Responses to the Competitive State Anxiety Inventory-2(d) by athletes in anxious and excited scenarios

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Abstract

Objectives: Given recent concerns regarding its validity the aim of the present study was to examine the capability of the Competitive State Anxiety Inventory-2(d) (CSAI-2(d)) in distinguishing between anxious and excited states.

Design and Methods: British university athletes (n = 188) were randomly assigned to one of two groups and asked to complete the CSAI-2(d) as if they were either excited (excited group) or anxious (anxious group) prior to the most important competition of the season.

Results: Participants (n = 18) who indicated that they were unable to complete the task with any degree of accuracy were removed from the analysis. Data were initially analysed using Multivariate Analyses of Covariance, with gender as the covariate. Participants in the anxious group reported higher scores on the cognitive and somatic anxiety intensity subscales, while the participants in the excited group reported a more facilitative perception of their symptoms on the somatic anxiety subscale. A logistic regression correctly classified 62.9% of the participants as belonging to either the anxious or excited group on the basis of the scores from the CSAI-2(d).

Conclusions: It is possible to observe differences in scores on the CSAI-2(d) from participants asked to complete the inventory as if they were either excited or anxious. However, differences in scores were typically small with 37.1% of participants incorrectly classified on the basis of these scores. Accordingly, caution is advised in interpreting the results of the CSAI-2(d) in research and applied settings.

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Keywords: Competitive State Anxiety Inventory-2; Excitement; Anxiety; Facilitative; Debilitative

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Introduction

Research has demonstrated that the ability to cope with intense anxiety is integral to success in competitive sport, particularly at the highest levels (Gould, Eklund, & Jackson, 1992a,b; Scanlan, Stein, & Ravizza, 1991). Accordingly, a great deal of research has been directed towards the study of anxiety in sport, much of it utilising the Competitive State Anxiety Inventory-2 (CSAI-2; Martens, Burton, Vealey, Bump, & Smith, 1990). The CSAI-2 assesses the intensity of cognitive anxiety (characterised by negative expectancies and self-doubts), and somatic anxiety (typified by symptoms such as increased heart rate and muscular tension), along with a third component, self-confidence. However, recently a number of authors have questioned the validity of the CSAI-2, arguing that the words used in both the cognitive and somatic anxiety subscales may be representative of other affective states (e.g. Burton & Naylor, 1997; Kerr, 1997; Lane, Sewell, Terry, Bartram, & Nesti, 1999).

Somatic anxiety is defined by Martens et al. (1990, p. 121) as the “…physiological and affective elements of the anxiety experience that develop directly from autonomic arousal”. However, Kerr (1997) suggested that such a definition is problematic given that an increase in physiological arousal may accompany other emotions, such as excitement or anger. Therefore, if items in the somatic anxiety subscale describe symptoms of physiological arousal a high score may not necessarily reflect anxiety. Indeed, Schachter (1964) has proposed that emotion is the product of an individual’s cognitive appraisal of physiological arousal, and similar levels of arousal may accompany different emotions. For example, an individual with a racing heart and butterflies in their stomach may interpret that arousal as excitement if they are about to play in an important tournament, but may interpret the same symptoms as fear if they were about to do a parachute jump for the first time. Similarly, research on reversal theory (Apter, 1982) by Kerr and colleagues (see Kerr, 1997 for a review) suggests that under different metamotivational states (frames of mind) an individual could interpret their arousal levels differently. For example, in a telic state high arousal will be interpreted as anxiety and low arousal as relaxation, while in a paratelic state high arousal will be interpreted as excitement and low arousal as boredom.

Concerns have also been raised regarding the validity of the cognitive anxiety subscale of the CSAI-2. While Martens et al. (1990) define cognitive anxiety as reflecting negative expectations about performance, Lane et al. (1999) have suggested that only one item (‘I have self-doubts’) in the cognitive anxiety subscale genuinely assesses cognitive anxiety. The remaining items assess a rather different construct where the competitor is “acknowledging the importance and difficulty of the challenge and is attempting to mobilize resources to cope.” (Lane et al., pp 510–511). Thus, according to Lane et al. there is a possibility that a high score on the cognitive anxiety subscale may not necessarily reflect negative expectations about performance (i.e. cognitive anxiety).

The possibility that the CSAI-2 does not discriminate between performers experiencing different affective states is clearly a concern. Indeed, several researchers have advocated using a modified version of the CSAI-2 that incorporates a directional subscale, the CSAI-2(d), that measures not only the intensity of symptoms (as assessed by the original CSAI-2) but also considers the perception of these symptoms (e.g. Jones, 1995; Jones & Swain, 1992). This directional subscale provides a measure of whether the symptoms reported on the cognitive and somatic anxiety subscales are perceived as being facilitative or debilitative to performance. Jones (1995) suggested that
athletes with a positive belief in their ability to cope, and of goal attainment, will interpret their symptoms as facilitative, whereas those with negative expectancies will interpret their symptoms as debilitative. However, Burton and Naylor (1997) have suggested that such an approach has resulted in researchers mislabelling positive emotions (e.g. excitement) as ‘facilitative anxiety’. Indeed, Jones (1995) also suggested that a facilitative perception of the symptoms reported on the cognitive and somatic anxiety subscales may be something more akin to ‘anticipatory excitement’ or being ‘psyched up’. Certainly, Lazarus’ (2000) theory of emotion could support both Jones (1995) and Burton and Naylor (1997) as he considers anxiety to reflect uncertainty regarding goal attainment and coping. Thus, if a facilitative perception of the scores on the cognitive and somatic anxiety intensity subscales (no matter how high these are), indicates a belief that an athlete can both cope with the situation and achieve their goals, then it would be unlikely, according to Lazarus’ definition, that the athlete is experiencing anxiety.

Nevertheless, it is equally feasible that individuals who report a facilitative perception of their scores on the anxiety intensity subscales may not be experiencing a different emotional state to individuals reporting a debilitative perception of their scores (i.e. excitement and anxiety, respectively), but are merely indicating a different belief about how these symptoms affect sport performance. Indeed, there is both theoretical support (Eysenck & Calvo, 1992) and empirical evidence (e.g. Hardy & Parfitt, 1991; Hardy, Parfitt, & Pates, 1994) indicating that sport performance can be facilitated by anxiety. Accordingly, even though anxiety is a negatively toned emotion it does not necessarily have a negative effect on performance and athletes may recognise this. Furthermore, research has reported that a wide range of positively and negatively toned emotions are associated with both facilitating and debilitating effects on performance (Hanin & Syrjä, 1995a,b; Jones, Mace, & Williams, 2000). Thus, positively toned emotions (e.g. excitement, happiness) do not necessarily have a positive effect on performance, and negatively toned emotions (e.g. anxiety, anger) do not necessarily have a negative effect on performance.

In summary, the demarcation between ‘intensity’ and ‘direction’ subscales contained within the CSAI-2(d) appears to have generated some confusion with researchers able to adopt contrasting perspectives. One perspective is that the symptoms reported on the CSAI-2(d) intensity subscales measure the intensity of anxiety, and the perception subscales of the CSAI-2(d) assess athletes’ beliefs about the way these anxiety symptoms may affect performance. A second perspective is that high scores on intensity subscales of the CSAI-2(d) may be representative of other affective states (e.g. excitement), and the perception subscales of the CSAI-2(d) assess athletes’ beliefs about the way these particular symptoms may affect performance. A final perspective is that even if the intensity subscales of the CSAI-2(d) do assess more than one emotion, it is possible to distinguish anxiety from more positive emotional states because anxiety reflects uncertainty regarding goal attainment and coping and this would, therefore, be reflected by a perception that these symptoms will debilitate performance.

Given these competing perspectives and recent concerns regarding the validity of the CSAI-2(d) the aim of the present study was to examine its capability in distinguishing between anxious and excited states. No specific hypotheses were proposed because of the contrasting views evident in the literature. Rather, the study had two aims. As a result of concerns raised regarding the neutrality of the items (Burton & Naylor, 1997; Kerr, 1997; Lane et al., 1999), the first aim was to determine whether the CSAI-2(d) is able to distinguish between excited and anxious states on the scores reported on the cognitive and somatic anxiety intensity subscales. Following sugges-
tions by Jones (1995) and Burton and Naylor (1997), the second aim was to investigate whether the CSAI-2(d) is able to distinguish between anxious and excited states on the basis of the scores on the cognitive and somatic anxiety direction subscales.

Method

Participants

The sample comprised 188 (103 male, 85 female) British university athletes ($M_{age} = 19.75, SD = 2.68$) who participated in a wide range of sports (mainly soccer $n = 44$, athletics $n = 28$, netball $n = 18$, hockey $n = 21$, rugby $n = 18$) at recreational ($n = 15$), club ($n = 57$), district ($n = 99$) and international ($n = 17$) levels.

Measurement

Participants completed the CSAI-2(d), which is a modified version of the CSAI-2 (Martens et al., 1990), incorporating a direction subscale (Jones & Swain, 1992). The CSAI-2(d) consists of 27 items and measures the intensity of cognitive anxiety, somatic anxiety and self-confidence on a 4-point Likert scale ranging from 1 (not at all) to 4 (very much so), with intensity scores ranging from 9–36 for each subscale. The three intensity subscales have all shown adequate internal consistency with alphas between 0.79 and 0.90 (Martens et al., 1990). The direction scale for each item required participants to rate whether they perceived the intensity of their feeling to be facilitative or debilitative to performance on a 7-point scale ranging from $-3$ (very debilitative) to $+3$ (very facilitative). Thus, possible direction scores ranged from $-27$ to $+27$ for each of cognitive anxiety, somatic anxiety and self-confidence. Internal consistency analyses for this scale have yielded coefficients of between 0.80 and 0.89 for cognitive anxiety and 0.72 and 0.86 for somatic anxiety (Jones & Hanton, 2001).

Procedure

In total 188 participants were randomly assigned to one of two groups: anxious or excited. All participants were asked to take 1 min to recall and focus on the thoughts and feelings typically experienced when they were either extremely anxious (anxious group) or extremely excited (excited group). In general, anxiety is considered to reflect uncertainty regarding goal attainment and coping (Lazarus, 2000) and is typified by feelings of apprehension and tension along with activation or arousal of the autonomic nervous system (Spielberger, 1966). Excitement was chosen as the contrasting emotion as it is typically considered to be positive (Jones & Hanton, 2001), reflects positive goal attainment and coping (Burton & Naylor, 1997), is also associated with arousal and activation of the autonomic nervous system (Kerr, 1997), and is often cited as being ‘facilitative anxiety’ (Burton & Naylor, 1997; Jones, 1995). After recalling and focussing on the relevant thoughts and feelings participants were asked to complete the CSAI-2(d) as if they were highly anxious (anxious group) or excited (excited group) 30 min prior to competing in the most
important competition of the season. This time frame was used because in competitive anxiety research the CSAI-2(d) is typically completed within 1 h of competition. In line with recommendations by Martens et al. (1990) instructions accompanying the CSAI-2(d) emphasised the need for honesty and assured participants that they could not give any ‘wrong’ answers. The instructional set and directions for completing the CSAI-2(d) given to the participants in each condition are reported in full in Appendix A.

After completing the CSAI-2(d) the participants were asked to indicate whether they were able to complete the task accurately. The data from participants (n = 18) who indicated that they were unable to complete the task with any degree of accuracy were removed from the analysis leaving 170 participants in total (anxious group, n = 83; excited group, n = 87).

The use of recall was used to ensure participants were cognisant of the thoughts and feelings they experience when excited or anxious, thereby facilitating accurate completion of the CSAI-2(d) in the appropriate scenario. This was the preferred methodology given the practical difficulties associated with the assessment of emotions at the time they actually occur (Ntoumanis & Biddle, 2000). Furthermore, asking participants to recall a ‘typical’ occasion when they experienced either anxiety or excitement was intended to exaggerate potential differences between excited and anxious individuals. As Levine (1996) observed, when asked to recall emotions participants tend to recount prototypical episodes that are less likely to be unusual and contradictory.

Data analysis

The data obtained for self-confidence were omitted from the analysis as this variable was not considered to be of interest to the aims of the study. The analysis of the remaining data was divided into four stages. First, internal consistency analyses were conducted for the remaining CSAI-2(d) subscales. Secondly, to examine whether differences could be observed in the scores of either group on the cognitive and somatic anxiety subscales a one way Multivariate Analysis of Covariance (MANCOVA) was conducted. The independent variable was group (anxious or excited) and the dependent variables were the scores on the cognitive and somatic anxiety intensity subscales. Gender was included as a covariate as females typically report higher levels of competitive anxiety than males (Martens et al., 1990). Thirdly, to examine whether differences could be observed on the perception of cognitive and somatic anxiety subscale scores a one-way MANCOVA was conducted. Again the independent variable was group (anxious or excited) with the dependent variables being scores on the subscales assessing perception of cognitive and somatic anxiety symptoms. Gender was included as a covariate as research has demonstrated that males report a more facilitative interpretation of competitive anxiety than females (Perry & Williams, 1998). Prior to analysis of the data in each MANCOVA, both univariate and multivariate outliers were removed using Boxplots and Mahalanobis’ distance, respectively. This resulted in a reduction in the number of cases to 169 for the first MANCOVA (anxious group, n = 83; excited group, n = 86) and to 155 for the second MANCOVA. (anxious group, n = 71; excited group, n = 84). Secondly, in line with recommendations by Timm and Mieczkowski (1997) to ensure gender could be accepted as an appropriate covariate we compared the regression slopes for the values of each group (using both univariate and multivariate forms of ANOVA) to ensure they were parallel. The adjusted means and standard deviations for scores on the cognitive and somatic anxiety intensity and direction sub-scales for this final sample are shown in Table 1. Finally,
Table 1
Adjusted mean and standard deviation scores on the CSAI-2 (d) for each group

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<th></th>
<th>Anxious group</th>
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<th>Excited group</th>
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<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>Cognitive anxiety intensity</td>
<td>23.72</td>
<td>5.49</td>
<td>21.15</td>
<td>5.68</td>
</tr>
<tr>
<td>Somatic anxiety intensity</td>
<td>23.19</td>
<td>6.11</td>
<td>20.81</td>
<td>5.14</td>
</tr>
<tr>
<td>Cognitive anxiety direction</td>
<td>-3.41</td>
<td>5.77</td>
<td>-0.43</td>
<td>10.73</td>
</tr>
<tr>
<td>Somatic anxiety direction</td>
<td>-1.70</td>
<td>4.71</td>
<td>1.61</td>
<td>7.47</td>
</tr>
</tbody>
</table>

logistic regression was used to determine the number of participants that could be correctly classified as belonging to either the excited or anxious group on the basis of the scores from the cognitive and somatic anxiety intensity and perception subscales.

Results

Internal consistency analyses on the cognitive and somatic anxiety intensity and direction subscales were conducted. Alpha coefficients were all satisfactory: cognitive anxiety intensity (0.87), somatic anxiety intensity (0.89), cognitive anxiety direction (0.84), and somatic anxiety direction (0.80). These are comparable to values previously reported (Jones & Hanton, 2001; Martens et al., 1990).

Scores on the Cognitive and Somatic Anxiety Intensity Subscales. There was a significant effect for condition (Pillais’ trace = 0.048, $F(2,165) = 4.14$, $p < 0.05$, $\eta^2 = 0.048$). Univariate analyses showed that the anxiety group scored significantly higher on both the cognitive anxiety ($F(1,166) = 7.53$, $p < 0.01$, $\eta^2 = 0.043$) and somatic anxiety ($F(1,166) = 4.87$, $p < 0.05$, $\eta^2 = 0.029$) subscales.

Perceptions of Scores on the Cognitive and Somatic Anxiety Subscales. There was a significant effect for condition (Pillais’ trace = 0.061, $F(2,151) = 4.88$, $p < 0.01$, $\eta^2 = 0.061$). However, it is important to note that the Box’s M test was significant for this analysis (Male = 35.58, Female = 11.69, $p < 0.001$), indicating unequal variance–covariance matrices. In these circumstances Tabachnick and Fidell (1996) note that the more numerous the dependant variables and the greater the discrepancy in cell sample sizes the greater the potential distortion of alpha levels. However, in this instance the number of participants in each group are similar with only two dependent variables. In any case, Pillais’ trace is considered a robust statistic when dealing with data where there is inequality of variance–covariance matrices (Tabachnick & Fidell, 1996). Accordingly, while the Box’s M test is reported as being significant, follow-up univariate analyses were conducted. These showed that the excited group had a more facilitative interpretation of their somatic anxiety ($F(1,152) = 9.74$, $p < 0.01$, $\eta^2 = 0.060$) but there was no difference in perception of cognitive anxiety between the two groups ($F(1,152) = 3.55$, $p > 0.05$, $\eta^2 = 0.023$).

Classification of Group Membership. To ensure the full data set of 170 participants could be
used, logistic regression was chosen in preference to discriminant function analysis as it is considered a more robust technique when assumptions of normality and homogeneity of variance cannot be met (Krzanowski, 1990). Analysis showed that 105 participants (61.8%) could be correctly classified as belonging to the excited or anxious group on the basis of the scores on the cognitive and somatic anxiety intensity subscales. On the basis of the scores on the cognitive and somatic anxiety perception subscales it was possible to classify 96 participants (56.5%) as belonging to the excited or anxious group. Correct classification of group membership rose marginally to 107 participants (62.9%) when the scores for both cognitive and somatic anxiety intensity and direction were combined (see Table 2).

**Discussion**

Results suggest that the CSAI-2(d) is able to discriminate between the anxious and excited groups on the intensity of symptoms reported. Specifically, participants in the anxious group scored higher on both the cognitive and somatic anxiety subscales. In addition, the excited group reported a more facilitative perception of their symptoms on the somatic anxiety subscale, although no difference in the perception of symptoms was observed on the cognitive anxiety subscale. Finally, based on the scores from the CSAI-2(d) it was possible to classify 62.9% of the participants as correctly belonging to either the anxious or excited group.

Recent authors (Burton & Naylor, 1997; Kerr, 1997; Lane et al., 1999) have questioned the validity of the CSAI-2, suggesting that the items in the cognitive and somatic anxiety subscales may be representative of affective states other than anxiety. However, in this study participants who completed the questionnaire as if they were highly anxious reported higher scores on the cognitive and somatic anxiety subscales than participants in the excited group. Despite this finding it is not possible to conclude with certainty that the items in the cognitive and somatic anxiety intensity subscales do not assess thoughts and feelings typical of people experiencing excitement. First, the effect size is small, explaining only 4.8% of the variance between the two groups. Second, the mean intensity scores in the excited condition were substantially higher than the norms reported by Martens et al. (1990) for college athletes on cognitive anxiety (Male =

<table>
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<th>Actual group</th>
<th>Predicted group</th>
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<tbody>
<tr>
<td></td>
<td>Anxious</td>
<td>Excited</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anxious</td>
<td>83</td>
<td>50</td>
<td>60.2</td>
<td>33</td>
</tr>
<tr>
<td>Excited</td>
<td>87</td>
<td>30</td>
<td>34.5</td>
<td>57</td>
</tr>
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</table>

Percentage correctly classified: (62.9%) $\chi^2 = 16.07, p < 0.01$
17.68, Female = 18.40) and somatic anxiety (Male = 17.68, Female = 16.85). This would appear to lend some support to the concerns outlined by Kerr (1997) and Lane et al. (1999). That is, in line with Lane et al. athletes may respond with high scores on the cognitive anxiety subscale prior to an important competition, while experiencing excitement. Similarly, in line with Kerr (1997), a high score on the somatic anxiety subscale may reflect increased physiological arousal associated with excitement. Indeed, it was only possible to correctly classify 61.8% of the participants on the basis of the scores from the cognitive and somatic anxiety subscales. Thus, approximately one third of the participants (38.2%) could not be correctly classified on the basis of their responses on the CSAI-2(d) intensity subscales.

There was an overall difference in the perception of anxiety symptoms between the two groups supporting the proposition that a more facilitative perception of symptoms may reflect excitement (Burton & Naylor, 1997; Jones, 1995; Jones & Hanton, 2001). However, again the effect size was small, explaining 6.1% of the variance between the groups and, furthermore, significant differences were only observed for participants’ perceptions on the somatic anxiety subscale. It is perhaps not surprising that no difference was observed in the way symptoms on the cognitive anxiety subscale were perceived as it is more likely that contrasting emotions have different cognitions, rather than share similar cognitions which are perceived differently by the individual. For example, cognitions accompanying excitement may include ‘I am looking forward to playing today’, ‘I cannot wait to for the competition to start’, whereas cognitions accompanying anxiety may include ‘I am worried about making a mistake’, ‘the opposition looks strong’. However, the notion that emotion is the product of an individual’s cognitive appraisal of physiological arousal, and similar levels of arousal may accompany different emotions, has previously been suggested (Kerr, 1997; Schachter, 1964).

Interestingly, while overall differences were observed the participants in the excited group reported what can best be described as a neutral, rather than a strongly facilitative perception, of symptoms on both the cognitive and somatic anxiety subscales. Moreover, the large standard deviations suggest that participants demonstrated a great deal of variability in the extent to which they perceived their symptoms to be facilitative or debilitating to performance. Indeed, correct classification of participants on the basis of anxiety perception was only possible for just over half of the participants. This may suggest that excitement is not necessarily reflected in a facilitative perception of the symptoms reported on the CSAI-2(d), contrasting with a number of researchers who contend that facilitative anxiety may be more akin to excitement and a debilitating perception of symptoms assessed by the intensity subscales of the CSAI-2 signifies a state of anxiety (Burton & Naylor, 1997; Jones, 1995; Jones & Hanton, 2001). Thus, it is possible that rather than reporting a different emotional state participants who indicate a facilitative perception of symptoms reported by the CSAI-2(d) are merely indicating a belief that these symptoms are likely to facilitate performance at a particular event. Indeed, Hanin and Syrjä (1995a,b) have observed that any single emotion may have facilitating or debilitating effects on performance, depending on its idiosyncratic meaning and intensity. Individuals who report a facilitative perception of the symptoms assessed by the CSAI-2(d) anxiety subscales may not be experiencing a different emotional state to individuals reporting a debilitating perception of anxiety, a standpoint adopted by Jones and Hanton (2001), but are merely indicating a different belief about how the symptoms affect sport performance. That is, a judgement made by the participant as to whether a particular symptom will facilitate or debilitate performance may be based on a number of factors.
(e.g. past experience), but reflects an entirely separate process that does not alter the way in which the individual experiences those symptoms.

While this present study represents an initial attempt to explore the validity of the CSAI-2(d) in distinguishing between different affective states it is important to consider the findings in light of possible limitations regarding the methodology. First, as the task required participants to respond to the CSAI-2(d) prior to a hypothetical event they may not have the array of information available on which they may typically base a meaningful judgement of their expectancies of success (e.g. opponent; how their training had been progressing), which may determine the interpretation of their symptoms (Jones, 1995). Indeed, asking participants to respond prior to a hypothetical scenario may account for the small proportion of variance observed. Nonetheless, in order to have greater confidence in the findings we assessed the participants’ ability to complete the task and discarded those participants who felt unable to do the task accurately. A second possible limitation is that in a task of this nature the participants in the excited group, in recounting the thoughts and feelings prior to competing may have indicated on the CSAI-2(d) symptoms typically associated with anxiety and vice versa. This would not, however, be an unusual occurrence, and is supported by appraisal studies of emotion indicating that conceptually distinct emotions (e.g. sadness and anger) frequently co-occur (Levine, 1996). Nonetheless, asking participants to recall the thoughts and feelings typically associated with either excitement or anxiety was thought to increase the likelihood of eliciting a prototypical response, exaggerating potential differences between the contrasting emotional states (Levine, 1996).

To conclude, the findings of this study are of interest to both theoretical and applied sport psychologists. It is possible to observe differences in scores on the CSAI-2(d) from participants asked to complete the inventory as if they were experiencing contrasting emotions (excitement and anxiety). However, differences in scores were typically small and one-third of participants were incorrectly classified on the basis of these scores. Furthermore, the results indicate that scores higher than published norms on the cognitive and somatic anxiety intensity subscales may be recorded by individuals asked to compete the CSAI-2(d) as if they were excited. Similarly, there is some uncertainty as to whether excitement is necessarily reflected in a strongly facilitative perception of anxiety. Based on our results it would seem more plausible that rather than reporting a different emotional state (i.e. excitement), participants who indicate a facilitative perception of symptoms reported by the CSAI-2(d) are merely indicating a belief that symptoms assessed by the cognitive and somatic anxiety intensity subscales are likely to facilitate performance at a particular competition. There is clearly a need for further research to clarify the relationship between intensity and perception of emotional responses in competitive settings and their effect on performance. Nonetheless, on the basis of these results the authors advise caution when interpreting the results of the CSAI-2(d) in both research and applied settings. Furthermore, given the difficulties associated with interpreting the CSAI-2(d) in its current form it is suggested that future research should be directed towards the development of sport-specific inventories that aim to assess the range of emotions experienced by athletes.

Acknowledgements

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Appendix A

Instructional set and directions given to participants in the anxious condition

Instructional set in the anxious condition

We would like you to imagine that you are about to compete in the most important competition of the season. (It does not matter if this is an individual or team sport, or at what level you compete). We would also like you to imagine that you are feeling extremely anxious about the upcoming competition. Please spend about 1 min recalling and focussing on the thoughts and feelings you typically experience when you are highly anxious.

Recall and focus on the thoughts and feelings that you experience when you are anxious

Now imagine you are completing this questionnaire 30 min prior to the start of the competition. We require you to complete this questionnaire as honestly as possible, and to record the thoughts and feelings that you believe you would be experiencing if you were highly anxious prior to competing in the most important competition of the season. Having read and understood the preceding instructions please complete the questionnaire overleaf.

Directions prior to completing the CSAI-2(d)

A number of statements that athletes have used to describe their feelings before competition are given subsequently. The questionnaire is divided into two sections. In Section 1 please read each statement and then circle the appropriate number to the right of the statement to indicate how you would feel if you were highly anxious and about to take part in the most important competition of the season. There are no right or wrong answers. Do not spend too much time on any one statement, but choose the answer which describes your feelings if you were highly anxious and about to take part in the most important competition of the season.

In addition please indicate in Section 2 whether you regard this thought/feeling as negative (debilitative) or positive (facilitative) in relation to performance in your sport. N.B. if you have scored ‘1’ (Not at all) on the fourth item then you respond on this scale as if you had no self-doubts. If you respond ‘4’ (very much so) to item 4 then you respond on this scale as if you had a great deal of self-doubt.

Instructional set and directions given to participants in the excited condition

Instructional set in the excited condition

We would like you to imagine that you are about to compete in the most important competition of the season. (It does not matter if this is an individual or team sport, or at what level you compete). We would also like you to imagine that you are feeling extremely excited about the upcoming competition. Please spend about 1 min recalling and focussing on the thoughts and feelings you typically experience when you are highly excited.

Recall and focus on the thoughts and feelings you experience when you are excited

Now imagine you are completing this questionnaire 30 min prior to the start of the competition.
We require you to complete this questionnaire as honestly as possible, and to record the thoughts and feelings that you believe you would be experiencing if you were highly excited prior to competing in the most important competition of the season. Having read and understood the preceding instructions please complete the questionnaire overleaf.

Directions Prior to Completing the CSAI-2(d)

A number of statements that athletes have used to describe their feelings before competition are given subsequently. The questionnaire is divided into two sections. In Section 1 please read each statement and then circle the appropriate number to the right of the statement to indicate how you would feel if you were highly excited and about to take part in the most important competition of the season. There are no right or wrong answers. Do not spend too much time on any one statement, but choose the answer which describes your feelings if you were highly excited and about to take part in the most important competition of the season.

In addition please indicate in Section 2 whether you regard this thought/feeling as negative (dibilitative) or positive (facilitative) in relation to performance in your sport. N.B. if you have scored 1 (Not at all) on the fourth item then you respond on this scale as if you had no self-doubts. If you respond 4 (very much so) to item 4 then you respond on this scale as if you had a great deal of self-doubt.

References


