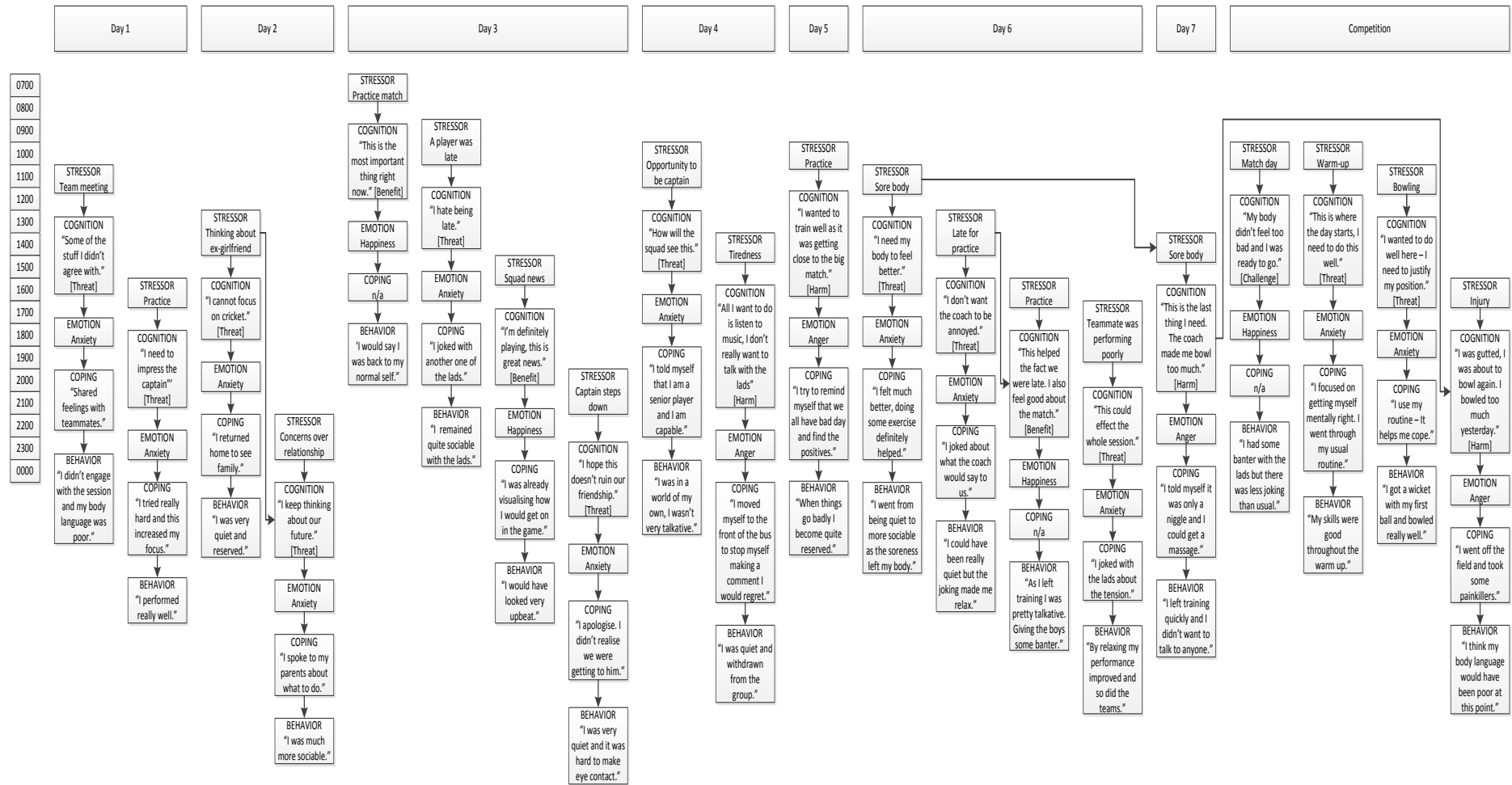
5 Figure 2. Temporal representation of the stress and emotion process of the 8-day
6 period leading up to, and including, competition for player B.

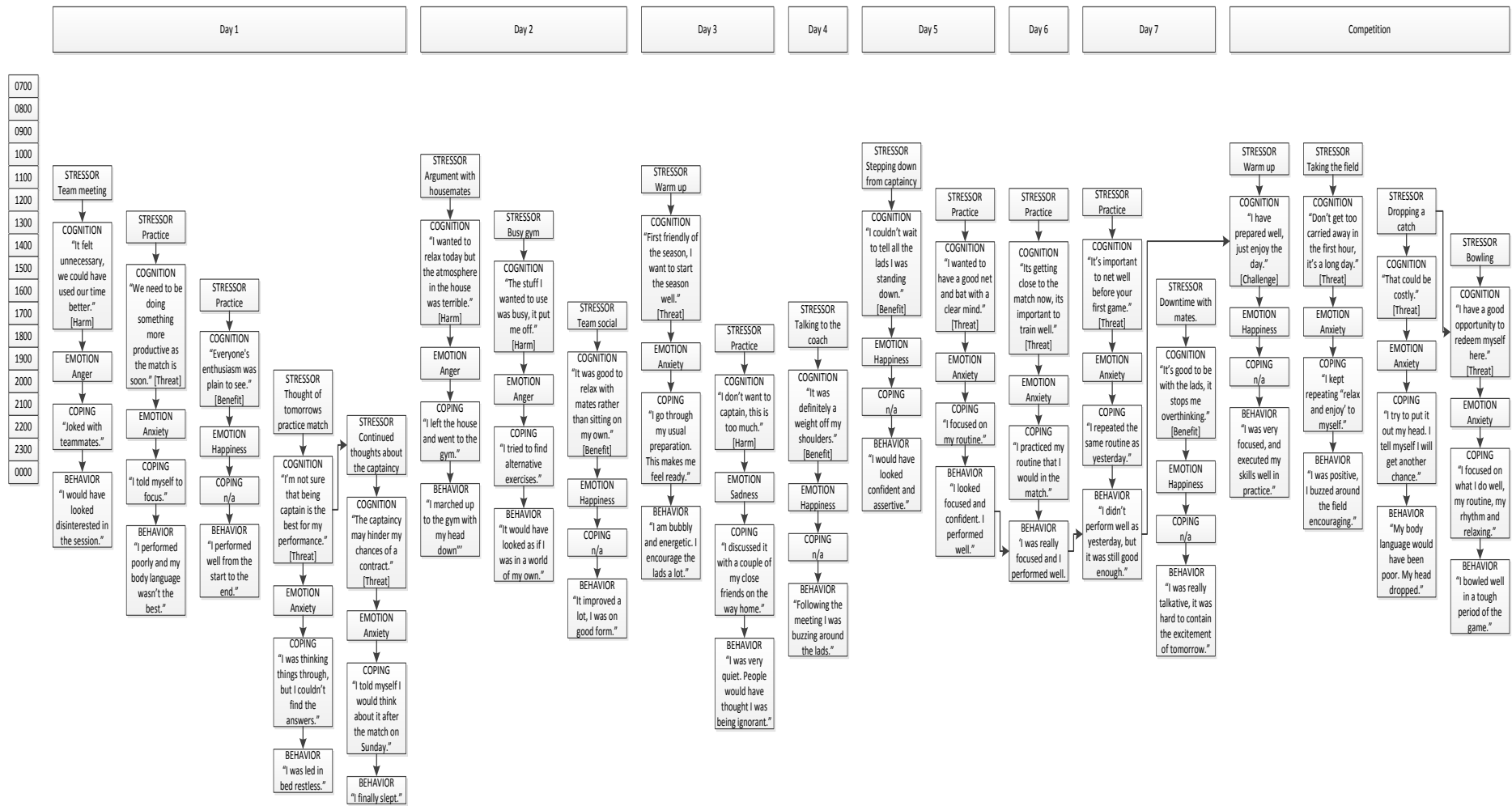
7

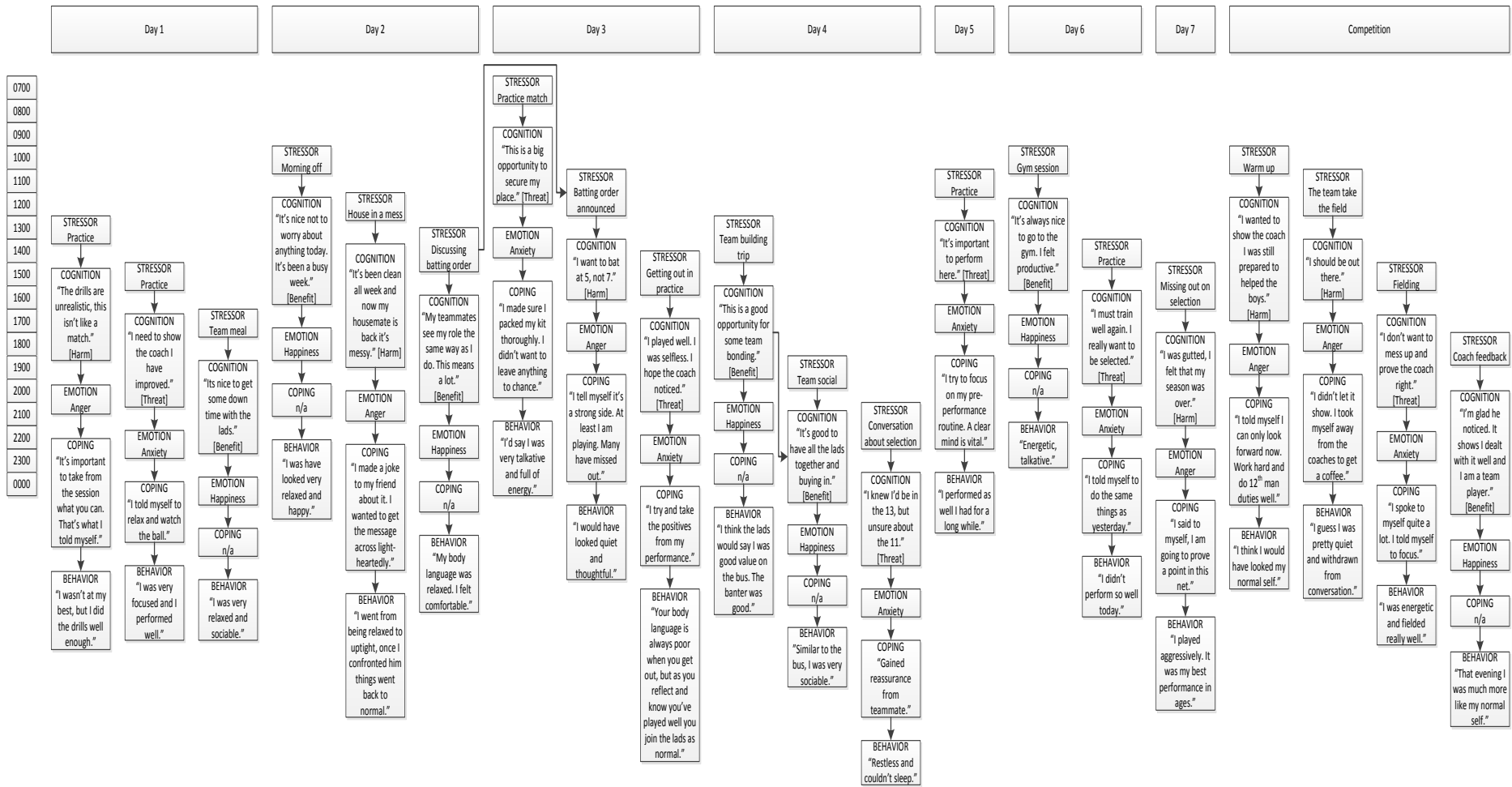
8 Figure 3. Temporal representation of the stress and emotion process of the 8-day
9 period leading up to, and including, competition for player C.

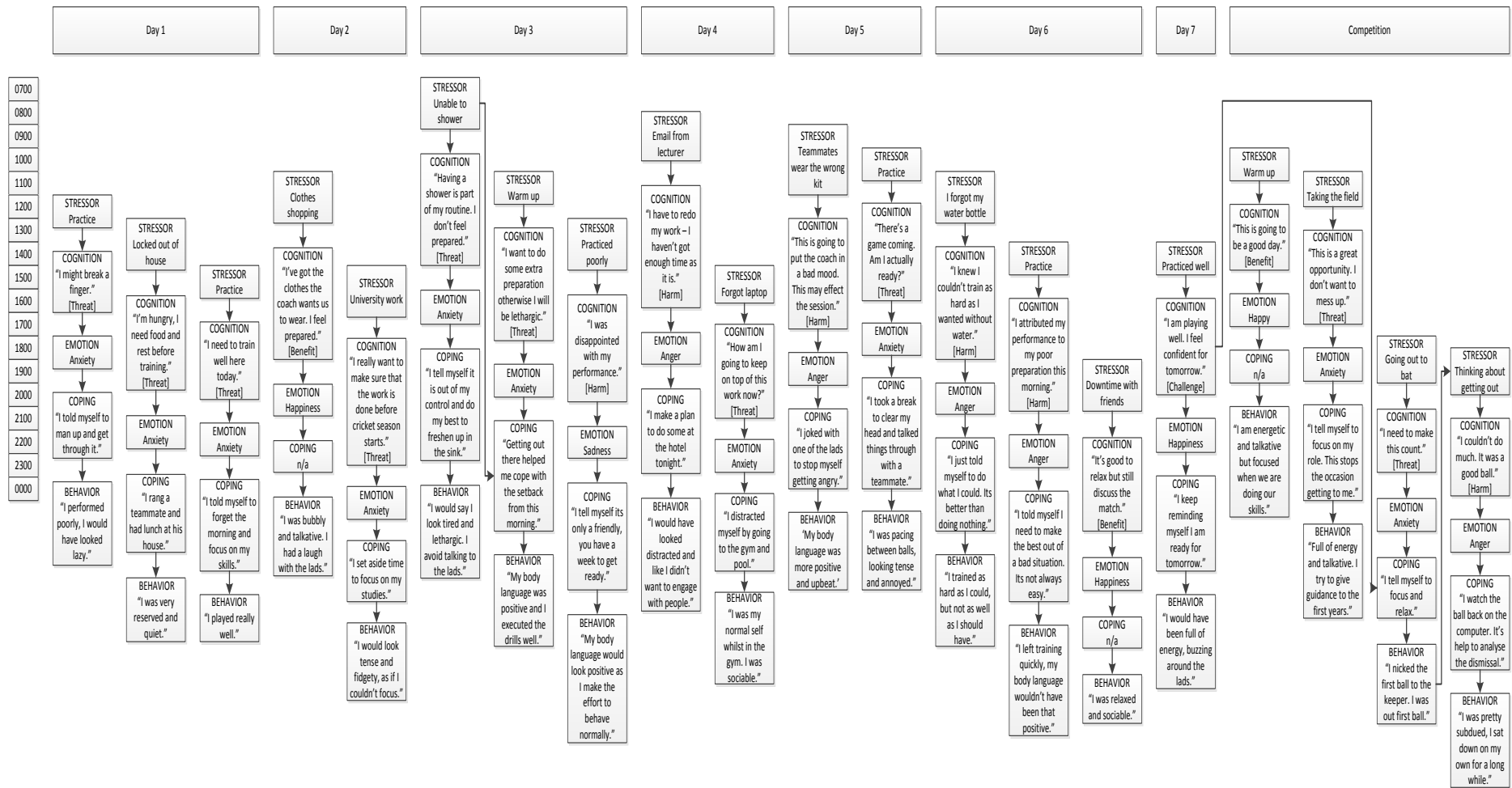
10

11 Figure 4. Temporal representation of the stress and emotion process of the 8-day
12 period leading up to, and including, competition for player D.









1

2