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## Antecedents of Burnout Among Collegiate Tennis Players

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# ANTECEDENTS OF BURNOUT AMONG COLLEGIATE TENNIS PLAYERS

by

DALE R. WHITE

(Under the Direction of Dr. Jonathan N. Metzler)

## ABSTRACT

Burnout has become to be regarded as a debilitating problem for athletes, but individual differences that may provide a buffer to burnout characteristics have only partially been examined. The purpose of this study was to examine the possible association between optimism, trait confidence, need for achievement, gender, and years of competitive experience and symptoms of burnout in collegiate tennis players. Four inventories were used to assess the 86 collegiate participants (47 men, 39 women): the Athlete Burnout Questionnaire (ABQ; Raedeke & Smith, 2001), the Trait Sport Confidence Inventory (TSCI; Vealey, 1986), the Life Orientation Test-Revised (LOT-R; Scheier, Carver, & Bridges, 1994), and the Need Achievement Pride Scale (NAPS; Metzler, 2007). Participants were from universities located across the United States.

Results indicated that an association existed between optimism and trait confidence and symptoms of burnout. Significant variance was explained for the burnout subscales of emotional/physical exhaustion ( $R^2 = .208$ , S.E. = 3.14), reduced sense of accomplishment ( $R^2 = .469$ , S.E. = 2.33), and sport devaluation ( $R^2 = .281$ , S.E. = 3.43). Optimism provided significant contribution to the emotional/physical exhaustion and reduced sense of accomplishment subscales. Trait confidence provided significant contribution to the reduced sense of accomplishment and sport devaluation subscales. It

was also found that need for achievement and years of competitive experience each provided significant contributions to a single subscale of burnout.

INDEX WORDS: Sport Psychology, Burnout, Optimism, Confidence, Need for Achievement

ANTECEDENTS OF BURNOUT AMONG COLLEGIATE TENNIS PLAYERS

by

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B.A., Armstrong Atlantic State University, 2005

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Fulfillment of the Requirements for the Degree

MASTER OF SCIENCE

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by

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May 2008

## DEDICATION

I dedicate this to my parents, Richard and Sandra White, for their constant support and encouragement throughout. You have always given me the words of inspiration that stuck with me through this process. I appreciate all that you have done for me, I would not be the person I am today without you. You have always pushed me to become better and I would like to thank you deeply for that. You inspire me everyday and I only hope I am I can be as a good a parent as you both have been to me. I love you both very much.

To my little brother, even though you are not so little. It only takes one phone call to you for me to take get my mind off everything. Talking to you makes me remember that not everything in life is about work. I miss the time we used to spend together growing up and only wish we were closer so we could spend a little more time together now. You are an amazing individual and I couldn't wish to have a better younger brother. If ever you need a break from the miserable English weather you know where I am.

To my friends at Georgia Southern, thanks for being a part of an amazing experience. I never dreamt of having such close friends after two years. We can all say that we have had ups and downs throughout, but we have stuck by each other and helped each other out as a team. I will miss you all, but know that we will keep in contact and share the memories of our GSU experience. Cheers guys!

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# CHAPTER 1

## INTRODUCTION

### *Defining Burnout*

Burnout is defined as a psychological, emotional, and physical withdrawal from a formerly pursued and enjoyable sport as a result of chronic excessive stress (Smith, 1986). The syndrome of burnout has physical, mental, and behavioral components, and its development is a complex interaction between environmental and personal factors (Smith, 1986). Freudenberg (1975) characterized the term “burnout” as exhaustion due to excessive demands on energy, strength, or resources.

### *Conceptualizing Burnout*

The burnout syndrome among athletes has been grounded in Maslach and Jackson’s (1981, 1986) seminal work. They studied the phenomenon in human service workers and characterized the syndrome into three different sub structures: sustained feelings of emotional exhaustion, depersonalization (negative attitudes and feelings toward the recipients of the service), and inadequate personal accomplishment (Eklund & Cresswell, 2006). The most widely regarded conceptualization of the athlete burnout syndrome was forwarded by Raedeke (1997). Based on Maslach and Jackson’s (1981, 1986) conceptualization he characterized athlete burnout by an enduring experience of emotional and physical exhaustion, sport devaluation, and reduced accomplishment. Raedeke (1997) argued burnout could be represented by emotional and physical exhaustion because it is associated with the intense demands of training and competing, this has been linked by empirical research (Cohn, 1990; Gould, et al., 1996; Silva, 1990).

Raedeke (1997) also stated that sport devaluation is when athletes stop caring about what is important for athletes; sport and their own performance. Reduced sense of accomplishment in athletes has been characterized by unmet expectations and inability to reach personal goals (Gould, Tuffey, et al. 1996).

Burnout has been studied in many different areas including human service areas and coaching settings. The burnout syndrome has been studied extensively in the workplace and has been associated with such negative consequences as decreased performance, low motivation, impaired health, personal dysfunction, insomnia, increased use of alcohol and drugs, and marital and family problems (Maslach & Goldberg, 1998; Maslach, Jackson, & Leiter, 1996). Freudenberg (1975) believed that this was not limited to the workplace; he implied that the sporting environment was one of burnout-inducing potential. Although yet to be studied extensively, athletes have reported negative, amotivated, and exhausted states, which might be a manifestation of burnout (Eklund & Cresswell, 2006). This has attracted interest from many sport scientists. There is a growing importance to study burnout and the effect it is having on the sporting arena. Sport psychology consultants, coaches, and athletes need to be aware of the growing problem so they can take measures to limit the amount of burnout athletes are experiencing. By studying antecedents of burnout we can determine which factors may lead athletes to experience more burnout. Once we have determined these factors sport psychology consultants can develop targeted interventions to prevent burnout from occurring as frequently.

### *Models of Burnout*

There are three models of burnout among athletes; the present study would best fit into the cognitive-affective stress model proposed by Smith (1986). The cognitive-affective stress model focuses on antecedents of stress and how that in turn leads to burnout. Stress is the link between optimism and confidence and the burnout syndrome. This model not only accounts for burnout, but also of sport withdrawal in general (Gould et al., 1996). Smith argues that individuals discontinue sport involvement when the costs outweigh the benefits relative to other activities. Withdrawal due to burnout is said to be driven by the young athlete's perceptions of excessive stress. Not everyone that drops out of sport burns out, only those who discontinue because of prolonged stress.

The model shows the parallel relationships which exist among situational, cognitive, physiologic, and behavioral components of stress and burnout. The first component involves interactions between environmental demands and personal and environmental resources. Stress results when environmental demands outweigh personal and environmental resources (Smith, 1986). Demands can be external, as when an athlete confronts a strong opponent in an important contest, or internal in the form of desired goals and unconscious motives and conflicts (Smith, 1986). The second component involves cognitive appraisals. These play a vital role in understanding stress due to the nature and intensity of emotional responses being a function of at least four different appraisals: appraisal of the demands, appraisal of the resources available to deal with them, appraisal of the nature and likelihood of potential consequences if the demands are not met, and the personal meaning of those consequences for the person. Smith (1985) stated that excessive or inappropriate stress responses can result from errors in any of

these appraisal elements. Athletes with low self confidence may misappraise the balance between demands and resources so that failure seems imminent (Smith, 1986). If athletes make threat appraisals, the stress of the situation can result in physiological responses such as tension, irritability, and fatigue. Repeated appraisal of distress can have counterproductive consequences on the athlete; these include reduced self-confidence, sustained heightened anxiety, impaired performance, and the development of burnout (Kelley, Eklund, & Ritter-Taylor, 1999). The final component of the model involves the output behaviors that constitute the athlete's attempt to cope with the situation. These include task oriented, social, and other classes of coping behaviors that are affected by the demands of the situation, cognitive appraisal, and the physiological responses that occur.

#### *Environmental and Individual Differences*

Situational characteristics can have a significant effect on the occurrence of burnout. Severe practice conditions, extreme physical fatigue, lack of recovery time from competitive stress, and boredom have been shown to cause burnout among college athletes (Vealey, Armstrong, and Comar, 1998). In an experimental study conducted on collegiate coaches Kelley, Eklund, & Ritter-Taylor (1999) found that coaches who perceived higher levels of stress experienced more burnout. Due to the fact that training schedules are becoming ever more strenuous for college athletes, it would be useful for sport psychology consultants to know if some of these situational demands are significant antecedents of burnout because they would be able work with athletes to develop effective coping strategies and also help increase these before burnout occurs. Number of

competitions has been highlighted by Gould et al. (1996) as a situational demand for junior tennis players.

Individual differences in athletes have been studied the most regarding antecedents of burnout. Gender is the first individual difference that has been shown to have an effect on levels of burnout experienced. Women have been found to experience higher levels of burnout than males (Caccese & Mayerberg, 1984; Kelley, Eklund, & Ritter-Taylor, 1999; Cremades et al., 2007). Kelley, Eklund, & Ritter-Taylor (1999) proposed that hardiness and individuals prone to anxiety are substantial predictors of burnout in collegiate coaches. Hardiness has a significant negative relationship with burnout, whereas anxiety has a significant positive relationship. Another study conducted on swimmers found that intrinsically motivated swimmers reported lower burnout scores than extrinsically motivated swimmers (Lemyre, Treasure, & Roberts, 2006). Ying-Me Tsai, Lung Hung Chen, & Ying Hwa Kee (2007) recently found that optimism was a significant predictor of burnout among various sport athletes.

Despite the empirical support for several situational and individual difference variables that antecede burnout some theoretical antecedents have only partially been examined.

### *Optimism*

Optimism refers to a person's expectations for what the future holds (Peterson & Bosio, 1991). Optimism has an influence on a person's emotions and the decision about striving for success or giving up (Scheier & Carver, 1987). Peterson and Bosio (1991) have shown that optimism encompasses the whole person, having an influence on all



aspects of one's being – mind, body, and spirit. Dispositional optimism is beneficial for physical and psychological well-being (Scheier, Carver, and Bridges, 1994).

Recent research has studied the connection between optimism and burnout among athletes. It has been found that optimism has a significant negative prediction of reduced sense of accomplishment, devaluation of sport, and emotional and physical exhaustion (Ying-Me Tsai, Lung Hung Chen, & Ying Hwa Kee, 2007). This research is very recent and is yet to be replicated. This study was much different to the present study as it was conducted on various sport athletes of a middle school age.

Optimism and stress have been studied together in relation to burnout. Stress has been shown to be a major factor in job burnout (Maslach et al., 1996). Chang, D'Zurilla, & Maydeu-Olivares (1994) revealed a negative relationship between optimism and stress.

### *Confidence*

Confidence in one's own ability is one of the most frequently cited psychological factors thought to effect sport performance. It is considered by many to be a key factor in successful performances (Feltz, 1988).

There is a distinct lack of research linking confidence directly to burnout and the three subscales that constitute burnout. As previously stated stress has been shown to be positively related to burnout. McGregor & Abrahamson (2000) found that successful athletes who showed higher levels of self-confidence can cope with pre-competitive stress and anxiety better than their low self-confidence counterparts. It therefore may be considered that athletes that are lower in self-confidence are more likely to feel stressed and anxious and in turn be more susceptible to burnout.

### *Need for Achievement*

Need for achievement (nAch) was introduced into the world of psychology by McClelland and Atkinson in the 1950's. Need for achievement refers to a person's desire for significant accomplishment, mastering of skills, control, and high standards (McClelland, 1955). When thinking about nAch there are two problems to account for. The first is to account for an individual's selection of one path of action among a set of possible alternatives. The second is to account for the amplitude of the action tendency once it is initiated, and its tendency to persist for a time in a given direction (Atkinson, 1957). Atkinson (1957) proposed that need for achievement scores are indices of individual differences in the strength of achievement motive, conceived as a relatively stable disposition to strive for achievement or success.

There is a distinct lack of research linking need for achievement and burnout in athletics. However, there are two differing schools of thought among researchers as to how need for achievement is linked to burnout. Individuals with a high need for achievement prefer moderate difficulty, are oriented toward the future orientation, desire information, achieve, and have positive, stable self-concepts as well as good physical health (Metzler, 2007). These are all positive characteristics so the line of research would follow that need for achievement is negatively associated with burnout. On the other hand, characteristics such as persistence would lead the individual to pursue things that they know are unachievable. So the line of research would follow that need for achievement is positively associated with burnout. These conflicting lines of research mean we have to empirically test which direction the association is.

## *Gender*

Gender has been studied as an antecedent to burnout in the sporting arena. Cremades et al. (2007) found that female athletes reported significantly higher burnout than males, specifically females playing individual sports reported higher burnout. These results were not consistent over the three subscales of burnout though. Women only scored significantly higher on the emotional/physical exhaustion scale and sport devaluation scale. Another result this study found was that any athlete, male or female, playing an individual sport reported higher reduced sense of accomplishment scores. With these results in mind it is possible that men and women tennis players may only differ on the emotional/physical exhaustion and sport devaluation scales. Kelley, Eklund, & Ritter-Taylor (1999) reported that female coaches experienced higher levels of burnout than their male counterparts.

With the prevalence of burnout rising rapidly in professional women's tennis, the Women's Tennis Association (WTA) introduced an age eligibility rule for competing in tournaments, so as to try and reduce the number of players burning out and withdrawing from the sport before they are 21. A fifteen year old female is only allowed to play a maximum of 8 professional tournaments during a calendar year. This number increases each year until the player reaches 18 and then she can play as many as she would like. In contrast, there are no restrictions on the amount of tournaments men can play in a year. Given that there are differences in policies for women to men; it is assumed that women are more prone to the burnout syndrome than men, but this has never been empirically tested specifically in tennis.

### *Years of Competitive Experience*

Years of competitive experience has rarely been looked at in relation to burnout in a sport setting. There has been growing concern over the large number of athletes who drop out of sports during the adolescent years. This has been fueled by speculation that years of intense competitive pressures during childhood may cause them to burn out (Martens, 1978; Orlick & Botterill, 1975). It has been studied extensively in the work environment. Several studies in different working environments have revealed that there is a positive relationship between burnout and years of experience in the field (Brewer & Shapard, 2004; Gillespie, 1991; Jenkins, 2005; and McCain, 1995). This research suggests that cumulative stress may increase the likelihood of burnout; therefore, a player who has been exposed to competitive stress from a young age may be more likely to show more signs of burnout than players that didn't start to play tournaments until later.

The purpose of the current investigation is to examine gender, competitive experience, optimism, confidence, and need for achievement as possible predictors of burnout.

### *Hypotheses*

Optimism will be negatively associated with emotional/physical exhaustion, reduced sense of accomplishment, and sport devaluation scales of burnout.

Confidence will be negatively associated with emotional/physical exhaustion, reduced sense of accomplishment, and sport devaluation scales of burnout.

Women will report higher levels of emotional/physical exhaustion and sport devaluation than men.

Years of competitive experience will be positively associated with emotional/physical exhaustion, reduced sense of accomplishment, and sport devaluation.

I will not have a hypothesis for need for achievement because of the conflicting schools of thought.

## CHAPTER 2

### METHODS

#### *Participants*

Participants included 86 (47 men and 39 women), aged 18 to 23 years, collegiate tennis players from across the United States.

#### *Instrumentation*

*Burnout.* The 15 item Athlete Burnout Questionnaire (ABQ; Raedeke & Smith, 2001) provided scores on three aspects of burnout including emotional/physical exhaustion, reduced sense of accomplishment, and sport devaluation. Participants responded to items on a five point Likert scale ranging from 1 to 5 (almost never to almost always). Internal consistency has been adequate for each of these scales: emotional/physical exhaustion ( $\alpha = .92$ ), reduced sense of accomplishment ( $\alpha = .86$ ), and sport devaluation ( $\alpha = .92$ ). Construct validity for this measure was supported by the relationships between the burnout subscales and theoretically related constructs. Burnout was positively related to competitive trait anxiety and amotivation, and negatively related to enjoyment, commitment, and intrinsic motivation.

*Optimism.* The 10 item Life Orientation Test - Revised (LOT-R; Scheier, Carver, & Bridges, 1994) will provide scores for optimism. Participants rated each item on a five point Likert scale ranging from 1 to 5 (agree a lot to disagree a lot). The LOT-R has been shown to have acceptable internal consistency ( $\alpha = .82$ ) and also construct validity. Also test-retest reliability was high ( $r = .95$ ; Scheier, Carver, and Bridges, 1994). Convergent and discriminant validity were shown by correlating the LOT-R with several related scales, including neuroticism ( $r = -.43$  &  $-.36$ ), self-mastery ( $r = .48$ ), self-esteem ( $r =$

.50), trait anxiety ( $r = -.53$ ), and the original LOT ( $r = .95$ ). All of these correlations are moderate apart from the correlation with the original LOT which was high.

*Confidence.* The 13 item Trait Sport Confidence Inventory (TSCI; Vealey, 1986) provided confidence level scores for the athletes. Participants rated each item on a nine point Likert scale ranging from 1 to 9 (1-3 is low, 4-6 is medium, and 7-9 is high). The TSCI measures the confidence of the individual in comparison to the most confident athlete they know. The TSCI proved to have very good test-retest reliability ( $r = .86$ ). Positive correlations were found between the TSCI and; perceived physical ability, physical self-presentation confidence, self-esteem, SSCI, and CSAI-2. Negative correlations were found between the TSCI and; competitive A-trait, external locus of control, cognitive competitive A-state, and somatic competitive A-state. (Vealey, 1986).

*Need for Achievement.* The 5 item Need Achievement Pride Scale (NAPS; Metzler, 2007) provided scores of intrapersonal pride (IaP). Participants rated each item on a five point Likert scale ranging from -2 to +2 (do not believe at all to believe 100% of the time). This recently developed scale of measurement showed that the IaP factor had an alpha coefficient of .92. During the development of this scale it was found that IaP was the purest form of the need for achievement motive because individuals may be more self-focused in their competence pursuits (Metzler, 2007). The NAPS also showed to have very good external validity with positive associations with existing nAch measures, appetitive motivational systems, self-esteem, pleasant affect, and approach achievement goals as well as a negative association with depression (Metzler, 2007).

## *Procedures*

Two different procedures were used to collect the data.

*Procedure A:* A survey was used to collect the data. A researcher attended different collegiate spring matches and gave each head coach packets for their players to fill out. Each participant completed the packet of questionnaires and returned their packets to a centrally located drop box (registration table). The packets had no identifiers on them so the participants remain anonymous. Demographics were also collected during the procedure, consisting of; gender, age, years of competitive experiences, and year in school.

*Procedure B:* The survey was also posted online and emailed to collegiate tennis coaches to ask their players if they would fill it out. The link was emailed to approximately 150 men's head coaches and 150 women's head coaches asking them to forward it on to their players so they could fill it out. The online survey had no identifiers so the participants remained anonymous.

Completed surveys from procedures A and B were put together to form the complete data set.

## *Data Analysis*

Three simultaneous multiple regression analyses were performed; one for each dependent variable: emotional and physical exhaustion (EPE), reduced sense of accomplishment (RSA), and sport devaluation (DEVA). For each analysis, five predictors were used: gender, years of experience, trait sport confidence, optimism, and need for achievement. To determine overall variance in each of the three burnout subscales explained by predictors,  $R^2$  were examined. Relative strength of contribution of each



predictor variable to variance in burnout was determined by examining respective beta coefficients.

## CHAPTER 3

### RESULTS

The total variance explained in EPE was 21% ( $p = .002$ ). However, only one of the five predictors, optimism, contributed significant variance in EPE ( $\beta = -.35, p = .002$ ). The negative association between optimism and emotional/physical exhaustion this means that a more optimistic person will have a lower likelihood of experiencing emotional/physical exhaustion, which are signs of burnout.

In RSA the five predictors explained 47% ( $p = .000$ ) of the variance. Trait sport confidence ( $\beta = -.46, p = .000$ ), optimism ( $\beta = -.21, p = .021$ ) and need for achievement ( $\beta = -.20, p = .031$ ) were each negatively associated with RSA. This means that the more optimistic a person is then the less likely it is that they will feel the lack of accomplishment which leads to burnout. The association between trait confidence and reduced sense of accomplishment was also negative which means that the more confident an athlete is then the less likely they are to feel that lack of accomplishment which leads to burnout. The results showed that there was a negative association between need for achievement and reduced sense of accomplishment. This means that the higher somebody is in their need for achievement, the less likely they are going to feel a lack of accomplishment.

Overall, the five predictors explained 28% of variance in DEVA ( $p = .000$ ). While trait sport confidence had a negative association ( $\beta = -.39, p = .001$ ); years of experience associated positively ( $\beta = .25, p = .013$ ) with DEVA. The association between trait sport confidence and sport devaluation was negative. We can understand this to mean that a more confident athlete will value their sport higher than an athlete with low confidence.

Years of competitive experience associated positively with sport devaluation; the first positive association found. This means that the longer an athlete plays in competitive tournaments, the more they will devalue the sport.

Table 1 displays the descriptive statistics for each dependent and independent variable. Table 2 shows bivariate correlations between all of the dependent and independent variables as well as Cronbach's alpha for each subscale employed.

## CHAPTER 4

### DISCUSSION

The present study examined factors hypothesized to contribute to aspects of burnout among collegiate tennis players. In general, the results of this study point toward optimism and trait sport confidence as individual difference variables that buffer against aspects of burnout. In contrast, need for achievement, gender, and years of competitive experience do not appear to be critical factors in understanding individual difference correlates of aspects of burnout.

As expected, optimism was negatively associated with emotional/physical exhaustion and reduced sense of accomplishment; however, it was not significantly associated with sport devaluation. A recent study of optimism and burnout conducted on various sport athletes of junior age (under 18) found that optimism was negatively associated with all three subscales of burnout (Ying-Me Tsai, Lung Hung Chen, & Ying Hwa Kee, 2007). High optimist tennis players are going to be lower in emotional/physical exhaustion because having this high optimism has been associated with successful coping. This means that these players are going to be better predisposed to cope with the emotional/physical exhaustion associated with the training and competitive demands. These feelings are proof that they are striving for that success and working towards getting it. High optimists always expect the future to be positive (Peterson & Bosio, 1991) so they may not report experiencing reduced accomplishment because they are oriented toward the possibility of success (i.e., accomplishment) in their next competition. Contradictory to the previous research by Ying-Me Tsai, Lung Hung Chen, & Ying Hwa Kee (2007) optimism was not found to be negatively associated to

sport devaluation. Due to the fact this was conducted on a younger population, middle school children, it may mean that these results are different because it was conducted on college age athletes. Another factor that has to be taken into consideration is that this previous study had a sample of 139 and the current study had only 86 participants. This limited sample size may not have been high enough to produce the same effect as the previous study. Looking back at Smith's (1986) Cognitive-Affective Stress Model, and more specifically the appraisal stage, these results suggest that high optimistic athletes are going to appraise their resources as being equal, if not better, than their demands, so that the feeling of emotional/physical exhaustion is lower. Similar to this for reduced sense of accomplishment is that the meaning of the consequences (i.e. losing a match) to an optimist is not going to be negative because they appraise the situation as part of tennis. These optimistic players are going to appraise this situation as not being threatening and remain positive about future outcomes.

Trait sport confidence was negatively associated with reduced sense of accomplishment and sport devaluation as expected; however, it was not significantly associated with emotional/physical exhaustion. The current results are consistent with previous research (Kjormo & Halvari, 2002) who also found a negative association between self-confidence and burnout. Compared to their low counterparts, high self-confident tennis players are going to report higher sense of accomplishment because these players are going to still have this trait confidence no matter what kind of results they are having at that present moment. Similar to high optimistic athletes, athletes with high self confidence believe that they have the ability to achieve their desired results. Low confidence athletes may devalue the sport to protect themselves. An athlete low in

self confidence believes that they do not have the ability to achieve a desired outcome, so if they place less value on the sport they play. Emotional/physical exhaustion is a common occurrence in most sports. It can happen to anyone at anytime. Whether an athlete is high in confidence or low is not going to stop them feeling this emotional/physical exhaustion. With trait confidence being negatively associated with two of the three subscales of burnout it may be said that it is an important factor in whether a tennis player experiences signs of burnout.

The appraisal stage of Smith's (1986) model is again going to be the key stage when looking at a more confident athlete. The more confident tennis player is going to appraise situations differently to a low confidence tennis player. They are going to believe that they have the resources to cope with the training and competitive demands. Also, the consequences of winning a match or losing match are going to be appraised in a similar way by the more confident player. They are going to take confidence from winning a match and therefore still be confident for future matches, and they are going to look at losing a match as a "blip", still being confident for future matches. This is going to produce a higher sense of accomplishment.

Given the lack of research examining the relationship between need for achievement and aspects of burnout, no specific research hypotheses were stated. The current research revealed a negative association with the reduced sense of accomplishment subscale of burnout but no significant associations with either the emotional/physical exhaustion scale or the sport devaluation scale. This means that the tennis players with the higher need for achievement have more positive feelings of accomplishment. Low sense of accomplishment leads to burnout because a player is

feeling that results and/or performance development are stationary; an athlete must have a feeling of accomplishment to be willing to continue practicing and competing. Athletes who are high in need for achievement have a high desire for significant accomplishment, and of mastering skills (McClelland, 1955). With this being said this high need for achievement can act as a buffer for this low sense of accomplishment.

Gender did not factor as a predictor for any of the three subscales of burnout. These results suggest that men and women can be equally prone to aspects of burnout. This is contradictory to previous research (Cremades et al., 2007; Kelley, Eklund, & Ritter-Taylor, 1999) which found that women experienced higher burnout levels than men. Cremades et al. (2007) specifically found that women playing individual sports had higher burnout levels than women playing in team sports. A possible reason for why this research contradicts previous findings is because this is the first to compare burnout levels specifically on tennis players. The limited sample size may not have been high enough to produce the same effect as the previous studies.

Based on past research (Martens, 1978; Orlick & Botterill, 1975), years of competitive experience was hypothesized to be positively associated with burnout. In the current study, years of competitive experience predicted only one aspect of burnout: sport devaluation. Cresswell & Eklund's (2006) study of burnout in rugby players concluded that sport devaluation manifested itself in the expression of a loss of desire to compete. Lengthy participation in competition could result in a loss of desire to compete, may be due to boredom, if competing against the same people week in week out, or stress. This could also be due to the fact this study was conducted on collegiate age athletes who have been in the sport a lot longer than juniors. In a study conducted on young children

McCarthy, Jones & Clark-Carter (2008) found school aged children (11-18) to have greater enjoyment of sports which may mean that they value the sport they play more than older athletes, such as these collegiate athletes. Years of competitive experience was not associated with either emotional/physical exhaustion or reduced sense of accomplishment. A possible reason why years of experience is unrelated to reduced sense of accomplishment is because some players that have been competing for a significant length of time may be experiencing higher levels of accomplishment. This could also be said for emotional/physical exhaustion. The college athlete may explain their emotional/physical exhaustion as due to their studies or other areas of their lives. Emotional/Physical exhaustion could vary for all years of competitive experience because not all tennis players are going to be training and competing the same amount and also at the same level. This means that someone who is younger, who has had fewer years of experience, but is training much more and playing a higher level of competition may still experience the same, if not higher, level of emotional/physical exhaustion as someone who is older, and who has had more years of competitive experience.

### *Practical Implications*

This research can have significant practical implications. Based on these results sport psychology consultants can use many things to try and reduce the risk of a player burning out. There are techniques and skills that can be used when working with an athlete that can increase their optimism, confidence, and need for achievement. By enhancing these characteristics at a young age will mean that these athletes will more than likely reduce the risk of that athlete experiencing signs of burnout and thus lengthening their careers.



The WTA has rules to curb burnout in female tennis players. Given the current results, men may not be less immune to aspects of burnout than women, thus the ATP might examine implementing a similar rule into men's tennis. There is a drawback to this suggestion however; this study was conducted on college age and college level tennis players, which may yield different results from doing a similar study with young professionals making their way onto both the WTA or ATP tour circuits. The results of this study are contradictory to many that have already been found. Future research that replicates the current findings would strengthen this suggestion. Conducting similar research on professional tennis players will be more beneficial when it comes to implying that the ATP tour may want to implement a rule similar to that of the WTA tour.

A smaller implication for parents and coaches is going to be when to start their child in competitive tournaments. This research shows that players who have experienced more years of competitive tennis devalue tennis more than players who have not been in competitive tennis as long. Devaluing sport is not conducive to a young athlete's future participation or development because they need to place some value on what they do to enjoy it. It would be like the athlete is constantly questioning themselves, 'Why am I playing this sport?' This should show parents and coaches that entering the child in competitive tournaments at a young age are going to be more likely to experience signs of burnout. A counter argument to this is that to reach the elite in sport you have to specialize early. Although years of experience was positively associated with sport devaluation, trait sport confidence was negatively associated with sport devaluation. If the young athlete participated in mental training, developing confidence from this young

age, it may reduce the consequences of the years of competitive experience and therefore reduce the threat of devaluing the sport.

### *Future Research*

This study was only conducted on 86 collegiate tennis players, so the scope of the research may be small. The link to the online questionnaire was sent to 150 men's and 150 women's collegiate head coaches with an email asking them to forward it to their team. The response rate from these only amounted to 86 responses. Obviously sending emails to more coaches would have amounted in more participants. More participants would mean a bigger effect size and therefore the chance to produce more significant findings.

Expansion of this research could be to conduct it on young professional tennis players rather than collegiate tennis age/level players. If results were to be found similar to these, in which men experience the same levels of burnout as women then there would a legitimate reason to go to the ATP and explain that it may be good idea if they were to introduce a similar rule to the WTA.

Another way to expand on this research is to maybe study burnout with other predictors. This may be a way to really enhance the developmental process of an athlete. Certainly working on the few skills produced by this study (confidence, optimism, and need for achievement) will help alleviate some signs of burnout later on for the athlete. If there was more things to work on with an athlete that were proven to help alleviate the signs of burnout then it would produce a more rounded healthy individual who would have little worry of burning out and withdrawing from the sport.

Using the preliminary conclusions drawn from this study, further research could explore both optimism and trait confidence individually. Using a more experimental design, and over a longer period of time, studies could be done working with younger tennis players enhancing their optimism and/or confidence. By periodically assessing their level of burnout you could see if this enhancement has curbed the level of burnout the player experiences.

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Table 1

*Descriptive Statistics for each Dependent and Predicting Variable*

Variable	Mean	Standard Deviation	Minimum	Maximum	Skewness (S.E.)	Kurtosis (S.E.)
Emotional/Physical Exhaustion	11.52	3.43	5	20	.15 (.26)	-.41 (.51)
Reduced Sense of Accomplishment	11.64	3.01	5	17	-.12 (.26)	-.87 (.51)
Sport Devaluation	10.95	3.93	5	18	.26 (.26)	-1.1 (.51)
Trait Sport Confidence	78.94	16.62	37	117	-.19 (.26)	-.44 (.51)
Optimism	24.14	3.89	14	30	-.48 (.26)	-.41 (.51)
Need for Achievement	19.28	4.01	8	25	-.38 (.26)	-.35 (.51)
Years of competitive experience	9.38	4.24	1	34	2.26 (.26)	12.63 (.51)

Table 2

*Bivariate Correlations between all Dependent and Predicting Variables*

<b>Variable</b>	Emotional/ Physical Exhaustion	Reduced Sense of Accomplishment	Sport Devaluation	Trait Sport Confidence	Optimism	Need for Achievement
Emotional/ Physical Exhaustion	$\alpha = .82$					
Reduced Sense of Accomplishment	.477	$\alpha = .73$				
Sport Devaluation	.653	.602	$\alpha = .82$			
Trait Sport Confidence	.102	-.594	-.429	$\alpha = .95$		
Optimism	-.418	-.443	-.311	.341	$\alpha = .76$	
Need for Achievement	-.210	-.430	-.204	.392	.332	$\alpha = .90$



Table 3

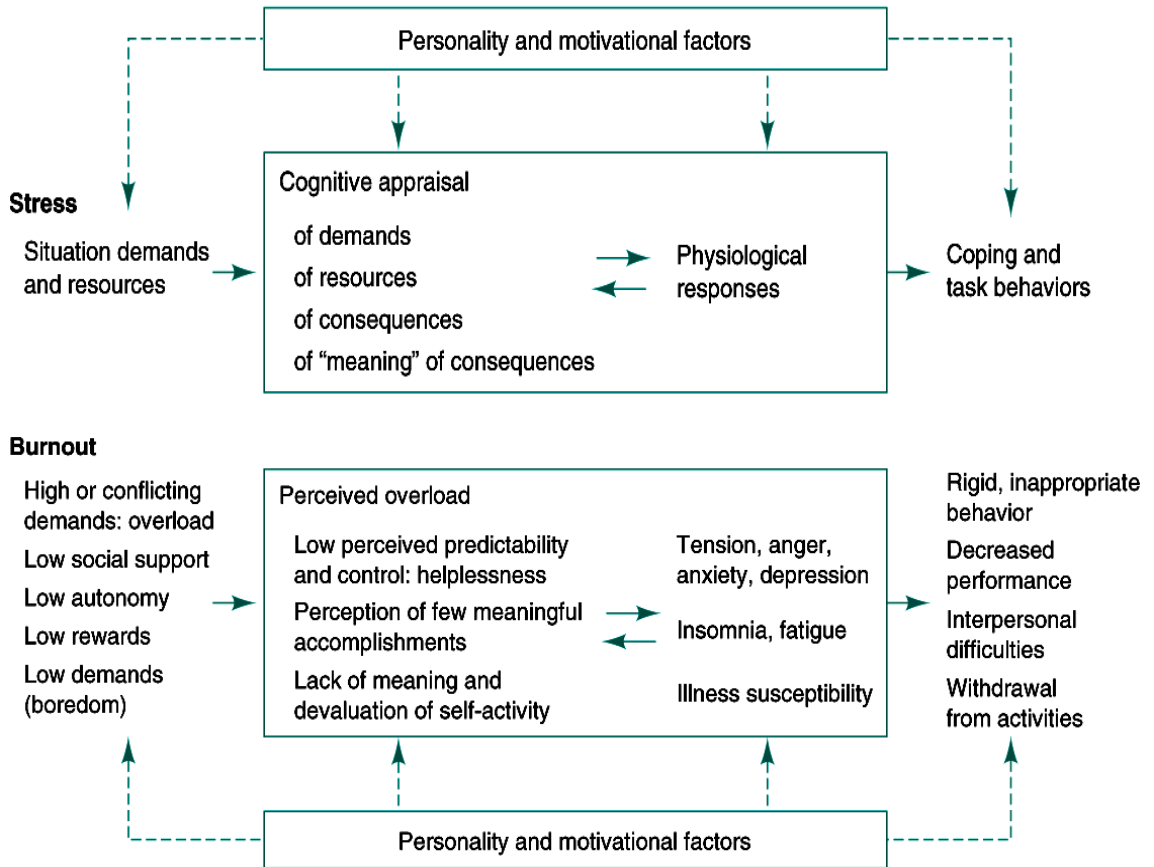
*Betas and R-Squares for each subscale of Burnout*

Variable	Optimism	Trait Confidence	Need for Achievement	Gender	Year of Experience	R <sup>2</sup>
Emotional/Physical Exhaustion	-.349*	-.136	-.065	.008	.123	.208*
Reduce Sense of Accomplishment	-.212*	-.456*	-.203*	-.101	.141	.469*
Sport Devaluation	-.153	-.385*	-.043	-.132	.249*	.281*

\* Values all significant at the .05 level

Figure 1

*Smith's (1986) Cognitive-Affective Stress Model*



## APPENDICES

## APPENDIX A

### ASSUMPTIONS, LIMITATIONS, AND DELIMITATIONS

*Limitations:*

Limitations for the present study include:

- 1) The athletes will be chosen from a sample that is convenient.
- 2) There will be no control group for the study.
- 3) There will be no random selection of participants.
- 4) English may not be the first language for most of the participants so they may have trouble understanding some of the questions.
- 5) The study will not account for injured athletes or athletes that have had a major injury in their career.

*Delimitations:*

Delimitations include:

- 1) The athletes will be from NCAA Division I and II colleges/universities from the southeastern United States.
- 2) The Athlete Burnout Questionnaire (ABQ), a reliable and valid measure, will be used to assess the level of burnout.
- 3) The Life Orientation Test – Revised (LOT-R), a reliable and valid measure, will be used to assess level of optimism.
- 4) The Trait Sport Confidence Inventory (TSCI), a reliable and valid measure, will be used to assess level of confidence.
- 5) The Need for Achievement Pride Scale (NAPS), a reliable and valid measure, will be used to assess level of intrapersonal pride.
- 6) The athletes will be eligible for tennis participation by the NCAA clearinghouse.

*Assumptions:*

It is assumed that:

- 1) The guarantee of anonymity will prompt the athlete to answer honestly about their own level of burnout.
- 2) The athletes will not answer in a way that they feel is socially desirable.

APPENDIX B  
EXTENDED REVIEW OF LITERATURE

## *Burnout*

Burnout is becoming more and more prevalent in today's sporting society. Overtraining and Staleness are pre-cursors to burnout. Overtraining is defined as a short cycle of training during which athletes expose themselves to excessive training loads that are near maximum capacity, causing too much overload on the athlete without enough rest (PP Book). Overtraining leads then to staleness, this is when the athlete has difficulty maintaining standard training regimes and can no longer achieve previous performance results (PP Book). Staleness consequently leads to athletes to many athletes burning out. Athletes are reporting more and more experiences of overtraining and staleness. 66% of Atlantic Coast Conference (ACC) athletes experience some overtraining, on average twice a year. 72% of athletes reported some staleness during their sport season. Finally, of swimmers who reported staleness during their freshman year, 90% became stale in one or more subsequent seasons.

There are three models of burnout among athletes. Smith (1986) proposed the cognitive-affective stress model, Silva (1990) proposed the negative-training stress response model, and Coakley (1992) proposed the unidimensional identity development and external control model. All these models have positives and negatives, but Smith's cognitive-affective model is regarded as the most significant advance in the study of burnout (Rotella, Hanson, & Coop, 1991).

### *Smith's (1986) Cognitive-Affective Stress Model*

Burnout is defined as a psychological, emotional, and physical withdrawal from a formerly pursued and enjoyable sport as a result of excessive stress which acts on the athlete over time (Smith, 1986). The cognitive-affective stress model is a four stage



model involving physiological, psychological, and behavioral components. The first stage of the model is situational demands. This involves interactions between demands and resources. Stress results when the environmental demands outweigh the personal and environmental resources (Smith, 1986). The second stage is cognitive appraisal. This is how the individual athlete interprets and appraises the situation. Give the same situation, some athletes will view it as threatening (negative appraisal), while others will view it as something to be challenged (positive appraisal). The third stage is a result of the athlete negatively appraising the situation. This stage focuses on the physiological responses of the athlete. The stress of the situation can result in tension, irritability, and fatigue. The final stage of the model is the behavioral responses of the athlete. This is how the athlete copes with the physiological responses. Some signs of this stage may be decreased performance, difficulties with team-mates, and eventual withdrawal from the sport (Smith, 1986).

*Silva's (1990) Negative Training Stress Response Model*

The Negative Training Stress Response Model suggests that physical training can physically and psychologically stress the athlete, which can in turn produce both positive and negative outcomes (Silva, 1990). The main goal and major purpose of physical training is positive adaptation, but excessive training generates a negative adaptation. Such an adaptation produces negative training responses, allowing staleness, overtraining, and burnout to be the interconnected and successive phases (Silva, 1990). If the negative training stress syndrome is not reversed through rest or other intervention, withdrawal from sport may be the likely end result (Cox, 2002).

*Coakley's (1992) Unidimensional Identity Development and External Control Model*

In Coakley's (1992) model stress is described as a mere symptom of burnout rather than the cause. Coakley hypothesized that burnout in young athletes was linked to the social organization of involved sport and relevant effects on personal issues of identity and control. So, the social structure is overly controlling and restrictive in nature (Cox, 2002). This model suggests that burnout occurs because the structure of involved sport impedes the young athletes from becoming well-rounded and developing a versatile identity. Athletes in this position also demonstrate reticence in personal control and decision making (Coakley, 1992).

### *Burnout and Gender*

There have been several studies that have suggested that females are more prone to burnout (Cremades et al., 2007; Kelley, Eklund, & Ritter-Taylor, 1999; Caccesse & Mayerberg, 1984). Cremades et al. (2007) found that female collegiate athletes who participated in individual sports showed the highest level of burnout. Kelley, Eklund, & Ritter-Taylor (1999) studied burnout among college coaches. They found that female coaches showed higher levels of burnout because they perceived more things to cause them stress.

In 1994 the Women's Tennis Association (WTA) introduced an age eligibility rule for competing in tournaments, so as to try and reduce the number of players burning out and withdrawing from the sport before they are 21. A fifteen year old is only allowed to play a maximum of 8 professional tournaments during a calendar year. This number increases each year until the player reaches 18 and then they can play as many as they would like. This is not the case on the men's side. There are no restrictions on the amount of tournaments you can play in a year, no matter how old the player is.

### *Burnout and Competitive Experience*

Although research into this has been limited, especially in sports, there has been some in the professional job world. Burnout among health service professionals has been shown to be inversely related to years of experience (Gillespie & Numerof, 1991). Brewer & Shapard (2004) also reported that there was a small negative correlation between burnout and years of experience. Contrary to these two studies, Hock (1988) found that there was no significant relationship between burnout and years of experience among public school teachers.

### *Burnout and Sport*

In the context of sport burnout has been defined as a multidimensional response to ongoing stressors of competitive sport, depersonalization, lack of perceived accomplishment, feelings of physical, mental, and emotional exhaustion, and prolonged stress, which also play a vital role in symptomology (Vealey, Armstrong, Comar, & Greenleaf, 1998).

Gould (1996) explained burnout as a consequence of various components of excessive stress, and not solely an element of personality. Burnout is thought to result from an interaction of personal and situational factors (Gould, 1996). Some of the personal factors which are thought to typify individuals prone to burnout include descriptors such as a perfectionistic personality, an intense need for control, and a need to be accepted and liked by others (Gould, 1996). Situational sources found to be important to burnout occurrence consist of high levels of emotional stress, lack of positive feedback, and low social support, to name a few (Gould, 1996).

Gould et al. (1996) were commissioned by the sport science division of the U.S. Tennis Association (USTA) to identify and describe junior tennis burnouts and compare them to individuals that did not burnout. This research reported that some of the characteristics of tennis burnouts were that they have lower external motivation, higher amotivation, and are more withdrawn. Also they had higher needs for organization but practiced fewer days. These players were also more likely to have had less input into their training. An important finding in this study was the identification of the important role perfectionism plays in burnout (Gould et al., 1996).

In the second part of this investigation the researchers carried out interviews with the players. From this research it was found that burnout seemed to result from an interaction of personal and situational factors, not solely from one or the other (Gould et al., 1996). The social environment surrounding the athlete was also taken into consideration during this study. This emphasized the importance of having friends and being with friends for maintaining motivation in junior tennis. However, as tennis became more competitive, these opportunities for friendship diminished. This had a three-pronged negative effect: lessening a player's ability to combat stress by reducing social support, reducing the fun of tennis, and making competing alternative activities where a player could spend time with friends more attractive. The researchers felt that most of the cases could be fairly well explained by using Smith's (1986) cognitive-affective stress model of burnout (Gould et al., 1996).

Burnout has been studied in the sporting arena for many years. However, the majority of the research has been directed toward burnout among coaches. Only recently has the interest shifted on to the athlete population. Studies on general high school

athletes (Ying-Me Tsai, Lung Hung Chen, & Ying Hwa Kee, 2007), professional rugby players (Cresswell & Eklund, 2006), swimmers (Raedeke, 1997) and junior tennis players (Gould et al., 1996) have only recently been conducted. Cresswell and Eklund (2005) reported rugby players experience modest increases in burnout levels across a 12 week rugby tournament. This may be indicative of some sort of progressive or cumulative effect of competition involvement. The only study involving tennis players focused on already burned out players.

### *Optimism*

Optimism refers to a person's expectations for what the future holds (Peterson & Bosio, 1991). Optimism has an influence on a person's emotions and the decision about striving for success or giving up (Scheier & Carver, 1987). Peterson and Bosio (1991) have shown that optimism encompasses the whole person, having an influence on all aspects of one's being – mind, body, and spirit. Dispositional optimism is beneficial for physical and psychological well-being (Scheier, Carver, and Bridges, 1994).

### *Optimism and Sport*

An athlete with higher optimism levels has been found to try harder, particularly after defeat or under stiff challenge and also is more likely to go on and win (Seligman, 1990, Seligman et al., 1990).

Venne, Laguna, Walk, & Ravizza (2006) found a relationship between athletic performance and optimism levels. Optimism levels were significantly higher in final year athletes than in first year athletes. The reasons for this could be that athletic participation provides increases in self-efficacy and mastery challenges (Venne et al., 2006).

Recent research into optimism and burnout in a sport setting has been conducted in Asia. Ying-Me Tsai, Lung Hung Chen, & Ying Hwa Kee (2007) found that optimism was a significant negative predictor of the three scales of burnout; reduced sense of accomplishment, sport devaluation, and emotional and physical exhaustion.

#### *Optimism and Burnout*

Optimism has been negatively related to stress (Chang, D’Zurilla, & Maydeu-Olivares, 1994). Stress has been associated with symptoms of job burnout, suggesting that less stressed individuals may experience less risk for job burnout. Some researchers have viewed stress as the major predictor of job burnout (Maslach et al., 1996). Further research in this area by Chang, Rand, and Strunk (2000) found a significant association between optimism and each of the three dimensions of risk for job burnout.

Research in information service workers has found that workers with low work resources who have higher levels of optimism show lower levels of burnout compared to workers that have lower levels of optimism (Riulli & Savicki, 2003).

#### *Confidence and Sport*

Confidence in oneself can be defined as the belief or degree of certainty that individuals possess about their ability to be successful in a particular situation or task. Confidence can be seen to be synonymous with self belief (as cited in Butler, 2000).

Confidence in one’s own ability is one of the most frequently cited psychological factors thought to effect sport performance. It is considered by many to be a key factor in successful performances (Feltz, 1988). Bandura (1982) suggested a theory that an individual’s degree of self-efficacy (or self-confidence) influences performance both directly and indirectly via emotions and cognitions. This theory is called the social

cognitive theory. Successful performances have been found to increase perceived self-efficacy while repeated failures lowers self-confidence.

Covassin and Pero (2004) studied confidence in tennis players and found that winning players exhibited higher vigor scores than losing players. Successful tennis players also exhibited higher self-confidence than unsuccessful players. Also a player with higher self-confidence going into the competition tended to be more successful (Covassin and Pero, 2004).

### *Need for Achievement*

Need for achievement is grounded in pleasurable affective experience (Murray, 1938). Individuals high in need for achievement welcome obstacles (physical or mental), selects the hardest tasks – things that demand great exertion and courage - , in order to experience the elation of mastering them, (Murray, 1938).

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APPENDIX C  
INSTRUMENTATION

## Athlete Burnout Questionnaire

	Almost never	Rarely	Some- times	Fre- quently	Almost always
1. I'm accomplishing many worthwhile things in tennis.	1	2	3	4	5
2. I feel so tired from my training that I have trouble finding energy to do other things.	1	2	3	4	5
3. The effort I spend in tennis would be better spent doing other things.	1	2	3	4	5
4. I feel overly tired from my tennis participation.	1	2	3	4	5
5. I am not achieving much in tennis.	1	2	3	4	5
6. I don't care as much about my tennis performance as much as I used to.	1	2	3	4	5
7. I am not performing up to my ability in tennis.	1	2	3	4	5
8. I feel "wiped out" from tennis.	1	2	3	4	5
9. I'm not into tennis like I used to be.	1	2	3	4	5
10. I feel physically worn out from tennis.	1	2	3	4	5
11. I feel less concerned about being successful in tennis than I used to.	1	2	3	4	5
12. I am exhausted by the mental and physical demands of tennis.	1	2	3	4	5
13. It seems that no matter what I do, I don't perform as well as I should.	1	2	3	4	5
14. I feel successful at tennis.	1	2	3	4	5
15. I have negative feelings towards tennis.	1	2	3	4	5

## Life Orientation Test-Revised

- A = I agree a lot
- B = I agree a little
- C = I neither agree nor disagree
- D = I disagree a little
- E = I disagree a lot

Circle the most appropriate answer for you.

1. In uncertain times, I usually expect the best.  
A      B      C      D      E
2. It is easy for me to relax.  
A      B      C      D      E
3. If something can go wrong for me, it will.  
A      B      C      D      E
4. I'm always optimistic about my future.  
A      B      C      D      E
5. I enjoy my friends a lot.  
A      B      C      D      E
6. It is important for me to keep busy.  
A      B      C      D      E
7. I hardly ever expect things to go my way.  
A      B      C      D      E
8. I don't get upset too easily.  
A      B      C      D      E
9. I rarely count on good things happening to me.  
A      B      C      D      E
10. Overall, I expect more good things to happen to me than bad.  
A      B      C      D      E

### Need Achievement Pride Scale

-2	-1	0	+1	+2
	Do not Believe At all		Believe 50% of the time	Believe 100% of the time

1. When I am challenged to demonstrate my ability, I am pleased with the opportunity to increase my view of myself.
2. When I am presented with achieving something new, I am excited by the chance to enhance my opinion of myself.
3. When I am asked to display my ability, I am excited with the opportunity to think more highly of myself.
4. When my talent is about to be evaluated, I feel good knowing I have the opportunity to add to my self-worth.
5. When I am asked to display my talent, I am enthusiastic about the possibility of increasing my opinion of myself.

## Trait Sport Confidence Inventory

When you compete, how confident do you generally feel?	(circle number)								
1. Compare your confidence in your <i>ability to execute the skills necessary to be successful</i> to the most confident athlete you know.	Low				Medium				High
	1	2	3	4	5	6	7	8	9
2. Compare your confidence in your <i>ability to make critical decisions during competition</i> to the most confident athlete you know.	Low				Medium				High
	1	2	3	4	5	6	7	8	9
3. Compare your confidence in your <i>ability to perform under pressure</i> to the most confident athlete you know.	Low				Medium				High
	1	2	3	4	5	6	7	8	9
4. Compare your confidence in your <i>ability to execute successful strategy</i> to the most confident athlete you know.	Low				Medium				High
	1	2	3	4	5	6	7	8	9
5. Compare your confidence in your <i>ability to concentrate well enough to be successful</i> to the most confident athlete you know.	Low				Medium				High
	1	2	3	4	5	6	7	8	9
6. Compare your confidence in your <i>ability to adapt to different game situations</i> and still be successful to the most confident athlete you know.	Low				Medium				High
	1	2	3	4	5	6	7	8	9
7. Compare your confidence in your <i>ability to achieve your competitive goals</i> to the most confident athlete you know.	Low				Medium				High
	1	2	3	4	5	6	7	8	9
8. Compare your confidence in your <i>ability to be successful</i> to the most confident athlete you know.	Low				Medium				High
	1	2	3	4	5	6	7	8	9
9. Compare your confidence in your <i>ability to think and respond successfully</i> during competition to the most confident athlete you know.	Low				Medium				High
	1	2	3	4	5	6	7	8	9
10. Compare your confidence in your <i>ability to meet the challenge of competition</i> to the most confident athlete you know.	Low				Medium				High
	1	2	3	4	5	6	7	8	9
11. Compare your confidence in your <i>ability to be successful Even when the odds are against you</i> to the most confident athlete you know.	Low				Medium				High
	1	2	3	4	5	6	7	8	9
12. Compare your confidence in your <i>ability to consistently be successful</i> to the most confident athlete you know.	Low				Medium				High
	1	2	3	4	5	6	7	8	9
13. Compare your confidence in your <i>ability to bounce back from performing poorly and be successful</i> to the most confident athlete you know.	Low				Medium				High
	1	2	3	4	5	6	7	8	9

**GEORGIA SOUTHERN UNIVERSITY**  
**Department of Public Health**  
**College of Health & Human Sciences**

**INFORMED PASSIVE CONSENT FORM**

**Title of Project: Antecedents of Burnout among Collegiate Tennis Players**

1. **Principal Investigator:** Dale White, Graduate Student, Department of Health & Kinesiology
2. **Purpose of the Study:** The purpose of this research study is to examine the attitudes of collegiate tennis players.
3. **Procedures to be followed:** You will be asked to answer 46 questions on a survey.
4. **Discomforts and Risks:** There is minimal risk for physical or emotional harm should you choose to participate. You may experience some minor embarrassment or discomfort while completing the questionnaires. No other risks are known.
5. **Benefits:** You might learn more about yourself by participating in this study. This research might provide a better understanding of the nature of burnout experienced by collegiate tennis players.
6. **Duration:** It will take about 15 minutes to complete the questions.
7. **Statement of Confidentiality:** Only the person in charge, and his/her assistants, will know your identity. If this research is published, no information that would identify you will be written.
8. **Right to Ask Questions:** You can ask questions about the research. The person in charge will answer your questions. Contact Dale White at (912) 655-0431 with questions. If you have questions about your rights as a research participant, contact the Office of Research Services and Sponsored Programs by email at [oversight@georgiasouthern.edu](mailto:oversight@georgiasouthern.edu) or phone at (912) 681-7758.
9. **Compensation:** There is no compensation provided for participating in this study.
10. **Voluntary Participation:** You do not have to participate in this research. You can end your participation at any time by telling the person in charge. You do not have to answer any questions you do not want to answer.
11. **Penalty:** There is no penalty for deciding not to participate in this study. You may decide at any time you don't want to participate further and may simply withdraw.
12. You must be 18 years of age or older to consent to participate in this research study. Completion and return of the questionnaire materials implies that you have read the information in this form and consent to participate in the research.

**Please keep this form for your records or future reference.**



APPENDIX D  
INSTITUTIONAL REVIEW BOARD FORMS