

Emotional Labeling and Competitive Anxiety in Preparation and Competition

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The purpose of this study was to extend the work of Jones and Hanton (2001) by examining differences in affective states of performers who reported facilitating or debilitating interpretations of symptoms associated with precompetitive anxiety. Competitive athletes ($N = 229$) completed state and trait versions of the CSAI-2 (Martens, Burton, Vealey, Bump, & Smith, 1990), including intensity and direction subscales (Jones & Swain, 1992) and an exploratory measure of precompetitive affective responses in preparation and competition. "Facilitators" reported significantly greater positive labeling of affective experiences than "debilitators," while cognitive interpretations of symptoms were reported to change with regard to preparation for and actual performance. The findings further support the need to examine the labeling and measurement of precompetitive affective states.

The adoption of a multidimensional approach and the development of the Competitive State Anxiety Inventory-2 (CSAI-2; Martens, Burton et al., 1990) have aided the study of anxiety research in sport psychology in the last decade. This has provided a plethora of literature investigating the intensity of competitive anxiety symptoms of sports performers (Woodman & Hardy, 2001). Other dimen-

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sions of the competitive anxiety construct, specifically that of directional interpretations (i.e., facilitative versus debilitating), have been investigated via the employment of a modified directional version of the CSAI-2 (Jones & Swain, 1992). Support for the distinction between intensity and direction has been provided in empirical studies examining variables such as competitiveness (Jones & Swain, 1992), performance (Jones, Swain, & Hardy, 1993; Swain & Jones, 1996), the antecedents of competitive anxiety (Hanton & Jones, 1997), gender differences (Perry & Williams, 1998), temporal patterns of the anxiety response (Wiggins, 1998), competitive trait anxiety (Hanton, Mellalieu, & Hall, 2002), hardiness (Hanton, Evans, & Neil, *in press*), and the use of psychological skills (Fletcher & Hanton, 2000). The findings not only appear to support the view that there is value in examining the interpretation of symptoms associated with competitive anxiety, but that direction appears to be more sensitive in distinguishing between individual difference groups than the intensity of responses (Jones & Hanton, 2001).

Despite the wealth of productive research, recent concern has been expressed regarding the concept of directional interpretations of anxiety symptoms. Continuing the points raised by Jones (1995), the notion of facilitating or positive anxiety has stimulated a debate among researchers (Burton & Naylor, 1997; Hardy, 1997, 1998; Jones & Hanton, 2001). One perspective postulates that high levels of cognitive anxiety can be perceived as facilitating to performance (Hardy, 1997). The opposing view maintains that, in line with Lazarus' (1991) cognitive-motivational-relational model of emotion (*cf.*, Lazarus, 2000), such cognitive symptoms are purported to merely reflect positive expectations of coping and goal achievement. These experiences are proposed to lead to positive emotions that include challenge or excitement, beneficial for performance and not indicative of facilitative anxiety (Burton, 1998; Burton & Naylor, 1997). Jones and Hanton (2001) suggested "although there are commonalities of opinion within the recent debate, essentially researchers either accept that a 'positive anxiety' state for performance exists or reject this in favour of another affective state previously labelled as anxiety" (p. 56). In addition, a growing dissatisfaction from a number of researchers exists (*e.g.*, Hanin, 1997; Jones, 1995) that purports anxiety is too narrow to account for the performers' precompetitive response that is proposed to encompass a recipe of emotions (Gould & Udry, 1994).

Current measures of emotional states tend to suffer from both conceptual and methodological limitations (Jones, Mace, & Williams, 2000; Lane & Terry, 2000). Predominantly, the problem emanates from psychometric scales taken from clinical settings that possess a negative bias, resulting in content and construct validity problems with use in sport settings (Gauvin & Spence, 1998). In addition, sport and exercise psychology researchers have employed terms such as "emotion," "mood," and "feeling" interchangeably, when indeed they are recognized as relatively distinct concepts (Lane & Terry, 2000). For the purposes of the current paper, we have adopted the traditional definition of anxiety (Jones, 1990; Jones & Hanton, 2001; Lazarus, 1966) that refers to anxiety as a negative, cognitive, and perceived physiological response to uncertain appraisals of coping with the demands of a stressful situation (*e.g.*, competition). Affective responses are characteristic of feeling states that refer to "those human experiences that include bodily reactions, cognitive appraisals, actual or potential instrumental responses, or some combination thereof" (Gauvin & Spence, 1998, p. 326).

Jones and Hanton (2001) have recently conducted empirical research addressing several of these limitations in an attempt to advance the debate surrounding the notion of positive anxiety. In an exploratory study with elite swimmers, the authors investigated directional interpretations of the intensity of competitive state anxiety symptoms and the type of feeling state experienced (i.e., positive or negative). Those swimmers who perceived competitive state anxiety as facilitative to performance indicated significantly higher scores for positive labels and lower scores on negative labels. Likewise, debilitators of symptoms associated with competitive anxiety indicated significantly higher scores on negative labels and lower scores on positive labels. The authors suggested future research should examine dispositions to experience the precompetitive response as positive or negative with regard to both preparation for and competitive performance. Methods that have adopted state-trait approaches for anxiety measures (Albrecht & Feltz, 1987; Jones & Swain, 1995) have also been hypothesized to apply for predispositions to experience affective states (Ekman, 1994). Predispositions to experience competitive anxiety symptoms as facilitative to performance may therefore be predictive of the direction and type of precompetitive affective state experienced (Jones & Hanton, 2001).

Despite this attempt to advance the understanding of the conceptual debate, Jones and Hanton (2001) acknowledged that their findings were limited. The affective labels employed were predecided as either positive or negative from a pilot study with a large athletic sample. The scale did not ask respondents to report the experience of affective states in regard to helping/hindering performance; positive feeling states reported were assumed to be facilitative to performance and negative feeling states debilitative. Conceptually, however, two performers may experience an intense feeling of aggression, one as positive the other negative, yet it may not be differentiated so in such a scale. Cognitive labeling (i.e., facilitating/debilitating) of the affective state may, therefore, also be important (Hanin, 1997). In addition, the adjective checklist employed by Jones and Hanton (2001) utilized a composite measure of positive and negative feeling states that had limited psychometric properties.

In light of the findings by Jones and Hanton (2001), the primary purpose of the present study was to continue the line of investigation examining performers' cognitive labeling (i.e., facilitative or debilitative) of symptoms associated with competitive anxiety and precompetitive affective experiences and also to advance it in three ways. First, the study employs an intraindividual perspective via measurement of precompetitive affective states using an idiographic scale that allows performers to label the type and direction of each affective state experienced (i.e., facilitative/debilitative). Second, in an applied context, understanding of the temporal patterning of an athlete's precompetitive response in relation to preparation for and forthcoming performance has implications for the nature and timing of interventions required to regulate or protect against negative symptoms experienced (Cerin, Szabo, Hunt, & Williams, 2000). The study therefore aims to examine precompetitive states in relation to performers' perceptions of preparation for and forthcoming performance (Hanton & Jones, 1997; Hardy, Jones, & Gould, 1996). Finally, in addition to measurement of state responses, to enable state-trait comparisons, the study examines predispositions to experience precompetitive affective states and interpretations of competitive trait anxiety (Hanton et al., 2002).

Based upon the findings of Jones and Hanton (2001) and the recommendations of Jones (1995), it was hypothesized that for both state and trait responses, performers who perceived their symptoms associated with precompetitive anxiety as facilitating would also label greater positive precompetitive affective experiences than their debilitating counterparts with regard to both preparation for and actual competitive performance.

Method

Participants

Data for the study was obtained from 229 collegiate athletes (129 males and 100 females), all of whom provided informed written consent. Participants were sampled from several sports including netball, soccer, tennis, track and field, and swimming. The sample was drawn from undergraduate and postgraduate sports science degree programs. All participants in the study were currently competing at national collegiate level. Fifteen team and individual sports were represented with athletes' ages ranging from 19 to 30 years (M age = 22.44 years, SD = 2.78). The competitive standard of the participants ranged from regional (equivalent to state honors) to national and international levels.

Instrumentation

Measurement of Competitive State and Trait Anxiety. The Competitive State Anxiety Inventory-2 (CSAI-2; Martens, Burton et al., 1990) was employed to measure the intensity of preperformance cognitive anxiety, somatic anxiety, and also self-confidence, with nine items in each subscale. The response scale asked the participant to rate the intensity with which each symptom was being experienced on a continuum from 1 (*not at all*) to 4 (*very much so*). Thus, possible intensity scores on each subscale ranged from 9 to 36. Cronbach's Alpha coefficients demonstrating internal consistency for the intensity responses have been reported ranging from .79 to .90 (Martens, Burton et al., 1990). In addition, a direction scale developed by Jones and Swain (1992) was included for the cognitive and somatic anxiety items in which each participant rated the degree to which the experienced intensity of each symptom was either facilitative or debilitating to subsequent performance on a scale from -3 (*very debilitating*) to +3 (*very facilitative*). Thus, possible direction scores on each subscale ranged from -27 to +27, where a positive score represented a state of facilitation and a negative one, debilitation. A score of zero was deemed an interpretation that intensity levels were unimportant to performance. Internal consistency for the direction scale has been reported with coefficients ranging from .80 to .89 for cognitive anxiety and .72 to .84 for somatic anxiety (Jones & Hanton, 1996, 2001; Swain & Jones, 1996).

Although essentially a measure of state anxiety, the modified CSAI-2 test instructions have been successfully adapted by previous researchers to assess intensity and direction of trait anxiety (i.e., Jones & Swain, 1995; Ntoumanis & Jones, 1998; Perry & Williams, 1998). Each item is converted in terms of how the participant *usually* feels so that a general or trait measure is created. Similar procedures have been successfully employed by a number of other developers of state-trait measures (e.g., McNair, Lorr, & Dropleman, 1971; Vealey, 1986).

Precompetition Affective Measures. Acknowledging Jones and Hanton's (2001) recommendations to adopt a more "fine-grained," intraindividual approach to labeling procedures, a measurement instrument was developed for the present study to provide a more sensitive assessment of the direction of performer's labeling of precompetition affective states before competition (cf., Hanin, 1997). The state version was an individual measure that required participants to list the feelings they were experiencing right now before competing and then consider each label listed in relation to (a) preparation for performance and (b) actual forthcoming performance. To overcome previous limitations in the labeling of affective measures that have predecided whether an emotion is negative or positive to the participant's performance (e.g., Jones & Hanton, 2001), a direction scale was provided where participants were requested to label how they perceived each of the feelings experienced with regard to preparation for and actual performance on a scale from -3 (*very debilitative*) to +3 (*very facilitative*). The trait version of the measure contained similar instructions requiring performers to list the feelings that they *usually* experienced before competing and then indicate how they perceived these (i.e., facilitative/debilitative) in relation to preparation for and actual performance on a scale of -3 (*very debilitative*) to +3 (*very facilitative*). Direction scores for each individual's list of affective labels are then summed to obtain an overall direction value for each subscale. Total scores for the two subscales could therefore be of either a positive or negative value. Due to the individual nature of the scale, respondents can list as many feelings as desired. Consequently, the maximum or minimum scores for directional interpretation of preparation for and actual performance subscales will vary from respondent to respondent. In addition, for purposes of comparison, the type and label (i.e., positive/negative) of each feeling listed by the participant for each subscale was also noted.

Procedure

Participants were contacted and informed of the nature of the study and invited to take part in the investigation. Demographic information and written informed consent regarding the study objectives was obtained from those individuals who agreed to participate. A suitable time and venue for the collection of the data was then arranged. All questionnaires were administered by the lead researcher who possessed over 10 years experience in the administration of psychometric instruments to sports performers.

For state responses, all participants completed both the modified CSAI-2 and precompetition affective measure in random order across participants within one hour of the competitive event. The average time before performance was 34.5 minutes ($SD = 4.24$). This time frame has been consistently employed within the anxiety literature and was regarded as acceptable, since it did not interfere with any of the performers' preparation routines. This was also orally verified throughout the study. With respect to the trait responses, participants were asked to complete both the trait versions of the modified CSAI-2 and precompetition affective measure away from the competitive environment in order to avoid any contextual influences (e.g., audience effects). Specifically, responses were completed at a neutral venue such as the empty classroom, office, or participant's house. All responses were completed within the time frame of the participants' competitive season. In order to counter any cognitive bias or judgment effects, no questionnaires were completed directly prior to or after major competitions.

Before completing these scales, performers were presented with antisocial desirability instructions based upon the recommendations of Martens, Vealey, and Burton (1990). These directions emphasized the confidentiality of the responses at an individual level, the need for honesty, and an indication of the thoughts and feelings that performers are experiencing right now (state) or what the performer would usually experience just before competing in an important competition (trait).

Data Analysis

Employing a moderate effect size, the sample size used gave a statistical power that exceeded the required value of 0.80 (Cohen, 1988). Data analysis was then divided into four stages. First, data screening procedures were conducted to investigate the accuracy of the data and measure the influence of any potential covariates such as gender, age, sport type, or skill level, as highlighted in previous anxiety-direction studies (e.g., Hanton, Jones, & Mullen, 2000; Perry & Williams, 1998). Second, internal consistencies and correlations were calculated for this sample. Third, in accordance with procedures adopted by recent direction studies (Hanton & Jones, 1999a; Jones & Hanton, 2001; Jones, Hanton, & Swain, 1994), participants were dichotomized into facilitated (positive scores for cognitive and somatic anxiety direction) and debilitated groups (negative scores for cognitive and somatic anxiety direction). Participants who had a combination of a positive score and a negative score, or a negative and zero score, or positive and zero score were omitted from the analysis. Facilitated and debilitated groups were then examined in relation to labeling of precompetitive affective responses as a function of, preparation for, and actual performance. Multivariate Analyses of Variance (MANOVA) procedures were used to investigate any significant multivariate effects in relation to scoring of precompetitive affective labels of preparation for and performance subscales as a function of anxiety interpretation. Univariate Analyses of Variance (ANOVA) with Bonferroni adjustments ($p < .01$) was employed for follow up analyses. Stage four involved a descriptive frequency count of the feelings listed by the groups debilitated and facilitated by precompetitive anxiety symptoms. In addition, the sum of the labels given to the feelings experienced by the performers (i.e., positive/negative) both in preparation for and forthcoming performance was calculated.

Results

Preliminary Data Analysis

Participants' scores on the measures were examined for accuracy of data entry, missing values, and fit between their distribution and the assumptions of multivariate analysis. No missing values were recorded, and there were no univariate or multivariate within-cell outliers at $p = .001$. In line with recommendations of Tabachnick and Fidell (1996), the assumptions of normality; homogeneity of variance-covariance matrices, $F(3, 74928) = 1.21$, $p > .05$; linearity; and multicollinearity were also observed to be satisfactory. Additional analyses were performed to measure the influence of any potential covariates. Separate one-way MANOVAs were conducted to determine the possible effects of age, skill level, sport type, and gender on the modified CSAI-2 scores with each covariate group acting as the independent variable and CSAI-2 intensity and direction and trait and

state subscale scores acting as the dependent variables. Nonsignificant effects were observed for gender, sport type, age, and skill level ($p > 0.05$).

Internal consistency analyses were conducted on the state and trait CSAI-2 direction subscales. The coefficients were .86 ($p < 0.001$) and .83 ($p < 0.001$) for cognitive anxiety direction and .89 ($p < 0.001$) and .91 ($p < 0.001$) for somatic anxiety direction for state and trait, respectively. These values were similar to results previously reported (Jones & Hanton, 1996, 2001; Jones & Swain, 1995). Correlation coefficients of .34 ($p < 0.01$) and .28 ($p < 0.01$) were observed between intensity scores for cognitive and somatic anxiety, representing less than 12% common variance. Correlations between cognitive anxiety intensity and direction and somatic anxiety and direction scores were $-.21$ ($p < 0.05$) and $-.27$ ($p < 0.05$) for state and $-.19$ ($p < 0.05$) and $-.25$ ($p < 0.05$) for trait, respectively, representing less than 7.3% common variance. These findings further support the multidimensional nature of cognitive and somatic anxiety components and the separate measurement of intensity and direction dimensions of the response.

Precompetitive Affective Responses as a Function of Anxiety Interpretation. Following dichotomizing of participants into facilitators (state $N = 46$; trait $N = 74$) and debilitators (state $N = 34$; trait $N = 21$), a one-way MANOVA was conducted for both trait and state groups to determine any significant differences evident between debilitated and facilitated groups and subscale scores on the precompetition affective measures. Groups (debilitated versus facilitated) acted as the independent variable and total scores for the performers preparation for and actual performance on the precompetition affective measure acted as the dependent variables. This procedure was performed for both the trait and state responses. MANOVAs were observed to be significant for both state and trait, respectively (Wilks's Lambda = .54, $F(2, 77) = 33.34$; $p < .01$, $ES = .41$; Wilks's Lambda = .67, $F(2, 92) = 22.89$; $p < .01$, $ES = .37$). ANOVAs were conducted for preparation for and performance subscales of the precompetitive affective state measure to examine specific differences between facilitated and debilitated groups. Findings are presented in Table 1. The results revealed that for state and trait responses, the facilitated group labeled significantly more positive scores on both the preparation and performance subscales than the debilitated group. Similarly, the debilitated group reported significantly more negative scores than the facilitated group for both subscales for state and trait responses. Both ANOVAs reached the .001 level of significance.

Frequency Analysis of Precompetitive Affective Responses. A frequency count was conducted of the state and trait affective responses listed by the facilitators and debilitators of symptoms associated with precompetitive anxiety for preparation and performance subscales. Participants listed over 900 labels across both trait and state samples in total, with each athlete listing on average 4 labels with a range of between 3 and 8 labels. To verify that the numbers of labels listed did not differ between facilitated and debilitated groups, additional separate one-way ANOVAs were conducted with debilitated and facilitated groups acting as independent variables and the total number of labels listed by the participants for trait and state subscale scores as dependent variables. Nonsignificant effects were found for both groups ($p > 0.05$), suggesting that facilitators and debilitators did not differ significantly on the total number of feelings they indicated experiencing. Twenty-eight different labels were identified for state and trait samples in total. Tables 2 and 3 illustrate the ten most frequent feelings experienced for both state

Table 1 One-way Analyses of Variance of Precompetitive Affective Responses Scores as a Function of Anxiety Interpretation

	Facilitators <i>M (SD)</i>	Debitiators <i>M (SD)</i>	df	F	Effect size
State					
Preparation	4.61 (3.11)	0.44** (2.51)	1, 78	16.31	0.45
Performance	5.48 (3.29)	0.09** (3.40)	1, 78	47.98	0.87
Trait					
Preparation	5.42 (4.28)	0.76** (4.28)	1, 93	22.32	0.61
Performance	6.24 (4.76)	-1.8** (5.31)	1, 93	43.65	0.81

Note. State anxiety (facilitators $n = 46$; debilitators $n = 34$), trait anxiety (facilitators $n = 74$; $n = 21$). * $p < .05$. ** $p < .01$.

and trait responses for each category. Responses are represented as a percentage of the total feelings in each category (i.e., facilitators' state responses, debilitators' trait responses). In addition, within each category, the percentage of respondents that indicated a feeling as positive or negative for preparation and performance is given. Across anxiety interpretation groups and state and trait conditions, performers listed "excited" as the most frequent feeling. Over 75% of trait respondents reported experiencing this response, while 32% of state respondents indicated such an experience. Feeling nervous was also indicated as experienced across all anxiety interpretation groups and state and trait conditions. The confidence feeling was reported as experienced almost three times more in facilitators as debilitators in both state (26% and 8%) and trait respondents (27% and 10%), respectively.

Examination of the interpretation of responses across temporal groups indicated that feeling nervous was viewed as more positive by performers with regard to preparation for performance and less positive with respect to forthcoming performance. This was reported for both anxiety interpretation groups for state responses (facilitators, 90% to 10%; debilitators, 33% to 23%) and with anxiety debilitators for trait responses (45% to 12%). Feeling worried was viewed as more negative by performers with regard to preparation for performance and less negative with respect to forthcoming performance. This was reported for both anxiety interpretation groups for state responses (facilitators, 50% to 25%; debilitators, 100% to 67%) and for anxiety debilitators for trait responses (83% to 66%).

Discussion

The purpose of this study was to extend the work by Jones and Hanton (2001) by investigating how facilitators and debilitators of cognitive and perceived physiological symptoms associated with competitive anxiety differed in their experience of precompetitive affective states in preparation for and with regard to actual performance. Support was found for the hypotheses under investigation such that,

Table 2 Frequency of State Precompetitive Affective Labels as a Function of Debilitators/Facilitators of Competitive Anxiety

Label	Facilitators				Label	Debilitators			
	% Respondents listing label	Preparation %+	%-	Performance %+		% Respondents listing label	Preparation %+	%-	Performance %+
Excited	32	100	—	91	Excited	33	90	10	90
Nervous	29	90	10	10	Nervous	30	33	67	23
Confident	26	100	—	100	Anxious	20	17	83	—
Relaxed	21	100	—	100	Worried	20	—	100	33
Focused	21	100	—	100	Tired	10	—	100	—
Enjoyment	15	100	—	100	Tense	10	—	100	—
Worried	10	50	50	75	Angry	10	33	67	33
Eager	10	75	25	25	Confident	8	100	—	100
Motivated	10	100	—	100	Apprehensive	7	—	100	50
Anxious	8	100	—	100	Enjoyment	5	100	—	100

Table 3 Frequency of Trait Precompetitive Affective Labels as a Function of Debilitators/Facilitators of Competitive Anxiety

Label	Facilitators				Label	Debilitators			
	% Respondents listing label	Preparation %+	Preparation %-	Performance %+ %-		% Respondents listing label	Preparation %+	Preparation %-	Performance %+ %-
Excited	96	100	—	—	Excited	75	83	17	75
Nervous	46	91	9	9	Nervous	57	45	55	12
Confident	27	100	—	—	Worried	38	17	83	44
Focused	25	100	—	—	Fear	32	80	20	—
Fear	23	25	75	64	Anxious	25	25	75	25
Worried	19	55	45	55	Fear of Failure	19	—	100	—
Aggressive	13	100	—	—	Anger	13	—	100	40
Apprehensive	10	75	25	—	Sick	12	—	100	—
Anger	10	60	40	20	Tired	12	—	100	—
Joy	10	100	—	—	Confident	10	100	—	100

for state and trait responses, anxiety interpretation groups (facilitated versus debilitated) differed significantly in regard to the precompetitive emotional state experienced and the labeling of these symptoms with respect to preparation for and actual performance. Performers who interpreted anxiety symptoms as facilitative labeled significantly more positive emotional states than did individuals who interpreted their thoughts and perceived feelings as debilitative. Descriptive analysis of affective labels in both debilitators and facilitators indicated several traditionally positive affective labels among the most frequent listed, including excitement and focused. These results confirm the findings of Jones and Hanton (2001) that from a situational and dispositional context, positive affective experiences can exist alongside symptoms of competitive anxiety in the preperformance period. The findings also reinforce the view that the precompetitive stress response is not necessarily negative and characterized solely by anxiety (cf., Eysenck & Calvo, 1992; Hardy, 1997; Jones et al., 2000). Moreover, it appears that a multitude of emotional states, including anxiety, influence athletic performance (Hanin, 2000; Jones, 1995; Males & Kerr, 1996).

One of the primary aims of the study was to examine how performers labeled their experience of affective responses in relation to preparation for and actual performance in forthcoming competition. The findings revealed that some participants' cognitive interpretations of feelings changed in how they viewed their effect on preparation for performance and toward how they affected actual performance. Some interpretations changed from negative to positive, whereas others changed from positive to negative. Some feelings reported, such as nervous, were viewed as positive for preparation but labeled as negative toward actual forthcoming performance. Similarly, the feeling worried was viewed as negative for preparation but labeled as more positive for actual performance. Interestingly, the majority of feelings listed where perceptions changed across the temporal period represented were those typically associated with symptoms of competitive anxiety. The notion that anxiety can be perceived as positive for preparation but negative for actual performance has been suggested in previous research (Burton & Naylor, 1997; Jones, 1995). The findings in the current investigation would therefore appear to support the distinction between the experiences of preparatory anxiety for competition, enabling the performer to achieve a necessary activation state for performance, in comparison to in-event or worry anxiety, associated with debilitating cognitions of performance failure (Burton, 1998). For applied practice, patterns of change in the cognitive labeling of affective states in the precompetition period may therefore be as significant, if not more so, than the type and intensity of feeling reported by the athlete.

A further interesting finding from the labeling of emotional states experienced was the labeling of traditionally negative emotions such as anger and fear as positive for preparation and performance by the athletes. Equally, traditionally positive feelings (i.e., relaxed and calm) were labeled as debilitative to performance. Conceptually, traditional self-report measures of mood and emotion have assessed merely the intensity of the response, predeciding the direction of the emotion experienced. The present study overcomes such limitations by assessing performers' cognitive interpretations of the feeling experienced with regard to preparation for and actual performance in forthcoming competition. The results highlight the need to view not only the presence or intensity of the affective response, but how the athlete perceives that emotion, mood, or feeling in relation to

forthcoming performance. These findings support the work of Hanin and his colleagues that show positive and negative emotions can have both an optimal and dysfunctional impact upon performance (Hanin, 1997; Hanin & Syrja, 1995). Allowing the researcher to assess both the intensity and direction dimensions therefore adds greater possibility and further specificity to the examination of the precompetitive affective response.

A final intention of the study was to examine the recent research debate that has arisen surrounding the notion of debilitating and facilitating anxiety (Jones, 1995; Jones & Hanton, 2001). This debate has attempted to address the paradox of positive experiences of anxiety, where the existence of high levels of cognitive anxiety is interpreted as positive for performance by the athlete (Burton & Naylor, 1997; Hardy, 1997, 1998). One view regards facilitating anxiety as a misnomer, merely representing the psychometric inadequacies of the modified direction CSAI-2, allowing athletes to mislabel anxiety symptoms with emotions such as excitement and challenge (Burton, 1998; Burton & Naylor, 1997). In the current study, the most frequent feeling experienced for both state and trait response was that of excitement. Over 30% of state and 80% of trait respondents indicated experiencing some level of excitement before competition. Such findings, it could be argued, support the view that anxiety and excitement may be confused or mislabeled when employing the CSAI-2. Further support for this argument could also be inferred from the findings of the descriptive analysis that revealed facilitators of symptoms associated with competitive anxiety reported a greater number of traditional positive feelings (i.e., relaxed, focused) than their debilitating counterparts, who, in turn, reported more symptoms associated with traditional negative feelings (i.e., tired, sick).

In opposition to this view, Jones and Hanton (2001) have reported that symptoms such as excitement and anxiety may be experienced concurrently preceding performance. Athletes, therefore, are suggested to experience symptoms associated with competitive anxiety but label their overall mental state as positive. The findings of the descriptive analysis in the current study also support this view, with the presence of both positive affective states and symptoms associated with competitive anxiety reported by performers. In addition, facilitators of symptoms associated with competitive anxiety labeled greater positive interpretations of affective states than debilitators did. For state and trait responses, 90% of labels listed were perceived as positive for preparation and performance for facilitators, compared with 30% for debilitators. Further, facilitators labeled symptoms associated with competitive anxiety (i.e., nervous, anxious) as positive to preparation for and actual performance, while debilitators labeled similar feelings as negative.

The underlying rationale for the notion of positive or facilitating interpretations of competitive anxiety (Hardy, 1997, 1998) suggests that such symptoms can exist as long as the performer maintains and increases levels of effort and confidence (cf., Eysenck & Calvo, 1992). Similarly, the five-dimension butterfly catastrophe model (Hardy, 1996) implies that the performer can maintain positive perceptions of performance, despite experiencing competitive anxiety symptoms through the maintenance of high levels of self-confidence. Explanation for this mechanism suggests that self-confidence moderates against the debilitating effects of anxiety and the stress response in some way (Jones et al., 1994). In addition, research from a dispositional perspective has also observed trait sport-confidence to be most related to the regulation of precompetitive mood amongst several

personality variables (Prapavessis & Grove, 1994). In the present study, the confidence label was reported as experienced at least three times more in facilitators than debilitators for both state and trait respondents. Similarly, for the self-confidence subscale scores of the CSAI-2, state and trait facilitators experienced significantly greater levels of self-confidence than their debilitating counterparts did. Further support can also be found in the content of the emotions labeled where facilitators of symptoms associated with competitive anxiety indicated experiencing precompetitive feelings associated with the notion of concentration and effort, such as focused, motivated, and eager, while debilitators did not report similar feelings. In the context of the positive anxiety debate, and given the present findings, whichever perspective is valid, a strong rationale is presented to further investigate the positive affective states experienced precompetition and the relationship with performers' perceptions of symptoms associated with competitive anxiety.

The practical implications of the study suggest that the broader precompetitive affective response, particularly the athletes' interpretation and cognitive labeling of such experiences, may be more salient in assisting achievement of optimal preperformance mental states. Practitioners need to be cognizant that traditional negative or positive emotions reported may not necessarily debilitate/facilitate preparation for or actual forthcoming performance. We recommend the use of cognitive restructuring techniques that focus upon changing perceptions of the individuals' affective state, rather than attempting to reduce the emotion, mood, or feeling via relaxation strategies, as this may lead to a lowered and ineffective activation state (Hanton & Jones, 1999b). The findings of the current study also suggest that performers' cognitive perceptions of the precompetitive affective response change in the time period before performance. Practitioners should be aware that athletes are likely to experience some competitive anxiety symptoms as functional and facilitating to their preparation for performance as they elicit the required effort and motivation to mentally and physically prepare the necessary resources for competition (Hanin, 2000). However, such symptoms that are used by the athlete to enhance preparation for performance may then appear to be considered dysfunctional and debilitating for actual performance. Understanding of the athletes' cognitive interpretation and labeling of such responses will aid the psychologist in providing a clearer rationale to intervene and implement intentional and planned change (Cerin et al., 2000). The idiosyncratic nature of these changes in anxiety and emotional state interpretation with regard to preparation for and actual performance identified in the present study reinforces the emphasis on the need for the practitioner to adopt more sensitive intraindividual methods of assessment and intervention (Hanin, 1997).

In the current study, many of the responses listed to describe performers' affective states would not qualify under any definition as moods or emotions. What is important, however, is that in the context of the sporting situation, these feelings may be more meaningful in predicting performance than current non sport-specific scales employed (Hanin & Syrja, 1995). Even though feelings such as focused and in control are not emotional states, they are very much considered integral components of an athletes' flow state (cf., Jackson, 1996). While the exploratory affective instrument employed in the current study has enabled a more sensitive assessment of such important preperformance feeling states, there are limitations with the scale's measurement properties. For example, although the athletes may have listed a different number of feelings, their total labeling scores were determined

by summing the directional ratings. It is possible, therefore, that one person may have listed two feelings while another listed nine feelings, yet both athletes may receive the same labeling score. However, additional analysis to examine if any differences existed in the mean number of labels indicated by debilitators and facilitators was found to be nonsignificant for both trait and state responses. This suggests that facilitators and debilitators did not differ significantly on the number of feelings they indicated experiencing and provides further credibility for the main result of the multivariate analyses that showed significant differences were reported in the way the athletes labeled their feelings. Despite this finding, though, it is clear that the design and construction of a sport-specific scale to accurately measure performers' thoughts, feelings, and emotions is one that requires significant priority. Beyond Hanin's (2000) idiographic assessment of an individual's emotional state, no sport-specific nomothetic affective measures exist in wide use in sport psychology. Current validated measures of affect may, therefore, be more appropriate when investigating the concept of positive anxiety. Jones, Swain, and Harwood (1996), for example, investigated anxiety interpretation and affect using a measure widely used in social psychology, the Positive and Negative Affect Scale (PANAS; Watson & Clarke, 1984; Watson & Tellegen, 1985). Positive and negative affect were found to strongly predict directional interpretations of competitive trait anxiety symptoms. High negative affect individuals consistently perceived anxiety symptoms as debilitating to performance, whereas high positive affect individuals reported symptoms as more facilitating. The study was limited, however, in that Jones et al. (1996) only examined the independent relationship between anxiety symptoms and affect, failing to consider the combined effect (cognitive and somatic) of facilitating or debilitating interpretations. If researchers are to improve our understanding of the concurrent experience of anxiety and positive affect, the misrepresentation of anxiety as excitement, or the role of self-confidence in moderating anxiety interpretations, then future studies should consider how facilitators/debilitators of competitive anxiety *per se* experience symptoms of positive and negative affect.

We also recommend that future research consider the criteria by which performers are labeled as debilitators or facilitators of symptoms associated with competitive anxiety. Under Jones and Swain's (1992) criteria, individuals are only considered for analysis if they score both negative and both positive on the CSAI-2 direction subscales. This leaves a percentage of individuals unaccounted for, who, for example, may score positive for cognitive anxiety direction and negative for somatic anxiety direction. In addition, some respondents may score an overall total of zero on either of the direction subscales, indicating that intensity levels experienced are unimportant to performance yet are omitted from analysis. This is despite them interpreting some anxiety symptoms as debilitating or facilitative to performance. In order to assess more sensitive measures of anxiety interpretation, future studies should consider examining not only participants' combined cognitive and somatic anxiety direction scores, but also separate totals for cognitive and somatic anxiety direction (cf., Jones & Hanton, 2001). A further area also requiring consideration is the factor structure of the CSAI-2 direction scale itself. While coefficient alphas provide some evidence for this structure, we cannot rely upon these as the sole indicators of subscale homogeneity. Using confirmatory analysis techniques, researchers have produced findings to question the three-factor structure of the intensity component of the scale (Lane, Sewell, Terry, Bartram, & Nesti,

1999). Similar techniques are therefore required to investigate the integrity of the proposed two-factor structure of the direction dimension.

In addition to the methodological problems highlighted, the present study also raises questions regarding the nature and timing of sampling in investigations of precompetitive affective labeling. First, an ethical issue is presented by requesting performers to be reflective within thirty minutes of performance. The current time frame adopted has been consistently employed within the anxiety literature and was regarded as acceptable since it did not interfere with any of the performers' preparation routine. However, from an applied perspective, such introspection close to competition may inhibit an athlete's access to flow or optimal performance via increased analytical (left-brain) type activity (cf., Masters, 1992). Alternative approaches to data capture and athlete assessments that are less invasive in the precompetition period and more reflective of "natural" preperformance states should be considered (Krane, 1994; Thomas, Hanton, & Jones, 2002). We also ask researchers to consider the type of population sampled in studies of affect labeling. In the present study, it could be implied that the sport and exercise science students sampled may have encountered information describing anxiety-performance research through their academic study. Such knowledge may bring potential implicit biases to the investigation, and this could account for why many of the labels describe affective states that are traditional or congruent with the extant literature. However, in the present study, all efforts were taken to ensure participants had received no prior formal exposure to the anxiety-performance literature.

A further factor causing such content overlap may have been the cueing effects of administering the CSAI-2 items before the exploratory feelings measure. In the present study, the instruments were completed in a random order, yet several of the respondents would still have completed the CSAI-2 first. This may explain why there is considerable content overlap between the affective labels listed and the CSAI-2 items. However, it may also be further evidence to support the reasoning that the CSAI-2 scale measures affective responses beyond the intended symptoms associated with competitive anxiety (Burton, 1998; Burton & Naylor, 1997). Future researches need to be cognizant of the nature and prior experiences of populations sampled for such possible biases and the potential order and cueing effects of scales to be administered. Finally, it is also interesting to note that the number of facilitators and debilitators of symptoms associated with competitive anxiety changed across the assessment of trait and state responses. While this may merely be due to the differential situational stressors the participants were placed under for the recording of state responses, it does highlight caution that researchers should take when employing trait measures of emotional responses to investigate or make inferences regarding state symptoms.

The findings of the study support the notion that at situation and trait levels, the precompetitive experience is not necessarily perceived as negative and harmful to an athlete's performance. Equally, positive affective states can be experienced in addition to symptoms associated with competitive anxiety. Knowledge of predispositions to interpret anxiety symptoms can therefore assist the practitioner in comprehending how athletes experience and label precompetitive affective states. We recommend that examination of a broader range of affective responses other than anxiety, together with the incorporation of directional perceptions of precompetitive mental states, will aid researchers and practitioners in the understanding of the performers' psychological experiences in preparation and competition.

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