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In recent years there has been a steady increase in the number of children playing team sports. Young people are also engaging in individual sports such as tennis, gymnastics, golf, and running. Therefore, research has been conducted on many aspects of motivation in individual sports. However, I sought to ask what happens when an individual sport is formatted into a team sport activity? Take tennis for example, which is inherently an individual sport. Many juniors have now started playing team tennis. Considerable research has been conducted on tennis players in relation to their motivation and goal achievement orientations (Balaguer, Duda, & Crespo, 1999; Crespo & Reid, 2007; Fry & Newton, 1993; Harwood & Swain, 1998; Hatzigeorgiadis & Biddle, 1999; Newton & Duda, 1993). However, little research has been conducted on motivation in team tennis. Additionally, sport commitment within tennis has also been analyzed, through use of the Sport Commitment Model (Casper & Andrew, 2008; Zahariadis, Tsorbatzoudis, & Alexandris, 2006). The purpose of this research was to ascertain in which type of competitive environment, team tennis or individual tennis, players display high or low task and ego orientations and perceived climate orientations. Additionally, differences in sport commitment among players between the different competitive contexts were examined.

Junior tennis players in the Central North Carolina Region were surveyed relative to their goal achievement orientation, perceived motivational climate, and sport

commitment, for their participation in team tennis and individual tennis. A total of seven measures were administered as there were two sets of the TEOSQ, two sets of PMCSQ-2, two sets of the SCM, and one demographic questionnaire. Explicit instructions were visible at the top of each survey and the participants were instructed to recall how they felt in recent team or individual tennis matches.

With this data set, two-way Mixed Analyses of Variance (ANOVA) and regression analyses were performed. There were statistically significant findings for the effect of setting on ego orientation, perceived ego climate, sport commitment, and match importance. Additionally, there were statistically significant results for a gender effect for perceived ego climate, perceived task climate, and sport commitment. Further, regression analyses revealed the perceived task climate to be most predictive of sport commitment in both team and individual tennis.

AN EXAMINATION OF MOTIVATIONAL, GOAL ACHIEVEMENT, AND SPORT COMMITMENT DIFFERENCES IN YOUTH TEAM AND INDIVIDUAL TENNIS POPULATIONS

by

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APPROVAL PAGE

This thesis has been approved by the following committee of the Faculty of The Graduate School at The University of North Carolina at Greensboro.

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CHAPTER I

INTRODUCTION

In youth sports there has been a steady increase in the number of children playing team sports. From 1990 to 1999, there was a 12.6% increase in the number of children engaging in youth team sports (Journal of Physical Education, 1999). There has been an increase in the number of young people engaging in individual sports such as tennis, with the United States Tennis Association (USTA) reporting that from 2003 to 2008 there was an 88% increase in sales of youth tennis racquets (2009). Research has been conducted on many aspects of motivation in individual sports. However, what happens when an individual sport is formatted into a team sport? Motivation of these young athletes is most likely influenced by this new team dynamic. Take tennis for example, which has historically been recognized as an individual sport. Many young people have now taken to playing team tennis.

Team tennis is not a new sport, it has existed for decades in high schools, colleges, and in country clubs, but it is relatively new to young adolescents who are first learning the game. Team tennis has now been developed for children as young as four years old, with modifications in the court size, net height, and scoring made to make the game easier for them to learn and play. Team tennis operates by having two teams compete against each other in a best of 5, 7, or 9 match formats, where each match win earns one point and the team with the most points at the end wins the match. Each player

only plays one singles or doubles match in a USTA team tennis match. However, in high school team tennis matches, players typically play in both a singles and doubles match.

Historically, tennis has been an individual sport in which players engage in singles tournament play against other individuals. In this individual format, winning a match progresses the player to the next round and thus closer to winning the tournament. This match type is the common way for top junior players to gain recognition through state, regional, and national rankings based on their age group. Additionally, these rankings and matches are used as a method of comparison in the collegiate tennis recruiting process. Research indicates that these rankings and seeding systems help to promote ego goal achievement orientations in junior tennis players as they promote social comparison among the players (Harwood & Swain, 1998).

Considerable research has been conducted on tennis players in relation to their motivation and goal achievement orientations (Balaguer, Duda, & Crespo, 1999; Crespo & Reid, 2007; Fry & Newton, 1993; Harwood & Swain, 1998; Hatzigeorgiadis & Biddle, 1999; Newton & Duda, 1993). However, little research has been conducted on motivation in team tennis. Therefore, current research related to individual tennis players must first be evaluated, so that hypotheses can be drawn with regard to team tennis motivational goal achievement orientations.

Many studies used the Task and Ego Orientation in Sport Questionnaire to assess which goal achievement orientations, task or ego, were dominant in tennis players (Balaguer, Duda, & Crespo, 1999; Fry & Newton, 1993; Harwood & Swain, 1998; Hatzigeorgiadis & Biddle, 1999; Newton & Duda, 1993). Newton and Duda (1993)

found that males thought their ego orientations would result in success in tennis, while females more often held task orientations and believed that effort was a reason for their success. Balaguer, Duda, and Crespo (1999) indicated that task orientations in players were positively correlated with more satisfaction with their level of play, while the inverse was found with players who were more ego orientated. Hatzigeorgiadis and Biddle (1999) used a sport adapted Intrinsic Motivation Inventory to assess the players' perceived competence in their abilities and found that those tennis players with low perceived competence and an ego orientation were prone to 'thoughts of escape.' Thoughts of escape were operationally defined as thoughts about being unhappy with the sport and/or quitting.

Previous studies have also used a Perceived Motivational Climate in Sport Questionnaire to assess to what extent the players find their motivational climate to be ego or task oriented (Balaguer, Duda, & Crespo, 1999; Calvo, Cervello, Iglesias, Jiménez, & Rosa, 2007; Fry & Newton, 1993; Kavussanu & Roberts, 1996). Kavussanu and Roberts (1996) indicated that a perceived task motivational climate in beginning college tennis classes was correlated with more enjoyment and lower tension, while perceptions of an ego climate were characterized by increased feelings of pressure and higher tension in the players. Fry and Newton (1993) found junior tennis players who perceived the climate to be highly ego-involving had negative attitudes about their fellow players, while those who perceived it as task oriented held more positive attitudes about their fellow players and teacher.

Calvo, Cervello, Iglesias, Jiménez, and Rosa (2007) indicated that where the environmental motivational climate and the players' dispositional orientation is concerned, whichever is stronger for the player will be the one that they adopt and use in play. That is, if the environmental factors are stronger for the player than their dispositional orientation, they will succumb to the environmental motivational profile rather than their dispositional profile. Harwood and Swain (1998) found that there existed a 'match value' that influenced to what degree task and/or ego orientations were present in the players in tournament style competition. 'Match value' refers to the extent to which the athlete places importance on their performance in that specific match. These researchers discovered both task and ego orientations increased with an increasing 'match value.'

Additionally, sport commitment has also been analyzed, through use of the Sport Commitment Model. Sport commitment is described as the desire and resolve to continue participation in a sport. Casper and Andrew (2008) surveyed recreational collegiate tennis players to examine differences in sport commitment between the populations. The results showed those who played college tennis reported higher levels of sport commitment, involvement opportunities, and social constraints, and lower levels of sport enjoyment, compared to the recreational players surveyed. Further, correlations can be drawn between sport commitment and self-determined motivational states. These findings are important as they help to demonstrate how sport commitment can represent motivation in a particular domain such as tennis (Zahariadis, Tsorbatzoudis, & Alexandris, 2006).

Purpose

The purpose of this research was to ascertain in which type of competitive environment, team tennis or individual tennis, players displayed high or low task and ego orientations and observed perceived high or low task and ego climates. Additionally, another purpose of this study was to explore differences in sport commitment among players between the different competitive contexts. Sport commitment was used to reflect the players' perceived motivation, meaning the thoughts and feelings they hold about the degree to which they will persist in the face of obstacles.

Through use of surveys, goal achievement orientation, perceived motivational climate and sport commitment scores were obtained. This information enabled a comparison of the goal achievement, perceived motivational climate, and sport commitment differences when junior tennis players participate in team and/or individual style tennis within the same sport. Hence, the influence of a team dynamic in an individual sport was explored.

Research Questions

The primary question sought to examine the difference between a team and individual tennis atmosphere on an individual player's sport commitment and goal achievement orientation. It was discovered in which competitive situations, team tennis or individual tennis, sport commitment was higher for the players. It was also determined which goal achievement orientations were predominant within each aforementioned competitive situation. This occurred on two scales as players can be high or low in both task and ego orientations. It was hypothesized that ego orientations would not be

significantly different between individual style tournaments and team tennis matches, while task orientations would be significantly different, with players displaying stronger task orientations in individual style tennis. These hypotheses were developed with the idea that in individual tennis the players' would need more task orientation to continue to participate, while the desire to win and use an ego orientation would not differ between the two competitive contexts. Further, based upon previous research, it was hypothesized that males would possess stronger ego orientations than the females, while females would report stronger task orientations than the males. With regard to sport commitment, it was hypothesized that the team aspect provides an added motivation for the players to perform and thus they would report a significantly higher sport commitment while engaging in team tennis. Lastly, it is also hypothesized that those who report using a stronger task orientation, in both team and individual tennis settings, would also report higher levels of sport commitment, when compared against ego-oriented players.

Secondary research questions were developed relative to the perceived motivational climate of the players. Players' responses occurred on two different scales, one for task climate and one for ego climate. Tests of the effect of setting and for gender differences were performed. Additionally, a secondary research question based on match importance was developed, wherein a context and gender effect was explored for these variables.

CHAPTER II

LITERATURE REVIEW

Overview of Constructs

Much of what is discussed in research on goal achievement and motivation comes from Nicholls' goal achievement theory (1989) and Deci and Ryan's theory of self-determination (1985). Nicholls' goal achievement theory outlines that the primary intent for individuals in achievement settings is to demonstrate ability. The way in which individuals do this occurs in two distinct goal states, known as task- and ego-involved goal states. An individual's disposition towards one goal state or the other is known as his or her goal achievement orientation. These two goal achievement orientations do not work as bi-polar opposites, but rather orthogonally, as individuals can be either high or low in each of the goal achievement orientations simultaneously.

A task orientation can be described as the desire to improve one's skills or elevate competence, and is measured through self evaluations. Therefore, with this goal achievement orientation, success is measured through mastery evaluations of their ability relative to their previous abilities. An ego orientation, on the other hand, revolves around the idea that success in a sport is measured through how one performs relative to others, in a norm-referenced manner. Thus, ability in a sport is measured through how an individual's performance exceeds the performance of others, especially when this is

achieved by exerting less effort (Nicholls, 1989). These orientation differences are important to understanding motivation as they lay the groundwork for what influences young athletes to strive for success. Studies examine the differences between task and ego orientated tennis players to gain a better perspective of their motivational dispositions, their feelings about their play, and their feelings about their satisfaction with the sport (Balaguer, Duda, & Crespo, 1999; Calvo, Cervello, Iglesias, Jiménez, & Rosa, 2007; Crespo & Reid, 2007; Fry & Newton, 1993; Harwood & Swain, 1998; Hatzigeorgiadis & Biddle, 1999; Kavussanu & Roberts, 1996; Newton & Duda, 1993).

Additionally, important to understanding motivation in sport is Deci and Ryan's theory of self-determination. The self-determination theory presumes that individuals have three innate needs, known as autonomy, competence, and relatedness (Deci &Ryan, 1985). It is believed that these three needs must be fulfilled for individuals through social contexts to aid their motivation, performance, and development. Thus, these three needs mediate the bridge between social factors and motivations. Further, self-determination theory describes three different types of motivations underpinning these needs, namely intrinsic, extrinsic, and amotivation.

Intrinsic motivation is described as the most self-determined source of motivation and refers to participation in an activity for the pleasure and enjoyment that the individual gains from participation. An individual who is intrinsically motivated will exert the most positive amount of effort, as he or she sees effort as a mediator for success and stronger positive feeling states. Extrinsic motivation comes from sources outside of the individual, and describes how individuals gain motivation from systems of rewards or

punishments. An individual who is extrinsically motivated will often still be motivated to demonstrate effort, but will be doing so for rewards secondary to the reward of the positive feeling state that intrinsically motivated individuals obtain. Finally, amotivation describes the least self-determined set of motivations, and refers to an activity in which an individual sees no correlation between his or her demonstration of effort and outcomes and thus views the activity as unimportant. An individual who is amotivated views success as highly unlikely and thus believes there is little use in exerting effort since he or she has no control over the outcome. Deci and Ryan propose that these motivations lie on a continuum with intrinsic motivation as the ideal, extrinsic as a secondary source, and amotivation describing the lack of motivation.

Furthermore, it is important to note that for intrinsic motivation to be present, individual perceived autonomy is necessary. This means that the individual must feel as though he or she is performing the task for himself or herself, and no one is controlling or compelling the involvement in the activity. This intrinsic state then leads to levels of perceived competence within the activity, wherein the individual feels as though he or she has the skills necessary to perform well. Through this perceived competence and other factors, commitment to the sport is affected.

Finally, there are many connections that can be drawn from viewing goal achievement and self-determination theories in combination. Ryan and Deci (1989) have explained that there are many ways in which their theories are complementary to Nicholls. For example, a task orientation is often viewed as facilitating an intrinsic motivation state for individuals, as the striving for achievement in the context is the

ultimate goal. In combination the theories propose that ego orientations be minimized so that a stronger task oriented state can be fostered, and ultimately a more intrinsic motivational profile. Ego orientations are desired to be minimized as they work in combination with a more extrinsic reward system, which leads to less positive cognitions of the self. Deci, Ryan, and Nicholls proposed a negative relationship between an ego state and intrinsic motivation, in which as one becomes more ego oriented he or she often does so for less intrinsic reasons. As a final example, when an individual's disposition is towards a more self-referenced state, (i.e. task orientation), it is more likely that his or her situational motivation is towards a self-determined state, as his or her participation in the activity is driven by more intrinsic than extrinsic means.

Group Differences in Goal Achievement Orientations and Perceived Motivational Climate

To fully understand the motivational differences and goal achievement orientations that are present in a youth team tennis match, it is important to understand the orientations that are found within a youth engaging in individual tennis play. Beginning with research on sex differences, Newton and Duda (1993) used a Task and Ego Orientation in Sport Questionnaire (TEOSQ) with both male and female adolescent tennis players and found both orientations present, to differing degrees. This study was conducted on 121 junior tennis players at a junior summer camp for tennis skill development in the Midwest United States, and the researchers found two goal-belief dimensions for females and one for males. First, it was discovered that female tennis players held a stronger task orientation than the males at the same camp. Additionally,

the authors found that for females, task orientations were positively correlated to the belief that effort was the reason for their success, whereas for the males, their ego orientations influenced beliefs that their abilities and capacity to creative a positive impression for the coaches to see, would result in success in tennis. This positive impression could be described as an extrinsic cause for demonstrating effort as the players reported pretending to like the coach and feeling as though success in impressing the coach would lead to further success in tennis. Finally, the authors expressed their belief that it seems as though more cognitive maturity and/or competition experience is needed before an athlete accepts that ability and hard work come before success, which is reflective of a task orientation.

Fry and Newton (2003) conducted research on 168 junior tennis players, 101 males and 67 females, from 10 programs in 5 states. They examined the motivational responses of young tennis players using Nicholls' goal achievement theory. This study used the TEOSQ to measure the players' goal achievement orientations, and the Perceived Motivational Climate in Sport Questionnaire-2 (PMCSQ-2; Newton et al., 2000) to assess the player's opinions of the motivational atmosphere in their tennis program (Fry & Newton, 2003). The authors used the PMCSQ-2 because of the way in which it assesses the degree to which the players perceive their tennis program's motivational climate to be task or ego oriented.

Fry and Newton (2003) found that task and ego orientations were predictors of players' attitudes towards sportpersonship, fellow players, and their instructors. In this study it was found that when the players reported perceiving a task oriented climate, they

also reported liking their tennis coach, enjoying playing under their coach's guidance, and a desire to have the same coach the next year. Further, these same players were also more likely to hold positive attitudes toward their fellow players, than those who perceived the tennis program to be an ego oriented motivational climate. These results are indicative of an intrinsic motivational self-determination profile. In the area of sportpersonship, the authors explained that those athletes who observed a high task oriented climate demonstrated more positive sportpersonlike attitudes, while perceptions of an ego oriented motivational climate were negatively correlated with the approval of sportpersonlike attitudes. From the results of this study, one may once again observe the benefits of a task orientation, contrasted against the negative effects of an ego orientation.

Additionally, the study by Fry and Newton (2003) is different than prior studies in that it was performed on children who were of low socioeconomic status and from urban areas. Prior studies were conducted at tennis clubs where there was a greater cost of participation. By using public tennis facilities, instead of private tennis clubs, a more complete understanding of motivational orientations across socioeconomic status may be obtained by analyzing this study in conjunction with other research.

Goal Achievement Orientation and Perceived Motivational Climate Benefits and Drawbacks

Moving now to research emphasizing the consequences of holding a task versus ego orientation, Hatzigeorgiadis and Biddle (1999) surveyed 92 tennis players in England and found that when analyzing task and ego orientations, those with low perceived competence and an ego orientation were prone to 'thoughts of escape', while those with

high competence were not. Thoughts of escape were operationally defined as thoughts about being unhappy with the sport and/or quitting. These thoughts of escape describe an amotivation self-determined state, wherein athletes no longer desires to engage in the activity as they see no correlation between their effort or competence and the results. In this study, the TEOSQ was used to measure the athlete's goal achievement orientations. In addition, the perceived competence of the players was measured using a sport adaptation of the Intrinsic Motivation Inventory (Ryan, 1982). Perceived competence is important to understand and measure in relation to goal achievement theory as correlations have been found between the two measures (Hatziegeorgiadis & Biddle, 1999). The authors explain that overall, task orientation, when coupled with low perceived competence levels, is more likely to be correlated with more adaptive and positive cognitions, than when ego orientations are coupled with the same low competence levels. Ego orientations on the other hand, when paired with low perceived competence, can lead to more maladaptive cognitions.

The authors point out that task-oriented athletes evaluate their competence by assessing their effort and their mastery levels on the task by comparing recent performances to past performances and practices (Hatzigeorgiadis & Biddle, 1999). For ego-oriented individuals, evaluations of competence are performance outcome based, and based upon a social comparison among their peers. Therefore, for ego-oriented athletes, when the athletes fail to accomplish their goals or when they lose a match, competence perceptions may decrease, which may result in an increase in maladaptive behavior

patterns, including temporary thoughts of escape from the task or task avoidance altogether, which once again is indicative of an amotivation state.

Balaguer, Duda, and Crespo (1999) performed a study of 219 competitive adolescent Spanish tennis players and assessed goal achievement orientations and motivational climates with the TEOSQ and PMCSQ. Results indicated that the players perceived the motivational climate as highly task-involved. Additional results indicated that ego orientations were negatively correlated with player's satisfaction with their results and level of play, while positive correlations were found between player's satisfaction and task orientations. Thus, the authors suggest that the situational tennis atmosphere should be more task shifted, so that players will be more self-referencing and mastery oriented in how they perceive their ability and evaluate their success. This type of atmosphere also fosters a more intrinsic motivational profile, wherein the player desires to engage in play for the simple reward of improving. Additionally, the authors contend that this type of environment should promote a more positive attitude about one's competitive record and current performance level. Finally, when the players were asked to describe their "ideal" coach, many of the athletes chose a coaching style that was indicative of a task climate rather than ego climate.

Kavussanu and Roberts (1996) also used the PMCSQ in assessing the perceived motivational climate in beginning college tennis classes. Results indicated that a perceived mastery motivational climate was correlated with effort, enjoyment, and low tension. In the beginning collegiate recreational course environment, where personal improvement was emphasized, the students reported higher enjoyment levels, exerting

more effort, and experiencing greater perceived competence. However, those who felt the class was performance based and stressed social comparison, felt increased pressure and experienced higher tension during the sport. These results are important as they again stress the way in which a task climate in tennis promotes more positive thought patterns, while a performance or ego based climate promotes more maladaptive cognitions. Hence, certain patterns emerge when tests of correlations between the perceived motivational climate and an individual's goal achievement orientation. Tests of correlations between these constructs for perceived task and perceived ego, and task and ego orientation are especially intriguing and can help demonstrate how a climate influences a disposition

Perceived Motivational Climates Influencing Goal Achievement Orientations

Finally, consideration is given to research outlining what influences holding a task or ego orientation and how these orientations are developed. In a narrative review, Crespo and Reid (2007) examine the motives for participation in tennis and the relevance of Nicholls' goal achievement theory in tennis. The authors conclude that those who adopt a task orientation have a stronger ability to create and continue using appropriate competence perceptions. The authors also conclude that task orientations are positively correlated with adolescent players' interest in tennis, their perceptions of the sport's significance in their life, and the amount of effort they exert while engaging in tennis; while ego oriented players have increased worry about their performance and impaired concentration while playing. Finally, they explain that those players who are high in task orientation, and perceive their tennis environment to be task-involving as well, have been

found less likely to describe psychological withdrawal and experience burn-out from tennis. These results are consistent with Deci and Ryan's self-determination theory as well. As has already been mentioned, task orientations are much more likely to foster a more intrinsic motivational profile, while an ego orientation can lead to extrinsic or even amotivation self-determined states.

In addition, Crespo and Reid (2007) explain that frequent interactions with coaches, parents, and peers act to cultivate the child's preferred goal achievement orientation. The authors suggest that a task-involving tennis environment reinforces effort, by emphasizing that players focus on the individual components of tennis, the intrinsic prize from learning and improving in tennis, and group collaboration and cohesiveness. Contrarily, ego-involved climates are described as putting emphasis on the results and outcomes of matches, while only appreciating the most talented players, promoting rivalry among the team members, and creating punishment systems based on mistakes. This type of system is indicative of an extrinsic motivational state wherein the athlete's goal is to attempt to avoid punishments. This analysis of task and ego climates in terms of a team practice climate is important to take note of, as it is a step closer towards analyzing motivational orientations in a team tennis dynamic.

Finally, Crespo and Reid (2007) offer advice on how to create more positive motivational orientations in tennis players. They advise the use of optimal challenges to match individual skill level and drill difficultly, developing stimulating and co-operative practices rather than competitive ones, allowing player leadership and autonomy in drill selection during practices, emphasizing the amount of effort demonstrated, and stressing

the importance of learning and developing of new skills. Further, they advise that coaches and parents help the players to set specific individual short-term performance goals that are realistic and measureable, wherein improvement and effort are calculable.

Furthermore, it should also be noted what influence situational effects have on a person's dispositional tendencies. Calvo, Cervello, Iglesias, Jiménez, and Rosa (2007) surveyed 151 junior tennis players in Spain to ascertain their goal achievement orientations and their perceptions of the motivational climates. The players were surveyed before and after a match in which the coach was able to speak with the players during the match, thus perhaps influencing their motivation and goal achievement orientation. Results indicated that players' perceptions of a coach-initiated learning climate were predictive of a task orientation during competition. These results indicate the effect that a coach can have on fostering the orientation of his or her players.

Calvo, Cervello, Iglesias, Jiménez, and Rosa (2007) also made an important point regarding the influence of a situational environment on a dispositional goal achievement orientation. The authors point out that when environmental cues are stronger than an individual's dispositional goal achievement orientation tendencies, it is likely that the individual will adopt the success criterion that is most dominant in that environment. Similarly, when an individual's dispositional goal achievement orientation is stronger than the situational one, the dispositional orientation should supersede the situational cues. This idea is important to understand, as it bridges the gap between the motivational disposition that the individual holds, and the climate which is taught by their coaches, parents, and peers. Additionally, one may apply these ideas to the study of situational

versus dispositional self-determined motivation states to better understand motivation profiles and the sources through which they are developed.

Harwood and Swain (1998) also point out the importance of situational factors in developing task and ego orientations. The authors surveyed 119 junior tennis players at the 1994 National Junior Tennis Championships in Great Britain using a TEOSQ and Match Context Questionnaire. The results indicated that there exists a 'match value' factor that influences what type of orientation a tennis player might hold. By match value, the authors mean the perceived importance of the match to the player. In this study, it was found that with a higher perceived 'match value,' came a stronger ego goal achievement orientation. However, a player's personal performance was also reported as a very important goal for these matches that were of high value. The authors believed both task and ego orientations becoming stronger were a result of the increasing value of the match causing both orientations to intensify. This notion leads one to conclude that the importance of a tennis match influences the amount and type of motivation that the player demonstrates and can be viewed from both intrinsic and extrinsic motivational contexts, with the reasons for wanting to win underpinning which motivational context is being utilized.

Finally, Harwood and Swain (1998) offer a suggestion for future hypotheses regarding the type of goal achievement orientation present in certain types of tennis matches. As their study was performed at an individual tournament, where advancing depends on winning matches, it is a prime example of the kind of goal achievement orientations that may be found within individual tournament style players. The authors

believe that achievement criteria such as age-group and area rankings, tournament seedings, sponsorships, and ratings help to influence or promote ego orientations, as they favor social comparison between the players. These organized systems for ranking tennis players based on how they perform relative to one another influences goal achievement orientations in young tennis players in specific situational and match type settings.

Sport Commitment

Sport commitment is defined as "a psychological construct representing the desire and resolve to continue sport participation" (Scanlan, Carpenter, Schmidt, Simons, & Keeler, 1993, p. 6). Evidence supports a correlation between intrinsic motivation and sport commitment and no correlation between extrinsic motivation and sport commitment (Zahariadis, Tsorbatzoudis, & Alexandris, 2006). Not surprisingly, a negative relationship was found between amotivation and sport commitment. The Sport Commitment Model (SCM) assesses to what degree individuals desire to continue participating in a sport using six subscales to test their commitment to their sport. Additionally, when perceived competence is increased, results from tests of the SCM tell us that sport enjoyment is increased. This increased enjoyment not only increases commitment to the activity, but also furthers the cycle wherein intrinsic motivation is increased and the desire to persist within the sport is augmented.

In research utilizing a sport commitment survey in the sport of tennis, Casper and Andrew (2008) surveyed 515 recreational tennis players and 245 collegiate tennis players to examine differences in sport commitment between the populations. The results indicated that those who played collegiate tennis reported higher levels of sport

commitment, involvement opportunities, and social constraints, and lower levels of sport enjoyment, compared to the recreational players. These findings illustrate that in some players with increased mastery of a sport, comes decreased enjoyment. The authors propose that to help counteract these effects, "interclub matches" could be used at individual clubs where players compete against each other with the focus on skill improvement and not on competition.

In additional research on the use of the SCM in tennis, Weiss, Kimmel, and Smith (2001) surveyed 198 junior tennis players between the ages of 10-18 on their sport commitment. In finding scores for each of the subscales of sport commitment, the authors found the highest ratings for the subscale of sport enjoyment. The authors defined sport enjoyment as "a positive affective response that reflects feelings of pleasure, liking, and fun." The lowest ratings were found for the social constraints subscale, which the authors explained corresponded to the perceived pressure that the players felt from adults and their peers to remain in the activity. Additionally, the authors found high correlations between sport enjoyment, sport commitment, and involvement opportunities, as all three were found to be higher than the subscales for social constraints and personal investments. As a result of their findings, two models to explain tennis commitment were established. Further, additional support of the use of the sport commitment model within junior tennis players was achieved.

In the SCM there is no separate construct for perceived competence. According to this model, perceived competence is encapsulated within the broader sport enjoyment construct. Results have indicated that perceived competence influences sport enjoyment

(Scanlan, Russell, Scanlan, & Magyar, 2009). Thus, in a methodology that uses an SCM, it would be redundant to also survey the perceived competence of the respondents.

Summary

To review, the literature suggests many positive results from holding a task orientation and an intrinsic motivational disposition for youth tennis players. These results include having greater interest in tennis, decreased 'thoughts of escape', increased approval of sportpersonship attitudes, and more positive cognitions when low competence is present. The results also indicate some negative and some neutral findings with regard to holding an ego orientation or an extrinsic or amotivation state in the same context. These include having increased worry about play, impaired concentration while playing, more 'thoughts of escape', greater chance of maladaptive cognitions when low competence is present, and simply an increase in measuring success based on norm-referenced standards. Furthermore, the results suggest many positive results from perceiving a task-involving climate, including the fostering of task orientations, so that players will be less likely to experience burnout or withdrawal from tennis. Additionally, gender differences were found with regard to task and ego orientations, with females being more task oriented than males. However, the literature has not yet investigated athletes' orientations and perceived climate when a team aspect is present in the same sport.

With an understanding of the theories related to task and ego goal achievement orientations, perceived motivation, and self-determined motivational states within individual tennis players one can see where further research was necessary. Research had

not yet examined what differences were present on goal achievement orientations and perceived motivational climates between team and individual contexts within the same sport. By surveying goal achievement orientation and perceived motivational climate differences between individual and team tennis settings in the same players, researchers are able to identify in which tennis match type, goal achievement orientations and perceived motivational climates predominated. Researchers were also able to further document gender differences that have been reported on goal achievement orientations within tennis. Additionally, through an analysis of athletes' sport commitment, researchers were able to identify in which competitive setting sport commitment and motivation was stronger and more intrinsically-based. Finally, sport commitment, goal achievement orientations, and perceived motivational climates were analyzed using regression, to check for correlations in the players' commitment and goal achievement orientations. Tests of correlations between sport commitment scores, goal achievement orientations, and perceived motivational climates were also performed. This information will better inform future researchers and youth sport practitioners on the motivational, sport commitment, and goal achievement orientation differences between individual and team sport settings.

CHAPTER III

METHODS

Participants

The participants for this research consisted of male and female junior tennis players, ages 13-18 years. This research was executed using tennis players instead of golfers, bowlers, or other individual athletes from team sport settings of low interdependence for sake of convenience sampling. Attempts were made to obtain a gender-balanced sample to provide for comparisons between males and females.

For this study, the participants were contacted through tennis clubs in Greensboro, Durham, Cary, and Raleigh, North Carolina. To qualify as a tournament style participant the participants must have engaged in at least one North Carolina, Southeast Region, or National tournament within the past year, as self-reported. This criterion was used to insure that the participants had recent exposure to tournament style play and could reflect on their recent experiences. Participants were not be required to have a ranking to participate. To qualify as a team tennis style participant the participants must have played on a tennis team within the past year. This could be in the form of a high school team tennis team or a United States Tennis Association team. This criterion was used to insure that the participants had recent exposure to team tennis play and could reflect on their recent experiences. Participants were excluded if they did not meet these criteria.

Thirty-one tennis coaches or club directors in the Greensboro, Durham, Raleigh, and Cary, North Carolina area were contacted in regards to having their athletes participate in the study. Five out of thirty one responded, for a 16%, and 5/5 (100%) agreed to let their athletes participate resulting in a total sample of 66 athletes. Sixteen of these 66 athletes had missing data points or did not engage regularly enough in team or individual tennis; therefore, their data was excluded resulting in a final sample of N=50 which was used for all analyses. Thus, participants included male (n=21) and female (n=29) adolescent tennis players between 13 and 18 years of age (M=15.08, SD=1.44). Thirteen of the participants came from a club in Cary (5 males, 8 females), seven from a club in Durham (5 males, 2 females), six from a club in Greensboro (2 males, 4 females), and eleven (3 males, 8 females) and thirteen (6 males, 7 females) from two different clubs in Raleigh. The mean for how often the participants played individual tennis tournaments was (M=2.26, SD=0.63), while the mean for how often the participants engaged in team tennis was (M=1.64, SD=0.92).

Measures

The method of data collection for this research was through surveys administered to participants at their respective tennis clubs. Three surveys were used, the Task and Ego in Sport Questionnaire (TEOSQ), the Sport Commitment Model Scale (SCM), and the Perceived Motivational Climate in Sport Questionnaire-2 (PMCSQ-2). All were adapted for play in tennis. In addition to these existing measures, select demographic data were obtained via self-report.

Demographics

Demographic information was obtained through use of a survey relative to the participant's age, gender, North Carolina ranking, Southeast ranking, and National ranking (See Appendix 1). If the participants did not have a ranking this did not exclude them from participating. Additionally, the participants were asked how often they engaged in singles tournament play and team tennis play in the form of scaled, close-ended questions. Further, the participants were asked to state which club they practiced at so that group differences between players from different clubs could be accounted for. The participants were also asked the following question, taken from the Intrinsic Motivation Inventory (Ryan, 1982), within the demographic survey, "It was important to me to do well in (individual tournament tennis matches/team tennis matches)." Participants respond with to what degree they agreed or disagreed with the previous statement for each competitive context (anchors: 1, strongly disagree, 5, strongly disagree)

Task and Ego Orientation

Goal achievement orientations were measured using the TEOSQ (Duda, 1989). The TEOSQ has been found to be a valid and reliable measure of goal achievement orientations in sport (Li, Harmer, Duncan, Duncan, Acock, & Yamamoto, 1998). The TEOSQ is made up of 13 items on five point scales where seven of the items refer to a task orientation and the remaining six items refer to an ego orientation. The participants are asked to rate themselves on a five-point Likert scale (anchors: 1, strongly disagree, 5, strongly agree), on each of the 13 items or statements (See Appendix 2A or Appendix

2B). Responses to these questions are calculated into scores for task orientation and ego orientation. Each individual has two goal state scores, one for task orientation and one for ego orientation. These scores were found by averaging the responses for task and ego questions separately. The task and ego subscales have both been found to be internally consistent (Duda, Olson, Templin, 1991; Li et al., 1998). Cronbach's alpha internal consistency coefficients have been reported to range from .71-.77 for the items evaluating a task orientation and .80-.87 for the items evaluating an ego orientation (Chi & Duda, 1995). The measure has also been found to be appropriate for the adolescent age (Li et al., 1998). This measure enables researchers to describe to what degree the player is high or low in both task and ego orientation in each competitive context. There was a TEOSQ administered with the participants instructed to recall how they felt in recent tournament style singles matches (Appendix 2A). There was also a TEOSQ administered with the participants instructed to recall how they felt in recent team tennis matches (Appendix 2B). In the current study, Cronbach alpha internal consistency coefficients were also acceptable for task and ego orientation subscales with both team tennis (α = .82 and .83, respectively) and individual tennis (α = .67 and .87, respectively) versions of the TEOSQ.

Perceived Motivational Climate in Sport Questionaire-2

The perceived motivational climate was measured using the PMCSQ-2 (Newton, Duda, Yin, 1999). The PMCSQ-2 has been found to be a valid and reliable tool for measuring a participant's perceptions of the motivational climate of their team or program. The measure contains 33 items, and is comprised of two higher-order scales (Task-involved and Ego-involved climates) with three subscales for each (Task:

Cooperative Learning, Effort/ Improvement, Important Role; Ego: Intra-Team Member Rivalry, Unequal Recognition, Punishment for Mistakes) (Newton et al., 1999). Both the task- and ego-involved scales showed adequate internal consistency, as Cronbach alpha internal consistency coefficients of .87 and .89, respectively, have been reported (Newton et al., 1999). Concurrent validity was also established for this measure (Newton et al., 1999). Additionally, the measure was found to be appropriate for use with an adolescent sample.

This measure allows researchers to ascertain data relative to how the participants felt the motivational climate in their individual and team tennis environments are task or ego oriented. There was a PMCSQ-2 administered with the participants instructed to recall how they felt in recent tournament style singles matches (Appendix 4A). There was also a PMCSQ-2 administered with the participants instructed to recall how they felt in recent team tennis matches (Appendix 4B). In the current study, Cronbach alpha internal consistency coefficients were also acceptable for perceived task and perceived ego climate subscales with both team tennis (α = .95 and .80, respectively) and individual tennis (α = .92 and .91, respectively) versions of the PMCSQ-2.

Sport Commitment Model Scale

Sport commitment was measured using the SCM (Scanlan, Carpenter, Schmidt, Simons, & Keeler, 1993). The SCM has been found to be a valid and reliable measure for evaluating a participants' desire to continue playing a sport (Scanlan et al., 1993). The instrument includes six subscales to assess areas related to the participants' commitment to their sport. These subscales include sport commitment and five

determinants of the participants' commitment (i.e. sport enjoyment, the attractiveness of involvement alternatives, personal investments, social constraints to continue participating, and the involvement opportunities afforded by continued participation).

Psychometric evaluation supports the use of the scale, the five determinants, and the number of items within each subscale (Scanlan, Carpenter, Schmidt, Simons, & Keeler, 1993). Additionally, the SCM has been found to be a valid and reliable measure for assessing sport commitment within youth sport (Scanlan et al., 1993). Cronbach alpha internal consistency coefficients have been reported for each subscale as sport commitment (.88), sport enjoyment (.90), social constraints (.87), personal investments (.77), and involvement opportunities (.83). Upon additional tests it was found that the involvement alternatives had only marginal consistency, and thus was be dropped from this survey (Scanlan, Simons, Carpenter, Schmidt, & Keeler, 1993). As evidence supports, only the remaining five subscales: sport commitment, sport enjoyment, social constraints, personal investments, and involvement opportunities, were used in this survey. This modified survey included three to four questions for each subscale (18 total questions) where the player's responded on a five-point Likert scale (anchors: 1, none or not at all, 5, very much or a lot; See Appendix 3A; Appendix 3B). Within each subscale averages were found that describe that subscale for each individual in each competitive context. The results of this survey allow researchers to ascertain how committed the participants' felt in each of the competitive contexts. This commitment was used as a reflection of the participants' motivation in each context. In the current study, Cronbach alpha internal consistency coefficients for team and individual tennis were found for each

subscale: sport commitment (α = .94 and .90, respectively), sport enjoyment (α = .96 and .92, respectively), social constraints (α = .35 and .59, respectively), personal investments (α = .73 and .55, respectively), and involvement opportunities (α = .90 and .41, respectively).

Procedures

Participants were recruited from tennis clubs in the Central North Carolina region. Once Institutional Review Board permission was obtained, contact was made with local clubs by the researcher through e-mail and in person. Initial contact was made with the head tennis professional at each club and then with the coaches who work with the tournament and team tennis players. Most clubs in the area have programs designed for players who engage in tournament and team tennis play on a regular basis, so participants were obtained from these programs. Since the majority of the participants were under the age of 18, parental consent and child assent was necessary. Parental consent and child assent was obtained by distributing consent forms to the participants to take home to obtain their parent's consent and give their assent. Once consent and assents were obtained, the surveys were distributed by the researcher to fill out immediately or to take home and return.

Surveys were distributed in the winter season, and took place, on average, one time at each club, during their practice. To accommodate programs that could not spare practice time to have their players fill out the surveys, some surveys were filled out at home and returned to the club, where they were then picked up by the researcher. A brief survey introduction was given by the researcher before the surveys were distributed. The

survey packet contained the 7 surveys in the following order: Individual TEOSQ, Team TEOSQ, Individual SCM, Team SCM, Individual PMCSQ-2, Team PMCSQ-2, Demographic survey. Clear instructions were visible at the top of every page and participants were instructed repeatedly to read each question carefully.

Seven surveys were administered. For participants with recent experience in both team tennis and tournament style matches there were two TEOSQ's, two SCM's, and two PMCSQ-2's administered. Instructions were visible at the top of the surveys and the questions asked specifically to reflect on the particular setting (team or individual). Surveys were collected and were kept separated by club.

Data Analysis

Once data was collected and organized, descriptive analyses were run to describe the sample characteristics. Tests for statistical significance were performed using PASW statistical software. With this data set two-way Mixed Analyses of Variance (ANOVA) and regression analyses were performed. Two 2 (Context: Team Tennis, Individual Tennis) x 2 (Sex: Male, Female) Mixed ANOVA's with ego orientation and task orientation as dependent variables were run separately. The setting was used as the within-subjects variable, while gender was the between-subjects variable. This allowed researchers to determine which goal achievement orientations were predominant within each competitive situation. It was hypothesized that ego orientations would not be significantly different between the competitive situations, while task orientations would be significantly different, with the players having higher task orientations in the individual tennis environment. This analysis also discovered if males possessed stronger

ego orientations and females possessed stronger task orientations as hypothesized. Similarly, two 2 (Context: Team Tennis, Individual Tennis) x 2 (Sex: Male, Female) Mixed ANOVA's with perceived ego climate and perceived task climate as dependent variables were conducted. Again, setting was used as the within-subjects variable, while gender was the between-subjects variable This allowed researchers to determine if the individual's perceived the team or individual tennis climate differently, with cross comparisons drawn relative to their gender.

Through use of a 2 (Context: Team Tennis, Individual Tennis) x 2 (Sex: Male, Female) Mixed ANOVA, with setting as the within-subjects variable and gender as the between-subjects variable it was determined, in which competitive situation, sport commitment was higher. Gender effects were also explored in this analysis. It was hypothesized that sport commitment would be higher in the team tennis environment. Two regression analyses were also performed to see if sport commitment scores from the SCM were predicted by task or ego orientations from the TEOSQ or perceived task or ego climates from PMCSQ-2. A stepwise regression method was used to see which of the aforementioned variables were predicted of the SCM results. It was hypothesized that sport commitment scores would be predicted by task orientations. Once again, sport commitment scores were used as a reflection of the participant's motivation within the sport. Finally, a 2 (Context: Team Tennis, Individual Tennis) x 2 (Sex: Male, Female) Mixed ANOVA compared match importance between the two contexts and by gender, as setting was the within-subjects variable and gender was the between-subjects variable.

CHAPTER IV

RESULTS

Task and Ego Orientation

Means with standard deviations on all TEOSQ measures are provided in Table 1. In individual tennis, the players were significantly more task oriented than ego oriented $t(49) = 3.59$, $p=.001$. In team tennis, once again, the players were significantly more task oriented than ego oriented $t(49) = 6.30$, $p=.000$. Two 2 (Context: Team Tennis, Individual Tennis) x 2 (Sex: Male, Female) Mixed ANOVA's were run for TEOSQ subscales of ego orientation and task orientation, with setting as the within-subjects variable and gender as the between-subjects variable. For ego orientation there was a significant effect of setting $F(1, 48) = 14.52$, $p=.000$, wherein the individual setting for was significantly higher in ego orientation than the team setting. No significant main effect for gender $F(1, 48) = .11$, $p=.743$ or an interaction between gender and setting was found for ego orientation $F(1, 48) = .123$, $p=.727$. No significant differences were found in regard to TEOSQ task orientations for either gender $F(1, 48) = .69$, $p=.409$ or setting $F(1, 48) = .03$, $p=.867$. There was also not a significant interaction effect between gender and setting for task orientation $F(1, 48) = .84$, $p=.363$.

Table 1

Mean and Range of Scores on the TEOSQ Across Setting and Gender

	Task M(SD)	Ego M(SD)
Individual Tennis		
Male	4.25 (0.57)	3.68 (0.85)
Female	4.18 (0.41)	3.80 (0.84)
Total	4.21 (0.48)	3.75 (0.84)
Range (Min-Max)	3.00-5.00	1.67-5.00
Team Tennis		
Male	4.29 (0.60)	3.21 (0.91)
Female	4.12 (0.63)	3.24 (0.88)
Total	4.19 (0.61)	3.23 (0.88)
Range (Min-Max)	2.86-5.00	1.67-5.00

Perceived Motivational Climate

Means with standard deviations on all PMCSQ-2 measures are provided in Table 2. In individual tennis, players reported significantly higher perceived task climates than ego climates $t(49) = 7.28$, $p=.000$. In team tennis, players also reported significantly higher perceived task climates than ego climates $t(49) = 9.00$, $p=.000$. Two 2 (Context: Team Tennis, Individual Tennis) x 2 (Sex: Male, Female) Mixed ANOVA's were run for PMCSQ subscales of perceived ego climate and perceived task climate, with setting as the within-subjects variable and gender as the between-subjects variable. Perceived ego climates showed a significant effect of setting $F(1, 48) = 4.10$, $p=.048$, wherein the individual setting for perceived ego climate was significantly higher than the team setting. Additionally, significant gender differences were found for perceived ego

climate $F(1, 48) = 5.72$, $p=.021$. Specifically, males reported significantly higher perceptions of ego climate than females. There was not a significant interaction effect between gender and setting for perceived ego climate $F(1, 48) = 1.21$, $p=.276$

When comparing across gender and settings, no significant differences were found in regard to perceived task climate for setting type $F(1, 48) = .22$, $p=.643$, but there was a significant main effect found for gender $F(1, 48) = 4.48$, $p=.040$. Specifically, females, in comparison to males, reported significantly higher perceptions of task climate. There was not a significant interaction effect between gender and setting for perceived task climate $F(1, 48) = .87$, $p=.356$.

Table 2

Mean and Range of Scores on the PMCSQ-2 Across Setting and Gender

Setting	Task M(SD)	Ego M(SD)
Individual Tennis		
Male	3.66 (0.72)	2.99 (0.79)
Female	4.12 (0.60)	2.50 (0.68)
Total	3.93 (0.69)	2.70 (0.76)
Range (Min-Max)	2.24-4.94	1.31-4.75
Team Tennis		
Male	3.80 (0.92)	2.69 (0.62)
Female	4.08 (0.63)	2.41 (0.52)
Total	3.96 (0.77)	2.53 (0.57)
Range (Min-Max)	1.00-5.00	1.19-3.88

Sport Commitment

Means with standard deviations on all subscales of the SCM and the Total SCM for both male and female participants, in team and individual tennis, are provided in Tables 3 and 4. Two 5 (Subscales: Sport Commitment, Sport Enjoyment, Involvement Opportunities, Social Constraints, Personal Investments) by 2 (Gender: Male, Female) Mixed ANOVA's were run, one for team tennis and one for individual tennis, with the subscales as the within-subjects variable and gender as the between-subjects variable. In individual tennis, there was a significant subscale effect, while no gender effect was present. Pairwise comparisons revealed the involvement opportunities subscale was significantly higher than all other subscales. Additionally, sport enjoyment and sport commitment were not significantly different from each other (p=.946), but were significantly greater than the two remaining variables social constraints and personal investments (p=.000 for all four comparisons). In team tennis, there was a significant subscale effect and a significant gender effect $F(1, 48) = 9.19$, p=.004. All subscales significantly differed from each other, with sport enjoyment being significantly higher than involvement opportunities (p=.010), which was significantly higher than sport commitment (p=.001), which was significantly higher than personal investments (p=.000), which was significantly higher than social constraints (p=.000).

Sport commitment data from the SCM was analyzed using a 2 (Context: Team Tennis, Individual Tennis) x 2 (Sex: Male, Female) Mixed ANOVA, where total SCM average score was used and the setting was used as the within-subjects variable, while gender was used as the between-subjects variable. When comparing total SCM scores,

significant differences were found for both gender $F(1, 48) = 13.32$, $p=.001$, and setting $F(1, 48) = 7.94$, $p=.007$. Specifically, total sport commitment was significantly higher for the individual setting than the team setting, and females reported significantly higher sport commitment than males. There was not a significant interaction effect between gender and setting $F(1, 48) = 2.05$, $p=.159$.

Table 3

Mean and Range of Scores on the Sport Commitment Model and Subscales Across Setting and Gender

	Individual		Team Tennis		Range
SCM Subscales	Males M(SD)	Females M(SD)	Males M(SD)	Females M(SD)	(Min-Max)
Sport Commitment	4.15 (0.99)	4.23 (0.81)	3.19 (1.18)	3.96 (0.88)	1.00-5.00
Sport Enjoyment	4.22 (0.92)	4.15 (0.77)	3.93 (0.92)	4.57 (0.85)	1.00-5.00
Involvement Opportunities	4.25 (0.54)	4.60 (0.47)	3.67 (1.10)	4.30 (0.86)	1.00-5.00
Social Constraints	1.89 (1.02)	2.19 (0.83)	1.76 (0.68)	1.82 (0.76)	1.00-5.00
Personal Investments	3.41 (0.85)	3.85 (0.84)	2.65 (1.07)	3.37 (0.92)	1.00-5.00

Table 4

Total SCM Means Across Gender and Setting

Variable	Males M(SD)	Females M(SD)	Total M(SD)
Individual Tennis SCM Total	3.69 (0.55)	3.90 (0.45)	3.81 (0.50)
Team Tennis SCM Total	3.13 (0.77)	3.71 (0.60)	3.47 (0.73)

Correlation and Regression Analyses

Correlations between goal achievement orientations, perceived motivational climates, and sport commitment were performed. In individual tennis, SCM total score was significantly positively correlated with task orientation, ego orientation, perceived task climate, and perceived ego climate. Task orientation also significantly positively correlated with perceived task climate and negatively correlated with perceived ego climate. Finally, perceived task climate was significantly negatively correlated with perceived ego climate. In team tennis, perceived task climate was significantly correlated with SCM total score, while perceived task climate was negatively correlated with perceived ego climate.

In order to compare which goal achievement orientations from the TEOSQ or perceived climates from the PMCSQ-2 were predictive of sport commitment in both individual and team contexts, regression was utilized. Two step-wise regression analyses were run. For the first analysis of individual SCM, results revealed that task climate and ego orientation were together predictive of the individual SCM data with respective β

levels of .322 and.277, respectively, R^2=.074, $F(1, 47) = 4.43$, p=.041. For the analysis relative to team SCM, results revealed perceived task climate predicted SCM R^2=.273, $F(1, 48) = 8.91$, p=.004.

Table 5

Individual Tennis Correlations

	Task Orientation	Ego Orientation	SCM Total	Perceived Task Climate	Perceived Ego Climate
Task Orientation	-	.150	.279*	.338*	-.365*
Ego Orientation		-	.333*	.173	-.029
SCM Total			-	.370**	-.325*
Perceived Task Climate				-	-.378**
Perceived Ego Climate					-

**Correlation is significant at the p<0.01 level (two-tailed)
*Correlation is significant at the p<0.05 level (two-tailed)

Table 6

Team Tennis Correlations

	Task Orientation	Ego Orientation	SCM Total	Perceived Task Climate	Perceived Ego Climate
Task Orientation	-	-.015	-.126	-.030	.201
Ego Orientation		-	.233	.276	-.139
SCM Total			-	.396**	-.208
Perceived Task Climate				-	-.386**
Perceived Ego Climate					-

**Correlation is significant at the p<0.01 level (two-tailed)
*Correlation is significant at the p<0.05 level (two-tailed)

Table 7

Individual and Team Tennis Setting Stepwise Regression Model Summaries

Model	*B*	*SE(B)*	*β*	R^2	*t*	*p*
Individual Tennis						
Individual PMCSQ-2 Task	.234	.096	.322	.212	2.452	.018
Individual TEOSQ Ego	.164	.078	.277	.212	2.104	.041
Team Tennis						
Team PMCSQ-2 Task	.374	.125	.396	.157	2.985	.004

Match Importance

As a part of the demographical questionnaire the participants responded to the question "It was important to me to do well in (individual tournament/team tennis) matches" on a 5 point Likert scale (anchors: 1, strongly disagree, 5, strongly agree). A 2 (Context: Team Tennis, Individual Tennis) x 2 (Sex: Male, Female) Mixed ANOVA with setting as the within-subjects variable and gender as the between-subjects variable was run to compare the participants' responses across these contexts. Results revealed a significant main effect for setting $F(1, 47) = 6.143$, $p=.017$, wherein importance was significantly higher in individual tennis matches than team tennis matches. No significant main effect for gender was found, although this approached significance $F(1, 47) = 2.92$, $p=.094$, nor was there a significant interaction between gender and setting $F(1, 47) = 1.12$, $p=.296$.

Table 8

Mean and Range of Scores on Match Importance Across Setting and Gender

Variable	Individual Tennis Importance M(SD)	Team Tennis Importance M(SD)
Males	4.65 (0.75)	4.05 (1.15)
Females	4.72 (0.45)	4.48 (0.74)
Total	4.69 (0.58)	4.30 (0.94)
Range (Min-Max)	2.00-5.00	1.00-5.00

CHAPTER V

DISCUSSION

The purpose of this study was to see how goal achievement orientations, perceived motivational climates, and sport commitment differed between individual and team tennis, as well as by gender. Additionally, tests of correlation and regression were used to evaluate how these constructs correlated with each other and whether task or ego goal orientations or perceived climates predicted sport commitment in each respective setting. The discussion section is organized beginning with goal achievement orientation results and moves to how those results compare with hypotheses and previous literature. In the same manner, perceived motivational climate, and sport commitment, and match importance results are presented and then compared with previous hypotheses and literature. Subsequently, limitations of this study are presented, followed by conclusions and future directions.

Goal Achievement Orientations

It was hypothesized that athlete ego orientation would not be significantly different between the two settings; however, ego orientation was found to be significantly higher in the individual setting than in the team setting. One possible explanation for these results could be in the way in which individual tennis is designed in a tournament fashion, where there is only one winner per age bracket. In this format, the participants

are compelled to feel more successful when they alone are the ones who can perform the skillset better than their opponents. It was also hypothesized that males would report significantly higher ego orientations than females. However, there were no gender differences found with regard to ego orientations, nor was there a significant interaction between gender and setting. This may have occurred as females and males differed similarly between the two competitive contexts in ego orientation, both aware that increased levels of attributes associated with an ego orientation were necessary for increasing likelihoods of success within individual tennis.

With regard to task orientation, it was hypothesized that task orientations would be significantly different between the two tennis settings, with individual tennis being higher than tournament tennis. However, there were no significant findings to support this hypothesis. It is important to note that the task orientations for both individual and team tennis were both significantly higher than the ego orientations for both individual and team tennis. This indicates that the players in the current sample were more task oriented than ego oriented in both contexts. It was also hypothesized that females would be significantly higher on task orientations; however, there were no gender differences found with regard to task orientations, nor was there a significant interaction between gender and tennis setting. This result may be because both males and females were relatively high on task orientation as these junior tennis players are strongly task oriented athletes. Thus, they are aware of the importance of having attributes related to a task orientation in order to be successful and improve within the sport of tennis.

In comparison with previous literature, Balaguer, Duda, and Crespo (1999) found task orientations to be higher than ego orientations in junior Spanish tennis players. This finding was replicated in the present study, across both the team and individual contexts. Additionally, Newton and Duda (1993) surveyed juniors at a U.S. tennis camp and found that task orientations were higher than ego orientations in both males and females. This finding was also replicated. Furthermore, Newton and Duda (1993) found task orientations to be significantly higher in females than males. This finding was not replicated in the present study. In fact, males actually had slightly higher task orientation scores than females in both the team and individual tennis settings.

Perceived Motivational Climate

With regard to perceived task and ego climates, a significant difference in ego climate across the two settings was found, wherein the participants rated their individual climate as higher on ego climate than their team environment. Additionally, a significant difference based on gender was found, wherein males reported significantly higher perceptions of an ego climate than females. Moving to perceived task climate, there was not a significant difference based upon setting found. However, there was a significant gender difference. Females were found to perceive a significantly greater task climate than the males. When males and females are combined, a setting effect was found for both perceived task and perceived ego climates, wherein individual tennis was rated significantly higher than team tennis in both perceived task and perceived ego climate. In comparison with previous literature, Balaguer, Duda, and Crespo (1999) found that junior Spanish tennis players perceived higher task oriented climates than ego oriented. This is

consistent with the findings of the present study, where this difference was observed across both team and individual tennis settings.

Additionally, when comparing goal achievement orientations to self-determined states and the reasons for participating, this present study aids our understanding. For example, it is believed that a task orientation facilitates an intrinsic motivational state. In this state, striving for achievement is the ultimate goal. On the other hand, it is believed ego orientations should be reduced, as they work with an external reward system for extrinsic means. As the results of the present study suggest, both the individual's orientation, and their situational climate was higher in perceived task climate than perceived ego climate in both team and individual settings. These results support the notion that mastery was the goal of the both the coaches and the participants in this sample and that they were driven by intrinsic means more so than extrinsic means in both setting contexts. Additionally, as ego orientations were significantly higher in the individual setting, one may argue that this is indicative of the tournament nature that the participations engage in during this tennis setting. In this setting, winning is a must to advance within the tournament and thus it seems greater ego orientation is necessary for the players in this setting. In the current sample, athletes were high on both task and ego orientations, suggesting that a healthy mix of both may be necessary to succeed within this tournament setting of junior tennis today.

Sport Commitment

It was hypothesized that sport commitment would be higher in the team tennis environment than the individual environment. This hypothesis was not supported. In

fact, the participants' sport commitment was significantly higher for athletes within the individual setting as compared to the team tennis environment. This finding, which is in contradiction to the hypothesis, may have occurred as a result of greater sport commitment being necessary to excel in the individual tennis setting. Additionally, as the participants engaged in individual tennis significantly more often than team tennis, this may have influenced their sport commitment with regards to each setting. Had the participants engaged in both settings equally, the sport commitment results may have been different. However, the present study is still unique in that it compares sport commitment between a team and individual setting within the same sport, as such there is little research with which to directly compare.

Although no specific hypothesis was made, there was a significant effect of gender. Females rated their sport commitment significantly higher than did the males. There was not a significant interaction between gender and setting for sport commitment. This finding may have been found because perhaps for those females that are participating in regular tennis play, greater sport commitment is necessary for them to continue engaging in tennis play. By the same token, perhaps males continue to participate in tennis, even when they have lower commitment to the sport.

In the present study, sport enjoyment was again found to be the highest factor in both males and females in the team setting, wherein it was significantly higher than all other factors. It was followed by involvement opportunities, sport commitment, personal investments, and finally social constraints. In the individual setting, sport enjoyment was rated similarly to sport commitment, both of which were significantly lower than

involvement opportunities, yet significantly higher than personal investments and social constraints. These findings suggest that the sport enjoyment, sport commitment, and involvement opportunities subscales emphasize factors that are pivotal to why juniors continue to participate in tennis, in both team and individual settings.

In examining the subscales of sport commitment, in a study of junior U.S. tennis players and their sport commitment, Weiss, Kimmel, and Smith (2001) also found the sport enjoyment subscale to be the highest of the five sport commitment subscales. Additionally, Weiss, Kimmel, and Smith's (2001) also found that sport enjoyment was highly correlated with sport commitment. The author's also found the social constraints subscale to have the lowest score. The present study found the same results for the social constraints subscale, as it was the significantly the lowest factor, across both team and individual contexts. These consistent findings suggest that the present study observed similar trends to that of the previous literature examining sport commitment within tennis players, this time in both team and individual contexts.

Perceived task climate and athletes' ego orientation predicted sport commitment in individual tennis. In team tennis, perceived task climate was the only significant predictor of sport commitment. Tests of correlations in team tennis demonstrated perceived task climate was significantly positively correlated with total sport commitment, while perceived task climate was negatively correlated with perceived ego climate. Therefore, it makes sense that perceived task orientations are predictive of sport commitment. Additionally, it seems as though in team tennis perceived task and

perceived ego climates move in contrasting directions. This may be indicative of coaches being unable to demonstrate both task and ego climates simultaneously.

In individual tennis, total sport commitment was significantly positively correlated with task orientation, ego orientation, and perceived task climate, while it was negatively correlated with perceived ego climate. Again, the findings for perceived task climate and ego orientations being predictive of sport commitment makes sense given their high correlations. Task orientation was also significantly positively correlated with perceived task climate and negatively correlated with perceived ego climate. Finally, perceived task climate was significantly negatively correlated with perceived ego climate. Again, now in the individual setting, it seems these coaches are also unable to demonstrate both a task and an ego climate simultaneously.

It was hypothesized that task orientations would be predictive of sport commitment, yet this hypothesis was not supported. Instead of the task orientations being predictive of the sport commitment, it was the perceived task climates that were predictive of sport commitment, in both team and individual tennis settings. As the correlation models demonstrate, perceived task climate was positively correlated with task orientation. As perceived task climate was more positively correlated with sport commitment than task orientation was, this could explain why perceived task climate was solely predictive of sport commitment, as opposed to task orientation being coupled with task climate or itself being a predictor.

In previous research, Balaguer, Duda, and Crespo (1999) found that in junior Spanish tennis players a perceived task orientation was significantly positively associated

with satisfaction with one's coach, their level of play, and match results. To extend the literature, in the present study, perceived task climate was found to be most predictive of sport commitment among tennis players in both the team and individual context. While this is a slightly different finding than the one presented by Balaguer, Duda, and Crespo (1999), the results of the present study are still consist with these author's study. The important connection between this previous literature and this present study is the effect the perceived task climate has on the tennis players' feelings with regard to their commitment to tennis and their satisfaction within the sport. As a byproduct of their results, Balaguer, Duda, and Crespo (1999) contended that tennis clubs should attempt to make their tennis environment more task orientated, so that players will be more self-referencing in how they evaluate their success and mastery oriented. As the results suggest, the clubs that participated in this survey were able to present a task climate for their players. This type of environment should have aided in the players' commitment to tennis, both in the individual and team context.

Match Importance

There was a significant effect of setting for match importance, wherein overall the participants rated individual tennis match importance higher than team tennis match importance. While this goes against the hypothesis that match importance would be rated higher in the team versus individual context, this result was not surprising. Specifically, it was anticipated that athletes' ratings of match importance would be highest for the setting in which they also reported the greatest level of sport commitment. As sport commitment was significantly higher for individual tennis than for team tennis, it was to

be expected that match importance would also be higher for individual tennis than team tennis.

If match importance as measured in the current study is similar to what others have referred to as match value, Harwood and Swain (1998) found that with a higher match value came a higher ego orientation. Additionally, Harwood and Swain (1998) found that with an increasing 'match value' both task and ego orientations were also higher. In the present study, match importance within team tennis was significantly positively correlated with task orientation but not team ego orientation within the team setting. Additionally, individual match importance was not significantly correlated with individual task nor individual ego orientation. Therefore, it seems as though the match importance variable is not similar to match value, or the correlations between the aforementioned variables are not the same in this present study. Instead, this present study suggests that match importance is more pivotal to task orientation development in team tennis than individual tennis. This may result from the notion that when playing team tennis matches multiple matches, played by different players, determine the outcome of the team match jointly, whereas with individual tennis, winning each match is pivotal to each player's success within the tournament. Thus, in team tennis matches, the adoption of a task orientation differs based on match importance, where in team tennis this match importance often fluctuates, while for individual tennis matches remains relatively stable.

Limitations

An important limitation of this present study lies in the demographic makeup of the sample. In order to help explain the contradictions one of the strongest factors is the fact that in this sample the participants engaged in individual tennis more often than team tennis. The mean for participation in individual tennis was significantly higher than the mean for team tennis. The participants engaged in individual tennis significantly more often than team tennis. However, this sample was still consistent with what can be found today within a sample of junior tennis, as individual tennis tournaments are still more prevalent within junior tennis. Thus, the external validity of this sample should not have been affected, as the sample is consistent with the junior tennis population within the U.S. Additionally, there were interesting gender effects with regard to participation, wherein the males did not significantly differ in their participation, while females did significantly differ in their participation. This difference in participation of females may have been influenced by the observation that the females perceived a significantly greater task climate than the males. These increased perceptions of a task climate may have influenced females to be more likely to participate in tennis more often than males.

Part of the reason for this disparity in participation between the two tennis contexts comes from the season in which the data was collected. As it was the winter season, the practices that were being conducted were primarily of the individual variety, as Spring USTA and high school team tennis had not yet begun. Thus, the participant pool was comprised more of those who engaged in individual tennis on a regular basis, and team tennis only on a semi-regular basis.

An additional sample limitation is simply that all of the participants were from the Central North Carolina region; results from clubs in different areas of the United States may have been different. Moreover, all of the participants came from clubs in which the structure of the practices was towards an individual tournament manner. As has already been said, the season affected these findings, if high school or USTA teams comprised of participants who engage in both team and individual play could have participated, the results may have differed. The number of participants may also have been a factor in the analyses as well, had the research been conduct in a season in which more juniors were engaging in tennis, a larger participant pool would have been available. With a larger sample size, some of the findings that were nearly significant, such as the gender effect in the match importance variable, may have become significant. While the results from this present study may be influenced by these participation differences, as the athletes still participated in both contexts, they were still able to respond to both sets of surveys. The important point to be made is that in spite of any qualms to be made relative to participation differences, there were still differences between what the athletes reported for the two competitive contexts.

Furthermore, there were some measurement limitations with regard to the surveys. Thirty-two of the participants filled out the surveys with a researcher present, while 18 of the participants filled out the surveys at home. When the researcher was present, questions were asked at every club regarding the survey measures; however, no questions were asked from the participants who took the surveys home to complete. This difference could have led the participants who took the surveys home to fill them out

incorrectly or differently from the participants who were able to ask questions and receive answers to their questions.

Additionally, another measurement limitation came from the SCM surveys. Under the personal investments subscale, the participants were asked how much of their own money they had invested in playing team or individual tennis this year. Many of the questions asked during data collection centered on this question where participants were not sure if their parents' money counted as their own money or if the question was referring only to the participants' money invested. The researcher gave the same answer to this question every time, which was "It is up to you whether you consider your parents money and investments as part of your investments." The participants' answers to this question certainly impacted their score within the personal investment subscale of the SCM, but should not have significantly affected their total SCM score. The Cronbach alpha internal consistency coefficients for this subscale were $\alpha = .73$ and $\alpha = .55$ in team and individual tennis respectively. This low Cronbach alpha level is most likely indicative of the unclear nature of this question within this subscale. However, as this question was presented in both the team and individual setting, the comparisons between the two settings should have been similarly affected.

Conclusions

This study is consistent with much of the literature on goal achievement orientations, perceived climate, sport commitment, and match value ratings within tennis. To highlight a few of these consistencies, task orientations and perceived task climate were both again found to be higher than ego orientations and sport enjoyment again was

rated as the highest, or one of the highest, factors of sport commitment. These results indicate the data collected through these measures appear consistent with common trends within junior tennis players on the same measures. Additionally, these results indicate that the sample was representative of junior tennis players in both the U.S. and abroad as previous studies that found similar results were performed in other areas of the U.S. and in other nations.

Overall, this sample reflects a positive view of junior tennis players in the Central N.C. area. Task orientations were high in male and females in individual and team tennis. Given the positive results indicative with holding a task orientation, it is good to see that this sample has such strong task orientations. Additionally, the perceived task climates were also quite high in this sample in individual and team contexts. Task orientations and perceived task orientations have been previously linked to greater interest in tennis, decreased 'thoughts of escape', and more positive cognitions when low competence is present. Ego orientations on the other hand have been linked to increased worry about play, more 'thoughts of escape', and impaired concentration while playing. The high task orientation and perceived climate findings suggests that the coaches of these players were able to demonstrate a task climate to the participants, and as such, the players' were more likely to adopt a task orientation and the positive benefits of having said orientation. Further, high sport commitment model scores were found overall and on subscales including sport commitment and sport enjoyment, in both team and individual tennis. This suggests that the participants are engaging in tennis because they are commitment to the sport and because they enjoy participating. Thus, they are more likely

to be participating in tennis for intrinsic means, rather than extrinsic means. Participating in tennis for these intrinsic means also would suggest that these players would be more likely to continue engaging in tennis through their adolescent years, and potentially continue playing into adulthood.

To summarize key results once more, although some results were not in the direction that had been anticipated, significant differences were found on a variety of measures between the two competitive tennis contexts, as well as by gender. There were statistically significant findings for the effect of setting on ego orientation, perceived ego climate, sport commitment, and match importance. Additionally, there were statistically significant results for a gender effect for perceived ego climate, perceived task climate, and sport commitment. Further, regression analyses revealed the perceived task climate to be predictive of sport commitment in team tennis and perceived task climate and ego orientation together predictive of sport commitment in individual tennis. The most pivotal of these findings are the significant results relative to the effect of setting. Although the TEOSQ and SCM are typically dispositional measures of goal achievement orientation and sport commitment, respectively, it is important to note that statistically significant findings for the effect of setting were found for one or more subscales or the scale itself for all three of these measures, in some capacity. These results demonstrate that there are distinct goal achievement, perceived climate, and sport commitment differences in junior tennis players when they engage in individual or team tennis, even within the same participant and the same sport.

As junior tennis players display different goal achievement orientations and sport commitment within what was thought of as one activity, it seems that team tennis is distinct from individual tennis, and thus the participants display different dispositions when they engage in these different activities. This should inform future research to begin comparing individual tennis to team tennis when examining goal achievement orientations, perceived motivational climate, and sport commitment within tennis, as there are distinct differences. At the very least, some measurement of what type of tennis the players are engaging in should be noted so that tests for correlations can be performed.

Furthermore, future research should seek to have a sample of participants, who engage in both team and individual tennis equally. As this group engaged in individual tennis more often than team tennis, the comparisons between the two settings were undoubtedly influenced. A study with equal proportions of participation in the two competitive contexts may illicit more precise results with regard to the participant's goal achievement orientations, perceived motivational climate, and sport commitment. Although obtaining a sample with equal balance of participation between the two settings might be difficult to accomplish as it is difficult to find a season in which participants are engaging in individual and team tennis equally at the same time. Participants tend to minimize engagement in tournaments during the high school team tennis season. High school team tennis also occurs in different seasons for males versus females, further complicating attempts to obtain a balanced sample for both genders simultaneously.

Additionally, research should be extended to other areas within the United States, and other nations, to test for these differences in goal achievement orientations, perceived motivational climate, and sport commitment in different cultures. Furthermore, research may be extended to other youth sports in which there is both a team and individual setting to examine if any differences exist between the settings within those sports. Sports such as bowling, golf, track and field, cross country, and swimming may be explored in this way.

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APPENDIX A

PARTICIPANTS' DEMOGRAPHICS

Directions: Please answer the following questions by filling in the blank or circling one of the given answer options.

1. Id #____
2. Age____
3. Gender_____
4. North Carolina Ranking # (if available)_____
5. Southeast Regional Ranking # (if available)_____
6. National Ranking # (if available) _____
7. Club you primarily practice at_____

8. Have you played on a team tennis team within the past 12 months?
   Yes No

If you answered yes to question #8, please answer questions 9, 10, and 11.

9. How often do you engage in team tennis matches?
   Once a week Once a month A few times per year Never
10. When was the last team tennis match you played in?
    1-7 days ago…….8-31 days ago…….1 month-6 months ago……7-12 months ago
11. Please respond to the following statement:
    It was important to me to do well in team tennis matches:
    Strongly Disagree Neutral Agree Strongly
    Disagree Agree

12. Have you played in an individual tournament within the past year?
    Yes No

If you answered yes to question #12, please answer questions 13, 14, and 15.

13. How often do you engage in individual tournament tennis matches?
    Once a week Once a month A few times per year Never
14. When was the last individual tournament you played in?
    1-7 days ago…….8-31 days ago…….1 month-6 months ago……7-12 months ago
15. Please respond to the following statement:
    It was important to me to do well in individual tournament tennis matches:
    Strongly Disagree Neutral Agree Strongly
    Disagree Agree

APPENDIX B

INDIVIDUAL TEOSQ

Consider the statement "I feel most successful in **individual tournament tennis** when…" and read each of the questions on the questionnaire below and indicate how much you personally agree with each statement by entering an appropriate score where:

1 = strongly disagree (SD, 2 = disagree (D), 3 = neutral (N), 4 = agree (A), 5 = strongly agree (SA)

	STRONGLY DISAGREE	DISAGREE	NEUTRAL	AGREE	STRONGLY AGREE
I feel most successful in **individual tournament tennis** when:					
1) I am the only one who can do the play or skill:	1	2	3	4	5
2) I learn a new skill and it makes me want to practice more:	1	2	3	4	5
3) I can do better than my friends:	1	2	3	4	5
4) The others cannot do as well as me:	1	2	3	4	5
5) I learn something that is fun to do:	1	2	3	4	5
6) Others mess up but I do not:	1	2	3	4	5
7) I learn a new skill by trying hard:	1	2	3	4	5
8) I work really hard:	1	2	3	4	5
9) I score the most points/goals/hits, etc.:	1	2	3	4	5
10) Something I learn makes me want to go practice more:	1	2	3	4	5

11) I am the best:	1	2	3	4	5
12) A skill I learn really feels right:	1	2	3	4	5
13) I do my very best:	1	2	3	4	5

APPENDIX C

TEAM TEOSQ

Consider the statement "I feel most successful in **team tennis** when…" and read each of the questions on the questionnaire below and indicate how much you personally agree with each statement by entering an appropriate score where:

1 = strongly disagree (SD), 2 = disagree (D), 3 = neutral (N), 4 = agree (A), 5 = strongly agree (SA)

	STRONGLY DISAGREE	DISAGREE	NEUTRAL	AGREE	STRONGLY AGREE
I feel most successful in **team tennis** when:					
1) I am the only one who can do the play or skill:	1	2	3	4	5
2) I learn a new skill and it makes me want to practice more:	1	2	3	4	5
3) I can do better than my friends:	1	2	3	4	5
4) The others cannot do as well as me:	1	2	3	4	5
5) I learn something that is fun to do:	1	2	3	4	5
6) Others mess up but I do not:	1	2	3	4	5
7) I learn a new skill by trying hard:	1	2	3	4	5
8) I work really hard:	1	2	3	4	5
9) I score the most points/goals/hits, etc.:	1	2	3	4	5
10) Something I learn makes me want to go practice more:	1	2	3	4	5

11) I am the best:	1	2	3	4	5
12) A skill I learn really feels right:	1	2	3	4	5
13) I do my very best:	1	2	3	4	5

APPENDIX D

INDIVIDUAL SCM

Read each question and the answer choices carefully as they are different for individual questions. Please circle one number per question.

Sport Commitment

1. How dedicated are you to playing individual tournament tennis?

Not at all dedicated	A little dedicated	Sort of dedicated	Dedicated	Very dedicated
1	2	3	4	5

2. How hard would it be for you to quit individual tournament tennis?

Not at all hard	A little hard	Sort of hard	Hard	Very Hard
1	2	3	4	5

3. How determined are you to keep playing individual tournament tennis?

Not at all determined	A little determined	Sort of determined	Determined	Very determined
1	2	3	4	5

4. What would you be willing to do to keep playing individual tournament tennis?

Nothing at all	A few things	Some things	Many things	Anything it takes
1	2	3	4	5

Sport Enjoyment

1. Do you *enjoy* playing individual tournament tennis this year?

Not at all	A little	Sort of	Pretty much	Very much
1	2	3	4	5

2. Are you *happy* playing individual tournament tennis this year?

Not at all	A little	Sort of	Pretty much	Very much
1	2	3	4	5

3. Do you have *fun* playing individual tournament tennis this year?

Not at all	A little	Sort of	Pretty much	Very much
1	2	3	4	5

4. Do you *like* playing individual tournament tennis this year?

Not at all	A little	Sort of	Pretty much	Very much
1	2	3	4	5

Involvement Opportunities

1. Would you miss being a individual tournament tennis player if you left the program?

Not at all	A little	Sort of	Pretty much	Very much
1	2	3	4	5

2. Would you miss your head coach if you left individual tournament tennis?

Not at all	A little	Sort of	Pretty much	Very much
1	2	3	4	5

3. Would you miss the good times you have had playing individual tournament tennis this season if you left the program?

Not at all	A little	Sort of	Pretty much	Very much
1	2	3	4	5

4. Would you miss your friends in individual tournament tennis if you left the program?

Not at all	A little	Sort of	Pretty much	Very much
1	2	3	4	5

Social Constraints

1. I feel it is necessary to play individual tournament tennis to be with my friends.

Not at all	A little	Sort of	Pretty much	Very much
1	2	3	4	5

2. I feel that I play individual tournament tennis to please others.

Not at all	A little	Sort of	Pretty much	Very much
1	2	3	4	5

3. I feel that I have to participate so others do not feel that I am a quitter.

Not at all	A little	Sort of	Pretty much	Very much
1	2	3	4	5

Personal Investments

1. How much of your *time* have you put into playing individual tournament tennis this year?

None	A little	Some	Pretty much	Very much
1	2	3	4	5

2. How much *effort* have you put into playing individual tournament tennis this year?

None	A little	Some	Pretty much	Very much
1	2	3	4	5

3. How much of *your own money* have you put into playing individual tournament tennis this year for things like entrance fees or equipment?

None	A little	Some	Pretty much	Very much
1	2	3	4	5

APPENDIX E

TEAM SCM

Read each question and the answer choices carefully as they are different for individual questions. Please circle one number per question.

Sport Commitment

5. How dedicated are you to playing team tennis?

Not at all dedicated	A little dedicated	Sort of dedicated	Dedicated	Very dedicated
1	2	3	4	5

6. How hard would it be for you to quit team tennis?

Not at all hard	A little hard	Sort of hard	Hard	Very Hard
1	2	3	4	5

7. How determined are you to keep playing team tennis?

Not at all determined	A little determined	Sort of determined	Determined	Very determined
1	2	3	4	5

8. What would you be willing to do to keep playing team tennis?

Nothing at all	A few things	Some things	Many things	Anything it takes
1	2	3	4	5

Sport Enjoyment

5. Do you *enjoy* playing team tennis this year?

Not at all	A little	Sort of	Pretty much	Very much
1	2	3	4	5

6. Are you *happy* playing team tennis this year?

Not at all	A little	Sort of	Pretty much	Very much
1	2	3	4	5

7. Do you have *fun* playing team tennis this year?

Not at all	A little	Sort of	Pretty much	Very much
1	2	3	4	5

8. Do you *like* playing team tennis this year?

Not at all	A little	Sort of	Pretty much	Very much
1	2	3	4	5

Involvement Opportunities

5. Would you miss being a team tennis player if you left the program?

Not at all	A little	Sort of	Pretty much	Very much
1	2	3	4	5

6. Would you miss your head coach if you left team tennis?

Not at all	A little	Sort of	Pretty much	Very much
1	2	3	4	5

7. Would you miss the good times you have had playing team tennis this season if you left the program?

Not at all	A little	Sort of	Pretty much	Very much
1	2	3	4	5

8. Would you miss your friends in team tennis if you left the program?

Not at all	A little	Sort of	Pretty much	Very much
1	2	3	4	5

Social Constraints

4. I feel it is necessary to play team tennis to be with my friends.

Not at all	A little	Sort of	Pretty much	Very much
1	2	3	4	5

5. I feel that I play team tennis to please others.

Not at all	A little	Sort of	Pretty much	Very much
1	2	3	4	5

6. I feel that I have to participate so others do not feel that I am a quitter.

Not at all	A little	Sort of	Pretty much	Very much
1	2	3	4	5

Personal Investments

4. How much of your *time* have you put into playing team tennis this year?

None	A little	Some	Pretty much	Very much
1	2	3	4	5

5. How much *effort* have you put into playing team tennis this year?

None	A little	Some	Pretty much	Very much
1	2	3	4	5

6. How much of *your own money* have you put into playing team tennis this year for things like entrance fees or equipment?

None	A little	Some	Pretty much	Very much
1	2	3	4	5

APPENDIX F

INDIVIDUAL PMCSQ-2

Directions: Please think about how it has felt to play in your **individual tennis environment** throughout this season. What is it usually like in this environment? Read the following statements carefully and respond to each in terms of how you view the typical atmosphere in this environment. Perceptions naturally vary from person to person, so be certain to take your time and answer as honestly as possible. Circle the number that best represents how you feel.

Note: Each item is responded to on a 5-point Likert-type scale (1 = strongly disagree; 5 = strongly agree).

	STRONGLY DISAGREE	DISAGREE	NEUTRAL	AGREE	STRONGLY AGREE
1. In this individual tennis environment, the coach wants us to try new skills.	1	2	3	4	5
2. In this individual tennis environment, the coach gets mad when a player makes a mistake.	1	2	3	4	5
3. In this individual tennis environment, the coach gives most of his or her attention to the stars.	1	2	3	4	5
4. In this individual tennis environment, each player contributes in some important way.	1	2	3	4	5
5. In this individual tennis environment, the coach believes that all of us are crucial to the success of the team.	1	2	3	4	5
6. In this individual tennis environment, the coach praises players only when they outplay team-mates.	1	2	3	4	5
7. In this individual tennis environment, the coach thinks only the starters contribute to the success of the team.	1	2	3	4	5
8. In this individual tennis environment, players feel	1	2	3	4	5

good when they try their best.					
9. In this individual tennis environment, players are taken out of a game for mistakes.	1	2	3	4	5
10. In this individual tennis environment, players at all skill levels have an important role on the tennis team.	1	2	3	4	5
11. In this individual tennis environment, players help each other learn.	1	2	3	4	5
12. In this individual tennis environment, players are encouraged to outplay the other players.	1	2	3	4	5
13. In this individual tennis environment, the coach has his or her own favorites.	1	2	3	4	5
14. In this individual tennis environment, the coach makes sure players improve on skills they're not good at.	1	2	3	4	5
15. In this individual tennis environment, the coach yells at players for messing up.	1	2	3	4	5
16. In this individual tennis environment, players feel successful when they improve.	1	2	3	4	5
17. In this individual tennis environment, only the players with the best `stats' get praise.	1	2	3	4	5
18. In this individual tennis environment, players are punished when they make a mistake.	1	2	3	4	5
19. In this individual tennis environment, each player has an important role.	1	2	3	4	5
20. In this individual tennis environment, trying hard is rewarded.	1	2	3	4	5
21. In this individual tennis environment, the coach encourages players to help each other.	1	2	3	4	5
22. In this individual tennis environment, the coach makes it clear who he or she thinks are the best players.	1	2	3	4	5
23. In this individual tennis environment, players are `psyched' when they do better than their teammates in a game.	1	2	3	4	5

24. In this individual tennis environment, if you want to play in a game you must be one of the best players.	1	2	3	4	5
25. In this individual tennis environment, the coach emphasizes always trying your best.	1	2	3	4	5
26. In this individual tennis environment, only the top players `get noticed' by the coach.	1	2	3	4	5
27. In this individual tennis environment, players are afraid to make mistakes.	1	2	3	4	5
28. In this individual tennis environment, players are encouraged to work on their weaknesses.	1	2	3	4	5
29. In this individual tennis environment, the coach favors some players more than others.	1	2	3	4	5
30. In this individual tennis environment, the focus is to improve each game/practice.	1	2	3	4	5
31. In this individual tennis environment, the players really `work together' as a team.	1	2	3	4	5
32. In this individual tennis environment, each player feels as if they are an important team member.	1	2	3	4	5
33. In this individual tennis environment, the players help each other to get better and excel.	1	2	3	4	5

APPENDIX G

TEAM PMCSQ-2

Directions: Please think about how it has felt to play on your **team tennis** team throughout this season. What is it usually like on your team? Read the following statements carefully and respond to each in terms of how you view the typical atmosphere on your team. Perceptions naturally vary from person to person, so be certain to take your time and answer as honestly as possible. Circle the number that best represents how you feel.

Note: Each item is responded to on a 5-point Likert-type scale (1 = strongly disagree; 5 = strongly agree).

	STRONGLY DISAGREE	DISAGREE	NEUTRAL	AGREE	STRONGLY AGREE
1. On this tennis team, the coach wants us to try new skills.	1	2	3	4	5
2. On this tennis team, the coach gets mad when a player makes a mistake.	1	2	3	4	5
3. On this tennis team, the coach gives most of his or her attention to the stars.	1	2	3	4	5
4. On this tennis team, each player contributes in some important way.	1	2	3	4	5
5. On this tennis team, the coach believes that all of us are crucial to the success of the team.	1	2	3	4	5
6. On this tennis team, the coach praises players only when they outplay team-mates.	1	2	3	4	5
7. On this tennis team, the coach thinks only the starters contribute to the success of the team.	1	2	3	4	5
8. On this tennis team, players feel good when they try their best.	1	2	3	4	5
9. On this tennis team, players are taken out of a	1	2	3	4	5

game for mistakes.	
10. On this tennis team, players at all skill levels have an important role on the tennis team.	1 2 3 4 5
11. On this tennis team, players help each other learn.	1 2 3 4 5
12. On this tennis team, players are encouraged to outplay the other players.	1 2 3 4 5
13. On this tennis team, the coach has his or her own favorites.	1 2 3 4 5
14. On this tennis team, the coach makes sure players improve on skills they're not good at.	1 2 3 4 5
15. On this tennis team, the coach yells at players for messing up.	1 2 3 4 5
16. On this tennis team, players feel successful when they improve.	1 2 3 4 5
17. On this tennis team, only the players with the best `stats' get praise.	1 2 3 4 5
18. On this tennis team, players are punished when they make a mistake.	1 2 3 4 5
19. On this tennis team, each player has an important role.	1 2 3 4 5
20. On this tennis team, trying hard is rewarded.	1 2 3 4 5
21. On this tennis team, the coach encourages players to help each other.	1 2 3 4 5
22. On this tennis team, the coach makes it clear who he or she thinks are the best players.	1 2 3 4 5
23. On this tennis team, players are `psyched' when they do better than their teammates in a game.	1 2 3 4 5
24. On this tennis team, if you want to play in a game you must be one of the best players.	1 2 3 4 5
25. On this tennis team, the coach emphasizes always trying your best.	1 2 3 4 5
26. On this tennis team, only the top players `get noticed' by the coach.	1 2 3 4 5
27. On this tennis team, players are afraid to make	1 2 3 4 5

mistakes.	
28. On this tennis team, players are encouraged to work on their weaknesses.	1 2 3 4 5
29. On this tennis team, the coach favors some players more than others.	1 2 3 4 5
30. On this tennis team, the focus is to improve each game/practice.	1 2 3 4 5
31. On this tennis team, the players really `work together' as a team.	1 2 3 4 5
32. On this tennis team, each player feels as if they are an important team member.	1 2 3 4 5
33. On this tennis team, the players help each other to get better and excel.	1 2 3 4 5

APPENDIX H

SURVEY PACKET TITLE PAGE

Survey Packet

Directions: The following packet contains 7 surveys about your motivational and commitment when you play in team and individual tennis matches. There will be 3 pairs of surveys that look nearly identical, except one will ask you to reflect on recent **team tennis matches**, while the other will ask you to reflect on recent **individual tournament style tennis matches**. Please pay careful attention to the wording of each question and make sure you are reflecting on the proper type of match when you answer each question. If you have any questions while filling out the surveys please raise your hand and I will come answer your question as best I can.

APPENDIX I

RECRUITMENT LETTER

Dear Tennis Club Director/Head Professional,

I am a graduate student studying sport and exercise psychology at the University of North Carolina at Greensboro. I am conducting a thesis as a formal part of my master's degree requirements. My study is examining motivation, goal achievement, and sport commitment of youth tennis players' ages 13-18 who engage in team and individual style tennis matches. Research in this area has largely been done on the individual nature of tennis, with no studies examining what effect the team atmosphere has on these constructs. The purpose of this study is to look at these constructs from both a team and individual perspective to examine similarities or differences. This information may provide future researchers and youth sport practitioners greater insight into the motivational, goal achievement, and sport commitment processes at work in these different competitive settings.

I am writing to request the participation of the players at your club in my study. If you agree to allow your athletes to participate I will come to your club at a time you deem appropriate. I will distribute consent forms for parents to sign and I will return in approximately one week to conduct the surveys with the willing participants. The questionnaires will take approximately 30 minutes to complete. Following the completion of my study, I will provide you with a written summary of the findings upon request.

If your club is interested in participating you can e-mail me at m_davis2@uncg.edu to set up a meeting time when I can distribute the consent forms.

Thank you for your cooperation,

Matthew E. Davis
KIN M.S. Candidate
Specializing in Sport and Exercise Psychology
The University of North Carolina at Greensboro
m_davis2@uncg.edu