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## **Perfectionism and Mood States Among Recreational and Elite Athletes**

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### **ABSTRACT**

Recently, perfectionism has become a focus of attention in applied psychology. In athletic populations, both adaptive and maladaptive perfectionism have been found to exist (Terry-Short et al., 1995) but little research has been done on the relationships between perfectionistic tendencies and mood states in athletes. By furthering our understanding of potential relationships between perfectionism and mood, we may be able to promote the psychological health of athletes. The purpose of this study therefore was to examine perfectionism and its possible relationship with mood states among both elite and recreational athletes. Forty-four athletes from elite and recreational groups completed the Profile of Mood States (POMS) and Multidimensional Perfectionism Scale for Athletes (MPS-A). Correlational analyses yielded statistically significant associations between specific mood state scores and various dimensions of perfectionism. Recommendations are made for future study.

### **Introduction**

While several authors have cited a relationship between perfectionism and psychological problems (Shafran & Mansell, 2001), only recently has research investigated the specific links between aspects of perfectionism and various psychopathologies. The current study focuses on perfectionism and the possible correlations between perfectionism and mood states in a sporting environment.

#### *Perfectionism*

Perfectionism is defined as, “the setting and maintaining of unrealistically high standards and expectations, and critical evaluations of performance” (Hewitt, Newton, Flett, & Callander, 1997, p.95). In early works done by Burns (1980a) and Pacht (1984), the construct of perfectionism was

described as a negative quality. Burns (1980a) described perfectionism as a network of cognitions including expectations, interpretation, and evaluation of events. Individuals who possess perfectionist traits generally have excessively high expectations and define their self-worth in regards to the achievement or outcome of these events. Burns (1980b) further referred to perfectionism as a compulsive strain towards impossible goals. Pacht (1984, p.368) supported this definition by adding that perfectionism “keeps people in turmoil.” Another view of perfectionism, which Hollender (1978, p.384) described to be a neglected personality trait, is “the practice of demanding of oneself or others a higher quality of performance than is required by a situation.” Furthermore, Frost and colleagues (Frost, Marten, Lahart, & Rosenblate, 1990, p.451) referred to perfectionism as “the setting of excessively high standards for performance accompanied by an overcritical self-evaluation.” As well, an associated fear of failure is linked with these excessively high standards (Flett, Hewitt, Blankstein, & Mosher, 1991). Overall, the concept of perfectionism is used to describe an individual with high expectations for performance, which may impact negatively one’s perceived self-worth.

Hamachek (1978) distinguished normal perfectionism from neurotic perfectionism. Normal perfectionism can be a positive attribute that reflects a healthy pursuit of high standards. Conversely, neurotic perfectionism is exhibited by a fear of failure and is associated with more negative implications. This two dimensional view of perfectionism is further supported by Terry-Short, Owens, Slade, and Dewey’s (1995) description of perfectionism as being either positive or negative, and by Frost, Heimberg, Holt, Mattai, and Neubauer (1993) who distinguished between adaptive and maladaptive perfectionism. Adaptive perfectionism can be explained as a positive pursuit towards achievement, whereas maladaptive perfectionism is concerned with evaluation, and is associated with a fear of failure (Enns, Cox, Sareen, & Freeman, 2001).

Recent research has moved the conceptualization of perfectionism from a two-dimensional to a multidimensional construct (Frost, Marten, Lahart, & Rosenblate, 1990). Frost et al. (1990) identified personal standards, concern over mistakes, doubts about actions, organization, parental expectations, and parental criticisms as the six components of perfectionism. Personal standards involve the setting of excessively high standards for personal performance. Concern over mistakes is the setting of high standards of personal performance, followed by overly critical evaluations of one’s own behaviour. Doubts about actions can be defined as uncertainty about the quality of a personal performance. The subscale of organization is prevalent when the individual emphasizes order and precision. And the last two subscales of parental expectations and parental criticisms refer to the perceived expectations parents have for the individual and the feared outcome that failure to meet these standards will result in loss of acceptance (Cox, Enns, & Clara, 2002).

Hewitt and Flett (1991a) proposed another conceptualization of perfectionism, describing the dimensions of perfectionism as self-oriented, other-oriented, and socially-prescribed. Self-oriented perfectionism is defined as the setting of excessively high standards and perfectionistic self-motivation. Other-oriented perfectionism is the holding of unrealistically high standards of performance for another individual. And, socially-prescribed perfectionism is the perception that other individuals maintain excessively high standards of oneself (Cox, Enns, & Clara, 2002). The two separate multidimensional perfectionist scales developed by Frost, Marten, Lahart, and Rosenblate (1990), and Hewitt and Flett (1991a) are used to discern between different dimensions

of perfectionism.

The implications of perfectionistic tendencies for athletes have been debated. High goal orientation and more successful athletic performance have been linked to perfectionism (Bradham, 2000). A perfectionist trait is positive in the sense that it pushes the individual to achieve higher levels of achievement. However, the same trait can become extremely destructive once the individual feels that he or she must do anything to avoid failure (Hamilton, 2003). Hamilton (2003) explained that the high incidence of depression among dancers indicates that the same qualities of perfectionism that lead to significant achievement can also lead to self-destruction. Terry-Short et al. (1995) conducted a study comparing positive and negative perfectionism scores between an eating disordered group, a depressed group, athletes, and controls. Results revealed that the athletes showed significantly higher levels of positive perfectionism than the controls ( $F(227) = 29.05, p < 0.0001$ ). Significant differences were also found for negative perfectionism ( $F(227) = 50.47, p < 0.0001$ ), with athletes demonstrating lower scores than the eating disordered group and the depressed group, but similar to the controls. More recently however, Flett and Hewitt reported that although certain dimensions of perfectionism may be positive, perfectionism is primarily maladaptive among athletes and exercisers. “Despite the fact that there are many sports in which absolute perfection is required, negative, self-defeating outcomes and unhealthy patterns of behavior are evident among those athletes who are characterized by an extreme, perfectionistic personality and who are focused cognitively on attaining perfection” (Flett & Hewitt, 2005, p.14). While it is generally agreed that athletes have perfectionistic tendencies, the implications of these tendencies are not clear.

### *Mood States*

Mood state, the other construct of interest in this study, refers to “a situation specific, somewhat transient, psychological response to an environmental stimulus” (Cox, 2002, p.178). Cohen, Kessler, and Gordon (1997) described mood states as illustrations of a process in which an individual attempts to adapt to environmental demands. Murray (1998) defined a mood state as a temporary emotional state that fluctuates depending upon circumstances. Some of the circumstances that affect mood are external, such as weather and physical activity (Guerrero, Andersen, & Trost, 1998), while others are internal, such as our appraisal of events (Murray, 1998). For the purposes of the current study mood states will be defined as an emotional state in response to an environmental stimulus.

The most frequently used measure of mood states and the one used in the current study is the Profile of Mood States (POMS). This questionnaire, developed by McNair, Lorr and Droppleman in 1971, assesses six mood dimensions including tension-anxiety, depression-dejection, anger-hostility, vigour-activity, fatigue-inertia, and confusion-bewilderment, as well as overall psychological distress or total mood disturbance (Droppleman, Lorr, & McNair, 1992).

Previous research on mood states among athletes has shown that elite athletes exhibit a mood state profile that is higher in vigor and lower in the negative mood states of tension, depression, anger, fatigue, and confusion, than the average individual (Morgan, 1979). This ‘iceberg profile’, as coined by Morgan (1979), was developed from data from forty U.S. Olympic wrestlers the evening before a final competition. Morgan (1979) added that elite athletes displayed a healthier

mood state profile than less successful athletes. More recent evidence however, has suggested that under certain circumstances sport is associated with an increase in negative mood states. Turnbull and Wolfson (2002) tested the effects of exercise and outcome feedback on the mood states of fifty-four undergraduate male and female volunteers. The results indicated that exercisers displayed better mood states than non-exercisers when supplied with positive and neutral feedback, however a lower mood was found in the exercisers supplied with negative feedback when compared to the non-exercisers. Implications of this study suggested improvements in mood are not necessarily an inevitable result of exercise. Turnbull and Wolfson (2002) concluded that exercise followed by a negative outcome resulted in the intensification of negative mood states such as anger and depression. Although Puffer and McShane (1992, p.327) argued that, “for the most part, the competitive athlete is a well-adjusted individual who demonstrates considerable vigor and well-being, as well as less depression, anxiety, and fatigue than non-athletic counterparts”, they found that well-trained athletes often suffer from the phenomenon of overtraining which can express itself in the form of increased mood disturbance.

The relationship between exercise, sport and mood states therefore is not well-understood.

### *Correlations of Mood States and Perfectionism in Sport*

To-date only one empirical studies has examined the relationship between mood states and perfectionism, specifically in athletics. Frost and Henderson (1991) investigated perfectionism in forty female varsity athletes and concluded that concern over mistakes was associated with several negative outcomes such as increased anxiety, whereas high personal standards perfectionism did not significantly correlate with anxiety measures. To our knowledge, no other empirical studies on perfectionism and mood states in sport have been conducted since this time.

The effects of perfectionistic characteristics on the mood states of depression (Minarik & Ahrens, 1996), anxiety (Antony, Purdon, Huta, & Swinson, 1998), fatigue (Magnusson, Nias, & White, 1996), and overall psychological distress (Cheng, Chong, & Wong, 1999) have been well-documented in other areas of research outside sport psychology. For example, a relationship between perfectionism and mood states has been found to exist among gifted student populations (Orange, 1997) and these results may be transferable to elite sporting environments. Clearly, more research on the relationship between mood states and perfectionism in sport is required. If there is a relationship between perfectionism and mood states, coaches and others in sport may be able to use this knowledge to promote greater psychological health among athletes. There may also be implications for athletic performance. Flett and Hewitt (2005) stated that research on perfectionism in the area of sports and exercise science is relatively new and deserves further attention.

The purpose of this study therefore was to examine perfectionism and its possible relationship with mood states among athletes. More specifically, the perfectionism dimensions of self, parents, coaching staff, other athlete's expectations, significant others' expectations, other athletes' expectations, and total perfectionism among recreational and elite athletes were compared. In addition, we sought to assess possible correlations between these perfectionism dimensions and the specific mood states of friendship, tension-anxiety, depression-dejection,

anger-hostility, fatigue, and confusion-bewilderment, and total mood disturbance.

## Method

### *Participants*

The participants included recreational athletes and elite athletes, of both sexes, aged eighteen to twenty five, from a large urban university student population. A recreational athlete was defined as an individual who plays on a sport team at a recreational level, works out 1 - 4 times a week, does not train and/or compete nationally or internationally, does not train for the same activity for more than eight hours per week, and is not a member of an intercollegiate team. Within the university setting, intramural participants represented the recreational athlete. An elite athlete was defined as an individual who plays on a competitive sports team, trains for the same sport at least six days a week including games and competitions, and competes for an intercollegiate team and/or nationally or internationally. Athletes in elite sport devote greater time, energy and identity commitments to sport; they experience greater competitive pressures and demands to exceed than do recreational athletes (Leff & Hoyle, 1995). It was anticipated that these differences in sport context may be associated with differences in perfectionism and mood. Anyone who did not fit into the above classification criteria or any participant with an injury who was not actively participating in his or her sport was excluded from the study.

### *Measures*

*The MPS-A (Vitullo, 2003).* The Multidimensional Perfectionist Scale for Athletes is composed of fifty six questions where the participants are given a statement and respond by circling a number on a Likert scale ranging from one to five. A score of one would indicate the subject strongly disagrees, and a score of five means the subject strongly agrees. This questionnaire tests specifically for perfectionism among athletes, and was used for this reason. For example, one of the statements is as follows; "I hate being less than the best in my sport." The MPS-A tests for the specific perfectionism dimensions of self expectations, parents' expectations, coaching staff's expectations, other athletes' expectations, significant others' expectations, expectations directed at other athletes, and total perfectionism, which is the total score of all the perfectionism dimensions combined. These subscales represent the three categories of self-oriented, socially-prescribed, other-oriented perfectionism. Self-oriented perfectionism includes expectations of oneself. Socially-prescribed perfectionism includes expectations held by parents, coaching staff, other athletes, and significant others. Other-oriented perfectionism includes expectations directed at other athletes.

The MPS-A scale is based upon the Multidimensional Perfectionist Scale (MPS) with items reworded to enhance the applicability to athletic populations. The original MPS has been widely used and consistently shown to be a reliable and valid testing measure (Hewitt, Mittelstaedt & Wollert, 1986). While the MPS-A has not been used before, construct validity and internal consistency (alphas = .91) have been confirmed using a group of 505 intercollegiate athletes.

*The POMS (Droppleman, Lorr, & McNair, 1992).* The profile of mood states (POMS) scale is composed of 65 questions. The participants are given a list of words, such as "blue, tense,

angry, worn out,” and are asked to circle a number from one to five on a Likert scale, depending on the extent to which they have experienced this feeling during the last week, with 1 being ‘not at all’, and 5 being ‘extremely.’ The POMS scale tests for tension-anxiety, depression-dejection, anger-hostility, vigour-activity, fatigue-inertia, confusion-bewilderment, and total mood disturbance, which is calculated by adding all of the negative mood states of tension-anxiety, depression-dejection, anger-hostility, fatigue-inertia, confusion-bewilderment and subtracting vigor-activity. It is used commonly in sports research, and has been found to be an effective measure of mood states in athletes (Droppleman et al., 1992). The validity and reliability of the POMS have been established and widely accepted. Test-retest correlations range from .65 to .74 for the vigor and depression subscales respectively. Evidence of construct validity is demonstrated with significant correlations between the POMS and the Manifest Anxiety Scale, the Beck Depression Scale, and the MMPI-2 (Dropplemen et al., 1992).

### *Procedures*

Following ethics approval, participants were recruited from the university student population. To recruit participants, intercollegiate (elite) and intramural (recreational) team leaders were asked for volunteers from their teams. The first author introduced the study to the team members, asked for volunteers, and administered the scales. All participants were required to read an information letter and sign an informed consent form before participating in the study. Participants then completed the MPS-A and the POMS scales. Scores were calculated from the questionnaires by summing the totals of the respective subscales. Values were compared and contrasted to determine whether or not perfectionism dimensions varied across the different levels of athletes, and if there was a correlation between various mood states and perfectionism among the same athletes.

## **Results**

In total, forty-four individuals participated in the study, including twenty-four elite athletes and twenty recreational athletes. There were eleven male and thirteen female participants in the elite athlete category, and nine male and eleven female participants in the recreational athlete category. The sports of basketball ( $n = 3$ ), hockey ( $n = 2$ ), lacrosse ( $n = 2$ ), rock climbing ( $n = 2$ ), soccer ( $n = 1$ ), softball ( $n = 1$ ), swimming ( $n = 13$ ), tennis ( $n = 1$ ), track and field ( $n = 1$ ), triathlon ( $n = 7$ ), and volleyball ( $n = 11$ ) were represented. There were no statistically significant differences between elite athletes’ and recreational athletes’ scores on total perfectionism or on any of the perfectionism dimensions.

Correlation analyses were conducted to examine possible relationships between mood scores (POMS) and perfectionism (MPS-A scores). Significant positive correlations resulted between total mood disturbance and the perfectionism dimensions of parents’ expectations ( $r(42) = 0.31$ ;  $p < 0.05$ ) and coaching staff’s expectations ( $r(42) = 0.36$ ;  $p < 0.05$ ). Tension-anxiety showed a significant positive association with the MPS-A perfectionism dimension of coaching staff’s expectations only ( $r(42) = 0.37$ ;  $p < 0.05$ ). A significant association was found between the POMS scores on anger-hostility and all of the MPS-A dimensions of perfectionism with the exception of self perfectionism ( $r(42) = 0.20$ ; N.S.), but including total perfectionism ( $r(42) = 0.35$ ;  $p < 0.05$ ), parents’ expectations ( $r(42) = 0.31$ ;  $p < 0.05$ ), coaching staff’s expectations

( $r(42) = 0.35; p < 0.05$ ), other athletes' expectations ( $r(42) = 0.35; p < 0.05$ ), significant others' expectations ( $r(42) = 0.35; p < 0.05$ ), and expectations directed at other athletes ( $r(42) = 0.38; p < 0.05$ ). When looking at scores on fatigue, a significant positive correlation was found with total perfectionism ( $r(42) = 0.34; p < 0.05$ ), and the perfectionism dimensions of parents' expectations ( $r(42) = 0.36; p < 0.05$ ), coaching staff's expectations ( $r(42) = 0.48; p < 0.05$ ), and significant others' expectations ( $r(42) = 0.34; p < 0.05$ ). Depression-dejection showed an association with the perfectionism dimensions of parents' expectations ( $r(42) = 0.30; p < 0.05$ ) and coaching staff's expectations ( $r(42) = 0.31; p < 0.05$ ). These results are illustrated in Table 1.

Table 1

Intercorrelations Between Subscales for MPS-A and POMS

Subscale	Total Mood	Friendship	Tension	Anger	Fatigue	Depression	Vigor	Confusion
Athletes (n = 44)								
Total Perfectionism	0.28	-0.13	0.22	*0.38	*0.34	0.23	0.08	0.22
Self	0.06	-0.08	0.03	0.20	0.09	0.02	0.17	0.04
Parents	*0.31	-0.21	0.20	*0.31	*0.36	*0.30	-0.04	0.28
Coaching Staff	*0.36	-0.09	*0.37	*0.35	*0.48	*0.31	0.01	0.30
Athletes Expectations	0.26	-0.13	0.20	*0.35	0.28	0.24	0.07	0.19
Significant Others	0.26	-0.08	0.22	*0.35	*0.34	0.17	0.02	0.18
Other Athletes	0.20	-0.05	0.12	*0.38	0.24	0.14	0.14	0.13

\* =  $p < 0.05$

## Discussion

The purpose of this study was to examine perfectionism and its possible relationship with mood states among athletes. Contrary to expectations, no differences existed between elite athletes' and recreational athletes' scores on total perfectionism or on any of the perfectionism dimensions. As this is the first study to employ the MPS-A, other comparisons of perfectionism scores are not possible. It was anticipated that elite athletes would have had higher perfectionism scores because of the high demands for excellence and perfection in their sport context. There are several possible explanations for the absence of significant differences. First, both groups of participants were university students and it may be that university students tend to be higher in perfectionism than the general population due to the high admissions standards and demands of university programs. In other words, the pursuit of a university degree may have affected the perfectionism scores to a greater extent than the level of sport involvement. This explanation is supported in part by Enns and colleagues (2001) who found maladaptive perfectionism to exist among gifted student populations. It would be interesting in future studies to examine the effects of academic pursuits on perfectionism. It is also possible that the criteria used in the current study to separate recreational from elite participants did not adequately distinguish between the two types of athletes. Perhaps future studies could compare athletes versus sedentary populations and

student-athletes versus student non-athletes to address this possibility. And finally, we hypothesize that one's athletic identity, or the extent to which one's identity is defined by athletic involvements and accomplishments, may be a critical determinant of perfectionism.

When comparing correlations between mood state and perfectionism scores in both groups, no significant relationships were found between total mood disturbance and total perfectionism or the dimensions of self, other athletes' expectations, significant others' expectations, or expectations directed at other athletes. However, a significant positive association was found to exist between total mood disturbance and the socially prescribed dimensions of perfectionism - parents' expectations and coaching staff's expectations. The notion that there is a strong correlation between psychological distress and perfectionism is well supported (Cheng, Chong, & Wong, 1999). The current study contends that total mood disturbance is most closely related to socially prescribed dimensions of perfectionism, and has no correlation with other-oriented or self-oriented perfectionism. Therefore, when Hamilton (2003) suggested that perfectionism can be extremely positive because it pushes individuals to higher levels of achievement, one might infer that this 'positive' form of perfectionism may be other-oriented or self-oriented. Perfectionistic goal orientations that are prescribed externally may be what Hamilton (2003) referred to as the 'negative' form of perfectionism, which can be destructive and is associated with a fear of failure. This 'negative' perfectionism was revealed in significant correlations between the socially-prescribed perfectionism dimensions and total mood disturbance, as found in the present study. The implications of perfectionism dimensions on the specific mood states will be addressed separately.

Mood state scores on depression-dejection showed a positive association with the perfectionism dimensions of parents' and coaches' expectations, but were not associated with any of the other dimensions. These results indicate a relationship between depression-dejection and socially-prescribed perfectionism, suggesting that depression in athletes is more likely to occur as a result of perceived external pressures to succeed as opposed to self-imposed high expectations. This finding is supported by previous evidence showing that socially prescribed perfectionism is most closely correlated to depressive disorders (Blatt, 1995; Enns & Cox, 1999; Hewitt & Flett, 1991b).

Scores on fatigue showed a positive correlation with total perfectionism, and the socially-prescribed perfectionism dimensions of parents', coaches', and significant others' expectations. There was no association with the categories of self, other athletes' expectations, or expectations directed at other athletes. The correlation between total perfectionism and fatigue is consistent with research done by Magnusson, Nias, and White (1996) who implicated perfectionism as a susceptibility factor in the development of chronic fatigue. Magnusson et al. (1996) also supported the finding that fatigue relates to the socially-prescribed dimensions of perfectionism by asserting that physical fatigue is most closely associated with scores of parental expectations, but noted that mental fatigue is correlated highly with doubts about actions, a self-oriented dimension of perfectionism. As the MPS-A survey was given to athletes it is possible that they interpreted questions about fatigue to refer to physical fatigue. Future studies should ask more specific questions that would differentiate between mental and physical fatigue.

The mood state of tension-anxiety showed a significant positive association with the

perfectionism dimension of coaches' expectations only. Similarly, Antony, Purdon, Huta, and Swinson (1998) found that high anxiety individuals scored significantly higher on socially prescribed perfectionism than those in the control group. It may be that the participants in the current study experience social pressures to excel in both their academic and sport experiences. Between academic assignments and due dates externally imposed by professors, as well as training regimes and performance standards dictated by coaches, it is no wonder that socially prescribed perfectionism was associated with tension-anxiety in these participants. Given the correlational nature of the data in the current study, it is also possible that anxious individuals are more susceptible to external messages that emphasize perfection. Future studies would advance our understanding of these relationships by determining causality. It would also be interesting to examine the mood state profiles of coaches and their influence on the mood states of the athletes.

Significant positive associations resulted between the POMS scores on anger-hostility and all of the MPS-A dimensions of perfectionism except for self-perfectionism. Therefore, as socially-prescribed and other-oriented perfectionism increases, so does anger-hostility. No previous studies have examined this relationship. Although these data are correlational, it may be the case that high goal orientations that are derived from, or are directed at, an external source may lead to feelings of anger and hostility. This highlights the need for athletes' goals to be self-oriented and internally prescribed. When goals are set internally, athletes may feel they have more control over their goal attainment, whereas perceived external pressures to succeed may be associated with a lack of control, and consequential increased levels of anger-hostility. It would be interesting to pursue the question of whether self- versus other-directed goals influences one's sense of control and feelings of anger-hostility.

The mood states of friendship, vigor, and confusion-bewilderment were not associated with any of the dimensions of perfectionism. Like the mood state of anger-hostility, there have been no previous studies examining the relationships between the mood states of friendship, vigor, and confusion-bewilderment to dimensions of perfectionism. Future research could explore these questions further.

Overall, statistically significant associations between specific mood state scores and various dimensions of perfectionism were found to exist. The socially-prescribed dimension of perfectionism, including the expectations of parents, coaches, other athletes, and significant others most frequently correlated with mood state scores. And of these dimensions of perfectionism, parents and coaches' expectations correlated most often with the participants' mood states. Other athletes' expectations were not found to correlate significantly with any of the mood states. This could be due to the large percentage of individual sport athletes who participated in the study. Similarly, significant others did not seem to play a pertinent role in influencing the participants' mood states. Of importance is that many of the recreational and elite athlete participants, but primarily elite athletes, indicated verbally that they did not have time for a relationship with a significant other, implying that the questions in that category were irrelevant. As a requirement of the study, the elite athlete had to train at least six days a week including games and competitions. This training schedule can be quite demanding leaving little time for athletes to enjoy a social life. Tofler, Stryer, Micheli, and Herman's (1996) research on the physical and emotional problems of elite gymnasts indicated that elite athletes devote nearly all their time to sport, and consequently lack opportunities for social development and suffer from

social isolation. Interestingly, self-oriented perfectionism did not correlate with any of the mood states, suggesting that self-imposed perfectionism may not impact mood states to the same degree as externally-imposed perfectionism.

In summary, as the findings of this study are correlational, no conclusions regarding causal effects between perfectionism and mood states can be drawn. However, the findings suggest that perfectionism may have different implications depending upon whether the source of perfectionism is internal or external. When perfectionism is encouraged or reinforced by a parent, coach, teammate, or significant other, it is associated with a variety of negative mood states including total mood disturbance, depression-dejection, fatigue, tension-anxiety, and anger-hostility. When perfectionism is driven internally however, no association with negative mood states is seen.

### *Implications for Intervention*

Findings from this study have implications for the reduction of psychological distress of athletes and for coaching practices. The strong correlations found between mood disturbances and socially prescribed perfectionism suggests that coaches would do well to encourage and guide their athletes to set their own goals, and to refrain from exerting external pressures to seek perfection. Coaching certification programs and sport clinics might consider informing coaches, parents, and sport authorities about the relationships between perfectionism orientations and mood disturbances in athletes, and how their behaviors may affect athletes. The development of guidelines for coaches and parents to assist them in assessing, monitoring, and motivating perfectionistic athletes may also be helpful.

### *Limitations and Future Directions*

Several limitations existed in the current study; these need to be addressed and used to inform future research. First, and very importantly, as this study is correlational, causality cannot be determined. Future prospective studies that investigate the effects of perfectionism orientation on mood states are required.

In addition, the perfectionism scores could have been skewed due to high academic standards among a university population. To further examine this possibility, future replications could involve a more academically diverse group of athletes, possibly in a high school setting as opposed to university. Related to this, it would be interesting to examine whether the extent to which one's identity is tied to academic or athletic pursuits affects perfectionism and mood states in sport.

It is also possible that perfectionism influences one's willingness to volunteer for such a study, thus raising the concern of a sample bias. It would be interesting to examine this question in future studies as well as other possible associations between perfectionism and response biases or social desirability.

As mood states are a sensitive topic, some individuals may have been hesitant to report experiencing some of the negative mood states. Schwenk (2000, p.4) argued, "the current

conceptualization of and approach to mental illness in athletes is fraught with stigmatization, denial, and dichotomous paradigms of psychological versus physical disease.” This statement highlights the potential for perceived negative stigmatization and subsequent denial of certain psychological states. Future study on mood states in athletes might consider alternative forms of methodology, such as a qualitative based analysis.

This study is limited as it provides a glimpse of mood states and perfectionism at one point in time only. By definition, mood states are situation-specific and fluctuate depending on circumstances (Murray, 1998). For a more comprehensive picture, moods should be assessed several times throughout the year or athletic season. And given that this is the first study to employ the MPS-A, future studies using this instrument will allow for comparative data and the development of norms.

Further studies should be repeated within specific sports. An exploration of whether or not differences exist in the relationships of mood states and perfectionism between team and individual sport athletes would be interesting.

Demographic differences also require further investigation. More information needs to be obtained on whether or not age, sociocultural, or gender differences within athletic populations are related to perfectionism orientations and their correlates to specific mood states. Some research has been done on perfectionism in other cultures which shows that perfectionist dimensions differ between ethnicities (Castro & Rice, 2001), but variance in the effects of the perfectionism between cultures remains unexplored. As well, gender and age differences were discussed in a few of the studies (Blenkiron, Edwards, & Lynch, 1999; Iketani et al., 2002), but more information on the demographic differences in relation to perfectionism and its effects must still be obtained.

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