The Relationship Between Perceived Motivational Climate, Burnout, and Well-Being in Division I Athletes

By

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Submitted to the graduate degree program in Health, Sport, and Exercise Sciences and the Graduate Faculty of the University of Kansas in partial fulfillment of the requirements for the degree of Master of Science in Education.

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Date Defended: May 5, 2016

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Date approved: May 5, 2017

Abstract

The purpose of this study was to examine the relationships between Division I athletes' perceptions of the motivational climate on their sport team to their levels of sport burnout (i.e., physical and emotional exhaustion; reduced sense of accomplishment; and devaluation of sport), positive and negative affect, and well-being (i.e., emotional; social; and psychological). It was hypothesized that athletes' perceptions of a more caring and task-involving climate with less emphasis on an ego-involving climate, would be negatively associated with burnout and negative affect, and positively associated with positive affect and well-being. Participants were 104 Division I athletes (44 men and 60 females; mean age = 20.17) from four different sports (baseball, diving, golf, and rowing). Three separate canonical correlations were conducted to examine the relationships between the climate variables (i.e., caring, task, and ego) to burnout via (a) emotional/physical exhaustion, reduced sense of accomplishment, and devaluation of sport; (b) well-being subscales (emotional, social, and psychological) and coach care; and (c) positive affect, negative affect, and subjective vitality. Analysis indicated that perceptions of a higher caring and task-involving and lower ego-involving climate was associated with lower emotional/physical exhaustion, reduced sense of accomplishment, devaluation of sport, and higher emotional well-being, social well-being, coach care, positive affect, and subjective vitality. It will be important in future research to examine home a caring and task-involving climate may buffer athletes' experiences with burnout and enhance their well-being.

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The Relationship Between Perceived Motivational Climate, Burnout, and Well-Being in Division I Athletes

The popularity of college athletics has increased the pressure put on athletes to improve their skills and outperform others. Division I athletes must become experts in their sport, which requires at least 10 years of training (Ericsson, 1996). To compete in collegiate sports and be successful, athletes have to become dedicated to one sport earlier than ever before (Lai & Wiggins, 2003). Athletes' lives are structured with many practices including two-a-days, weight training, and conditioning during the off-season. Some teams even compete during the off-season to prepare for their in-season games, which results in many athletes competing year round.

While this training alone is time consuming, collegiate athletes also have to balance academic responsibilities and social activities. The mission of the National Collegiate Athletic Association (NCAA) is to develop individuals athletically and academically to prepare them for life after college, but research has shown that the commercialization of sport has put increased pressure on collegiate athletes that other students do not face during college (Gould & Whitley, 2009). Collegiate athletes are expected to train for several hours a day, go to classes, study, and attend tutoring sessions to meet requirements for success in sports and academics (Gustafsson, Kenttä, Hassmén, & Lundqvist, 2007). Athletes have less autonomy over their actions, because their days are planned for them. Collegiate athletes may feel overwhelmed with their activities in college and need support to thrive while still being involved in their sport.

With the increased pressure to perform and the amount of time spent in sport, some athletes may begin to feel less motivated to participate and suffer from burnout. Raedeke (1997) defined burnout as a process that involves athletes' physical/emotional exhaustion, reduced sense of accomplishment, and devaluation of sport. With the high physiological and psychological

demands placed on collegiate athletes, some can begin to feel both physical and emotional exhaustion. Athletes who feel a reduced sense of accomplishment perceive they are no longer improving their abilities or continuing to achieve; they may be performing well, but they perceive they are not (Raedeke, 1997). Devaluation of sport involves developing negative attitudes toward sport and athletes' views of what is important to them. Athletes who devalue their sport may come to practice, but are not invested in giving maximal effort, or they may begin to miss practices. While physical/emotional exhaustion may come and go, when it is persistent and paired with reduced sense of accomplishment and devaluation, athletes may experience burnout.

Raedeke (1997) discovered that athletes who enjoy their sport, perceive more benefits from their sport involvement, view fewer social constraints, and are more attracted to their sport than other activities, are less likely to experience burnout. In contrast, Gould & Whitley (2009) found burnout to be associated with lower enjoyment, as well as perceived lack of control and loss of motivation. Burnout also significantly increases over time (Lai & Wiggins, 2003); athletes who are experiencing low levels of burnout at the beginning of a season are likely to have increased levels of burnout at the end of a season. Since burnout increases over time there is a need to find effective strategies to decrease the likelihood of burnout in athletes. Therefore, additional research in burnout is warranted to discover ways to improve social interactions between athletes and coaches to decrease the likelihood of burnout in athletes.

Negative social interactions have been positively associated with global burnout (Defreese & Smith, 2014). Therefore, interventions that address social interactions may be important in reducing burnout in athletes. Giving support for athletes may also be important to enhance athletes' motivation and prevent burnout (DeFreese & Smith, 2013), which can combat

negative social interactions. How coaches develop the team environment may impact the athletes' social interactions and burnout.

Certain climates can foster motivation and prevent burnout. Research employing Achievement Goal Perspective Theory (AGPT) has considered how motivation can be optimized (Fry & Gano-Overway, 2010; Nicholls, 1989). Through research with AGPT, Nicholls (1989) identified two climates, task-involving and ego-involving. The features of an ego-involving climate include athletes perceiving increased rivalry among teammates, "star" athletes getting the most attention, and mistakes being punished. In an ego-involving climate, coaches send the message that high ability and performance is the criteria used to gauge success, not effort; therefore, athletes who have less ability often feel less valued and successful. The features of a task-involving climate include an emphasis on personal improvement, best effort, mistakes are viewed as learning opportunities, and everyone feels that they play an important role on the team. In a task-involving climate the process of performing is the focus rather than the outcome of winning or losing. Cumming, Smoll, Smith, & Grossbard (2007), in a study with youth basketball players, reported that athletes' who perceive a task-involving climate enjoy playing for their coach, view their coach as a good teacher, and were more likely to want to play the next year than those in an ego-involving climate.

Other research has extended Nicholls (1989) research, examining how creating a caring climate, where athletes feel valued, safe, supported, and respected, can impact their sport experience (Newton et al., 2007). When athletes are in a caring environment they have increased sport commitment, enjoyment, and more positive attitudes about their fellow teammates and coach (Fry & Gano-Overway, 2010). Athletes also feel a sense of belongingness on a team

where coaches support and value them. Through creating a caring climate coaches can model the behavior they want their athletes to use, changing the climate on the team.

Coaches at the collegiate level have successfully created caring climates for their teams. Knust & Fisher (2015) interviewed coaches to determine how NCAA coaches create caring climates. These coaches described viewing their team as a family, listening to their athletes through open communication, working hard to resolve conflicts between players, and viewing situations through their players' eyes as important strategies that help create a caring climate for their athletes. Other NCAA coaches have described how they create caring climates (Fisher, Bejar, Larsen, Fynes, & Gearity, 2017), specifically, they shared how they felt that developing their athletes as overall individuals through academics, athletics, socially, and emotionally was important in creating a caring climate. These coaches also viewed the athletes' lives outside of sport, knowing when their athletes needed support, and responding to athletes needs as important aspects in caring for their athletes. Through this research, coaches at the NCAA level have shown that they can create caring climates that foster athletes' confidence in their ability. In summary, a caring and task-involving climate seems to be the optimal climate, for athletes, over an ego-involving climate.

Recent research has linked athletes' perceptions of the motivational climate to their levels of burnout (Isoard-Gautheur, Guillet-Descas, & Duda, 2013; Lemyre, Hall, & Roberts, 2008; Vitali, Bortoli, Bertinato, Robazza, & Schena, 2015). In adolescent athletes, a task-involving climate was negatively associated with all three burnout dimensions (physical/emotional exhaustion, reduced sense of accomplishment, and devaluation of sport), while an ego-involving climate was positively associated with all three burnout dimensions (Vitali et al., 2015). Isoard-Gautheur, Guillet-Descas, & Duda (2013) discovered that athletes with high levels of

devaluation of sport and reduced sense of accomplishment perceived a more ego-involving climate. Coaches who create a task-involving climate may help protect their athletes from experiencing burnout; whereas, athletes in an ego-involving climate feel that they are in an environment where they must demonstrate higher ability than those around them, and may have an increased risk of experiencing burnout (Lemyre et al., 2008). While research with adolescent athletes has focused on the perceived motivational climate and burnout, further research is needed to examine the effects of the caring climate on burnout in collegiate athletes.

Motivational climates can affect burnout, but also impact other factors that may influence burnout like positive affect (i.e., enthusiasm, alertness, etc.) and negative affect (i.e., anger, contempt, disgust, etc.). Research involving perceived motivational climate and positive and negative affect has found that perceptions of an ego-involving climate were positively associated with negative affect and negatively associated with positive affect (Harwood, Keegan, Smith, & Raine, 2015). Additional research involving collegiate intramural sports found task-involving climates to be modestly, positively related to positive affect (Webb & Forrester, 2016). Links between burnout and positive and negative affect have been identified as DeFreese and Smith (2014) found that negative affect significantly predicts global burnout in collegiate swimming and track and field athletes. Seifriz, Duda, and Chi (1992) reported that the climate coaches create can impact their athletes positive affect. While there is a link between burnout and positive and negative affect, further research is needed to determine how perceptions of the climate relate to positive and negative affect and burnout.

Although more research is needed with positive and negative affect, research on perceived motivational climates and well-being has found a caring and task-involving climate to be the most beneficial for individuals (Brown & Fry, 2014; Reinboth & Duda, 2006). In an

exercise setting, Brown and Fry (2014) found that individuals' sense of well-being was positively related to a caring and task-involving climate. When examining athletes, Reinboth and Duda (2006) found that to facilitate athlete well-being through sport, a caring and task-involving climate needs to be emphasized. This research suggests that caring features (e.g., feeling valued, listened to, and supported) exhibited by the coach are important for athlete well-being.

For athletes to thrive in sport, a caring/task involving climate should be emphasized to reduce burnout, increase positive affect, and increase athlete well-being. While research has supported these relationships, there have been limited links between motivational climate, burnout, positive and negative affect, and well-being in the Division I collegiate athlete population. There is a need to examine these relationships to better understand how the motivational climate can impact athletes' willingness to play and their well-being, which could impact their performance over time. The purpose of this study was to examine the relationships between collegiate athletes' perceptions of the motivational climate on their sport team to their levels of sport burnout (i.e., devaluation of sport; physical and emotional exhaustion; and reduced sense of accomplishment), positive and negative affect, and psychological well-being. It was hypothesized that athletes' perceptions of a more caring and task-involving climate with less emphasis on an ego-involving climate, would be negatively associated with burnout and negative affect, and positively associated with positive affect and psychological well-being.

Method

Participants

Data was collected from a convenience sample of 104 Division I athletes. The sample consisted of males (42.3%) and females (57.7%) age 18 to 24 years. Athletes were freshmen (32.7%), sophomores (20.8%), juniors (24.8%), and seniors (18.8%); three percent of the

participants had redshirted. The sample was mostly Caucasian/White (90.4%) followed by athletes who identified as multiple race/ethnicity (3.8%). Few athletes identified as African American/Black (1.8%), Asian/Pacific Islander (1.8%), and Hispanic/Latino (1.8%). Athletes participated in rowing (52.9%), baseball (33.7%), golf (8.7%), and diving (4.8%) and 48.5% of athletes identified as starters for their team. Four different teams were represented from one NCAA Division I school. Most athletes in the sample (38.8%) were in their first year of college play, while only 18.4% were in their fourth year. Athletes indicated that they had been participating in their sport for 1 to 20 years. Most athletes participated for multiple reasons including scholarship, love for their sport, wanting to play professionally, their teammates, and other. After college, most athletes (72%) planned to keep participating in their sport. Ways they plan to keep participating in their sport included coaching, pursuing a professional career, playing in a recreational league, playing on a club team, being an agent, athletic director, sport marketing consultant, playing in the minor leagues, and others. A little over half of the athletes were not currently injured (58.7%), but half of athletes indicated they were playing with pain (52.4%). Most athletes rated their pain at or below 4 (72.2%) with the highest pain rating being 8 out of 10.

Measures

The survey assessed demographic information as well as the motivational climate, caring climate, athlete burnout, positive and negative affect, well-being, and subjective vitality. Described below are the measures that were used to assess the study variables:

Demographics. Participants identified which sport they were playing, age, level of eligibility, gender, race/ethnicity, starting status, number of years of college experience, and

number of years of overall experience in the sport. Participants also indicated if they were currently injured and how much pain they had while playing.

Motivational Climate. The perceived motivational climate was assessed using the 21-item Perceived Motivational Climate in Sport Questionnaire (PMCSQ; Seifriz, Duda, & Chi, 1992). Athletes' perceptions of the dominating motivational climate on their team during the season was assessed. The item consists of two subscales: task-involving (9 items) and ego-involving (12 items). Perceived task-involving climate was assessed using items that indicate the emphasis is on best effort, personal improvement, mistakes are viewed as part of learning, and everyone plays an important role (e.g., "The coach focuses on skill improvement"). The perceived ego-involving climate was assessed using items that signify encouragement of team rivalry, most attention given to "star" players, mistakes being punished, and value placed on winning/performance (e.g., "Out-playing teammates is important"). Responses were recorded using a five-point Likert-type scale (1 = "strongly agree", 5 = "strongly disagree"). The PMCSQ has demonstrated adequate validity and internal reliability (Seifriz, Duda, & Chi, 1992).

Caring Climate. Athletes' perceptions of the caring climate was assessed using the 13-item Caring Climate Scale (CCS; Newton et al., 2007). The CCS measures multiple caring elements including support, acceptance, value, and concern (e.g., On this team, athletes feel they are treated fairly). Responses were recorded using a five-point Likert-type scale (1 = strongly disagree, 5 = strongly agree). Previous research shows adequate validity and reliability for the scale (Newton M. , et al., 2007).

Athlete Burnout. Athletes' perceived burnout was assessed using the Athlete Burnout Questionnaire (ABQ; Raedeke & Smith, 2001). The ABQ contains three subscales consisting of five items each, which measure (a) reduced sense of accomplishment (e.g., It seems that no

matter what I do, I don't perform as well as I should), (b) devaluation (e.g., I feel less concerned about being successful in basketball than I used to), and (c) emotional/physical exhaustions (e.g., I am exhausted by the physical and mental demands of basketball). Participants responded on a five-point Likert-type scale (1 = "almost never", 5 = "almost always"). Subscale scores will be calculated by averaging the item scores corresponding to the dimensions of athlete burnout. A total burnout score will also be created by averaging the scores on all items. The ABQ has exhibited acceptable internal consistency and good reliability with constructs related to burnout (Cresswell, 2009; DeFreese & Smith, 2013; Raedeke & Smith, 2001).

Positive and Negative Affect. Athlete affect was assessed using the Positive and Negative Affect Scale (PANAS; Watson, Clark, & Tellegen, 1988). The PANAS consists of 10 positive (e.g., interested) and 10 negative (e.g., distressed) items. Participants respond on a five-point Likert-type scale (1 = "Very slightly or not at all", 5 = "Extremely") on how they have felt during this season. The PANAS has shown adequate internal consistency and reliability (Watson, Clark, & Tellegen, 1988).

Well-Being. Athlete well-being was assessed using the short form of the Mental Health Continuum (MHC-SF; Keyes, 2009). The MHC-SF consists of 14 items that measure emotional well-being (3 items), psychological well-being (6 items), and social well-being (5 items). Participants respond on a six-point Likert-type scale (0 = "never", 5 = "every day"). The MHC-SF has shown good internal consistency (> .80) and reliability (> .55 on all subscales).

Subjective Vitality. Six items from the Subjective Vitality Scale (SVS; Ryan & Frederick, 1997) were used to measures athletes' feelings of vitality (e.g., "I look forward to each new day"). Participants responded on a seven-point Likert-type scale where they indicated how true

the statement was for them (1 = “not at all”, 7 = “very true”). The SVS has shown good reliability and validity in past research (Ryan & Frederick, 1997).

Additional Items. Ten items were created to assess athletes’ feelings of care outside of sport from their coaches and teammates. Five items assessed athletes’ feelings of coach care (e.g., “My coach cares more about what is best for my well-being than winning a game”). Five items assessed athletes’ feelings of team care (e.g., “I spend time with my teammates outside of sport”). Participants responded on a five-point Likert-type scale (1 = “strongly disagree, 5 = “strongly agree”). There was good reliability for both scales (coach care = .82, team care = .85).

Procedure

Following institutional review board approval, permission was secured from athletic directors and team coaches via telephone to recruit athletes for the survey. Thirty-four coaches were contacted to participate in the study and four agreed to have their athletes participate. Two coaches declined to have their athletes participate, and the other 28 did not return email or voicemail messages.

When coaches agreed to allow their teams to participate in the study, a session was scheduled, and trained research assistants travelled to practice sites on days specified to collect data from each team. Athletes gave their consent to participate in the study through an information statement given to each athlete on the day of data collection. They were informed that participating in the study was optional. A questionnaire was administered in person during the athletic season and took athletes 12 to 15 minutes to complete. To avoid potentially biased results due to an order effect, where survey responses are affected by previous responses, the questionnaires were placed in counterbalanced order. At the time of data collection, all teams were experiencing moderately successful seasons.

Statistical Analysis

Mean, standard deviation, and Cronbach reliability coefficients were calculated for all of the scales. For each measure variable, Pearson correlation coefficients were calculated. Lastly, three canonical correlation analyses were conducted to examine the relationships between the motivational climate (caring, task, and ego) and the outcome variables.

Results

The statistics package used for analysis was IBM SPSS .22. Cronbach's reliability coefficients, mean scores, and standard deviations were calculated for each scale and presented in Table 1. The reliability coefficients were acceptable (α >.70) for all variables accept emotional well-being (α = .68), which was near acceptability. The emotional well-being scale consisted of 3 items, and the item-deletion procedure indicated that deleting an item would not improve the reliability coefficient. The emotional well-being scale was kept for further analysis since the alpha value was near acceptability.

Mean scores indicated that athletes perceived a moderately high caring, task-involving climate as well as a moderate ego-involving climate. Athletes reported low to moderate burnout (emotional/physical exhaustion, reduced sense of accomplishment, devaluation of sport), and moderate to high positive affect, subjective vitality, and well-being (emotional, social, psychological). Further, athletes reported low negative affect and indicated their coach and teammates care about them.

The Pearson correlation coefficients revealed that perceptions of a caring and task-involving climate were significantly and positively associated with the well-being total score and two of its subscales (emotional and social), positive affect, subjective vitality, and coach care. Furthermore, a caring and task-involving climate was significantly negatively associated with

total burnout and the three burnout subscales (emotional/physical exhaustion, reduced sense of accomplishment, and devaluation of sport). No significant relationship was found between a caring and task-involving climate and psychological well-being subscale, negative affect, or team care. Perceptions of an ego-involving climate were significantly and positively associated with total burnout and two burnout subscales (emotional/physical exhaustion and devaluation of sport). Additionally, an ego-involving climate was significantly negatively associated with feelings of coach care. No significant relationship was found between an ego-involving climate and the well-being subscales, positive affect, negative affect, subjective vitality, or team care.

Three separate canonical correlations were performed to examine the relationship of the climate to the outcome variables. All canonical correlations revealed one significant function [Model 1: L = .55, F (9) = 6.98 ($p < .001$); Model 2: L = .50, F (12) = 6.10 ($p < .001$); Model 3: L = .68, F (9) = 4.14 ($p < .001$)]. The first canonical correlation examined the relationship between the climate variables (caring, task-involving, ego-involving) and burnout subscales (emotional/physical exhaustion, reduced sense of accomplishment, devaluation of sport; see Model 1). The canonical for the climate variables to the burnout variables was .62 with 38% overlapping variance. The loadings revealed perceptions of a high caring and task-involving climate and a low ego-involving climate were associated with lower emotional/physical exhaustion, reduced sense of accomplishment, and devaluation of sport.

The second canonical correlation examined the relationship between the climate to well-being variables (emotional, social, psychological) and athlete perceptions of their coach caring for them outside of sport (see Model 2). The canonical for the climate variables to well-being variables and coach care was .70 with 48% overlapping variance. The loadings for the canonical correlation revealed perceptions of a high caring and task-involving climate and a low ego-

involving climate were associated with higher emotional well-being, social well-being, and feelings that their coach cares. The loading for psychological well-being was below the suggested level of .30.

The third canonical correlation examined the relationship between the climate variables and positive affect, negative affect, and subjective vitality (see Model 3). The canonical for the climate variables to positive affect, negative affect, and subjective vitality was .51 with 26% overlapping variance. The loadings for the canonical correlation revealed perceptions of a high caring and task-involving climate and a low ego-involving climate were associated with higher positive affect and subjective vitality. The loading for negative affect was not significant, as it was below the suggested level of .30.

Discussion

Based in AGPT, the present study examined the relationship between perceptions of the motivational climate to levels of burnout, positive and negative affect, and well-being in Division I athletes. Support was shown for the relationship between a caring and task-involving climate and a negative association to levels of burnout and positive association to positive affect and well-being. The current study provides evidence that an ego-involving climate is negatively associated with well-being and positively associated with levels of athlete burnout.

This study expands the previous research on burnout in athletes by including an assessment of the motivational climate that includes caring, task-involving, and ego-involving characteristics. Features of the task-involving climate include encouraging effort, learning from mistakes, recognizing personal improvement, and identifying how everyone plays important roles on the team. The caring climate features include fostering feelings of support, safety, respect, and belonging. Our results indicate Division I athletes perceptions of a high caring and

task-involving climate with less emphasis on an ego-involving climate are associated with the reporting of lower levels of all aspects of athlete burnout (emotional/physical exhaustion, reduced sense of accomplishment, and sport devaluation). These findings are in line with previous research where perceptions of a task-involving climate in Olympic athletes was negatively associated with emotional/physical exhaustion and reduced sense of accomplishment (Lemyre et al., 2008). Additional research with high level athletes of all ages (13-53 years) found that perceptions of an empowering (task-involving, autonomy-supportive, and socially-supportive) climate predicted decreases in reduced accomplishment and sport devaluation (Appleton & Duda, 2016). In adolescent athletes, Vitali and colleagues (2015) found perceptions of a task-involving climate to be negatively associated with all burnout subscales; while, Isoard-Gutheur and colleagues (2013) found that with handball players, only reduced sense of accomplishment and sport devaluation were significantly negatively associated with a task-involving climate. Across age groups there have been consistent findings that a task-involving climate is negatively related to burnout and the current study suggests that caring climate features may be equally important to buffer athletes' levels of burnout.

Additional evidence has found that athletes' perceptions of an ego-involving climate are positively related to burnout. In Olympic athletes, an ego-involving climate was positively associated with emotional/physical exhaustion and sport devaluation (Lemyre et al., 2008). When examined across multiple age groups a disempowering (ego-involving) climate predicted increases in all aspects of burnout (Appleton & Duda, 2016). In adolescent athletes, an ego-involving climate created by the coach was positively related with total burnout (Ntoumanis, Taylor, & Thøgersen-Ntoumani, 2012; Vitali et al., 2015), while additional work has found positive relations with reduced sense of accomplishment and sport devaluation (Isoard-Gutheur

et al., 2013). Research across ages has supported that an ego-involving climate may increase levels of burnout in athletes and the current findings contribute to this literature by revealing supporting evidence with a U.S. sample of Division I athletes. The climates coaches create plays an important role in influencing athletes' perceptions of burnout; however, the role teammates play can also influence athletes' burnout.

Ntoumanis et al. (2012), in research in peer created motivational climates, found that a task-involving climate negatively predicted burnout. Additional research with adolescents found that specific features of the peer task-involving climate were related to burnout dimensions. Teammates recognizing personal improvement and effort from other teammates was negatively associated with reduced accomplishment and sport devaluation, while having relatedness support from teammates was negatively associated with all dimensions of burnout (Smith, Gustafsson, & Hassmén, 2010). An ego-involving peer climate feature, intra-team conflict, was positively associated with all dimensions of burnout. Examining both peer and coach created climates can help us better understand the influences on burnout and how to reduce levels of burnout in athletes.

In accordance with AGPT (Nicholls, 1989), together current research suggests that individuals in a task-involving climate may have less burnout than athletes in an ego-involving climate. Since a task-involving climate promotes recognizing athletes' personal improvement and effort, athletes may be less likely to feel that they are not improving, because they are focusing on giving their best effort and improving based on their past performance, not on being better than other athletes. On the other hand, an ego-involving climate promotes a focus on being better than other athletes and punishing mistakes. When athletes feel that they have to be better than their teammates and are punished when they make mistakes it would make sense that they

would feel increased emotional and physical exhaustion and reduced sense of accomplishment as well as begin to devalue their sport by finding other activities where they are valued more enjoyable. This can be a particular problem at the Division I level when athletes are deeply involved in their sport, practicing numerous hours each day and having every hour of their day planned out for them, while also having an intense pressure put on them to win by their coaches.

Features of the caring climate, as identified in the framework, can have an impact on athletes' burnout as well. Athletes who experience burnout enjoyed playing their sport at one point, but when they have high levels of burnout no longer enjoy their sport like they once did (Gould, Tuffey, Udry, & Loehr, 1996). The current study showed that a caring and task-involving climate can decrease perceptions of burnout. One reason for this decrease in burnout may be that a caring climate has been linked to increases in enjoyment (Fry & Gano-Overway, 2010). If athletes no longer enjoy sport, because of the pressures they feel associated with sport, a caring climate may combat these stressors through increasing feelings of safety, support, and belonging. When a climate focuses on ego-involving features including high ability being valued, intrateam rivalry, mistakes being punished, and winning, athletes may have increases in burnout, because they cannot control variables like their ability. If athletes focus on aspects of their performance like effort, instead of ability, that they can control, they are more likely to experience less burnout than athletes who focus on aspects they cannot control.

The implications for climate and burnout show how climate can influence athletes' ill-being; however, climate also impacts athletes' well-being. This study also examined the relationship between the motivational climate to athlete well-being (emotional, social, and psychological) and coach care, indicating that perceptions of a high caring and task-involving climate with low emphasis on an ego-involving climate are associated with higher emotional

well-being, social well-being, and coach care. In the current study the psychological well-being subscale of the MHC-SF (Keyes, 2009) did not meet the requirements for significance within the canonical model, although previous research has identified that a caring and task-involving climate can influence psychological well-being. Fry and colleagues (2012) found that in youth athletes, psychological well-being (i.e. increased hope and happiness; decreased depression and sadness) is strengthened by the caring climate through emotional efficacy. When athletes perceived a caring climate their emotional efficacy was strengthened which increased their psychological well-being. Stark and Newton (2014) found a mixed climate (where ego-involving features are most prominent and caring/task features are less emphasized) can threaten adolescent dancers well-being (i.e., body esteem, positive relationships with teachers and peers, more friends, positive affect, and decreased negative affect).

Additionally, British elite dancers' perceptions of a task-involving climate were positively related to well-being (i.e., positive affect), while, an ego-involving climate was negatively related to well-being and positively related to ill-being (i.e., negative affect and emotional/physical exhaustion) (Quested & Duda, 2010). In British adolescent soccer and cricket players, a task-involving climate positively predicted well-being (i.e., self-esteem) and negatively predicted athletes' ill-being (i.e., physical symptoms) (Reinboth & Duda, 2004). Psychological well-being (self-esteem, positive affect, and satisfaction with life) was also significantly and positively related to an autonomy supportive environment in youth athletes (Cronin & Allen, 2015). While a task-involving climate has a positive relationship with well-being, ego-involving climates consistently are negatively correlated to well-being. In addition, when adolescent athletes perceive they have low ability and are in an ego-involving climate they

report lower levels of well-being (self-esteem) than athletes with higher perceptions of their ability (Reinboth & Duda, 2004).

Contrary to our findings and past research, Lundqvist and Raglin (2015) found that a task-involving climate served as only a minor contributor to well-being (i.e. positive affect, life satisfaction, and psychological well-being) and perceptions of an ego-involving climate did not contribute to differences in well-being suggesting that motivational climate is less important for elite athletes. This research is not in line with our findings where Division I athletes' perceptions of a more caring and task-involving climate was positively associated with well-being. Lundqvist and Raglin's research examined orienteering athletes which is a unique sport and may require much practice; however, Division I athletes are intensely involved in their sport which may account for a stronger link to motivational climate.

According to AGPT (Nicholls, 1989), a task-involving climate includes features of all athletes playing an important role and mistakes being viewed as part of learning. These features can help athletes cope with stressors and feel valued which can increase their well-being. While an ego-involving climate includes features like rivalry among teammates and only star athletes getting attention, when athletes feel increases in conflict and stress through these features they can be potentially detrimental to athletes' well-being. Adding to the positive impact a task-involving climate can have on well-being, a caring climate may provide additional benefits through making athletes feel safe, supported, and welcomed. When athletes feel more supported and safe while having a sense of belonging on their team they are more likely to be able to cope with the stresses sport can cause and have increased well-being compared to athletes in a more ego-involving climate.

Several specific aspects have been examined as part of athletes' well-being including positive affect, negative affect (ill-being), and subjective vitality. These aspects have been used as markers of well-being in previous research, but were examined as specific aspects that can be influenced by the climate in our study. The current study revealed that a high caring and task-involving climate was associated with increased positive affect and subjective vitality. Negative affect did not contribute to the canonical correlation. Our results align with previous research where Olympic athletes in an autonomy-supportive environment reported increases in positive affect (Solberg & Halvari, 2009). Athletes in an autonomy-supportive environment feel their opinions are valued and that they have input on how practices are structured. In a caring climate athletes also feel that their opinions are valued while also feeling safe, supported, and a sense of belonging; therefore, if athletes in an autonomy-supportive environment report increased positive affect it would make sense that athletes in a caring climate would feel the same. Kipp and Weiss (2015) found that adolescent gymnasts' perceptions of a task-involving climate were positively associated with positive affect, while adolescent dancers perceptions of a caring and task-involving climate were related to increases in positive affect (Stark & Newton, 2014). Additionally, when adolescent gymnasts perceived an ego-involving climate a negative association with positive affect was found (Kipp & Weiss, 2015). A mixed climate, where an ego-involving climate is most prominent with less emphasis on a caring and task-involving climate, was also examined with adolescent athletes and found to be detrimental to athletes' positive affect (Stark & Newton, 2014).

While coach created climates can influence athletes' affect, so can peer climates. A peer created task-involving climate perceived by university intramural sport participants significantly predicted positive affect, while an ego-involving climate significantly predicted negative affect

(Webb & Forrester, 2016). Therefore, the peer created climate may also have an impact on athletes' well-being. Motivational climate (caring, task, ego) has been associated with athletes' positive affect, but is also related to athletes subjective vitality.

In line with past research, our results indicated that a caring and task-involving climate was associated with increased subjective vitality. Reinboth and Duda (2006) found that when university athletes were surveyed, their perceptions of a task-involving climate were associated with increases in subjective vitality. Additional research with university students also found a positive relationship between a task-involving climate and subjective vitality (Reinboth & Duda, 2016). Even in adolescent soccer players, a task-involving climate was positively related to subjective vitality (Adie, Duda, & Ntoumanis, 2012). While direct relationships between climate and subjective vitality have been examined, other research with adolescent soccer players found that perceptions of a high task-involving climate predicted athletes' psychological needs which predicted increased intrinsic motivation and more subjective vitality (Alvarez, Balaguer, Castillo, & Duda, 2012). Our present study along with past research has shown how a caring and task-involving climate is beneficial for athletes through a positive association to their subjective vitality which may also be important for athletes' well-being.

These findings on positive and negative affect and subjective vitality are in line with AGPT (Nicholls, 1989). When a task-involving climate focuses on mistakes as part of learning athletes may be more determined, because they are encouraged to view a mistake as something they can learn from to improve, not a cause for experiencing shame (Fontana, Fry, & Cramer, 2017). When athletes focus on giving high effort they may also feel more determined because they know that they can control their effort and that it is valued. Athletes also viewing their own personal improvement as important in this climate can help them feel proud and inspired through

working to be better than they were before, without a requirement to outperform others. Additional aspects of a caring climate (Newton et al., 2007), feeling safe and supported, can add to the positive affect athletes have through feeling interested and excited because they know they have the support of their team behind them.

Limitations

While the results of this study contribute to research on burnout in sport, limitations of the study should be noted. First, athletes only responded to the questionnaire at one point in time. Having multiple time points would allow researchers to examine whether climate predicts burnout, positive and negative affect, and well-being across time. Another limitation was the small sample size; having more athletes would allow for more rigorous analyses and examination of differences across gender and team and individual sport. While this was a limitation, accessing Division I athletes can be extremely difficult due to their time commitments to sport and academics. Also, 34 coaches were contacted, but only four agreed to have their team participate. It is difficult to know why many coaches did not respond, coaches may have felt that their athletes did not perceive a good environment on their team. It is also possible that coaches hesitated to allow their athletes to participate because their teams were in season and both coaches and athletes were very busy. Coaches also may have been less willing to have their athletes participate if their jobs were in jeopardy and felt that the results would not reflect well on their coaching, although they would be the only ones to see their athletes' individual results. It is possible too that coaches did not know the researchers and may not have trusted them to ather such sensitive data related to their program. Interestingly, the coaches who did participate knew the researchers and were eager to receive the summary report of the results related to their teams. In addition to sample size there were a small number of individual sport athletes (>15%). Having

more individual athletes with a bigger sample size would allow for considering potential differences between team and individual sports. Lastly, recent research has begun to examine how peers play a role in creating team climate. By examining both peer and coach created climate, it would be possible to obtain a more complete understanding of the specific aspects of the climate that influence athlete burnout, positive and negative affect, and well-being.

Future Directions

Future research should address these limitation issues through having multiple data points throughout the season to consider how athletes' perceptions of team climate can predict burnout and well-being. Additionally, using qualitative research to better understand athletes' thoughts and feelings about sport would be helpful to understand what aspects specifically influence the different burnout subscales. While theoretically certain aspects make sense, it would be beneficial for athletes and coaches to share their specific views about how the team climate contributes to burnout and well-being. Future research also needs to address the differences in measuring well-being and how to create a more well-accepted measure to use across studies. The current measure used for psychological well-being looked at global aspects of well-being and not aspects related to athletes' sport experience. The global nature of the MHC-SF may have contributed to psychological well-being not being a significant contributor to Model 2. Lastly, combining theoretical perspectives like self-determination theory (SDT) and achievement goal perspective theory (AGPT) would be helpful in understanding how athletes' perceptions of the climate and basic needs satisfaction can work together to help athletes have lower levels of burnout and increased well-being. Research has focused on SDT and found that increased competence predicted decreases in emotional/physical exhaustion and reduced sense of accomplishment (Isoard-Gautheur et al., 2013). Combining both theoretical perspectives would

provide one route to examine all influences together for a more complete view of burnout and well-being in sport.

Conclusion

In summary, Division I athletes have tremendous pressure put on them to win and have a high level of commitment to their sport. The importance of climate has been identified in sport psychology literature, but the current study adds to that research by showing a relationship between motivational climate (caring, task, ego) and Division I athletes' levels of burnout, positive affect, and well-being. Knust & Fisher (2015) noted that coaches at the collegiate level are creating caring climates and see them as beneficial. Continued research will be important for helping college athletes maximize their sport experience and health outcomes.

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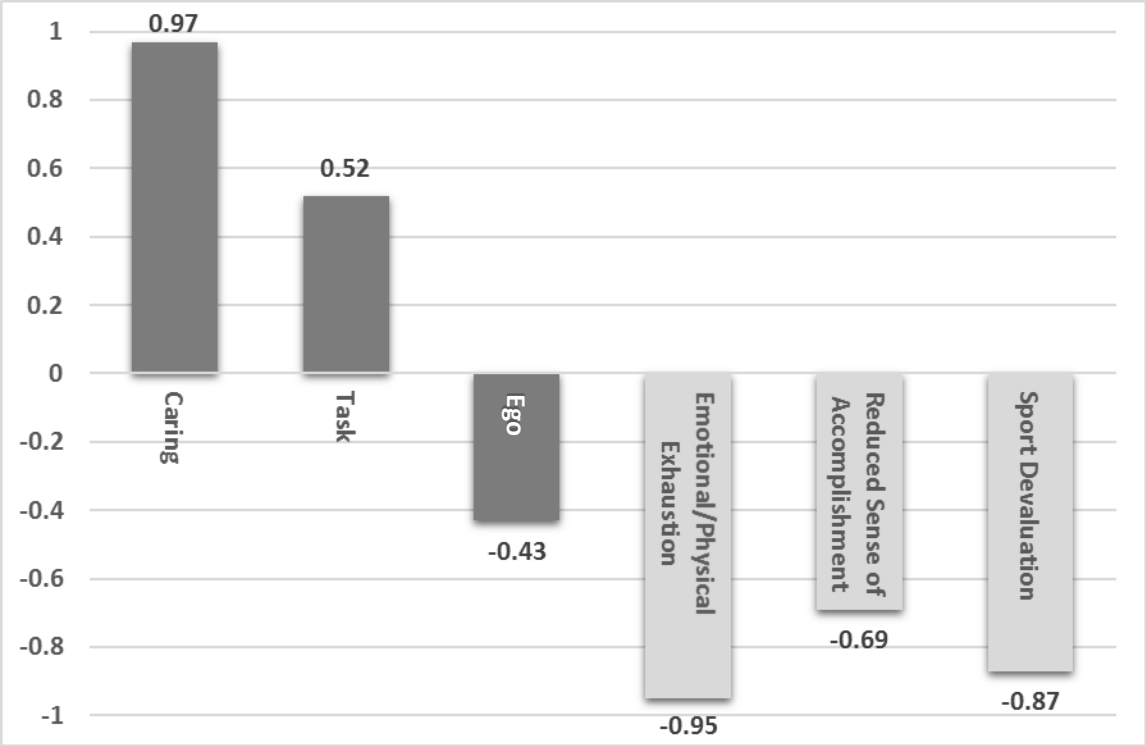
Table 1 Descriptive Statistics and Pearson Correlations

	Min.	Max.	$\bar{x}$	*SD*	α	1	2	3
1. Caring Climate	1.15	5.00	3.85	0.75	0.95	-		
2. Task Climate	2.11	4.89	3.85	0.55	0.76	.64**	-	
3. Ego Climate	2.17	4.83	3.54	0.62	0.83	-.26**	-.19	-
4. Total Burnout	1.13	4.87	2.42	0.81	0.92	-.61**	-.35**	.28**
5. Emotional/Physical Exhaustion	1.00	5.00	2.85	1.12	0.92	-.57**	-.23*	.25*
6. Reduced Sense of Accomplishment	1.00	5.00	2.33	0.78	0.78	-.44**	-.29**	.18
7. Devaluation of Sport	1.00	5.00	2.07	0.93	0.88	-.54**	-.39**	.29**
8. Total Well-being	2.57	6.00	4.74	0.70	0.89	.32**	.25*	-.01
9. Emotional Well-Being	2.33	6.00	4.75	0.73	0.68	.27**	.22*	-.10
10. Social Well-Being	2.40	6.00	4.49	0.85	0.75	.39**	.29**	-.03
11. Psychological Well-Being	2.17	6.00	4.94	0.8	0.86	.17	.16	.06
12. Positive Affect	1.40	5.00	4.05	0.68	0.92	.44**	.49**	-.09
13. Negative Affect	1.10	4.60	2.19	0.68	0.85	-.10	.07	-.08
14. Subjective Vitality	1.83	7.00	4.71	1.22	0.91	.38**	.24*	-.06
15. Coach Care	1.00	5.00	3.94	0.71	0.82	.64**	.37**	-.37**
16. Team Care	2.20	5.00	4.41	0.63	0.85	.17	.12	.05

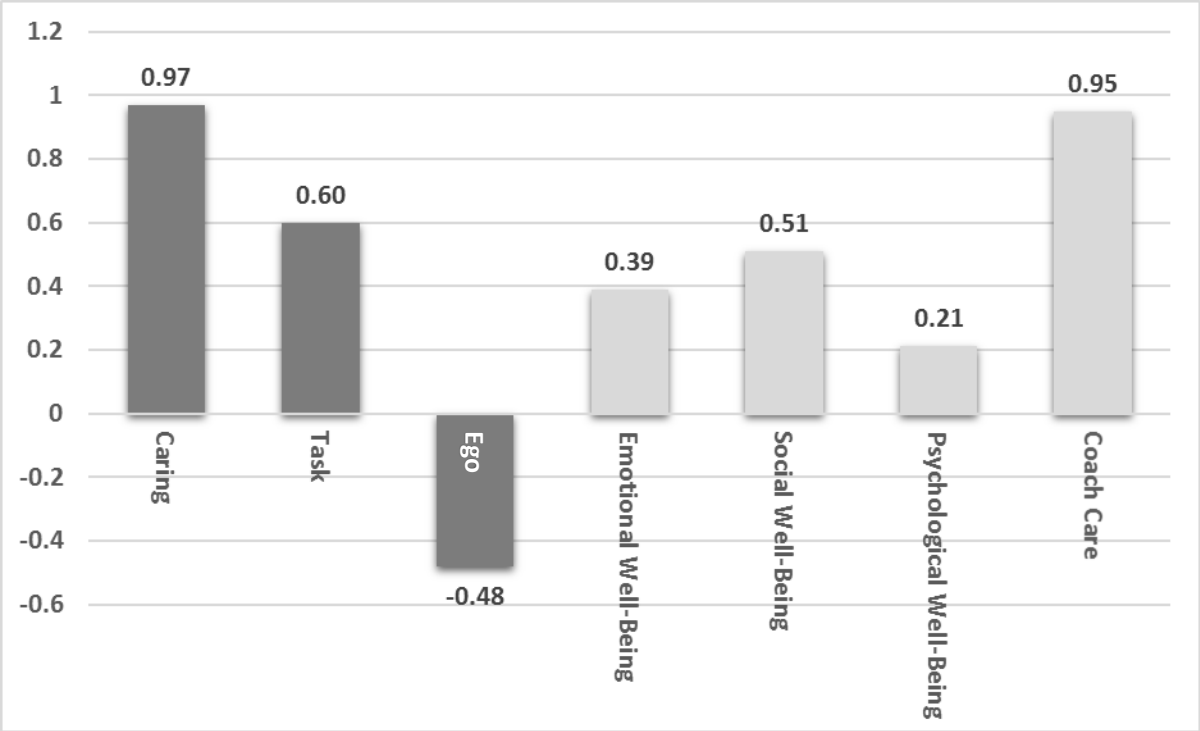
***p* < .05 ****p* < .01**

Note. Athletes responded to all scales on a 1-5 scale except all well-being scales (total, emotional, social, and psychological) which were responded to on a 1-6 scale and subjective vitality which was responded to on a 1-7 scale.

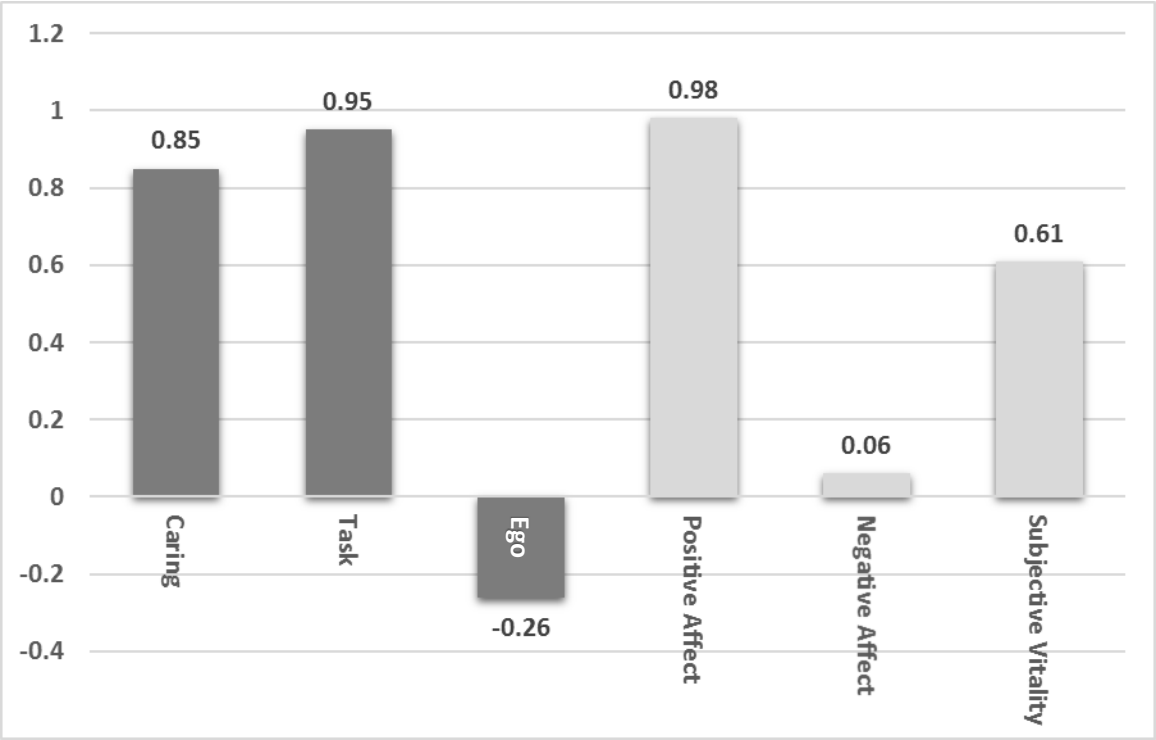
Model 1: Canonical Correlation Result of Climate to Burnout



Model 2: Canonical Correlation Result of Climate to Well-Being and Coach Care



Model 3: Canonical Correlation Result of Climate to Positive Affect, Negative Affect, and Subjective Vitality



THE UNIVERSITY OF KANSAS
Research

APPROVAL OF PROTOCOL

March 7, 2017

Hannah Vanorsby
hgvanorsby@ku.edu

Dear Hannah Vanorsby:

On 3/7/2017, the IRB reviewed the following submission:

Type of Review:	Initial Study
Title of Study:	The Relationship Between Perceived Motivational Climate, Burnout, and Well-Being in Collegiate Athletes
Investigator:	Hannah Vanorsby
IRB ID:	STUDY00140599
Funding:	None
Grant ID:	None
Documents Reviewed:	• Information Statement for Athletes, • Initial Submission Form, • Protocol , • Survey

The IRB approved the study on 3/7/2017.

1. Notify HSCL about any new investigators not named in original application. Note that new investigators must take the online tutorial at https://rgs.drupal.ku.edu/human_subjects_compliance_training.
2. Any injury to a subject because of the research procedure must be reported immediately.
3. When signed consent documents are required, the primary investigator must retain the signed consent documents for at least three years past completion of the research activity.

Continuing review is not required for this project, however you are required to report any significant changes to the protocol prior to altering the project.

Please note university data security and handling requirements for your project:
https://documents.ku.edu/policies/IT/DataClassificationandHandlingProceduresGuide.htm

You must use the final, watermarked version of the consent form, available under the "Documents" tab in eCompliance.

Sincerely,

Stephanie Dyson Elms, MPA
IRB Administrator, KU Lawrence Campus

Extended Literature Review

Athletes choose to discontinue sport for a number of reasons; however, one of the most damaging is burnout. Burnout is characterized by feelings of exhaustion, both physical and mental, reduced accomplishment, and valuing one's sport less (Raedeke, 1997). When athletes feel that they are physically/mentally exhausted, achieving less than they should, and are less passionate about their sport they may be experiencing burnout. Burnout is different from dropout, because of the combination of these aspects. While athletes may dropout after experiencing burnout for an extended period; many athletes who are suffering from burnout are still involved in their sport, but no longer enjoy sport. Burnout has been found to be associated with negative affect, lack of social support, reduced athlete well-being, and loss of motivation (Cresswell, 2009; Cresswell & Eklund, 2013; DeFreese & Smith, 2013; DeFreese & Smith, 2014; Gould, Tuffey, Udry, & Loehr, 1996; Lemyre, Hall, & Roberts, 2008; Holmberg & Sheridan, 2013; Isoard-Gautheur, Guillet-Descas, & Duda, 2013). Burnout in collegiate athletes also increases significantly with time (Lai & Wiggins, 2003). Since burnout can have such a damaging effect on athletes, including their well-being, it is important to examine ways to decrease the likelihood that athletes will experience burnout. To better understand the phenomenon of burnout several models have been studied.

Burnout in Sport

Several different perspectives including Smith's cognitive-affective stress model (1986), Coakley's unidimensional identity development and external control model (1992), and Raedeke's motivational model (1997) have been employed to examine burnout. Smith views burnout as a response to extreme stress through psychological, emotional, and, sometimes, physical withdrawal from sport or a specific sport activity (1986). The cognitive-affective stress

model uses the outcomes, rewards minus costs, in a sporting context to measure how satisfying a sport experience is for an individual. Rewards in the sport context include skill improvement, increased fitness, feelings of mastery, and recognition. Costs in sport may be fear of failure, competitive pressures, not liking a coach, conflicts with teammates, and excessive time/energy demands. If the costs outweigh the rewards an athlete experiences excessive stress and the activity becomes less enjoyable. According to Smith, when athletes experience burnout they have feelings of low energy/chronic fatigue; increased illness; feelings of depression, helplessness, and anger; and negative attitudes toward sport and life. Athletes experiencing burnout may also feel that everything is too much and resent anyone who adds to their demands.

Another burnout model that developed later was Coakley's unidimensional identity development and external control model (1992). Coakley argues that burnout is rooted in the social organization of sport, as well as, issues with identity and control. In this model athletes' identities are confined to their sport due to overinvolvement in sport from a young age where they do not control their involvement. When athletes are young and begin participating in sport it is often because their parents sign them up for a specific sport. These athletes may not get to choose which sport they play. Through interviews with athletes Coakley found that by only being involved in a single sport from a young age athletes develop strong sport athletic identity and have trouble viewing themselves outside of their sport experiences. This causes an increase in the importance of sport and increases the threat failure can have on the athlete. When improvement in skill was accompanied by increased expectations, athletes felt they would never be good enough. Coakley argues that a change has to be made to the sport organization, social relations in sport, and available life experiences. The final emphasis of this model is that stress is a symptom, rather than the cause, of burnout.

One of the most recent models of burnout is Raedeke's motivational model of entrapment (1997). This model includes three components of burnout: emotional and physical exhaustion, reduced sense of accomplishment, and devaluation of sport. Emotional and physical exhaustion includes the physiological and psychological demands athletes have when training and competing. Reduced sense of accomplishment includes how athletes feel about their sport abilities and achievements. Devaluation of sport involves what is important to athletes and develops through negative attitudes toward sport along with the athletes' involvement in sport. With devaluation, athletes may quit caring about their sport and how they perform. In this view, burnout is defined in relation to athletes' performance in sport. By using this perspective, withdrawal from sport through burnout can be differentiated from dropout for other reasons (e.g. participating in track and field instead of basketball because of different interests, not negative attitudes toward basketball). This allows for a more holistic view of burnout compared to Smith's cognitive-affective stress model and Coakley's unidimensional identity development and external control model. Although athletes do experience stress, not all athletes experience burnout; therefore, there has to be more to burnout than stress. While athletes may feel a lack of control and develop a unidimensional identity, this contributes to burnout only if athletes question the value of sport or feel they are trapped. Raedeke's theory incorporates Smith's model through the concept that athletes who feel entrapped in their sport will burn out because the costs outweigh the rewards.

A commitment perspective was examined by Raedeke (1997) to show that athletes with higher enjoyment, benefits, perceived control, and personal investments, as well as, lower costs, social constraints, and attractiveness to other alternatives would be less likely to experience burnout. With this theory, four profiles of burnout emerged including enthusiastic, obligated,

malcontented, and indifferent athletes. Enthusiastic athletes view their sport favorably, are committed, and enjoy participating in their sport; these athletes have the lowest burnout scores. Athletes who are enthusiastic about their sport are more likely to view their sport favorably and enjoy their sport making them less likely to burnout. The obligated athletes have low perceived control, high social constraints, but were not high or low in attraction to sport. They also had high identities associated with their sport and moderately high investments. With low perceived control, high social constraints, and strong sport identities these athletes could be developing burnout. The malcontented athletes have high social constraints, low perceived control, and view sport participation more negatively compared to other profiles. With these negative feelings toward sport and low control these athletes have the highest burnout scores and are most likely to be suffering from burnout. The indifferent athletes had low to average scores on all commitment determinants. This profile shows athletes that are not attracted to sport, but also are not entrapped by it. By examining Raedeke's model and profiles a combined viewpoint of social constraints and commitment can be examined.

Burnout and Motivation

Past research has employed self-determination theory (SDT) as a framework to examine burnout in sport. Research using this perspective found burnout to be negatively associated with intrinsic motivation and positively associated with amotivation (Cresswell & Eklund, 2013; Holmberg & Sheridan, 2013). Further research showed that external regulation was strongly related to devaluation (Holmberg & Sheridan, 2013), whereas amotivation was strongly related to all dimensions of burnout, but had the strongest relationship to devaluation. While research with self-determination theory has shown that motivation and burnout are related, research has

begun to shift to examining burnout with an Achievement Goal Perspective Theory (AGPT) framework.

Achievement Goal Perspective Theory

According to Achievement Goal Perspective Theory (AGPT), individuals are goal-directed organisms that are intentional and rational (Roberts, 2012). These achievement goals guide how a person acts through behavior and decision making; however, these achievement goals differ for individuals. AGPT identifies three aspects that influence how individuals are motivated: cognitive development, goals orientations, and motivational climate (Nicholls J. G., 1989).

Cognitive Development

Research in AGPT began with children and found that there are two different conceptions of ability (Nicholls J. G., 1978). Children with an undifferentiated conception were not able to differentiate luck, task difficulty, or effort from ability. As children age they became more aware of the differences between effort, luck, task difficulty, and ability. Once children reached age 12 they began to have a differentiated conception where they differentiate all of these aspects. Once children are capable of differentiating luck, task difficulty, effort, and ability children begin to develop goal orientations, because they can now understand that ability is a capacity that is maximized by effort.

Goal Orientations

Goal orientations reflect how individuals view achievement situations. If individuals define success through improving their skill they are considered task-oriented (Nicholls J. G., 1984). These individuals feel more competent the more that they learn. The difficulty of a task and the person’s ability are self-referenced, because they are determined by how a person has

performed in the past. If individuals feel that a task is difficult, but are successful in completing the task then they will feel that they have high ability. The more effort the individual must expend to successfully complete a task the more competent the individual will feel. On the other hand, an individual high in ego-orientation defines success through outperforming others or performing the same task using less effort. Learning a skill is not enough for individuals high in ego orientation to feel competent, they must also be able to perform better than others. These individuals view mastering a task as a means to an end, not an end itself. Individuals may be high in ego orientation and high in task-orientation; therefore, they may be motivated by doing better than others, but also through learning a new task. Nicholls argues that when individuals are both high in task and ego orientation that their ego orientation is not detrimental, because they have high task orientation. Someone could also be high in task orientation, but low in ego orientation. These individuals view success through skill improvement based on their past performance and not on how they do compared to others. Individuals may also be low in task and low in ego orientation. This can be an issue because these athletes are not motivated by mastering a task or outperforming others and may suffer from a lack of motivation. Lastly, individuals may be low in task orientation and high in ego orientation. These individuals are motivated by outperforming others and must do better than those around them to feel competent.

There is limited research on how goal orientations affect athlete burnout. Lemyre and colleagues (2008) assessed the relationship between athletes' goal orientations, among other variables, and signs of burnout at the end of the season. They found that elite athletes' goal orientations may affect other social cognitive variables and are important in understanding burnout. Two of the burnout variables, emotional exhaustion and reduced accomplishment, were negatively associated with task orientation while sport devaluation was positively associated

with ego orientation. Therefore, an athlete who is low in task orientation may score higher on emotional exhaustion and reduced accomplishment than those high in task orientation. Those athletes who are higher in ego orientation may be more likely to experience feelings of devaluation of sport and possibly more burnout. Future research is warranted to better understand the relationship between individuals goal orientations and their level of burnout. While goal orientations seem to be related to the amount of burnout an athlete experiences these goal orientations may be influenced by other aspects of sport. Research has found that individuals' goal orientation is not permanent and being in a particular climate across a season can influence athletes' goal orientation (Roberts, 2012).

Perceived Motivational Climate

In addition to goal orientation Nicholls also describes two different motivational climates that individuals can perceive in achievement settings such as sport. Like goal orientation, individuals may perceive a more mastery/task-involving climate or performance/ego-involving climate (Seifriz, 1992). In a task-involving climate, the emphasis is on personal improvement, best effort, and the process of performing rather than the performance outcome itself. An emphasis is placed on the effort individuals put into their sport specific tasks, not how well they perform. A task-involving climate has been linked to more enjoyment and greater intrinsic motivation (Seifriz, 1992). Athletes also view using more effort as likely to help them be successful when in a mastery climate. Seifriz and colleagues also found that players who perceived a task-involving climate were more task oriented (1992). On the other hand, a performance/ego-involving climate creates an atmosphere where there is tremendous rivalry among athletes, certain athletes are the "stars", and there are punishments for making mistakes. In ego-involving climates, high ability is perceived to lead to achievement. In this climate, some

athletes may not give as much effort or may even give up. Athletes have reported higher levels of anxiety when on teams that have a performance climate because of the emphasis on outcome, punishments for mistakes, and little reinforcement. Athletes' exposure to these distinct motivational climates may shape their goal perspectives and occurrence of burnout (Nicholls, 1989).

Researchers examined the contributions of motivational climate and won-loss percentage to athletes' views of the coach and sport experience found that when a mastery climate was perceived, athletes liked playing for their coach, felt their coach was more knowledgeable about the sport, viewed their coach as being a good teacher, and were more likely to want to play for their coach the next year. In contrast, perceiving an ego-involving climate was negatively related to the athletes' views of their coach (Cumming, Smoll, Smith, & Grossbard, 2007). In the task-involving climate athletes enjoyed playing on their team more and felt their parents liked their coach more. When coaches elicit a positive task-involving climate that emphasizes personal development and effort, athletes have more positive views of their coaches. With this evidence, it is interesting that coaches still viewed their won-loss record as being important. If athletes view the task-involving climate as more favorable and have a better view of their coach through this climate there must be other social expectations that make coaches foster ego-involving climates.

Research has also found a relationship between athletes' perceptions of the climate to their level of perceived burnout. In a study examining adolescent basketball and volleyball players, a task-involving motivational climate was negatively associated with all three burnout dimensions (physical/emotional exhaustions, reduced sense of accomplishment, and sport devaluation) while an ego-involving climate was positively related to all three burnout dimensions (Vitali, Bortoli, Bertinato, Robazza, & Schena, 2015). Therefore, a task-involving

climate may play a protective role in decreasing burnout while an ego-involving climate may lead to athlete burnout. Athletes who have reported higher sport devaluation and reduced accomplishment have perceived their coach-created climate to be more ego-involving while burnout characteristics have been negatively associated with task-involving climates (Isoard-Gautheur, Guillet-Descas, & Duda, 2013). Athletes who perceive an ego-involving climate are at a higher risk of experiencing burnout systems than those in a task-involving climate. Lemyre, Hall, & Roberts (2008) research on elite athletes found physical/emotional exhaustion and reduced accomplishment to be negatively linked to a task-involving climate while sport devaluation was positively associated with an ego-involving climate. Experiencing symptoms of burnout may be increased with elite athletes feeling that they are in an environment where success is seen through the demonstration of ability.

While research has examined the effects of the coach-created climate on perceived burnout, recent research has looked at how peer motivational climate can affect burnout (Smith, Gustafsson, & Hassmen, 2010). Examining high school athletes in Sweden and the climate peers can create found that peer climate may be more important in individual sports than in team sports, where athletes may interact and coach one another more. Specifically, intra-team conflict, negative comments, laughter, and criticism when a mistake is made, was positively linked to burnout in individual sports, but not team sports. In this view, athletes competing in an individual sport may need more support from their teammates and less criticism than those competing in team sports. With this research, attention to how peers can affect athlete burnout is also important.

Caring Climate

Research in caring began with Nodding (1992) when she characterized caring as a way of life where one attends to others' needs through listening, sympathizing, and accepting. Through caring one should focus on meeting the needs of others and foster their progress rather than focusing on one's own needs. Research began expanding in this area through work in developing a warm, stable, supportive classroom climate (Battistich, Solomon, Watson, & Schaps, 1997). Training was provided for the staff to nurture ethical and social development of children through norms and values that revolved around respect, caring, and honoring the interests of students. Children in these caring classroom environments enjoyed school, specific classes, and helping others learn.

In the sport context, a caring climate has been defined by Newton, Fry, Watson, Gano-Overway, Kim, Magyar, and Guivernaur as an environment where individuals feel safe, supported, valued, and respected (2007). Athletes who perceive a caring climate have reported greater sport enjoyment, commitment, and having positive attitudes/caring behaviors towards other athletes and coaches (Fry & Gano-Overway, 2010). Creating an environment where athletes feel invited, supported, and respected fosters a sense of belongingness for athletes. Athletes who see coaches engaging in caring behaviors are more likely to also engage in these behaviors with their teammates and coaches. Further, a caring climate has been linked to sport commitment through coaches wanting to help athletes, being kind, and athletes accepting and respecting each other. When all of these aspects are included athletes want to remain involved in their sport. Through creating a caring climate for athletes, coaches can encourage sport involvement and decrease the number of athletes who drop out of sport.

Even at a high performance level coaches can create a caring climate. Knust and Fisher (2015) interviewed NCAA female head coaches to determine how they created a caring climate for their athletes. The coaches considered their team a family where they feel responsible for the development of their athletes from recruitment through the time they were on their team and beyond. Coaches emphasized caring for their athletes as individuals outside of sport and not simply as athletes. In order to care for their athletes as people these coaches listened to their athletes, created open communication, worked to resolve conflict, and put themselves in their athlete's shoes to understand their point of view. While coaches cared for their athletes they did have high standards for their athletes. Although coaches referred to their caring practices with athletes most, they also treated their assistant coaches with care through recognizing their efforts and preparing them for their future careers. Some coaches mentioned the obstacles of the need to create revenue with the amount of care their athletes got from the institution, but this did not change the care they gave their athletes.

Fisher, Bejar, Larsen, Fynes, and Gearity (2017) have examined how male and female NCAA coaches care for their athletes. These coaches also viewed caring for their athletes through developing them as individuals and helping athletes be successful while also building relationships that last. To develop athletes as individuals, coaches viewed facilitating their growth in academics, athletics, socially, and emotionally as important. Coaches also found it important to learn about the athletes lives outside of sport, including their families. Another aspect that was important to creating the caring climate was to respond to athletes needs and know their athletes well enough to see when they were needing help and support. When athletes felt the coaches were responsive they were confident that they could develop in their sport, as well as, outside their sport. These coaches found that individualizing care was of upmost

importance so that athletes truly felt cared for and valued. The coaches had to know the athletes well enough to realize how they liked to be coached and what kind of feedback was most helpful to their players. Lastly, communication with the athletes was also important. Coaches used texts, phone calls, and weekly meetings to promote good communication. These conversations did not even need to be planned, but simply talking with their athletes allowed them to create a sense of belonging. While these coaches did their best to create caring climates for their collegiate athletes they struggled to balance the amount of care with the need to win. Often times their values of what it meant to be successful did not match up with the administration's expectations; therefore, making them worry about job security. This can create tension in areas where they are expected to win; however, if creating a caring climate can reduce athlete burnout then athletes can give higher effort and perform better.

Social Support

The support athletes receive from their team, coach, and parents is important to their overall well-being, as well as, burnout. Athletes who perceive ample social support report fewer characteristics of burnout (Cresswell, 2009). Specifically, emotional and physical exhaustion was significantly negatively associated with social support; furthermore, negative social interactions were significantly positively associated with emotional/physical exhaustion (DeFreese & Smith, 2014). Having positive social support may help athletes cope with injury, loss, and changes in sport when negative social interactions are reduced. These positive interactions can be promoted through the climate coaches establish on their team. Coaches should also provide strategies athletes can use to reduce the negative social interactions they may have and how they can cope with these situations when they do occur.

While coaches giving athletes strategies to cope is important the way athletes perceive their support seems to be more important. When examining college athletes, the way athletes perceived their support was more important than what they received from teammates (DeFreese & Smith, 2013); therefore, while making support available for athletes is important it is more important that they are perceiving they have enough support. To ensure that athletes are receiving enough support coaches should encourage athletes to give verbal encouragement during practice and games. Through creating a caring climate coaches can promote encouragement on their teams to help boost athletes' perceived social support and decrease the burnout on their teams. It is important for coaches to provide support for their athletes. Coaches can also provide support through their listening skills (Raedeke, Lunney, & Venables, 2002). By listening to the athletes and trying to understand what they are going through coaches can improve their relationships with their athletes and provide social support. Coaches can also improve athletes' social support through encouraging the team to do activities outside of practice together. This can help increase team cohesion and social support.

The relationship coaches have with their athletes through closeness and commitment have been negatively linked to the three dimensions of burnout (physical/emotional exhaustion, reduced sense of accomplishment, and devaluation of sport) (Isoard-Gutheaur, Trouilloud, Gustafsson, & Guillet-Descas, 2016). Athletes who report having a good relationship with their coach express higher personal accomplishment, more positive feelings toward their sport, and lower exhaustion. Athletes who have good relationships with their coach are more likely to give higher effort, because they value how their coach views them.

Coaches Perceptions of Burnout

Coaches play an important role in decreasing burnout, but their perceptions on burnout and how it affects their athletes is important as well. Swimming coaches have reported that the term burnout is used too loosely (Raedeke, Lunney, & Venables, 2002). These coaches viewed burnout as a long-lasting negative reaction that is associated with resentment and derived from frustration and dissatisfaction. To consider an athlete to be burning out they had to have been enthusiastically committed to their sport at one point. While some athlete's burnout end up dropping out of sport, others continue to play on their team, but only go through the motions and do not give much effort when practicing or playing. Coaches perceived several signs of burnout including withdrawal, reduced sense of accomplishment, physical/psychological exhaustion, and devaluation.

When athletes withdrew from training and teammates they were displaying symptoms of burnout (Raedeke, Lunney, & Venables, 2002). When distancing themselves from training they may start to use excuses to get out of practice or reduce their training load. These athletes may also show up to practice late or leave early in increasing frequency, often leading to not showing up at all. While athletes may begin to remove themselves from training they also withdraw from interactions with teammates. They may begin to decrease the time they spend with teammates, even exhibiting aggressive behaviors toward teammates to isolate themselves from the rest of the team.

Another symptom of burnout is reduced sense of accomplishment (Raedeke, Lunney, & Venables, 2002). Athletes may feel frustrated when they are not improving. When athletes have strong feelings of frustration and discouragement they may have a difficulty dealing with this change and feel they are going nowhere in their sport. A reduced sense of accomplishment can

be a symptom of burnout when athletes have difficulty coping and set unrealistic expectations for themselves which adds to their frustration. Often, when athletes compare themselves to others they begin to feel frustrated with their accomplishments and feel that they are not good enough. These social comparisons can lead to unrealistic expectations, frustration or discouragement, and over time, burnout.

Athletes who are experiencing burnout may also devalue their sport. Devaluation may occur when athletes stop caring about their sport; they may even develop hatred or resentment toward their sport (Raedeke, Lunney, & Venables, 2002). This can be seen when athletes no longer care about workouts or practices. Lastly, athletes who are physically/psychologically exhausted may also experience burnout. When athletes are over trained, they become physically exhausted; when they are physically exhausted, they have difficulty being mentally energized. Exhaustion can also occur through continued stress and unrealistic demands. Being both physically and mentally exhausted can cause an athlete to experience burnout.

When athletes' lives become too much about sport they may begin to experience burnout (Raedeke, Lunney, & Venables, 2002). By continuing to be involved in sport the performance pressures continue to increase which causes athletes lives to be structured around achieving. Athletes may receive pressure from coaches, parents, and friends outside of their sport. Through creating a positive caring environment coaches can help athletes focus on improving their effort instead of focusing on their performance outcomes. This can help reduce the pressure athletes may feel through helping them focus on the means rather than the end. Coaches can also help parents reduce the pressure they put on athletes through describing the climate they want to provide for athletes on their team during a parent meeting. By describing the climate they want to have on their team they can encourage parents to help promote the climate at home. Through

promoting a caring climate on the team and at home coaches can help reduce the pressure athletes are put under and decrease their likelihood of burning out.

Personality Impacts on Burnout

Some athletes may be more predisposed to burnout than others. Athletes positive affect (i.e., enthusiasm, alertness, etc.) and negative affect (i.e., anger, contempt, disgust, etc.) (Watson, Clark, & Tellegen, 1988) may impact their susceptibility to burnout. Trait negative affect significantly predicts global burnout and physical/emotional exhaustion among collegiate athletes (DeFreese & Smith, 2014). Promoting calmness in athletes and decreasing feelings of nervousness, disgust, and contempt can help athletes lower their risk for burnout. Through social support and team climate coaches can promote the use of coping strategies to improve arousal regulation and reduce anxiety. The climate coaches create can also impact their athletes positive affect (Seifriz, Duda, & Chi, 1992). Increasing positive affect can increase athletes' effort and enthusiasm toward their sport; therefore, making sport more enjoyable and decreasing the likelihood that athletes will experience burnout. While personality traits, such as positive and negative affect, may impact burnout, the environment the coach creates can help to buffer the harmful impact these dispositional traits may have.

Athlete Well-Being

Burnout can have a negative impact on athletes' well-being and life satisfaction. In collegiate athletes, burnout negatively contributes to athlete well-being (DeFreese & Smith, 2014), and is also negatively associated with the athlete's life satisfaction during the athletic season. The impact burnout can have on athlete well-being is an important future direction for research (Holmberg & Sheridan, 2013). While athlete well-being and burnout are linked, it would be valuable to examine whether social support may moderate this relationship (DeFreese

& Smith, 2013). If social support does moderate the impact burnout has on well-being, creating social support interventions for athletes through the coaching climate could help to reduce burnout and increase athlete well-being.

Summary

When athletes feel entrapped in their sport and have decreased motivation they are more likely to experience burnout. With the negative affects burnout can have on athletes through their well-being it is important to examine how the climate can affect burnout. When athletes are in a caring and task-involving climate they enjoy sport more and are more likely to return the next season (Fry & Gano-Overway, 2010). Enjoying sport has also been linked to decreased burnout scores (Raedeke, 1997); therefore, by creating a task or caring climate coaches may be able to decrease their athletes' likelihood of experiencing burnout and increase their retention of hard-working players.

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Perceived Motivational Climate in Sport Questionnaire

(PMCSQ-1: Seifriz, et al., 1992)

Directions*:* Read each statement and think about how much you believe that statement describes your team. Then choose the answer that shows how much you agree or disagree with the statement.	**Strongly Disagree**	**Disagree**	**Neither Agree or Disagree**	**Agree**	**Strongly Agree**
On my team…					
1. athletes feel good when they do better than others.	1	2	3	4	5
2. trying hard is rewarded.	1	2	3	4	5
3. athletes are punished when they make mistakes.	1	2	3	4	5
4. coaches focus on skill improvement.	1	2	3	4	5
5. athletes are taken out of games for mistakes.	1	2	3	4	5
6. each player's improvement is important	1	2	3	4	5
7. playing better than teammates is important.	1	2	3	4	5
8. athletes try to learn new skills.	1	2	3	4	5
9. the coaches pay the most attention to the "stars".	1	2	3	4	5
10. athletes are encouraged to work on weaknesses.	1	2	3	4	5
11. doing better than others is important.	1	2	3	4	5
12. the coaches want us to try new skills.	1	2	3	4	5
13. the coaches favor some athletes.	1	2	3	4	5
14. athletes like playing good teams.	1	2	3	4	5
15. athletes are encouraged to outplay their teammates.	1	2	3	4	5
16. everyone wanted to be the best player/MVP.	1	2	3	4	5
17. each player feels like they have an important role.	1	2	3	4	5
18. only the best athletes get noticed.	1	2	3	4	5
19. most athletes get to play in the games.	1	2	3	4	5
20. athletes are afraid to make mistakes.	1	2	3	4	5
21. only a few athletes can be the "stars."	1	2	3	4	5

Caring Climate Scale

(Newton, Fry, et al, 2007)

Directions*:* Read each statement and think about how much you believe that statement describes your team. Then choose the answer that shows how much you agree or disagree with the statement.	**Strongly Disagree**	**Disagree**	**Neither Agree or Disagree**	**Agree**	**Strongly Agree**
On my team…					
1. the athletes are treated with respect.	1	2	3	4	5
2. the coaches respect the athletes.	1	2	3	4	5
3. the coaches are kind to the athletes.	1	2	3	4	5
4. the coaches care about the athletes.	1	2	3	4	5
5. the athletes feel that they are treated fairly.	1	2	3	4	5
6. the coaches try to help the athletes.	1	2	3	4	5
7. the coaches want to get to know all of the athletes.	1	2	3	4	5
8. the coaches listen to team members.	1	2	3	4	5
9. athletes like one another for who they are.	1	2	3	4	5
10. the coaches accept athletes for who they are.	1	2	3	4	5
11. athletes feel comfortable.	1	2	3	4	5
12. athletes feel safe.	1	2	3	4	5
13 athletes feel welcome every day.	1	2	3	4	5

Positive Affect, Negative Affect Scale

(PANAS; Watson, Clark, & Tellegen, 1988)

Directions: This scale consists of a number of words that describe different feelings and emotions. Read each item and then choose the answer using the following scale that best describes your personal experience during this season.	**Very Slightly or Not at All**	**A Little**	**Moderately**	**Quite a Bit**	**Very Much So or Extremely**
During this season, I was…					
1. Interested	1	2	3	4	5
2. Distressed	1	2	3	4	5
3. Excited	1	2	3	4	5
4. Upset	1	2	3	4	5
5. Strong	1	2	3	4	5
6. Guilty	1	2	3	4	5
7. Scared	1	2	3	4	5
8. Hostile	1	2	3	4	5
9. Enthusiastic	1	2	3	4	5
10. Proud	1	2	3	4	5
11. Irritable	1	2	3	4	5
12. Alert	1	2	3	4	5
13. Ashamed	1	2	3	4	5
14. Inspired	1	2	3	4	5
15. Nervous	1	2	3	4	5
16. Determined	1	2	3	4	5
17. Attentive	1	2	3	4	5
18. Jittery	1	2	3	4	5
19. Active	1	2	3	4	5
20. Afraid	1	2	3	4	5

Athlete Burnout Questionnaire

(ABQ: Raedeke & Smith, 2001)

Directions: As you read the following statements, indicate how each of the following statements corresponds to your feelings during this season. ***In my sport, I am…***	**Never**	**Once or twice**	**About once a week**	**Almost every day**	**Every day**
1. accomplishing many worthwhile things	1	2	3	4	5
2. so tired from my training that I have trouble finding energy to do other things	1	2	3	4	5
3. feeling that the effort I spend would be better spent doing other things	1	2	3	4	5
4. overly tired from my participation	1	2	3	4	5
5. not achieving much	1	2	3	4	5
6. feeling I don’t care as much about my performance as I used to	1	2	3	4	5
7. not performing up to my ability	1	2	3	4	5
8. “wiped out” from baseball	1	2	3	4	5
9. not into baseball like I used to be	1	2	3	4	5
10. physically worn out from	1	2	3	4	5
11. less concerned about being successful than I used to be	1	2	3	4	5
12. exhausted by the mental and physical demands	1	2	3	4	5
13. feeling that no matter what I do, I don’t perform as well as I should	1	2	3	4	5
14. Successful	1	2	3	4	5
15. having negative feelings toward baseball	1	2	3	4	5

Adult Mental Health Continuum – Short Form

(MHC-SF: Keyes, 2009)

Directions: The following questions are about how you have been feeling during this season. Circle the number that best represents how often you have experienced or felt the following. ***So far this season, how often did you feel…***	**Never**	**Once or twice**	**About once a week**	**About 2 or 3 times a week**	**Almost every day**	**Every day**
1. Happy	1	2	3	4	5	6
2. interested in life	1	2	3	4	5	6
3. Satisfied	1	2	3	4	5	6
4. that you had something important to contribute to society	1	2	3	4	5	6
5. that you belonged to a community (like a social group, or your neighborhood)	1	2	3	4	5	6
6. that our society is becoming a better place for people like you	1	2	3	4	5	6
7. that people are basically good	1	2	3	4	5	6
8. that the way our society works makes sense to you	1	2	3	4	5	6
9. that you liked most parts of your personality	1	2	3	4	5	6
10. good at managing the responsibilities of your daily life	1	2	3	4	5	6
11. that you had warm and trusting relationships with others	1	2	3	4	5	6
12. that you had experiences that challenged you to grow and become a better person	1	2	3	4	5	6
13. confident to think or express your own ideas and opinions	1	2	3	4	5	6
14. that your life has a sense of direction or meaning to it	1	2	3	4	5	6

Subjective Vitality Scale

(Ryan & Frederick, 1997)

Directions: Please indicate how true you feel the following statements are about you.	**Not at all**			**Somewhat true**			**Very True**
1. I feel alive and full of vitality.	1	2	3	4	5	6	7
2. Sometimes I am so alive I just want to burst.	1	2	3	4	5	6	7
3. I have energy and spirit.	1	2	3	4	5	6	7
4. I look forward to each new day.	1	2	3	4	5	6	7
5. I nearly always feel awake and alert.	1	2	3	4	5	6	7
6. I feel energized.	1	2	3	4	5	6	7