| Running | Head: | THE | ROAD | TO | LONDON | 2012 |
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| 4 | The Road to London 2012: The Lived Stressor, Emotion, and Coping Experiences of |
| 5 | Gymnasts Preparing for and Competing at the World Championships |
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| 1 | Abstract |
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| 2 | The purpose of this study was to explore the lived stressors, emotions, and coping |
| 3 | experiences of four international gymnasts. A variety of recurring stressors were reported by |
| 4 | the gymnasts, such as performing poorly in training, expectations from other people, and |
| 5 | coaches. Coping appeared to generate pleasant emotions in some instances, especially when it |
| 6 | was effective. The gymnasts also experienced multiple emotions simultaneously, including |
| 7 | unpleasant (e.g., anxiety) and pleasant emotions (e.g., excitement). The diaries also revealed |
| 8 | the extent to which team members were affected by one another, such as when a team |
| 9 | member suffered an injury that prevented him competing in the international event and the |
| 10 | others experienced a variety of emotions. The gymnasts also reported experiencing pleasant |
| 11 | and unpleasant emotions simultaneously. As such, these findings add to the emerging |
| 12 | literature that people can experience different emotions simultaneously and illustrate the |
| 13 | importance of examining multiple emotions to capture the entire emotional experience. |
| 14 | Keywords: Interpretative Phenomenological Analysis; Longitudinal; Elite |
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The Road to London 2012: The Lived Stressor, Emotion, and Coping Experiences of
 Gymnasts Preparing for and Competing at the World Championships

Longitudinal research indicates that athletes who compete in high level sports experience a variety of stressors (Didymus & Fletcher, 2012) and deploy many different coping strategies on a daily basis (Holt & Dunn, 2004). Stress has been defined as "an ongoing process that involves individuals transacting with their environments, making appraisals of the situations they find themselves in, and endeavoring to cope with any issues that may arise" (Fletcher, Hanton, & Mellalieu, 2006, p. 329). Fletcher et al. (2006) refer to appraisal in their definition, and for a person to experience stress they will have appraised that the situation has the potential to harm, threaten, challenge, or benefit the person (Lazarus, 1999). It is the appraisal of harm, threat, challenge, or benefit, which may potentially endanger the well-being of an individual that mobilizes an individual's attempt to cope. Coping refers to cognitive and behavioral attempts to reduce demands that have been evaluated as taxing the resources of a person (Lazarus & Folkman, 1984) and coping effectiveness refers to the degree in which coping strategies are successful in alleviating stress (Nicholls, 2010).

Longitudinal diary studies have examined stressors and coping responses among elite athletes (e.g., Holt & Dunn, 2004; Nicholls, Holt, Polman, & Bloomfield, 2006; Nicholls, Jones, Polman, & Borkoles, 2009). Holt and Dunn found that stressors were appraised when the participants' goals were threatened, and that a variety of coping strategies were used such as acceptance and expending additional effort. Nicholls et al. (2006) found that the nine most cited stressors accounted for 79% of all stressors, indicating that professional rugby players needed to contend with a relatively small number of stressors on a repeated basis. Further, the rugby players in this study reported more stressors during the weeks in which the most important matches took place. Other research, with a sample of professional rugby players,

- 1 revealed that more stressors were reported during training than matches (Nicholls et al.,
- 2 2009). These studies have made important contribution to the literature, because they
- 3 identified the stressors encountered by elite athletes and the frequency of such stressors.
- 4 However, a limitation of this longitudinal research, is that emotions were not explored (e.g.,
- 5 Holt & Dunn, 2004; Nicholls et al., 2006) nor was the relationship between stress and coping
- 6 with emotions explored (e.g., Nicholls et al., 2009).
- 7 Emotions have been defined as "an organized psychophysiological reaction to
- 8 ongoing relationships with the environment, most often, but not always, interpersonal or
- 9 social" Lazarus (2000a; p. 230). Although Lazarus (1999) suggested that appraisal is the most
- important construct within the stress process, a recent study found that emotions are just as
- important (Nicholls, Perry, & Calmeiro, in press). As such, it could be argued that emotions
- should be explored to gain a more comprehensive understanding of athletes' stressful
- experiences. Emotions are thought to occur after the appraisal of a stressor and after a coping
- strategy has been deployed and that people may experience more than one emotion
- simultaneously (Folkman, Lazarus, Dunkel-Schetter, DeLongis, & Gruen, 1986).
- There are, however, examples of retrospective interviews (e.g., Neil, Hanton,
- Mellalieu, & Fletcher, 2011) and cross-sectional studies (e.g., Nicholls, Levy, & Polman,
- 18 2012) that have examined stress in conjunction with either emotions and/or coping. Neil et al.
- 19 (2011), for example, found that the athletes in their sample faced a variety of demands, which
- were appraised differently and led to different emotions being experienced. In agreement
- with Neil et al., Nicholls et al. (2012) also found that appraisals shaped emotions, and that
- 22 emotions were related to coping. Although these papers made important contributions, the
- Neil et al. study did not explore coping and Nicholls et al. only focused on competitive
- stressors. Research with professional rugby union players revealed that more physical and life
- 25 stressors were encountered on training days than on match days (Nicholls, Backhouse,

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Games.

1 Polman, & McKenna, 2009). From an applied perspective, it is important that practitioners have an understanding of the psychological demands in preparation for competitive sport or 2 3 major events, especially in some elite level team sports where athletes may spend much more 4 time training than competing. In order to address this pertinent issue, Mellalieu, Neil, Hanton, and Fletcher, (2009) interviewed elite and non-elite athletes regarding the organizational and 5 6 performance stressors encountered in the build up to a competition. These authors revealed that the athletes reported more performance than organizational stressors in the build up to a 7 competition. Further, Dugdale, Eklund, and Gordon (2002) retrospectively examined 8 9 appraisals and coping with expected and unexpected stressors at the 1998 Commonwealth Games. Unexpected stressors were evaluated as being more threatening. The athletes also 10 11 reported a variety of different coping strategies such as acceptance, increasing effort, and 12 planning. This study is particularly relevant to the present study given that stressors and coping was explored in relation to a major championship. However, Dugdale et al. (2002) did 13 not distinguish between stressors that were reported before or during the Commonwealth 14

The aforementioned studies (Dugdale et al., 2002; Mellalieu et al., 2009; Neil et al., 2011; Nicholls et al., 2009; 2012) have made important contributions to the literature regarding stress, emotions, and coping in regards to training and competition, but they have not prospectively explored stressors, emotions, and/or coping in regards to the build to and during an international event. Furthermore, these studies have used either retrospective interviews or have been cross-sectional. Although people can be interviewed regarding how their psychological reactions may have changed, this data may lack validity as daily accounts due to results being influenced by a multitude of factors such as memory decay (Stone et al., 1998).

The purpose of this study was to explore and interpret the lived experiences of

- stressors and the resulting emotions. We also explored the gymnasts' experiences of coping
- 2 and subsequent emotions after coping, and perceptions of coping effectiveness. To our
- 3 knowledge, it is the first time that emotions have been examined in response to stressors and
- 4 coping longitudinally, among a sample of elite athletes who are preparing for and then
- 5 competing at a major event. It should be noted that the gymnasts were not confined to
- 6 reporting either performance or organizational stressors, as in previous longitudinal research
- 7 (Didymus & Fletcher, 2012; Nicholls et al., 2006). We wanted to examine the gymnasts'
- 8 experiences of the most salient stressors in preparation for, and during a major championship,
- 9 regardless of whether they were performance or organizationally oriented.

10 Method

Participants

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- Four international gymnasts, who were aged between 20 and 25 years of age ($M_{age} =$
- 13 20.25 years; SD = 1.7) and had participated competitively in gymnastics from between 13
- and 17 years ($M_{\text{competitive years}} = 14.75 \text{ years}$, SD = 2.06) took part in this study. Participants
- were assigned the pseudonyms of Darren, Matthew, Johnny, and Daniel to protect their
- 16 identity.

The 28-Day Diary Period

- The 28-day diary period started on the 17th of September 2011 and ended on the 14th
- of October 2011. This competitive period was selected because it included a major
- 20 international event for the team and an individual event. The competitive event also acted as a
- 21 qualifying competition for the London 2012 Olympic Games. If the team did not finish in the
- top eight teams, they would have a final chance to qualify in January 2012.

Data Collection

Participants were given a diary pack that included instructions, definitions of the

- 1 psychological constructs, and 28 diary sheets, which is in accordance with previous diary
- 2 research (Didymus & Fletcher, 2012). The definitions were adapted from academic
- 3 definitions. Stressors were defined as "demands encountered that cause you worry or concern
- 4 that you try to cope with" (adapted from Fletcher et al., 2006), whereas emotions were
- 5 defined as "psychological and physiological reactions to what is happening or as happened
- 6 (adapted from Lazarus, 2000). Coping was defined as "the thoughts and behaviors you
- 7 engage in to reduce the amount of stress you are experiencing" (adapted from Lazarus &
- 8 Folkman, 1984). Finally, coping effectiveness was defined as "the degree to which the coping
- 9 strategies used were effective in eliminating or reducing the stress or the unpleasant emotions
- you were experiencing (adapted from Nicholls, 2010).
- Each diary sheet contained the following open-ended questions, which were based on
- theoretical assertions of Folkman et al. (1986), who stated that emotions are generated after
- the appraisal of stressors and coping: (1) What stressors have you experienced today? (2)
- How did experiencing these stressors make you feel? (3) What did you do to cope with these
- stressors? (4) How did you feel after attempting to cope with these stressors? (5) Which of
- the coping strategies that you used were the most AND least effective (please describe why)?

Procedure

- Ethical approval was obtained from a University Ethics Committee. Information
- 19 letters were personally distributed to five members of the gymnastics squad by a research
- assistant, who answered any questions the gymnasts may have had. If the gymnasts decided
- 21 to participate, they contacted the research assistant by e-mail. In total, four members of the
- 22 gymnastic team decided to participate. All four participants agreed that all data collected in
- 23 this study could be published in a peer reviewed journal. Further, all participants were
- 24 informed that they could decide to withdraw from the study at any point without
- 25 consequence.

Participants were asked to complete a diary sheet every day for the duration of the study, or until their involvement in the competition ended. Once the diary packs had been administered, the research assistant ensured that the participants understood the diary packs by asking whether there were any parts that were not understood. All participants reported that they understood the study requirements and all of the questions. Previous diary studies have shown that adherence can be maximized by regular contact with participants (e.g., Didymus & Fletcher, 2012). As such, the research assistant contacted the participants on a regular basis by telephone or e-mail.

Data Analysis and Peer De-Briefing

We used Interpretative Phenomenological Analysis (IPA; Smith & Osborn, 2003) to analyze the diaries, in accordance with previous longitudinal diary research (Nicholls, 2007). According to Smith and Osborn, IPA is useful in exploring participants' views to obtain an insiders' perspective. Given the essence of this study was to explore and interpret lived experiences of stress, coping and emotions, we deemed that this a suitable method of analysis. The first and second author have previously published research using IPA (e.g., Borkoles, Nicholls, Bell, Butterly & Polman, 2008; Levy, Polman, Nicholls, & Marchant, 2009; Nicholls, 2007; Nicholls, Holt, & Polman, 2005), so have experience using this form of data analysis.

All diaries were transcribed verbatim and each transcript was read several times and analyzed by two authors and a research assistant. During this independent reading and rereading of the transcripts, notes were made in the left hand margin about stressors, emotions, coping, and coping effectiveness. Following this process, blocks of text were isolated into meaning units and titles of themes were written in the right-hand margins. These notes were transformed into themes by the authors and a research assistant making connections between the participants' statements and the researchers' interpretations of these statements (Smith &

Osborn, 2003). This is consistent with the idiographic nature of IPA that emphasizes detailed and nuanced analysis on small sample sizes (Smith, 2004).

Peer De-Briefing. In addition to separate analyses being conducted by the two authors and a research assistant, these analyses were also verified by an independent researcher who had experience using IPA, which is in accordance with Neil et al. (2011) to increase the validity of data. This independent researcher read a copy of each participant's diary transcript and idiographic profile and checked whether he thought the interpretations we had made were correct. Although this technique is not widely used for IPA studies, we believed it adds extra credibility to the interpretations of the players experiences.

Member-Checking. Each participant received an individual profile. The research assistant e-mailed an electronic copy of the profiles and had an informal discussion with each participant within five days of the participant receiving their profiles (Lincoln & Guba, 1985). In accordance with Nicholls (2007), each participant was asked the following questions: "Is your profile representative of your experiences during the study?" "Did you agree with my interpretations of your diary?" "Is there anything you would like to add to your profile to make it more representative of your experiences?" All four participants confirmed that their report was accurate of their experiences and none of the participants wanted to make any amendments.

19 Results

The number of diary entries ranged between 15 and 28 completions (M number = 22.75, SD = 5.5). Danny suffered an injury on the 29^{th} of September and completed two additional entries after sustaining this injury. In accordance with both Holt and Dunn (2004) and Nicholls (2007), the participants' diaries are presented as chronologically ordered profiles.

1 Darren

| Training load was the initial stressor for Darren at the start of the build up to the |
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| world championships, as he wrote "feel there is a massive training load to get through. Not |
| feeling in a good place with my training." This stressor made him feel anxious. He coped by |
| engaging in positive self-talk: "kept telling myself I will get through this. I don't have a |
| choice." This coping strategy had a positive effect, as it made Darren "feel slightly more |
| relaxed and thought I will get to the Olympics" [all 17th of September]. |
| During the following day [18th of September], Darren experienced team mate |
| stressors, "a couple of my team mates were lacking motivation today, making the feel of the |
| training session quite negative, which made the coach quite angry." This annoyed Darren, "I |
| was ready to train hard and stuff, but they were bringing me down." Darren coped by using |
| several strategies in combination "accept it, try not to let it get me down, and concentrate on |
| my training." Although Darren had a good training session, he felt disappointed that the team |
| morale was low. |
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| He commented that after a trip home "it can be a disruption to my schedule, when |
| He commented that after a trip home "it can be a disruption to my schedule, when training is this intense." He coped with this disruption by seeking informational support from |
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| training is this intense." He coped with this disruption by seeking informational support from his coach, "told him where [I] was up to, what I need to improve, what I'm not confident with, and he put a session specific to that on for me." He felt that the session gave him a "chance to get off my chest what was worrying me, when I am not with the other team mates so that it does not worry them" [all 19 th of September]. As the competitive event neared, Darren felt more pressure, "really starting to feel the pressure now. It's a week till we travel to [name of destination], so not long left in [name of |

| 1 | Over the next few days, performing poorly in training [23 rd of September], not |
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| 2 | sleeping due to worrying about poor training performance [24th of September], and making |
| 3 | mistakes on the pommel horse [25 th of September] were the salient stressors for Darren. In |
| 4 | response to these stressors, he felt angry and frustrated and coped by being persistent in |
| 5 | training, which helped him feel more satisfied. These concerns spilled over into the following |
| 6 | day, as Darren did not feel prepared "just don't feel prepared at all. Training is not going as |
| 7 | well as it should be." This made him feel anxious, so he spoke to his coach to work out what |
| 8 | could be changed, which made him feel less anxious as he was "more prepared than I thought |
| 9 | and I came away from the session feeling pretty calm [26th of September]." |
| 10 | Upon arriving at the world championships venue, Darren had an altercation with his |
| 11 | coach for "nit picking at everything in our training and getting quite annoyed if anything |
| 12 | went wrong." This made Darren feel more frustrated as he felt it would normally result in |
| 13 | him performing poorly. In response to this he: |
| 14 | Separated myself from the coach and went to the other side of the gym and did my |
| 15 | own thing so I could concentrate between until my coach had calmed down. After |
| 16 | training, me and the team had a walk around [name of venue] to see what it was |
| 17 | like, which was good to take our mind of the intensity [2 nd of October] |
| 18 | In response to these coping strategies, Darren felt good because he had "managed my own |
| 19 | frustration and I kept calm, which helped my performance, particularly when it's a big |
| 20 | competition." |

Having been in [name of competition destination] for several days, Darren reported that the food was a stressor: "struggling with the food at the minute. Not getting many nutrients because I can't really find anything I like to eat. It's all sushi." This made Darren

feel weak and hungry most of the time, which he coped with by blocking and ensuring he ate
a good breakfast.

With the competition four days away, Darren reported feeling pressure across all four days leading up to the start. He coped by using a variety of strategies such as focusing on what he had to do and being positive, did not watch his opponents, and adjusted his routines. The day before the competition Darren felt "nauseous from the nerves, but quite excited too" and coped by thinking of "all of the good routines I have done and think I can do it" [both 9th of October].

Darren reported mixed emotions on the first day of the competition: "I was really pleased with my performance and got through to the finals, but disappointment that not everybody did, well so the team didn't qualify for the Olympics and need to re-qualify." In order to cope with the intensity of the competition Darren used visualization of "the perfect routine" which made him feel calmer [all 10th of October].

Although Darren did not have a training session the following day he found the feedback he received from the coaches stressful which made him feel "negative after the meeting because it was the coaches pointing out mistakes that were made." He found it difficult to cope with this disappointment, but just tried to stay positive. Even though he tried to stay positive, he still felt "gutted for the team because you can't get rid of disappointment, but was still excited to compete in the finals" [11th of October].

Darren felt pressure on the eve of the final:

Today I was under a lot of pressure because the competition is tomorrow and because we didn't do well in the qualifiers. I felt like I needed to perform well to prove myself and others, because of the expectations I was under [13th of October].

Similar to previous days, on the day of the final Darren felt a variety of emotions. "I felt nervous and excited before competing and relieved when it was finished. I found it difficult to stay calm during the competition." To cope, Darren used a variety of different coping strategies, such as adhering to his routine, deep breathing and "not to look at other gymnasts competing and their scores, so it did not distract me from my routines. Visualizing my routines in my head were helpful as they helped me perform to the best of my ability."

Matthew

Training intensity was stressful for Matthew "training sessions are feeling pretty tough at the minute. Starting to struggle with pressure of them, as they are pretty intense," which resulted in Matthew feeling "nervous, anxious, and worried that I won't perform in training sessions, which will knock my confidence for the comp[etition]." To cope with this stressor and negative emotion, Matthew engaged in "deep breathing to cope with my nerves and also bring my heart-rate back down, but also just concentrate on doing the routines properly, not thinking I won't do them properly," [all 17th of September].

On the following day, Matthew's lack of motivation was a stressor: "I was not motivated at all today for training, but had no idea why. A couple of the lads weren't either. I think there was just a general lack of team morale in training that brought me down," which made Matthew feel disappointed in himself. He coped by separating himself from the other gymnasts and tried to motivate himself [all 18th of September].

Some spectators at Matthew's next training session made him anxious and "like I needed to perform." He "concentrated harder on training and helping the lads out with theirs.

We help each other" and this resulted in feelings of confidence [21st of September].

With only a week until the team travelled to the international event, Matthew felt the weight of expectation from the coaches, which made him feel both anxious and excited. He "just took the pressure positively and used it to my advantage and thought 'these coaches

- believe in me, so I will prove it to them." This made Matthew feel more confident [22nd
- 2 September]. A few days later, "one of the strong experienced members of the team are ill
- 3 and not training today. Hoping he recovers in plenty of time to get some good training done."
- 4 This caused "slight panic and worry for him that he gets better, as we can't afford to lose a
- 5 team member." Matthew realized that he could not control this, and decided not to think
- 6 about it training so that it did not affect his performance [25th September].
- 7 During the following day's training, Matthew reported "struggling for some reason on
- 8 the high bar today. Couldn't seem to complete the routine, to begin with. Kept falling at
- 9 different skills" and he felt "panicked and nervous, but also worried because I didn't know
- why it was happening" He coped by taking a break, taking advice from his coach, and tried
- again once he was calmer. After successfully completing the routine he felt relief and a sense
- of achievement [26th of September].
- In preparation for the international competition, Matthew went home for a couple of
- days where he trained at his club. He was concerned about his performance in training [28th]
- of September], so his coach set up a mock competition for him [29th of September].
- However, Matthew "didn't do as well as I could hoped," which resulted in him feeling
- "disappointed, very disappointed and upset and nervous." In order to cope with this
- disappointing performance, Matthew "looked at the positive that I did do in the mock
- competition, and discussed with my coach what I should try and work on in order to
- 20 improve." This made Matthew feel less worried and wrote "communication is key to a
- successful performance. I believe that I would be nowhere without the communication I have
- 22 with my coaches and team mates and the relationships. Speaking to my coach was so helpful"
- 23 [29th of September].
- Upon meeting up with the squad after a break he "found out that a team member can't
- compete. That really worried me and added the pressure on" and he felt "gutted for my mate

- being injured and quite anxious." He stayed positive and spoke with other members of the
- 2 team, "we all believe we can still do it [qualify for the Olympics], we just need to stay
- 3 focused and positive."

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The most salient stressor for the first four days in Japan was fatigue, caused by jetlag

5 and sleeping problems. Matthew coped by having "a good breakfast, kept hydrated and had a

good warm up to make my body and mind really active" [2nd of October], tried to train

"really hard at quite a high intensity" [3rd of October], and "took two pro-plus to pick me up

for the session" [4th of October]. Matthew had a good session which quelled the nerves and

made him feel "really good and positive because I didn't feel great, but I managed to produce

a really good performance, which is looking good a week before the comp" [4th of October].

Over the next four days leading up to the competition, tiredness was still a stressor for Matthew. He coped by taking it "easy and had some good meals and recovery drinks" [7th of

October], "good warm up, good breakfast, and energy drinks" [8th of October], and "didn't

take chance of risking injuries during training" [9th of October].

On the first day of the competition Matthew experienced a range of emotions, feeling "nervous, but excited throughout the day. Very disappointed, angry, and frustrated at the end." Matthew failed to qualify for the final of the competitive event. Afterwards he felt "RUBBISH. Had a dreadful competition, it was the worst and I am completely deflated. Feel like I have let myself and everyone including the team down. Had a bad day!"

Johnny

At the start of the study and throughout the first week or so, illness and related concerns about fitness levels were the salient stressors for Johnny "not been feeling well today so training was difficult for me. Illness has thrown my mind and affected my concentration today." After feeling disappointed in his performance, Johnny coped by taking "the session a bit easier today, didn't push myself as that could have risked injury for me not

being able to concentrate. I just did what I felt I could do." Johnny was hopeful that a good 1 night's sleep would help him [all 17th of September]. 2 Johnny's illness had abated to the extent that he had a double training session, at his 3 home gymnastics club, a few days later. He frequently made mistakes, "I kept falling off the 4 parallel bars on the same skill," which made him "so mad that I couldn't do it. I could feel 5 myself getting more and more worked up about it and started to lose my temper." He walked 6 away and gave himself a break. He felt "glad and happy that it was my coach and not the 7 international coach because my coach is more understanding" [all 20th of September]. 8 Johnny was back training with the squad, the following day. He found the number of 9 spectators watching him train a stressor. This made him feel anxious as he did not feel he was 10 performing well. He "tried to ignore the people watching me as if they weren't in the gym." 11 [all 21st of September]. 12 Within a few days, Johnny's illness had returned and he felt "lethargic, disappointed 13 and worried because I don't want to be ill. Not this close" [to the competitive event starting]. 14 He took "the session easy, didn't want to push myself and cause an injury. That would be a 15 nightmare. Had a long bath after the session" [23rd of September]. After continuing to feel ill, 16 he was "feeling quite worried that I wasn't better" and felt a mixture of glad and frustration. 17 He was "glad of the break to recover, but frustrated that I wasn't well" [25th of September]. 18 Johnny returned to training on the 26th of September. He was "so angry that being ill 19 has made me feel like my fitness levels have dropped." He coped by ensuring that he did not 20 push himself too hard in the training session. He "didn't achieve what I wanted, but at least I 21 didn't feel too bad either". 22 Whilst being at home for a few days he felt the expectation on him. He "didn't want 23

to let anyone down, just wanted to do my best and come back having qualified for the

Olympics." Johnny "concentrated hard and kept telling myself I will do this. We will do

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| 1 | this." | Johnny then: | found out a | team-mate | "won't b | e able to | compete, | which has | really p | out the |
|---|--------|--------------|-------------|-----------|----------|-----------|----------|-----------|----------|---------|
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2 pressure on." Johnny coped by taking his mind of the trip by watching a film, which "was

helpful because it really calmed me down and took my mind off it" [30th of October].

Upon arriving at the competition venue, Johnny struggled with sleeping. He had a "lack of sleep due to the time difference in [name of destination] and the long flight" [1st of October] and "I keep waking up at 4.30 am and being wide awake [3rd of October]. He used a variety of coping strategies to manage this stressor such as having a "20 minute power nap before training and took longer to warm up to avoid injuring my muscles, which were stiff" [1st of October], "listened to music" [2nd of October], and "tried to go to bed at my normal time, like at home instead of falling asleep at 9 pm, because of tiredness" [3rd of October].

Two days before the start of the completion, Johnny was worried about having "to do my routines over hard landings instead of on foam, like at home. Although we do this all the time at home, some skills are always scary to do over a hard landing." This made him feel "worried as it is only two days way from the competition, so we want to make sure we stay safe and don't hurt ourselves." He coped by trying to stay calm, relax, and not try too hard [8th of October]. The day before the competition, Johnny was very anxious, but tried to cope by not "thinking about the competition too much" [9th of October].

Johnny failed to qualify for the finals and the team failed to qualify for the Olympic games in London. He experienced "disappointment due to having a bad competition on an important occasion and anger and nervous at doing so badly and letting my team mates down." Once he knew the team failed to qualify he "tried to look at the positives of the competition and knew we had a second chance." He still felt disappointed though, but also felt "more hunger to achieve. I was made up that [name of team mate] made the finals though and will be supporting him" [10th of October].

Danny

| 1 | Danny felt the weight of expectations "we are expected to do well by everyone like |
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| 2 | friends and family and coaches," which made him "feel anxious and worried, because I don't |
| 3 | want to let everybody down, but also makes me excited that it is quite soon." He coped by |
| 4 | staying positive and telling himself that "we are worthy Olympians, we can do this. I can do |
| 5 | this if I can train well." This made Danny feel much happier [17th of October]. |
| 6 | Danny's performance was a stressor the following day, along with his motivation |
| 7 | levels: |
| 8 | This morning I woke up and really wasn't in the mood for gym. Not sure why, maybe |
| 9 | it was the lack of sleep, but I had no motivation and just generally having an off day. |
| 10 | It caused me stress because I haven't got time not to be doing my best and feeling |
| 11 | 100% about my session [18 th of September]. |
| 12 | This made Danny feel "guilty that I may have been bringing the team morale down" [18th of |
| 13 | October]. He coped by trying to increase the amount of effort he exerted, tried to concentrate |
| 14 | more, and encourage his team mates, which made him less guilty. |
| 15 | After some rest days and days in which Danny did not experience any stressors, he |
| 16 | had struggled to grasp a new technical skill that made him "feel very anxious and gave me a |
| 17 | lack of confidence" [26th of September]. Danny coped by practicing the skill over again and |
| 18 | spoke to his coach, who re-assured him. This made him feel happier about the new skill. |
| 19 | Danny was feeling more nervous due to people's expectations again, he "felt a lot of |
| 20 | pressure today in training, with the camp being so close and everyone at home talking to me |
| 21 | about it. Their expectations are really high." This "made me feel really anxious and worried, |
| 22 | because I want to do them as well as myself proud and I want to disappoint them." He coped |
| 23 | by being positive and telling himself that 'if they think I can do it, then I should.'" This |
| 24 | helped him feel calmer and excited about the competition. |

The following day, Danny suffered an injury on the vault. He was "so scared in case it

- 1 means that I can't compete. Also worried whether it is something serious, because I am in a
- 2 lot of pain." He put ice on the injury and went to the physiotherapist, but was told he would
- 3 have to wait for the results of a scan the following day, resulting in anxiety [29th of
- 4 September].

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After finding out that his injury would prevent him from competing at the

6 international event, Danny wrote "never been this disappointed before. I am so gutted, I feel

depressed, depressed that I am not competing, depressed that I could be potentially letting the

team down and upset I have let my family down." He managed this disappointment by

getting a rehabilitation program from his physiotherapist and positive thinking that "the team

will pull it out of the bag" [30th of October].

Despite not competing, Danny travelled to the competition venue and was "really disappointed and guilty that I was not helping them, but at the same time made up that [name of team mate] getting through." He coped by being positive and told himself that he will be "fit by January, hopefully to compete in the re-tests so I can help them out." This made him feel positive and lucky because he had "been given a second chance" [10th of Oct].

16 Discussion

In this study we longitudinally explored the lived emotional experiences of elite gymnasts in regards to stressors and coping experiences in preparation for and during the world championships, which was also a qualifying competition for the London 2012 Olympic Games. Although previous research has explored stressors (Mellalieu et al., 2009) and stressors, appraisal, coping, and coping effectiveness in relation to a major sporting event (Dugdale et al., 2002), the authors of these studies used retrospective accounts which may provide distorted data (Stone et al. 1998). These authors also failed to explore emotional responses, which are thought to be generated after the appraisal of stressors and coping responses (Folkman et al., 1986) and one of the most important constructs within the stress

- 1 process (Nicholls et al., in press). Overall, the majority of stressors were related to the
- 2 gymnasts' goal of qualifying for the Olympic Games. Lazarus (1999) stated that it is the
- 3 endangerment of important goals that causes stress and that stress intensity is positively
- 4 related to goal importance. All of the gymnasts reported stressors relating to performance and
- 5 factors that would influence their ultimate goal of Olympic qualification such as fitness, diet,
- 6 sleep, and coaching. This study adds to the literature by providing descriptive accounts from
- 7 the elite gymnasts regarding how they were afflicted by the possibility of not achieving their
- 8 goals.
- At times, coping appeared to help alleviate unpleasant emotions such as anxiety or anger, when it was perceived as being effective. Theoretically, the purpose of coping is to
- alleviate stress and therefore stress-related emotions such anxiety (Lazarus, 1999). The
- finding that coping, in many cases, alleviated negative emotions supports Lazarus. However,
- the participants' accounts also indicate that coping generated positive emotions too, which is
- similar to the research of Nicholls et al. (2010). Perhaps successful coping facilitates
- enjoyment, which in turn generates positively toned emotions, although research is required
- to assess this idea.
- This study provides support for Folkman et al.'s (1986) assertion that people can
- experience more than one emotion simultaneously. The notion that high-level athletes can
- 19 experience more than one emotion simultaneously has previously been documented (e.g.,
- Nicholls et al., 2010). In this study, however, we found that elite athletes experienced both
- 21 pleasant and unpleasant emotions concurrently. The gymnasts reported both excitement and
- 22 anxiety several times. This is in agreement with laboratory research by van de Pol,
- 23 Kavussanu, and Ring (2012), who found that students competing in a laboratory task
- experienced enjoyment and tension. Based up the findings of this study and those by van de
- Pol et al. (2012), it is questionable whether studies that have just explored one emotion (i.e.,

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anxiety) have truly captured the entire emotional experiences of athletes.

Given the unique context of this study, the analysis of individual profiles have allowed us to illustrate the influence that the team mates had on each other in terms of generating emotions, causing stress, and coping. Although previous research has examined the relationship between appraisal and emotion (e.g., Neil et al., 2011) or appraisal, emotions, coping, and performance satisfaction (Nicholls et al., 2012), these studies were unable to document day-to-day influences of team mate interactions on stressors, coping, and emotions. With regards to generating emotions, Matthew experienced anxiety when another gymnast was ill and also when his team mate got injured. Darren, Matthew, and Danny all reported stressors relating to lack of motivation within the training environment, as consequence of a team member. In response to this specific situation the three gymnasts reported using different attempts to cope. This provides further support for Lazarus (1999) that coping is very individualistic, as the gymnasts used different strategies to cope with the same stressful event. This has a number of applied implications too. When athletes from team sports are injured, sport psychologists and coaches could speak to the non-injured athletes, because they may also experience stress, especially if an injury may reduce the likelihood of a team achieving their goal. Although Danny had to withdraw from the diary study due to an injury, we deemed it important that his entry was included in the study due to his account of the stressors, emotions, and coping in response to the injury he suffered that ended his chances of competing in the international competition. Due to the unpredictability of injury occurrence. studies with elite athletes tend to be retrospective (e.g., Carson & Polman, 2012). In the present study, Danny reported his feelings and coping strategies after sustaining the injury,

prior to receiving a medical diagnosis, and then upon receiving the news he feared. During

this time, Danny experienced a multitude of emotions such as anxiety, disappointment,

- depression, and even hope that his team mates would still qualify for the Olympics. From an
- 2 applied perspective, it could be argued that psychological support is critical for all athletes. In
- 3 particular, injured athletes should receive support that includes managing emotions from the
- 4 onset of sustaining an injury. If athletes receive bad news, as Danny did, an applied
- 5 consultant could work with athletes on helping them set new goals.

Although an advantage of diaries is that they can reduce the recall period compared to interviews and are less effected by memory decay, possible limitation of diaries relate to a lack of interaction between the participant and researcher and exploration of pertinent issues due to the limited contact. As such, researchers could combine both diaries and interviews, which may provide a deeper understanding of the interplay between stressors, emotions, and coping. Another limitation of this study is that we did not assess appraisals. According to Lazarus (1999), appraisals are the most important construct within the stress process, so assessing appraisals longitudinally in relation to emotions and coping, would be worthwhile.

Future research could build upon this study by examining stress and coping experiences in relation to specific events such as this study did, but have a longer assessment period and have more participants to identify not only inter-individuals differences but also intra-individual patterns among the constructs. Research by van de Pol et al. (2012), in a laboratory setting, and the present study indicate that people can experience pleasant and unpleasant emotions simultaneously. Future research could explore this in more depth to understand more about emotional experiences and factors that contribute to people experiencing pleasant and unpleasant emotions simultaneously.

In summary, the gymnasts experienced multiple emotions simultaneously, and quite often reported both an unpleasant (e.g., anxiety) and pleasant emotions (e.g., excitement). As such, research that only explores one emotion (i.e., anxiety) may not capture the overall emotional experience of an athlete. Coping appeared to generate pleasant emotions in some

- 1 instances, especially when it was effective. The day to day interactions and events between
- 2 the gymnasts were also stressful at times. Sport psychologists and coaches working with elite
- 3 athletes in training camps could consider how athletes may experience stress as a result of
- 4 interactions with other athletes and shape the environment accordingly.

References

- 2 Borkoles, E., Nicholls, A. R., Bell, K., Butterly, R. & Polman, R. C. J. (2008). Exercising
- with moderate disability Multiple Sclerosis. *Psychology and Health*, 4, 427-441. doi:
- 4 10.1080/14768320701205309
- 5 Carson, F., & Polman, R. C. J. (2012). Experiences of professional ruby union players
- 6 returning to competition following anterior cruciate ligament reconstruction. *Physical*
- 7 Therapy in Sport, 13, 35-40. doi: 10.1016/j.ptsp.2010.10.007
- 8 Didymus, F. F., & Fletcher, D. (2012). Getting to the heart of the matter: A diary study of
- 9 swimmers' appraisals of organisational stressors. *Journal of Sports Sciences*, 20, 1-12.
- doi: doi.org/10.1080/02640414.2012.709263
- Dugdale, J. R., Eklund, R. C., & Gordon, S. (2002). Expected and unexpected stressors in
- major international competition: Appraisal, coping, and performance. *The Sport*
- 13 Psychologist, 16, 20-33. Retrieved from http://journals.humankinetics.com/tsp
- 14 Fletcher, D., Hanton, S., & Mellalieu, S. D. (2006). An organizational stress review:
- 15 Conceptual and theoretical issues in competitive sport. In S. Hanton, & S. D. Mellalieu
- 16 (Eds.), Literature reviews in sport psychology (pp. 321–374). Hauppauge, NY: Nova
- Science.
- Folkman, S., Lazarus, R. S., Dunkel-Schetter, C., DeLongis, A., & Gruen, R. (1986). The
- dynamics of a stressful encounter: Cognitive appraisal, coping, and encounter
- outcomes. Journal of Personality and Social Psychology, 50, 992-1003. doi:
- 21 10.1037/0022-3514.50.5.992

- 1 Holt, N. L., & Dunn, J. G. H. (2004). Longitudinal idiographic analyses of appraisal and
- coping responses in sport. *Psychology of Sport and Exercise*, 5, 213-222. doi:
- 3 10.1016/S1469-0292(02)00040-7
- 4 Lazarus, R. S. (1999). Stress and emotion: A new synthesis. New York: Springer.
- 5 Lazarus, R. S. (2000a). How emotions influence performance in competitive sports. *The*
- 6 Sport Psychologist, 14, 229-252. Retrieved from http://journals.humankinetics.com/tsp
- 7 Lazarus, R. S. (2000b). Toward better research on stress and coping. *American Psychologist*,
- 8 55, 665-673. doi: 10.1037//0003-066X.55.6.665
- 9 Lazarus, R. S., & Folkman, S. (1984). Stress, appraisal, and coping. New York: Springer.
- Lincoln, Y. S., & Guba, E. G. (1985). Naturalistic inquiry. Newbury Park, CA: Sage.
- Levy, A. R., Polman, R.C.J., Nicholls, A.R., & Marchant, D.C. (2009). Sport injury
- rehabilitation adherence: Perspectives of recreational athletes. *International Journal of*
- 13 Sport and Exercise Psychology, 7, 212-229.
- Lewthwaite, R. (1990). Threat perception in competitive trait anxiety: The endangerment of
- important goals. *Journal of Sport & Exercise Psychology*, 12, 280-300. Retrieved from
- 16 http://journals.humankinetics.com/jsep
- Mellalieu, S. D., Neil, R., Hanton, S., & Fletcher, D. (2009). Competition stress in sport
- performers: Stressors experienced in the competition environment. *Journal of Sports*
- 19 *Sciences*, 27, 729-744. doi: 10.1080/02640410902889834
- Neil, R., Hanton, S., Mellalieu, S. D., & Fletcher, D. (2011). Competition stress and emotions
- 21 in sport performers: The role of further appraisals. *Psychology of Sport and Exercise*,
- 22 *12*, 460-470. doi: 10.1016/j.psychsport.2011.02.001

- 1 Nicholls, A. R. (2007). A longitudinal phenomenological analysis of coping effectiveness
- among Scottish international adolescent golfers. European Journal of Sport Science, 7,
- 3 169-178. doi: 10.1080/17461390701643034
- 4 Nicholls, A. R., (2010). Effective versus ineffective coping in sport. In In A.R. Nicholls (Ed.)
- 5 *Coping in sport: Theory, methods, and related constructs* (pp. 263-276). New York:
- 6 Nova Science Publishers.
- 7 Nicholls, A. R., Hemmings, B., & Clough, P. J. (2010). Stressors, coping, and emotion
- 8 among international adolescent golfers. Scandinavian Journal of Medicine & Science in
- 9 *Sports*, 20, 346-355. doi: 10.1111/j.1600-0838.2009.00894.x
- Nicholls, A. R., Holt, N. L., & Polman, R. C. J. (2005). A phenomenological analysis of
- coping effectiveness in golf. *The Sport Psychologist*, 19, 111-130. Retrieved from
- 12 http://www.journals.humankinetics.com/tsp
- Nicholls, A. R., Holt, N. L., Polman, R. C. J., & Bloomfield, J. (2006). Stressors, coping, and
- coping effectiveness among professional rugby union players. *The Sport Psychologist*,
- 20, 314-329. Retrieved from http://www.journals.humankinetics.com/tsp
- Nicholls, A. R., Holt, N. L., Polman, R. C. J., & James, D. W. G. (2005). Stress and coping
- among international adolescent golfers. Journal of Applied Sport Psychology, 17, 333-
- 18 340. doi:10.1080/10413200500313644
- 19 Nicholls, A. R., Jones, C. R., Polman, R. C. J., & Borkoles, E. (2009). Stressors, coping, and
- 20 emotion among professional rugby union players during training and matches.
- 21 Scandinavian Journal of Medicine & Science in Sports, 19, 113-120. doi:
- 22 10.1111/j.1600-0838.2008.00772.x

- 1 Nicholls, A. R., Perry, J. P, & Calmeiro, L. (in press). Pre-competitive Achievement goals,
- 2 appraisal, emotions, and coping in sport. *Journal of Sport & Exercise Psychology*.
- 3 Nicholls, A. R., Polman, R. C. J., & Levy, A. R., (2012). A path analysis of stress appraisals,
- 4 emotions, coping, and performance satisfaction among athletes. *Psychology of Sport*
- 5 *and Exercise*, 13, 263-270. doi:10.1016/j.psychsport.2011.12.003
- 6 Smith, J.A. (2004). Reflecting on the development of interpretative phenomenological analysis and its
- 7 contribution to qualitative research in psychology. Qualitative Research in Psychology, 1, 39-
- 8 54. doi: 10.1191/1478088704qp004oa
- 9 Smith, J.A., & Osborn, M. (2003). Interpretative phenomenological analysis. In J.A. Smith
- 10 (Ed.), Qualitative psychology: A practical guide to research methods (pp. 51-80).
- 11 London: Sage.
- 12 Stone, A. A., Schwartz, J. E., Neale, J. M., Shiffman, S., Marco, C., Hickcox, M.,... Cruise,
- L. J. (1998). A comparison of coping assessed by ecological momentary analysis and
- retrospective recall. *Journal of Personality and Social Psychology*, 74, 1670-1680. doi:
- 15 10.1037/0022-3514.74.6.1670
- van de Pol, P. K. C., Kavussanu, M., & Ring, C. (2012). The effects of training and
- competition on achievement goals, motivational responses, and performance in a golf-
- putting task. *Journal of Sport & Exercise Psychology*, 34, 787-807. Retrieved from
- 19 http://journals.humankinetics.com/jsep