THE PEER CREATED MOTIVATIONAL CLIMATE IN YOUTH SPORT AND ITS
RELATIONSHIP TO PSYCHOLOGICAL OUTCOMES AND INTENTION TO
CONTINUE IN SPORT AMONG MALE ADOLESCENTS

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Social agents in the youth sport domain (coaches, parents, and peers) play a crucial role in developing the motivational approaches of youth sport athletes. One theory which has been useful in explaining the important role of such social agents has been Achievement Goal Theory (Nicholls, 1989). Specifically, Achievement Goal Theory was used to delineate various peer behaviors as being task-involving (Ntoumanis & Vazou, 2005) and was used to predict subsequent relationships relationship between the task-involving motivational-climate created by teammates and athletes’ mastery goal orientations and self-esteem, sport competence, enjoyment, and intention to continue playing sport. Participants were 405 boys aged 12-15 years. Using structural equation modeling, an exploratory analysis and confirmatory analysis revealed that higher levels of task-involving behaviors from peers predicted mastery goal orientation. Participants with higher mastery goal orientation reported greater sport competence, self-esteem, and more enjoyment; enjoyment was the strongest predictor of intention to continue. These findings both emphasize the importance of peer relationships within sport on a variety of motivationally and psychologically salient outcomes and provide direction for the development of training programs targeted to create positive and healthy sport experiences.
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CHAPTER 1

INTRODUCTION

In the United States, more than 45 million children under the age of 18 years participate in sport programs (Ewing, Seefeldt, & Brown 1996), and, on average, children ages 3 to 12 years old spend more than 5 hours a week playing sports (Hofferth & Sandberg, 2001). Positive psychological characteristics, such as confidence, sportspersonship, motivation, and teamwork, are thought to result from sport participation, though there are a variety of factors within the sport environment that can help or hinder their development. One such factor is the motivational atmosphere (Keegan, Spray, Harwood & Lavallee, 2010) that results from the behaviors and messages of important social agents (e.g., teammates).

Research has focused primarily on the motivationally salient messages and behaviors communicated by adults, namely coaches and parents (e.g., Babkes & Weiss, 1999; Smith, Smoll, & Barnett, 1995). The unique ways that peers interact with one another and the significance of these interactions within a sport context, however, has only recently been examined (e.g., Keegan, Spray, Harwood & Lavallee, 2009, 2010; Ullrich-French & Smith, 2006; Vazou, Ntoumanis, Duda, 2006). Smith (2003) suggested that determining the potential influences of teammates was necessary if researchers were going to truly understand children’s motivation in sports. Moreover, differences exist in the way that peers, parents, and coaches influence children’s motivation (Keegan et al., 2009), so understanding the specific mechanisms of each is essential.
Vazou, Ntoumanis and Duda (2005) interviewed boys and girls 12 and 16 years old to understand peers’ motivationally-relevant behaviors. They identified eleven dimensions that contributed to the peer-influenced motivational atmosphere:
improvement (encouraging and providing feedback to teammates to improve), equal treatment (all athletes given an important role on the team and that all athletes on the team are treated and treat their teammates in a non-preferential way), relatedness support (the fostering and facilitation of the feeling of belonging and being part of the group), cooperation (helping teammates improve their weaknesses through teamwork), effort (the extent to which athletes emphasize to their teammates the importance of exerting effort and trying their hardest), intra-team competition (whether or not teammates strive to outperform one another and whether comparisons are made between teammates), intra-team conflict (negative and unsupportive behaviors exhibited by teammates), normative ability (the emphasis on displaying normative ability and the preference for the most competent athletes), autonomy support (relates to whether athletes evaluate that their input in decision-making is appreciated by the team), mistakes (refers to how teammates might react if an athlete makes a mistake) and evaluation of competence (the criteria that athletes use to evaluate their teammates’ competence). Similarly, Keegan et al. (2009, 2010), through interviews with boys and girls ages 7 to 18 years old, found that peers influence motivation through collaborative behaviors (e.g., building confidence in each other), competitive behaviors (e.g., fostering rivalry), evaluative communication (e.g., offering criticism and praise), altruistic behaviors (e.g., offering emotional support) and social relationships (e.g., friendship).
These studies (Vazou et al., 2005; Keegan et al., 2009; Keegan et al., 2010) identify the specific behaviors and interactions that contribute to the motivational atmosphere, suggesting that peers influence each other’s motivation by focusing on effort, promoting competition, and being supportive, collaborative, and caring. Although identifying what peers view as motivating is an important first step for understanding teammates’ potential influences, research still is needed to examine the relationship between motivational factors in the environment and the development of one’s dispositional motivation. That is to say, simply understanding and describing those factors that influence motivation neglects the process through which environmental influences may define actual behavior. Achievement goal theory (AGT; Nicholls, 1989) provides a framework for understanding how motivational agents, namely peers, in children’s sport environments may contribute to the development of their goal directed behaviors in sport.

Achievement goal theory posits that individuals’ goal directed behaviors are determined by the motivational environment to which they are exposed and their own goal orientation (a dispositional approach to adopt a specific goal) (Nicholls, 1989; Ames, 1992). In terms of AGT, it is the messages, behaviors, and values of the social agents that determine the motivational environment, which has been referred to as the motivational climate. Within sport, Roberts, Treasure, and Conroy (2007) and others (White, 1996) have defined the motivational climate along two dimensions: task-involving (encouraging effort, task mastery, and cooperation) or ego-involving (encouraging normative comparison and intra-team competition). Recent research has
classified the way in which teammates behave toward one another, what they believe to be true, and what they express to each other as ego-involving, task involving, or both (Vazou et al., 2005; Ntoumanis & Vazou, 2005). Specifically, the factors of improvement, cooperation, equal treatment, relatedness support, and effort appeared to represent a task-involving motivational climate, whereas mistakes, autonomy support, and evaluation of competence were all dimensions that, depending upon the messages and behaviors of teammates, could be evaluated as belonging to a task-involving or an ego-involving motivational climate. Finally, intra-team competition, normative ability, and intra-team conflict would relate more to an ego-involving motivational climate.

AGT suggests that over time and repeated exposure, the achievement messages from the motivational climate will be internalized and result in the development of specific goal orientations for each athlete. These goal orientations focus on the demonstration of competence or the avoidance of incompetence as well as improvement (Nicholls, 1989), and can be classified along the two dimensions used to describe the motivational climate: mastery (sometimes referred to as task) and ego. Mastery goal orientations are based primarily on personal improvement, task mastery, and the exhibition of maximum effort (Nicholls, 1989). In contrast, ego goal orientations exist when athletes evaluate their competence normatively and appraise their abilities in regards to how others perform.

In general, research has supported the connection between motivational climates and the development of goal orientations (Boyce, Gano-Overway, & Campbell, 2009; Harwood & Swain, 2001; Seifriz, Duda, & Chi, 1992), demonstrating that task-involving
environments are associated with, and may cause the development of, mastery goal orientations and, correspondingly, that ego-involving environments are related to ego goal orientations. With respect to sport environments, only recently have the potential influences of peer-created climates been studied (Atkins, Johnson, Force, & Petrie, 2011; Ntoumanis & Vazou, 2006; Smith, Balaguer, & Duda, 2006; Vazou, Ntoumanis, & Duda, 2006). For example, athletes, aged 9 to 12 years, who perceived the motivational climate as being more task-involving (i.e., defined through friendship, less conflict, and peer acceptance) were characterized as having mastery goal orientations more so than those athletes who perceived the climate to be more ego-involving (Smith, Balaguer, & Duda, 2006). With a sample of female athletes aged 10-14 years, Atkins, Johnson, Force, and Petrie (2011) also examined the relationship of the peer climate (as defined by positive friendship behaviors, such as companionship and supportiveness, and an emphasis on improvement, relatedness support, and effort) to goal orientation and found results consistent with Smith et al. None of these studies, however, directly measured a peer-created task-involving environment (Ntoumanis & Vazou, 2005). Rather they defined the environment indirectly through certain peer behaviors, such as positive friendship and peer acceptance, using them as a proxy for the motivational climate. A next step in research on peer influences would be to directly measure the peer-created motivational climate and examine its relationship to goal orientations and other salient psychological outcomes, as is supported by achievement goal theory (Nicholls, 1989).

AGT (Nicholls, 1989) suggests that task-involving environments, where effort and mastery are encouraged and athletes are supported, will lead individuals to take a
healthier and more intrinsically motivated approach towards achievement, that is, develop a mastery goal-orientation. What is not well understood is the relative influence of the motivational environment and the individual’s dispositional goal orientation on positive psychological outcomes. Both mastery goal-orientations and task-involving environments have been associated with a variety of positive psychological outcomes including, but not limited to enjoyment in sport (Smith, Balaguer & Duda, 2006; Theeboom, De Knop, & Weiss, 1995; Fox et al., 1994), self-esteem (Reinboth & Duda, 2004; Yoo, 1999; Kavussanu & Harnisch, 2000), and sport competence (Vlachopoulos & Biddle, 1997; Ullrich-French & Smith, 2006; Kavussanu & Harnisch, 2000). Given similar relationships between both mastery goal-orientation and task involving motivational climates and positive psychological outcomes, it is not clear the extent to which each contributes to the development of such outcomes and whether these contributions are direct or indirect. Consequently, understanding the extent to which goal orientation mediates the relationship between the motivational climate and such positive outcomes, as is suggested by AGT, is necessary.

Two studies to date have looked at the potential mediating role of goal orientation in the relationship between the motivational climate and positive outcomes. Cury, Biddle, Famose, and Goudas (1996), in a sample of adolescent girls, showed that mastery-oriented goals mediated the effects of task-involving climate perceptions. Similarly, using a sample of female athletes aged 10 to 14 years, Atkins et al. (2011) found that supportive environments created by parents and peers were related positively to a mastery goal-orientation, which in turn, was associated directly with higher levels of self-esteem, sport
competence, and enjoyment in sport; the supportive environments, however, were not directly related to these outcomes, but rather had indirect effects through goal orientation. These studies provide initial support for the idea that supportive environments may influence adolescents’ goal orientations and these dispositions likely lead to positive psychological outcomes. However, these two studies were limited by sample demographics (i.e., examined only girls), the manner in which the motivational climate was operationalized, and the psychological outcomes suggested to result from the girls’ goal orientation, so additional research is needed to further explore these potential relationships.

Increased self-esteem, feelings of enjoyment in sport, and increased perceptions of being competent in sport have been related to continued sport participation (Fox et al., 1994; Ewing & Seefeldt, 1996; Slutzky & Simpkins, 2009; Weiss & Chaumeton, 1992). For example, in a sample of male and female athletes aged 10 to 14 years, Ullrich-French and Smith (2009) revealed that greater perceived competence predicted whether or not athletes continued to play their sport. With self-esteem, it also has been associated with continued sport participation (e.g., Bowker, 2006; Slutzky & Simpkins, 2009), though research suggests the direction of the relationship may be from participation to higher levels of esteem. Few studies have actually examined this relationship in reverse. Given that this relationship has not been fully examined, and the plausibility that self-esteem may drive individuals’ determination to continue in sport (Kang, 2004), determining the extent to which self-esteem serves as an antecedent to continuing to participate in sport seems warranted. Additionally, enjoyment has been identified as a primary predictor of
children’s and adolescents’ continuation in sport; when kids are having fun, they want to stay involved (Ewing & Seefeldt, 1996). Sport competence may influence self-esteem directly, so accounting for this relationship will be important as well (Harter, 1982; 1983).

Atkins et al. (2011) examined the relationship of these psychological outcomes to girls’ intention to continue participating in sport, so some research has tested them simultaneously, albeit only with female adolescents. In their study, the researchers found that only enjoyment was related to the girls’ intention to continue sport; unexpectedly neither sport competence nor self-esteem played a role. They attributed their findings to the fact that they had included only girls in their sample and that female adolescents experiences and expectations in relation to sport and middle school may be different than their male counterparts. Specifically, they suggested that boys, in comparison to girls, may be more likely to persist in sports when they have high perceptions of their ability and sport competence (Reinboth & Duda, 2004), and that boys tend to place a higher value on ability and doing well in sports than girls do (Fredricks & Eccles, 2002). As such, they suggested that the role of sport competence and self-esteem may be more important in predicting continuation for boys than girls. Consequently, these relationships will be examined within a sample of male athletes to determine if Atkins et al.’s explanations are empirically supported. Further, given that the number of sedentary and obese children is growing at an alarming rate (Ogden et al., 2006), determining which psychological factors are related to staying physically active and involved, such as through sports, also is a health imperative and worthy of study.
In the current study, self-esteem, sport competence, and enjoyment were examined in relation to how the peer-created motivational climate and adolescents’ goal orientations may be associated with their intention to continue participating in sport. Although examining adolescents’ behavioral intention to continue participating may not be as ideal as studying their actual continuation in sport over time, behavioral intent is typically a strong predictor of behavior (Ajzen, 1985) and has been used previously as a means of assessing continuation in sport (Le Bars, Gernigon, & Ninot, 2009). Moreover, in a longitudinal study of children aged 12-14 years, Hagger, Chatzisarantis, Biddle, and Orbell (2001) found intention accounted for 34% of the variance in continuation. Thus, in the current study I extended the work of Atkins et al. (2011) by examining the relationship of the peer-created task-involving motivational climate to male adolescents’ mastery goal orientation, and the subsequent association of goal orientation with self-esteem, sport competence, enjoyment in sport, and ultimately, intention to continue playing their sport in a large sample of male adolescents. Specifically, I hypothesized that (a) a Task-Involving Peer Created Motivational Climate would be related positively to Mastery Goal Orientation, (b) Mastery Goal Orientation would be related positively to Self-Esteem, Sport Competence, and Enjoyment, and (c) Self-Esteem, Sport Competence, and Enjoyment in Sport would be related positively to Intention to Continue in sport. An alternative pathway also was proposed to account for the potential direct relationship from sport competence to self-esteem.
CHAPTER 2

METHOD\(^1\)

Participants

Sample A – Exploratory Data Set

Participants were 205 eighth grade boys drawn from six different middle schools located within the same suburban school district in the southwestern United States. They were drawn from their athletic period, which is a physical education class taken by boys who are participating in one or more of the schools’ sports programs during that semester. Their mean age was 13.8 years (SD = 0.55); 27.8% (n = 57) were 13 years old, 64.9% (n = 133) were 14, and 6.3% (n = 13) were 15. Participants identified themselves as “A” (n = 90, 46.6%), “B” (n = 93; 48.2%), and “C” (n = 10; 5.2%) students. The race/ethnicity of the sample was: 54.1% Caucasian/White (n = 111), 11.2% African-American/Black (n = 23), 23.9% Hispanic/Latino (n = 49), 2.0% Asian-American/Pacific Islander (n = 4), and 8.8% Other/Biracial/Multiracial (n = 18).

Concerning the sports in which the boys participated (they could list more than one), football was the most popular (61.5%; n = 126), followed by track (41.0%, n = 84), and basketball (36.1%, n = 74). They also indicated which of these sports they considered their “main sport” (i.e., the sport that they perceived to be most important to them):

\(^1\) This study was performed in collaboration with a research team that included Dustin Johnson and Erica Force. Large sections of this chapter were co-authored by the team.
40.5% (n = 83) reported football, 14.6% (n = 30) basketball, 10.7% (n = 23) track, 10.7%
(n = 23) soccer, 10.7% (n = 22) baseball, 3.4% (n = 7) golf, 0.5% (n = 1) hockey, and
1.0% (n = 2) swimming; 6.8% (n = 14) indicated that their main sport was “other.”
Regarding whether the boys selected as their “main sport” a team or an individual sport,
89% of the boys participated in team sports, such as basketball, football, soccer, hockey,
track, lacrosse, and baseball. The majority of the boys (n = 130; 63%) reported playing
two or more sports (M = 2.2). In rating their ability in their main sport relative to their
peers, 14 participants (6.8%) said they were less skilled than most, 69 (33.7%) reported
being average, and the remaining 122 (59.5%) said they were more skilled than most.
Sixty-one (29.7%) indicated that they were presently playing their main sport,
whereas 130 (63.4%) indicated being in the offseason training for their main sport; 14
(6.8%) did not respond. In terms of their playing status on their main sport team, 66.8%
(n = 137) said that they were starters or played regularly in competition, whereas 33.2%
(n = 68) reported being a substitute. Regarding the competitive level of their main sport,
22.9% (n = 47) said they played in a select league, 60.0% (n = 123) in a school league,
and 12.2% (n = 25) in a recreational league. Regarding winning, 46.8% (n = 96) of the
boys stated that they won more than they lost when playing their main sport, as opposed
to 29.3% (n = 60) who reported losing more than winning; 23.9% (n = 49) reported
winning as much as losing. In rating their intent to drop out of their main sport in the
next three years (from 1- not at all, to 7- absolutely), the boys indicated that they
intended to keep playing (M = 2.16; SD = 1.57). In rating their determination to continue
in their main sport (1- not at all, to 7- absolutely), the boys reported a high level of intent to continue ($M = 5.79; SD = 1.63$).

Sample B - Confirmatory Data Set

Participants were 200 eighth grade boys who were drawn from four of the middle schools ($n = 181$) in the same school district as Sample A (during the subsequent year so no participants in Sample A could have been included in Sample B), as well as from a middle school in Colorado ($n = 19$). As was the case with Sample A, they were solicited from their athletic period. Their mean age was 13.4 years ($SD = 0.52$); 0.5% ($n = 1$) was 12 years old, 27.8% ($n = 57$) were 13, 64.9% ($n = 133$) were 14, and 6.3% ($n = 13$) were 15. Participants identified themselves as “A” ($n= 98, 49.0%$), “B” ($n= 85; 42.5%$), and “C” ($n= 9; 4.5%$) students. The race/ethnicity of the sample was: 55.5% Caucasian/White ($n = 111$), 16.0% African-American/Black ($n = 32$), 22.5% Hispanic/Latino ($n = 45$), 4.5% Asian-American/Pacific Islander ($n = 9$), and 1.5% Other/Biracial/Multiracial ($n = 3$).

Concerning the sports in which the boys participated, football again was the most popular (64.5%; $n = 129$), followed by basketball (55.5%, $n = 111$), and track (40.5%, $n = 81$). For their main sport (i.e., the sport that they perceived to be most important to them), 41.5% ($n = 83$) played football, 23% ($n = 46$) basketball, 23% ($n = 46$) baseball, 7.5% ($n = 15$) soccer, 4.0% ($n = 8$) track, 2.0% ($n = 4$) golf, 0.5% ($n = 1$) hockey, and 0.5% ($n = 1$) swimming; 5.0% ($n = 10$) indicated that their main sport was “other.”

Regarding whether the boys selected as their “main sport” a team or an individual sport,

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2 The small sample from Colorado was used because it was available and using these participants ensured that I would reach a minimum of 200 participants.
91% of the boys participated in team sports. Again, the majority of the boys \((n = 147; 74\%)\) reported playing two or more sports \((M = 2.6)\). In rating their ability in their main sport relative to their peers, 8 participants \((4.0\%)\) said they were less skilled than most, 63 \((31.5\%)\) reported being average, and the remaining 129 \((64.4\%)\) said they were more skilled than most.

Fifty-eight \((29\%)\) indicated that they were presently playing their main sport, whereas 123 \((61.5\%)\) indicated being in offseason training for their main sport; 19 \((9.5\%)\) did not respond. In terms of their playing status on their main sport team, 63.1\% \((n = 125)\) said that they were starters or played regularly in competition, whereas 26.9\% \((n = 75)\) reported being a substitute. Regarding the competitive level of their main sport, 39.4\% \((n = 78)\) said they played in a select league, 69.8\% \((n = 139)\) in a school league, and 25.3\% \((n = 50)\) in a recreational league. Regarding winning, 50.8\% \((n = 100)\) of the boys stated that they won more than they lost when playing their main sport, as opposed to 31.5\% \((n = 62)\) who reported losing more than winning; 18.7\% \((n = 38)\) reported winning as much as losing. In rating their intent to drop out of their main sport in the next three years \((from 1- not at all, to 7- absolutely)\), the boys indicated that they intended to keep playing \((M = 1.93; SD = 1.40)\). In rating their determination to continue in their main sport \((1- not at all, to 7- absolutely)\), the boys reported a strong intent to continue \((M = 5.74; SD = 1.80)\).

Instruments

Demographics
A demographic questionnaire was developed for the participants to report personal demographics which included: age, racial/ethnic status, sports in which they participate (including identification of “main” sport), status on teams, average grades earned in school, ability level in main sport, playing status (e.g., starter, substitute), level of main sport (e.g., select league, school league, recreation league), and success of team (e.g., won more games than lost, lost more games than won, equal amount of game won and lost). They were asked to reference their answers regarding their “main sport,” which was defined as “the sport that is important to you in some way.”

Peer-created Task-involving Motivational Climate

Twelve items from the Task-involving Climate scale of the Peer Motivational Climate in Youth Sport Questionnaire (PeerMCYSQ; Ntoumanis & Vazou, 2005) measure the extent to which teammates endorse individual improvement, positive support, and effort. On items such as “On my best sport team, my teammates help each other improve,” participants respond on a 7-point Likert scale ranging from, 1, Strongly Disagree, to 7, Strongly Agree. Total score is the mean; higher scores indicate a stronger task-involving climate. In a sample of boy and girl athletes, Ntoumanis and Vazou (2005) reported four-week test-retest reliabilities that ranged from .74 to .82, and Cronbach’s alphas from .69 to .77. In the current study, the Task-involving scale was parcelled to create two measures that represent the Peer Created Task-Involving Motivational Climate construct. Cronbach’s alpha from the current study was .92. The Cronbach’s alphas for the two parcels in the current study were .89 and .90 (Sample A) and .85 and .88 (Sample B).
Goal Orientation

The thirteen-items of the Task and Ego Orientation in Sport Questionnaire (TEOSQ; Duda, 1993) were administered. The seven-item task dimension assesses a task goal orientation (i.e., focus on developing competence, along with personal improvement related to skill mastery, and a self-referenced set of standards). Although all thirteen-items were administered, only the seven items of the task dimension were used. Participants respond to each item on a five-point Likert scale ranging from 1, *Strongly Disagree*, to 5, *Strongly Agree*. Total score is the mean; higher scores indicate greater perceptions of a task goal orientation. Using a sample of male and female adolescents, Duda (1993) reported Cronbach’s alphas of .82. Cronbach’s alpha for the current study ranged from .89 to .90 across the two samples. Duda (1993) also reported the three-week test-retest reliability to be .68 for the task subscale. Using SEM-based cross-validation procedures, Li, Harmer, Duncan, Duncan, Acock, and Yamamoto (1998) examined the construct validity of the TEOSQ. They found that task orientation was found to be a valid predictor of intrinsic motivation in sport, which is consistent with achievement motivation theory. Specifically, individuals who had a high task orientation also had high intrinsic motivation.

The six item mastery dimension of the 12-item Achievement Goal Scale for Youth Sports (AGSYS; Cumming, Smith, Smoll, Standage, & Grossbard, 2007) assesses a mastery goal orientation (i.e., personal improvement and being the “best” one can be). Although all 12 items were administered, only the six mastery goal items were used. Participants respond to each item on a five-point Likert scale ranging from 1, *Not at all*
true, to 5, Very true. Total score is the mean; higher scores indicate greater perceptions of a mastery goal orientation. Cumming et al. reported a Cronbach’s alpha of .78 in a sample of male and female basketball players and swimmers aged nine to fourteen years. Cronbach’s alpha for the current study ranged from .85 to .88 across the two samples. Through exploratory and confirmatory factor analyses, Cumming et al. validated the factor structure of the measure and found significant positive correlations with task goal orientation (POSQ; Roberts, Treasure, & Balague, 1998) and mastery motivational climate (Motivational Climate Scale for Youth Sports; MCSYS; Smith, Cumming, & Smoll, 2008).

Sport Competence

The 6-item Sports Competence subscale from the Physical Self-Description Questionnaire (PSDQ; Marsh, Richards, Johnson, Roche, & Tremayne, 1994) measures self-perceived ability in sport. For each item, participants respond using a 6-point scale ranging from 1, False to 6, True. Total score is the mean; higher scores indicate higher perceived levels of competence. Internal consistency reliabilities have ranged from .94 to .95 in four separate trials across a sample of boys and girls aged 12 to 15 years old (Marsh, 1996). This measure was parceled into two sets of three items each: Cronbach’s alpha ranged from .78 to .83 (Sample A) and .79 to .92 (Sample B). Confirmatory factor analysis supported the Sports Competence scale as a unique measure within the PSDQ. Convergent and discriminant validity were supported by the significant correlations with similar scales from the Physical Self-Perception Profile (PSPP; Fox, 1990) and the
Physical Self-Concept Scale (Marsh et al., 1994; Marsh, 1996; Marsh, Hey, Roche, & Perry, 1997).

Self-esteem

The eight-item Global Esteem subscale from the Physical Self-Description Questionnaire (PSDQ; Marsh, Richards, Johnson, Roche, & Tremayne, 1994) assesses overall positive feelings about oneself and perceptions of self-worth. For each item, participants respond using a six-point scale that ranges from 1, False to 6, True. Total score is the mean; higher scores indicate higher self-esteem. Internal consistency reliabilities have ranged from .91 to .94 in four separate trials across a sample of boys and girls aged 12 to 15 years old (Marsh, 1996). Because there was a clear pattern in responses that indicated the participants did not differentiate between the reverse-scored items (i.e., negatively-valenced items) and regularly-scored items (i.e., positively-valenced items), only the three single positively-valenced items were used. Each one was used as a single indicator of self-esteem, thus no internal consistency could be calculated. Confirmatory Factor Analysis supported the Esteem scale as a unique measure within the PSDQ. Convergent and discriminant validity were supported by the significant correlations with similar measures from the Physical Self-Perception Profile (PSPP; Fox, 1990) and the Physical Self-Concept Scale (Marsh, 1996; Marsh et al., 1994; Marsh, Hey, Roche, & Perry, 1997).

Sport Enjoyment

The four-item Enjoyment subscale from the Sport Commitment Model (SCM; Scanlan, Simons, Carpenter, Schmidt, & Keeler, 1993) assesses positive responses (i.e.,
enjoyment, happiness, fun, and liking sport) to the sport experience. Participants rate each item on a five-point Likert scale, ranging from 1, *Not at all/none*, to 5, *Very much*. Each item served as an independent indicator of enjoyment in sport, and thus each item was its own total score. Scanlan et al. (1993) reported a Cronbach’s alpha of .90 in a sample of male and female athletes ranging from ages 9 to 19. Factor analysis confirmed the enjoyment factor as independent within the Sport Commitment Model. Discriminant validity was also supported by the clear distinction between factors similar to sport commitment that are measured by the SCM. Specifically, involvement opportunities correlated with sport commitment (*r* = .66), and enjoyment correlated with sport commitment (*r* = .69), suggesting that while these factors were correlated, they were unique measures within the SCM that “measured their corresponding constructs as intended,” (Scanlan, p. 29, 1993).

Intention to Continue Sport Participation

Two questions, based on Ajzen and Driver’s (1992) application of the theory of planned behavior to leisure choice, were used (Le Bars, Gernigon, & Ninot, 2009): (1) “Is it likely that you will drop out of your most successful sport in the next three years?” and (2) “Are you determined to continue your most successful sport at a high level?” Participants rate each item on a seven-point Likert scale, ranging from 1, *Not at all*, to 7, *Absolutely*. Consistent with Le Bars et al. the two intention items were utilized as single item indicators.
Procedure

Following approval from the University of North Texas Institutional Review Board for Human Subjects, schools in the Dallas/Ft. Worth (D/FW) metropolitan area and the Grand Junction, Colorado municipality were contacted to obtain permission to have eighth grade boys who were playing sports participate. Permission was received from one school district in the D/FW area (Samples A and B) and one in CO (for Sample B only). Participants provided assent prior to completing the questionnaires and after their parents provided consent. Completion of the questionnaire took approximately 30 minutes. The demographic form was completed first followed by the PeerMCYSQ, TEOSQ, AGSYS, PSDQ, and SCM; the measures were counter-balanced to control for ordering effects. As compensation, participants were entered into a raffle for two $25 cash prizes at each school, which was held immediately following the completion of questionnaires at each school.

Design and Analysis

Initially, data from both samples were screened for missing values. Using the Missing Values Analysis (MVA) module via SPSS (PASW 18), it was determined that data were missing completely at random (MCAR). In Sample A, only 0.6% of all the possible data were missing; in Sample B, it was only 0.45%. Expectation maximization (EM), a maximum likelihood estimation method that is part of the SPSS MVA, was utilized to replace missing data. EM imputation utilizes observed data to estimate parameters and missing scores (Scholmer, Bauman, & Card, 2010).
Because of the overall length of the questionnaire, the age and attention span of the participants, and the need to have at least two measured variables per latent construct, I chose to parcel one measured variable for each of the following constructs – Task-Involving Motivational Climate and Sports Competence – so as to create two indicators for each one. Although not optimal, parceling allows researchers to include multiple indicators of a construct when limited measures of a construct exist (Weston & Gore, 2006). The “item-to-construct balance” parceling technique (Little, Cunningham, Shahar, & Widaman, 2002), in which researchers parcel items based on distributing equal values of factor loadings was used to “split” each measure into two sets of items.

Next, total scores for each measure (and parcel) were obtained and then means, standard deviations, as well as measures of the distributional properties (i.e., skewness, kurtosis), were computed. Total scores from the PeerMCYSQ, TEOSQ, PSDQ, SCM, and the two intention questions were negatively skewed and kurtotic within both data sets. These measures were transformed using square root and logarithmic procedures (Tabachnick & Fidell, 2007); however, the transformed scores still were skewed and kurtotic and thus the decision was made to use the nontransformed values and rely on the robust fit statistics from EQS. Following this decision, correlations and internal consistency reliabilities among all the total scores were calculated.

Because the sample was diverse across three sport levels (recreational, middle school, and select), I wanted to ascertain how similar these athletes were in terms of variables that are important to the study. To do so, I performed multivariate analyses (MANOVAs)
on each set of measured variables (representing each latent construct) to determine if differences existed between the boys who played sport at the three different levels.

The proposed model (and the alternate pathway) was tested via structural equation modeling (SEM), which is a multivariate statistical method of relating the observed measures to their proposed theoretical constructs in a theoretically derived model (Bentler, 1980). The adequacy of the representations is measured by the degree of fit of the proposed model to the sample data. Maximum Likelihood (ML) estimation was used, which assumes multivariate normality (Weston & Gore, 2006). However, ML is also robust to moderate violations of the normality assumption and can be used if the data is moderately non-normal (Anderson & Gerbing, 1984), as was the case in the current study. The recommended best practices to determine model fit include incremental (comparison of the model to a null model that specifies no relationships among variables), absolute (how well the model fits the data), and predictive fit indices (how replicable the model will be with different data) (Weston & Gore, 2006; Worthington & Whittaker, 2006). Weston and Gore (2006) and Worthington and Whittaker (2006) explained that these three types of indices achieve the major objective in data evaluation: to determine whether the associations among measured and latent variables in the researcher’s predicted model are adequately consistent with the observed associations in the data. The specific absolute fit indices that were used were the robust Satorra-Bentler chi-square ($\chi^2$) goodness of fit (the robust statistic was used to account for non-normality in the data), the Standardized Root Mean Square Residual (SRMR), and the Root Mean-Square Error of Approximation with 90% Confidence Interval (RMSEA). The
incremental fit indices used included the Comparative Fit Index (CFI) and the
Nonnormed Fit Index (NNFI). Akaike’s Information Criterion (AIC; Martens, 2005) was
the predictive fit index used.

The SEM was carried out over two steps. First, I tested the measurement model
through Confirmatory Factor Analysis (CFA). Second, I tested the proposed model, with
and without the alternate pathway (see Figures 2 and 3). A chi-square test was used to
evaluate the difference in degree of fit between the initial and alternative models. In all,
32 parameters were specified for estimation in the structural model, 31 for the alternative
model. The sample size exceeded the 5.1 ratio of parameters to participants (Martens &
Haase, 2006).
CHAPTER 3

RESULTS

Table 1 contains the correlations, for Samples A and B, among all the measured variables used in this study. Table 2 contains the means, standard deviations, skewness, kurtosis, and internal consistency reliability (Cronbach’s alpha) of measured variables.

Preliminary Analyses

I used multivariate analysis of variance (MANOVAs) to determine if differences existed among the measured variables of each latent construct by sport level (i.e., recreational, middle school, or select). I ran separate MANOVAs, one for the set of measured variables associated with each latent variable. Within sample A, there were no significant effects for Peer Climate, Wilks’ Lambda = .958, $F(4, 382) = 2.077$, $p = .083$, partial $\eta^2 = .021$, Goal Orientation, Wilks’ Lambda = .982, $F(4, 382) = .888$, $p = .471$, partial $\eta^2 = .009$, Self-Esteem, Wilks’ Lambda = .940, $F(6, 380) = 2.005$, $p = .064$, partial $\eta^2 = .031$, and Fun, Wilks’ Lambda = .933, $F(8, 378) = 1.677$, $p = .102$, partial $\eta^2 = .034$. There was, however, a significant effect for Sport Competence, Wilks’ Lambda = .901, $F(4, 382) = 5.1$, $p < .005$, partial $\eta^2 = .051$. For the first Sport Competence indicator, recreational ($M = 5.25, SD = .886$) and select ($M = 5.25, SD = .771$) level athletes had higher scores than those who played at the school level ($M = 4.73, SD = 1.09$), $F(2, 192) = 6.09$, $p < .005$, partial $\eta^2 = .060$. For the second Sport Competence indicator, similar results emerged. Recreational ($M = 5.32, SD = .65$) and select ($M = 4.99, SD = .86$) level athletes rated themselves higher than those who played at the school level.
level ($M = 4.57, SD = 1.04$), $F(2, 192) = 8.1, p < .001$, partial $\eta^2 = .078$. A significant multivariate effect also emerged for Intent, Wilks’ lambda = 0.870, $F(4, 382) = 6.86, p < .001$, partial $\eta^2 = .067$. With respect to their likelihood of not dropping out of their main sport over the next three years, select level ($M = 6.62, SD = 0.768$) athletes reported higher scores than those who played at either the recreational level ($M = 5.44, SD = 0.961$) or school level ($M = 5.46, SD = 1.71$), $F(2, 192) = 13.06, p < .001$, partial $\eta^2 = .120$. With respect to their determination to continue their main sport at a high level, select level ($M = 6.51, SD = 1.02$) athletes again rated themselves higher than those at the school level ($M = 5.44, SD = 1.71$), $F(2, 192) = 9.01, p < .001$, partial $\eta^2 = 0.086$. The recreational athletes did not differ significantly from either the select or school athletes.

Within Sample B there were no significant multivariate effects for Peer Climate, Wilks’ lambda = .984, $F(4, 364) = .719, p = .580$, partial $\eta^2 = .008$, Goal Orientation, Wilks’ lambda = .954, $F(4, 364) = 2.168, p = .074$, partial $\eta^2 = .023$, Intent, Wilks’ lambda = .972, $F(4, 364) = 1.287, p = .274$, partial $\eta^2 = .014$, and Fun, Wilks’ lambda = .972, $F(8, 360) = .635, p = .748$, partial $\eta^2 = .014$. There was, however, a significant effect for Sport Competence, Wilks’ lambda = .929, $F(4, 364) = 3.42, p < .01$, partial $\eta^2 = .036$. For the first Sport Competence indicator, select level ($M = 5.51, SD = 0.886$) athletes reported higher levels than school level ($M = 4.73, SD = 1.09$), $F(2, 183) = 5.037, p < .01$, partial $\eta^2 = .052$; recreational athletes ($M = 4.94, SD = 0.86$) did not differ significantly from either group. For the second Sport Competence indicator select level athletes ($M = 5.32, SD = 0.884$) had higher scores than those who played at either
the school \((M = 4.76, SD = 1.04)\) or recreational levels \((M = 4.65, SD = .83)\), \(F(2, 183) = 7.007, p < .005\), partial \(\eta^2 = .071\). A significant effect for self-esteem was also present, Wilks’ lambda = .870, \(F(6, 362) = 2.26, p < .05\), partial \(\eta^2 = .036\). With respect to their belief that most things they do turn out well, select level \((M = 5.25, SD = 0.109)\) athletes rated themselves higher than school level \((M = 4.64, SD = 0.135)\), \(F(2, 183) = 4.466, p < .05\), partial \(\eta^2 = .047\). The recreational athletes did not differ significantly from the other two groups. With respect to their belief that they do most things well, select level \((M = 5.25, SD = 0.93)\) athletes rated themselves higher than those who played at either the school level \((M = 4.81, SD = 1.12)\) or recreational level \((M = 4.52, SD = 1.36)\), \(F(2, 183) = 4.334, p < .05\), partial \(\eta^2 = .045\). With respect to their belief that, overall, they have a lot to be proud of, no significant differences existed between the three groups, \(F(2, 183) = 1.738, p = .18\), partial \(\eta^2 = .019\).

Table 1 contains the correlations, for Samples A and B, among all the measured variables used in this study. Table 2 contains the means, standard deviations, skewness, kurtosis, and internal consistency reliability (Cronbach’s alpha) of measured variables.

Measurement Model – Sample A (Initial Data Set)

Confirmatory factor analysis was used to test the measurement model. The parceled measures of the Task-involving Climate scale of the Peer Motivational Climate in Youth Sport Questionnaire (PeerMCYSQ) loaded positively on the Peer Created Task-Involving Motivational Climate construct. The Task Orientation scale from the Task and Ego Orientation in Sport Questionnaire (TEOSQ) and the Mastery Orientation scale from
Achievement Goal Scale for Youth Sports (AGSYS) loaded positively on to the Task Goal Orientation construct.

Regarding the psychological outcomes, the two parcels from Sports Competence subscale from the Physical Self-Description Questionnaire (PSDQ) loaded positively on to the Sport Competence construct, the three single items from Global Esteem subscale of the PSDQ loaded positively on to the Self-Esteem factor, and the four items from the Enjoyment subscale of the SCM loaded positively on to the Enjoyment factor. The factors thus represented greater feelings of competence in sport, higher self-esteem, and more enjoyment from sport participation.

The final construct, Intention to Continue Sport, was represented by the two single-item questions; both items loaded positively as expected, and the factor represented the athletes’ intentions to continue playing their favorite sport. All latent factors were allowed to correlate and all factor correlations were significant ($p < .05$), ranging from .14 to .83. See Table 3 for the standardized factor loadings and standard errors of each measured variable associated with its latent factor. Overall, the fit of the final measurement model for the confirmatory data set was good (see Table 4).

**Structural Model – Sample A (Initial Data Set)**

The overall fit of the structural model without the alternative pathway was good, although the fit of the model with the alternate pathway was better, $\Delta \chi^2 = 27.99$, $df = 1$, $p < .001$, and $\Delta AIC = 25.99$ (see Table 4 for specific fit information on each model). Thus, the model with the extra pathway is described.
Within the structural model with the alternative pathway (see Figure 1), Mastery Goal Orientation was explained by the direct effects of the Peer-Created Task-Involving Climate (standardized parameter estimate, $\beta = .58$), which accounted for 34% of its variance. Sport Competence was explained by higher levels of Mastery Goal Orientation ($\beta = .56$), which accounted for 32% of the variance in Sport Competence. Self-Esteem was based on the direct effects of Mastery Goal Orientation ($\beta = .24$) and Sport Competence ($\beta = .70$); these variables accounted for 74% of the variance in Self-Esteem. Enjoyment was based on the direct effect of Mastery Goal Orientation ($\beta = .43$), which accounted for 18% of the variance in Enjoyment. Intention was related significantly to Enjoyment ($\beta = .49$); 40% of the Intention variance was explained. (See Figure 1).

Measurement Model – Sample B (Confirmatory Data Set)

The final measurement model from Sample A was tested in Sample B. All latent factors were allowed to correlate, which ranged from .28 to .78 ($p < .05$). See Table 3 for the standardized factor loadings and standard errors of each measured variable associated with its latent factor. Overall, the fit of the final measurement model for the initial data set was good (see Table 4).

Structural Model – Sample B (Confirmatory Data Set)$^3$

Peer-Created Task-Involving Climate ($\beta = .55$) was related directly to Mastery Goal Orientation and accounted for 30% of its variance. Sport Competence was based on the direct effect of Mastery Goal Orientation ($\beta = .63$), which accounted for 39% of the variance in Sport Competence.

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$^3$ This model was run with and without the participants from Colorado. Fit indices for the final model were nearly identical and all $R^2$ values were comparable with the Colorado participants removed. All significant pathways in the model remained even after the Colorado participants were removed. Consequently, the inclusion of the Colorado participants did not not have an effect on the data.
variance in Sport Competence. Self-Esteem was based on the direct effects of Mastery Goal Orientation ($\beta = .26$) and Sport Competence ($\beta = .62$); these variables accounted for 65% of the variance in Self-Esteem. Enjoyment was based on the direct effect of Mastery Goal Orientation ($\beta = .62$), which accounted for 39% of the variance in Enjoyment. Intention was related significantly to Enjoyment ($\beta = .35$), and helped to explain 44% of its variance. (See Figure 1).

Indirect Effects – Samples A and B

Across Samples A and B, respectively, similar indirect effects emerged within the model. Peer-Created Task-Involving Climate’s effects extended through to Sport Competence ($\beta = .33$, 95% CI [.22, .44]; $\beta = .35$, 95% CI [.24, .46]), Self-Esteem ($\beta = .37$, 95% CI [.26, .48]; $\beta = .35$, 95% CI [.23, .47]), Enjoyment ($\beta = .25$, 95% CI [.18, .32]; $\beta = .34$, 95% CI [.27, .41]), and Intention to Continue ($\beta = .23$, 95% CI [.11, .34]; $\beta = .39$, 95% CI [.06, .72]; $\beta = .50$, 95% CI [.17, .83]). Mastery Goal Orientation was indirectly related to Intention to Continue ($\beta = .39$, 95% CI [.06, .72]; $\beta = .50$, 95% CI [.17, .83]).
CHAPTER 4

DISCUSSION

The purpose of this investigation was to determine the relationships between the peer-created motivational climate and adolescent male athletes’ mastery goal orientation, self-esteem, athletic competence, and enjoyment, and how these psychological outcomes are associated with their intention to continue playing their best sport. To examine these relationships, a structural model was hypothesized and tested in two independent samples; the proposed model with the alternative pathway from Sport Competence to Self-Esteem revealed a good fit across both samples, though certain pathways were not significant as expected.

The Task-Involving Peer-Created Motivational Climate (Ntoumanis & Vazou, 2005) related positively to the boys’ Mastery Goal Orientation. This finding is consistent with AGT, which suggests that motivational environments characterized by effort, task mastery, and cooperation are likely to lead to the development of mastery-goal orientations, or dispositional approaches that focus on personal improvement, task mastery, and the exhibition of maximum effort (Nicholls, 1989). This finding also corroborates previous empirical research (Atkins et al., 2011; Smith, Balaguer, & Duda, 2006), which defined the peer created motivational environment through positive friendship behaviors such as companionship and supportiveness, relatedness support, less
conflict and peer acceptance. In these studies, the researchers reported strong associations between the peer climate and a mastery goal orientation for both male and female athletes aged 9 to 14 years. The current study extends past research that examined only female adolescent athletes (Atkins et al., 2011) by including male adolescent athletes and operationalizing the motivational environment through an actual measure of peer created-motivational climate (Ntoumanis & Vazou, 2005). Thus, the current study, in conjunction with past research findings (e.g., Boyce et al., 2009; Harwood & Swain, 2001; Vazou et al., 2006), suggest that there is a strong association between teammates who promote task-involving values and behaviors and having a motivational disposition that embraces effort, improvement, and mastering skills.

A Mastery Goal Orientation was related to higher levels of Sport Competence, Self-Esteem, and Enjoyment, which is consistent with AGT (Nicholls, 1984, 1989) and past research (De Knop, & Weiss, 1995; Fox et al., 1994; Smith, Balaguer & Duda, 2006; Theeboom, Reinboth & Duda, 2004; Vlachopoulos & Biddle, 1997; Ullrich-French & Smith, 2006 Yoo, 1999). For example, Smith et al. (2006) found that male soccer players aged 9 to 12 years who reported having a strong mastery goal-orientation enjoyed playing their sport. Similarly, among male and female athletes aged 11 to 14 years, there was a strong, positive relationship found between a mastery goal orientation and reported feelings of self-esteem and sport competence (Kavussanu & Harnisch, 2000).

When athletes are able to approach achievement situations from a mastery orientation (e.g., focused on effort, skill development, and learning) they are likely to feel positively about themselves and their athletic abilities and experience sport as fun and
enjoyable. Such relationships make sense because mastery orientated individuals are likely to attempt new challenges, see the development of their skill, not feel threatened by normative comparisons, and experience lower levels of physiological stress, all of which contribute to feelings of competence and self-esteem and the perception of sport as enjoyable. That the effects of the peer-created task-involving motivational climate on these outcomes occurred indirectly through the athletes’ mastery goal orientation suggests that a mastery goal orientation may serve as the mechanism through which the climate influences self-esteem, sport competence, and enjoyment in sport. That is, the motivational climate may lead to the development of a similar goal orientation, but it is the athletes’ goal orientation (or how they are motivated in different achievement situations) that is related directly to their having feelings of competence, esteem, and enjoyment. Because few studies (e.g., Cury et al., 1996), have examined goal orientation as a potential mediator, more research is needed to determine their relative direct and indirect effects on children’s and adolescents’ psychological functioning.

Sport Competence also was related to Self-Esteem, which is consistent with theoretical models (Harter, 1982; 1983) and empirical findings (Atkins et al., 2011; Ebbeck & Stuart, 1993; Ebbeck & Weiss, 1998) that have shown a global sense of self-worth (or esteem) to be comprised of more specific competencies, such as ability in sport. For example, Ebbeck and Stuart (1993) found that perceived competence explained 44% of the variance in self-esteem among a sample of male football players aged 11 to 14 years. These findings suggest that evaluating one’s skills positively in a specific area, such as athletics, may contribute to feeling positively about oneself overall, particularly if
the domain of achievement is viewed positively by the individual (Ebbeck & Weiss, 1998). In other words, athletes, who value their roles as athletes, are likely to feel a greater sense of self-esteem if they evaluate their sport competence positively. Athletes who believe they are skilled in their sport are likely to experience a greater sense of accomplishment and competence, which then may to lead to positive self-evaluation and ultimately increased self-esteem. Longitudinal research is needed, though, to establish the temporal relationship in the development of self-esteem from athletic accomplishments and competence.

As hypothesized, Enjoyment was positively and significantly related to Intent to Continue, which is consistent with the findings from other studies (e.g. Atkins et al., 2011; Fox et al., 1994; Malete, 2006; McCarthy et al., 2008). For example, in a sample of adolescent female athletes ($M_{age} = 12.7$ years), enjoyment accounted for 17% of the variance in the girls’ intention to continue playing their main sport (Atkins et al., 2011). Similarly, Malete (2006) found that enjoyment was associated with greater participation in sport activities in a sample of male and female athletes aged 13 to 18 years. Moreover, Ewing and Seefeldt (1996) noted that fun and enjoyment were the primary reasons why children participate in sports. The decision to continue to participate in sport, when the experience is being evaluated as enjoyable and fun, also is consistent with Gould’s model of youth sport withdrawal (1987), which emphasized the role of psychological factors like interest in other activities, no fun, and competitive stress as reasons why children and adolescents leave sport and pursue other activities. Thus, younger adolescent athletes,
whether male or female, are likely to continue in activities that provide them with intrinsic outcomes, such as fun and enjoyment, which are self-rewarding.

Contrary to expectations and past research (Slutzky & Simpkins, 2009; Fox et al., 1994; Ullrich-French & Smith, 2009), Self-esteem and Sport Competence were not significantly related to Intention to Continue Participation within the proposed model. For example, Ullrich-French and Smith (2009) studied male and female athletes aged 10 to 14 years over a 12 month period to determine the relationship between sport competence and continuing to participate in sport. Their results supported a strong, direct relationship between perceived sport competence and staying involved in sport. Similarly, in a sample of male and female college students, Kang (2004) found that higher levels of self-esteem influenced the intention to engage in physical activity by joining a private health club. However, not all research has supported a relationship between sport competence or self-esteem and intention to continue. Atkins et al. (2011), who tested a model similar to the one in the current study with female adolescent athletes ($M_{age} = 12.7$ years), found that neither sport competence nor self-esteem was related significantly to the athletes’ reported intention to continue in their main sport. They suggested that the lack of support for the expected relationships was due to the gender of their sample. Specifically, Atkins et al. (2011) suggested adolescent female athletes, may be more likely than adolescent boy athletes to stay in their sport when they are having fun (Butcher et al., 2002), whereas for boys, their persistence in sport may more so be related to their perceptions of sport competence and the degree to which they feel positively about themselves as athletes (Fredricks & Eccles, 2002; Reinboth & Duda, 2004). Given these two different
empirical studies have demonstrated no relationships among sport competence, self-esteem, and sport participation for young adolescent girls and boys, it appears that gender is not the reason for the nonsignificant results. Thus, it is important to consider other reasons why these nonrelationships exist.

First, in the current study, there actually were small to moderate correlations amongst the measures used to represent the constructs of Self-Esteem, Sport Competence, and Intention. Thus, it is probably inaccurate to say that self-esteem and sport competence are unrelated to intention, rather these constructs are not significant predictors when considered simultaneously with enjoyment as they were in the proposed model. Thus, it may be that, for young male and female adolescent athletes, fun is the most salient predictor of continuation in sport (or at least an intention to do so). Côté, Baker, and Abernethy (2003) suggested that the importance of fun and enjoyment in sport may be different depending on an athletes’ developmental level of sport expertise. Athletes entering what Côté et al. referred to as the “specializing” phase of sport, which occurs around the age of 13, are focused on learning key skills, tactics, and the rules of their sports, but still want to have fun while playing. It may not be until adolescents reach the “investment/mastery” phase of development, which generally begins at age 15, when the emphasis on fun and deliberate play decreases, being replaced by a focus on intentional practice in a single sport (Côté et al., 2003). Moreover, during the “investment/mastery” phase, skill development becomes prominent as does the role that sport plays within the athlete’s life. Consequently, positive feelings about the self and feelings of sport competence may become more crucial determinates of continued
participation than they are for children and adolescents who are in the “specializing” phase of development. Within the current study, the majority of the participants were still involved in multiple sports, suggesting that many of them may just be beginning to specialize and have not reached the investment phase of development. Ultimately, it will be necessary to test a similar multi-component model with older adolescent athletes, who are invested in one sport, to determine Sport Competence’s, Self-Esteem’s, and Enjoyment’s relative influence in predicting intention to continue.

Second, these inconsistent findings also might be due to the way sport participation was measured. In the current study, I represented this construct through two “intention to continue” items, but did not measure actual continuation in sport. Other studies, however, where a positive relationship between sport competence and sport participation have been found, have measured it by assessing athletes’ continued involvement on a sport team. For example, Ullrich-French and Smith (2009) reported that, over a 12 month period, adolescent athletes’ perception of their sport competence predicted their actual continued participation in their sport. Thus, competence may be a better predictor of continuing participation rather than intention. This idea is consistent with other studies that have demonstrated a link between lower sport competence and actual drop-out behavior (e.g., Salguero, Gonzalez-Boto, Tuero, & Marquez, 2003; Weiss & Ferrer-Caja, 2002). Thus, it is possible that sport competence is salient with respect to actual participation but not intended continuation for this age. In other words, regardless of how athletes evaluate their competence, they plan to participate. But, it is only those athletes whose competence is high who actual continue, particularly when ability
becomes an increasingly important factor in determining whether or not adolescents are given the opportunity to continue their sport. The role of perceived sport competence may be notably relevant as the level of competition increases as athletes age, in that, as their sporting environment becomes more competitive, their lower sport ability may be the cause of their dropping out.

Overall, the model proposed in the present study was consistent with achievement goal theory (Nicholls, 1989) and past research with female athletes (Atkins et al., 2011), indicating that a mastery goal orientation is associated with adolescent athletes’ experiencing a peer-created task-involving motivational climate on their best sport team. Specifically, the peer-created task-involving environment, characterized by improvement, cooperation, equal treatment, relatedness support, and the importance of effort, was related directly to the presence of a mastery goal orientation, and indirectly to the athletes’ feelings of competence in their sport, self-esteem, and enjoyment. A mastery goal orientation was associated directly with higher levels of self-esteem, sport competence, and the experience of sport as enjoyable. Male adolescent athletes with a dispositional approach to achievement situations that emphasizes the exertion of effort, skill development, and individual improvement, are likely to feel good about themselves and their abilities and have enjoy playing their sport. Intention to continue sport participation resulted solely from the amount of enjoyment that the athletes reported having. Self-esteem and sport-competence, although related to sport participation intention through bivariate correlations, were not salient in determining the athletes’ intention to continue sport when compared to how much enjoyment the athletes reported.
having in their best sport. When athletes are older, such as 16 and above, and invested in mastering a specific sport (as opposed to playing multiple ones), then sport competence (and feelings of esteem) may become the primary determinants with respect to continued participation. Overall, this model provides clarification of how peers contribute to the motivational climate and how task-oriented messages can have positive influences, including increasing athletes’ intention to continue participating in their best sport.

Implications for Counseling and Consulting

The development of a mastery goal orientation, which occurs through the internalization of the messages within the motivational climate, has many important implications for youth athletes. As demonstrated in this study, peer-created motivational climates that are characterized by improvement, cooperation, equal treatment, relatedness support, and effort, may help athletes develop a mastery goal orientation. Moreover, a mastery goal orientation is associated with self-esteem, feelings of competence in sport, and having the feelings of enjoyment towards sport. Consequently, sport consultants who work within youth sport environments may want to consider the benefits of designing and implementing programs that encourage the development of a peer task-involving motivational climate. Such programs can teach athletes how to communicate and behave in ways that encourage supportiveness, cooperation, individual improvement, equal treatment, and the exertion of effort. For example, athletes can be taught to respond to a teammate’s mistake by encouraging the effort of their teammate rather than teasing him/her for the mistake.
Although such programs have been constructed to help coaches, parents, and teachers foster a more task-involving climate (e.g., TARGET; Epstein 1988, 1989), very few studies have considered the role of the peers within achievement related contexts (e.g., Keegan et al., 2009; 2010; Smith et al., 2006; Ullrich-French & Smith, 2006; Vazou et al., 2006). For coaches, one way of doing this is to foster the feeling of being part of the team and creating a friendly atmosphere. Further, encouraging coaches to closely monitor the way their team conveys supportiveness, cooperation, equality, and evaluates success, failure, improvement and the exertion of effort can create an environment that fosters positive psychological outcomes that have been theorized and empirically supported to lead to continuation in sport. Coaches also can be encouraged to implement team rules that minimize teasing and encourage respect among athletes. Both the Mastery Approach to Coaching (MAC; Smith et al., 2007) and the TARGET system (Epstien, 1988, 1989), which provide guidelines for considering and promoting task-oriented behaviors within the motivational climate, can be used as a reference for coaches and parents to help them understand and integrate the characteristics of the task-involving climate.

Ultimately, coaches and parents should be encouraged to create a sport environment that emphasizes fun and the experience of enjoyment. Because the experience of enjoyment best predicts intention to continue participating in sport, consultants may want to work with parents, coaches and the athletes themselves to develop behavioral strategies that encourage positive and supportive communication among teammates, help athletes to value their own and their teammates’ efforts, and
emphasize the importance of individual growth and group inclusion. These strategies are all simple ways to cultivate a task-involving motivational climate that may directly contribute to the development of sport competence, well-being, and the experience of enjoyment. See Table 5 for a list of other practical strategies for youth athletes to help encourage the development of a mastery goal-orientation, a task-involving motivational climate, and sport enjoyment.

Limitations and Directions for Future Research

There were some limitations to the current study that warrant discussion. First, all data were collected using self-report measures, which allows for potential under-reporting or over-reporting or other self-presentational biases. Although the participants were closely monitored during the administration of the questionnaires and completed them separate from parents and/or their coaches, the possibility of self-presentation bias still exists. Future research could expand on the current study by using a variety of different measures to corroborate the athletes’ evaluations of the peer-created motivational climate, including coach and parent evaluations, naturalistic observations, and athlete interviews. Using a broader range of methodologies to assess the peer-created motivational climate could help to more accurately measure this overall environment and thus increase the validity of the construct. Additionally, such an approach may help to uncover any discrepancies that exist among the various sources of measurement (e.g., the way the coach evaluates the peer climate may be different from how parents or the athletes evaluate the peer climate), which may lead to new research opportunities regarding the consistency of how individuals in the youth sport environment (e.g.
coaches, parents, athletes, referees, etc.) assess the motivational climate. This work has been stressed by Ntoumanis, Vazou and Duda (2006) and Keegan et al. (2009; 2010) who argued that little is known about the dynamic and interrelated nature of social agents within motivational environments.

Second, despite careful monitoring, respondents appear to have misinterpreted the negatively valenced items of the Global Esteem subscale of the Physical Self Description Questionnaire (PSDQ; Marsh et al., 1994). Consequently, only the three single positively-valenced items were used. This left three items to represent the latent construct of Self-Esteem that was originally intended to be represented by two four item parcelled indicators of all eight items. As such, it is possible that the three items selected were not the best overall indicators of the athletes’ self-esteem, though these items did load significantly on their intended factor. In future studies, researchers may want to use alternative measures of esteem, reword the items from the PSDQ, or talk participants through each item to ensure they understand the negative wording and how to respond on the given scale.

Third, although the sample was large and diverse in terms of sports played, it was comprised mostly of Caucasians who were successful in school, which limits the generalizability of the results. Consequently, future studies should explore these relationships in more racially/ethnically diverse samples of male adolescent athletes. Additionally, replicating this study in a sample of older participants, who are at different phases of their sport development (Côté et al., 2003) may be necessary to understand the relative effects of self-esteem, sport competence, and enjoyment on participation.
Fourth, some of the constructs, such as Sport Competence and the Peer-Created Task Involving Climate were represented by a single parceled indicator. This approach made sense in the current study because it served to limit the possibility of participant fatigue and attention, which was an important consideration for this age group. It also was the case that there is no other validated measure to assess athletes’ perceptions of the peer motivational climate in sport. Using parceled measures is a limitation of the study because parceling items from a single measure to create two measures may not accurately represent the construct. As such, future research should consider the most effective way to measure and represent the constructs of interest given the potential length that extra measures might add to the questionnaire and the scarcity of supplemental means to measure these constructs. Ultimately, balancing the goal of having multiple measured constructs with the realities of surveying younger athletes is crucial (Weston & Gore, 2006).

Fifth, data from some of the measures was skewed (e.g., Self-Esteem, Sport Competence, Enjoyment, and Intention to Continue). Both square-root and logarithmic transformations were employed in an attempt to correct the skew, yet neither provided any meaningful transformation. The respondents may have been overly confident in their report of their self-esteem, ability to execute sport skills, enjoyment within their sport, and intention to continue that sport. Such confidence makes sense, though, considered against the context in which the samples were drawn. These boys had self-identified as athletes and, as such, selected themselves into a specialized athletics period. They also were in the 8th grade, the top grade in the middle school, and were amongst the most
physically active and fit boys in the school by virtue of their participation in the athletics period. Although this over-reporting may have limited the strength of the relationships among the constructs, all relationships (with the exception of two) were significant in the structural models and accounted for moderate amounts of variance in the constructs.

Sixth, the data for the current study is strictly cross-sectional, though such an approach is warranted at this point in the development of the model under study (Stice, 2002). Future studies may want to make use of a longitudinal design in order to determine true temporal relationships among the factors in the proposed models. For example, subsequent studies can examine participant’s self esteem, sport competence, perceptions of enjoyment, motivational climate, and goal-orientation at multiple points throughout adolescence and determine the extent to which they are related to athletes’ continued participation in sport.

Lastly, the present study only examined a select few of many possible outcomes that are both shaped by one’s goal orientation and influence sport participation. The decision to limit the number of constructs was made for practical reasons, however, future studies may want to examine how the peer-created motivational climates and goal-orientations influence other psychological outcomes, such as intrinsic motivation, anxiety, athletic success, and the experience of flow, and how these outcomes may be related to sport participation. Additionally, it may be beneficial to examine the influence of different social agents within the motivational atmosphere (e.g. parents, coaches, and peers) on athletes’ goal orientations and other outcomes. Such an approach would allow
researchers to determine the relative importance of these social agents, which could guide consultants in their interventions.

Conclusions

The results of this study provide information about the relationship of the peer-created task-involving motivational climate, which is based on improvement, cooperation, equal treatment, relatedness support, and the importance of effort, to male adolescent athletes’ mastery goal orientation and their psychosocial functioning and intention to continue in sport. The influence of the peer-created task-involving climate was notably strong and operated through mastery goal orientation to sport competence, self-esteem, and enjoyment. The level of perceived enjoyment was the sole predictor of the boys’ intention to continue in their best sport. However, the effects of self-esteem and sport competence on intention may have been attenuated when considered in conjunction with enjoyment, particularly for this age group. It may be that competence and esteem are better predictors of sport participation for older adolescents who already have invested in a single sport and thus are specializing in it. These findings highlight the importance of peer relationships within sport, an area of research that is beginning to grow, and suggest that the specific ways in which peers interact can have a wide range of effects on motivationally and psychologically salient outcomes. The results of this study also can provide direction for the development of training programs that can be targeted to create more positive and healthy sport experiences and relationships for children.
Figure 1. Diagram of structural model (with alternative pathway) with standardized parameter estimates and $R^2$ values for Sample A and Sample B. Sample B values are provided in parentheses. * $p < .05$
Table 1

Correlation Matrix of Measured Variables in Sample A (n = 205) and Sample B (n = 200)

<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
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<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
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<td>.88**</td>
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<td>.26**</td>
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<td>.25**</td>
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<td>.24**</td>
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</table>

Note. Sample A correlations are shown below the diagonal and Sample B above the diagonal. PeerMCYSQ-1 = Peer Motivational Climate in Youth Sport Questionnaire-Task-Involving Climate 1; PeerMCYSQ-2 = Peer Motivational Climate in Youth Sport Questionnaire-Task-Involving Climate 2; TEOSQ-T = Task and Ego Orientation in Sport Questionnaire –Task Orientation; AGSYS-M = Achievement Goal Scale for Youth Sports – Mastery Orientation; PSDQ-SC= Physical Self-Description Questionnaire – Sport Competence; PSDQ-GE= Physical Self-Description Questionnaire – Global Esteem; SCM-E= Sport Commitment Model – Enjoy; SCM-H= Sport Commitment Model – Happy; SCM-F= Sport Commitment Model – Fun; SCM-L= Sport Commitment Model – Like; INT-C= Intention to Continue – Continue Sport; INT-D= Intention to Continue – Drop Out of Sport

* Correlation is significant at the .05 level (2-tailed).  **. Correlation is significant at the .01 level (2-tailed).
<table>
<thead>
<tr>
<th>Variable</th>
<th>No. Items</th>
<th>M</th>
<th>SD</th>
<th>Skewness</th>
<th>Kurtosis</th>
<th>Internal Consistency</th>
</tr>
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<td>PeerMCYSQ-1</td>
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<td>0.9</td>
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<td>0.9</td>
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<td>AGSYS-M</td>
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<td>0.88</td>
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Table 2
Descriptive Statistics for Measured Variables, Sample A; N = 205 and (Sample B; N = 200)
Table 2 (continued).

<table>
<thead>
<tr>
<th>Variable</th>
<th>No. Items</th>
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<th>$SD$</th>
<th>Skewness</th>
<th>Kurtosis</th>
<th>Internal Consistency</th>
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</thead>
<tbody>
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<td>11. SCM–H</td>
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<td>4.62</td>
<td>0.77</td>
<td>-2.09</td>
<td>4.79</td>
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<tr>
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<td></td>
<td>-4.69</td>
<td>-0.75</td>
<td>-2.99</td>
<td>-9.79</td>
<td>(*)</td>
</tr>
<tr>
<td>12. SCM–F</td>
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<td>0.76</td>
<td>-2.17</td>
<td>4.03</td>
<td>*</td>
</tr>
<tr>
<td></td>
<td></td>
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<td>(-1.55)</td>
<td>-1.92</td>
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</tbody>
</table>

*Note. Sample B values noted parenthetically. PeerMCYSQ-1 = Peer Motivational Climate in Youth Sport Questionnaire-Task-Involving Climate (measures the extent to which teammates endorse individual improvement, positive support, and effort: scores range from 1[low perceived task-climate] to 7[high perceived task climate]); TEOSQ-T = Task and Ego Orientation in Sport Questionnaire –Task Orientation (developing competence, along with personal improvement related to skill mastery, and a self-referenced set of standards: scores range from 1[low task orientation] to 5[high task orientation]); AGSYS-M = Achievement Goal Scale for Youth Sports –Mastery Orientation (personal improvement related to skill mastery): scores range from 1[low mastery orientation] to 5[high mastery orientation]); PSDQ-SC= Physical Self-Description Questionnaire – Sport Competence (perceived ability in sport: scores range from 1[low perceived ability] to 6[high perceived ability]); PSDQ-GE= Physical Self-Description Questionnaire – Global Esteem (overall positive feelings about oneself and perceptions of self-worth: scores range from 1[low positive feelings] to 6[high positive feelings]); SCM-E= Sport Commitment Model – Enjoy (enjoying playing best sport: scores range from 1[low enjoyment] to 5[high enjoyment]); SCM-H= Sport Commitment Model – Happy (level of happiness playing best sport: scores range from 1[low happiness] to 5[high happiness]); SCM-F= Sport Commitment Model – Fun (amount of fun experienced playing best sport: scores range from 1[low levels of fun] to 5[high levels of fun]); SCM-L= Sport Commitment Model – Like (degree to which respondent likes playing best sport: scores range from 1[low degree of liking] to 6[high degree of liking]); INT-C= Intention to Continue – Continue Sport (intention to continue sport at high level: scores range from 1[low intention] to 7[high intention]); INT-D= Intention to Continue – Drop out (intention to drop out of sport in three years: scores range from 1[low intention] to 7[high intention]).

*Because represented by a single item, these variables cannot have an internal consistency value.
### Table 3

**Standardized Parameter Estimates for the Measurement Model**

<table>
<thead>
<tr>
<th>Latent Variables</th>
<th>Observed Variables</th>
<th>Factor Loadings: Sample A</th>
<th>Standard Error: Sample A</th>
<th>Factor Loadings: Sample B</th>
<th>Standard Error: Sample B</th>
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<td>.107</td>
<td>.801</td>
<td>.099</td>
</tr>
<tr>
<td></td>
<td>INT-D</td>
<td>.828</td>
<td>.111</td>
<td>.746</td>
<td>.127</td>
</tr>
</tbody>
</table>

*Note.* PeerMCYSQ-1 = Peer Motivational Climate in Youth Sport Questionnaire–Task-Involving Climate 1; PeerMCYSQ-2 = Peer Motivational Climate in Youth Sport Questionnaire–Task-Involving Climate 2; TEOSQ-T = Task and Ego Orientation in Sport Questionnaire – Task Orientation; PSDQ-SC = Physical Self-Description Questionnaire – Sport Competence; PSDQ-GE = Physical Self-Description Questionnaire – Global Esteem; SCM-E = Sport Commitment Model – Enjoy; SCM-H = Sport Commitment Model – Happy; SCM-F = Sport Commitment Model – Fun; SCM-L = Sport Commitment Model – Like; INT-C = Intention to Continue – Continue Sport; INT-D = Intention to Continue – Drop Out of Sport
Table 4

*Model Fit and Comparison (Sample A = 205; Sample B = 200)*

<table>
<thead>
<tr>
<th>Model</th>
<th>Df</th>
<th>$\chi^2$</th>
<th>NNFI</th>
<th>CFI</th>
<th>AIC</th>
<th>SRMR</th>
<th>RMSEA (90% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sample A</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Measurement Model</td>
<td>75</td>
<td>140.78**</td>
<td>.927</td>
<td>.948</td>
<td>-9.22</td>
<td>.037</td>
<td>.066 (.048 - .082)</td>
</tr>
<tr>
<td>Structural Model W/Out Alternate Path</td>
<td>83</td>
<td>194.04**</td>
<td>.892</td>
<td>.915</td>
<td>28.04</td>
<td>.075</td>
<td>.081 (.066 - .096)</td>
</tr>
<tr>
<td>Structural Model W/Alternate Path</td>
<td>82</td>
<td>166.05**</td>
<td>.914</td>
<td>.933</td>
<td>2.05</td>
<td>.094</td>
<td>.071 (.055 - .086)</td>
</tr>
<tr>
<td><strong>Sample B</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Measurement Model</td>
<td>77</td>
<td>132.34*</td>
<td>.960</td>
<td>.971</td>
<td>-21.66</td>
<td>.044</td>
<td>.060 (.042 - .077)</td>
</tr>
<tr>
<td>Structural Model W/Alternate Path</td>
<td>84</td>
<td>149.87**</td>
<td>.958</td>
<td>.967</td>
<td>-18.13</td>
<td>.057</td>
<td>.063 (.046 - .079)</td>
</tr>
</tbody>
</table>

*Note. Df = Degrees of Freedom; $\chi^2$ = chi square (larger values suggest that the model does not fit the data); NNFI = Non-Normed Fit Index (> .95 indicates good fit); CFI = Comparative Fit Index (> .90 indicates good fit); AIC = Akaike Information Criterion (lower values indicate good fit); SRMR = Standardized Root Mean Squared Residual (< .08 indicates good fit); RMSEA = Root Mean Square Error of Approximation (<.06 indicates good fit); 90% CI = 90% Confidence Interval.**

**p < .001.****
Table 5

Application of Findings:
Want to be an athlete who feels good about yourself, your abilities, and enjoys playing sports?

What you can do as a player:
It is most important to learn skills and try to improve. Winning may be exciting, but trying to get better every day will make you the best player you can be.

When you make a mistake, know that that is how you get better. Learn from your mistake and then try again.

Your effort is important. Try as hard as you can every time. If feels good to try hard.

What you can do as a teammate:
Encourage everyone on the team to try their hardest.
Help your teammates to learn new skills and improve.
Cooperate with your teammates. For example, take turns using the equipment.
Treat everyone equally on the team and support each other.
When mistakes are made, encourage your teammate to do their best and try again.
Avoid teasing your teammates.
Remember that everyone on the team has an important role, when everyone feels like they are needed; your team is likely to have more fun.

What can happen if you do these things?
Athletes who focus on improving, trying their hardest, and developing new skills are more likely to feel better about themselves and their athletic abilities and have fun while playing sports. When they may make mistakes, such athletes are likely to learn from them and get better.

Being a supportive, encouraging, and involving teammate is a great way to allow those around you to feel better about themselves, have more enjoyment, and become better athletes. Reminding your teammates of the importance of effort and learning and that it is ok to make mistakes is also a great way to help your teammates.
APPENDIX

CONSENT FORMS / QUESTIONNAIRE PACKET
UNIVERSITY OF NORTH TEXAS
INFORMED CONSENT FORM

Title of Study: Adolescents, Goals, and Enjoyment in Sports

Principal Investigator: Matthew Atkins, M.S.
Counseling Psychology Doctoral Candidate
Department of Psychology, University of North Texas

Co-investigators: Erica Force, M.Ed and Dustin Johnson, M.S., Counseling Psychology Doctoral Students, and Trent Petrie, Ph.D., Faculty Advisor, Professor, Department of Psychology

Before agreeing to your child’s participation in this research study, it is important that you read and understand the following explanation of the purpose and benefits of the study and how it will be conducted.

Start Date of Study 1/31/2010
End Date of Study 1/31/2011

Purpose of the study
You are being asked to allow your son to participate in a research study that will examine the relationship of children’s participation in sport, and the influence of important people in his life such as parents, coaches, and teammates, to self-esteem, enjoyment, belief in their sports ability, and their intent to continue playing sport.

Procedures to be used
Your child will be asked to complete a series of questionnaires that will take approximately 30 minutes to finish. They will complete the questionnaires in conjunction with the physical education class at their school.

Foreseeable risks
Participation involves no foreseeable physical, psychological, or social risks. Participants will be assured that they can discontinue the survey at any time.

Benefits to the subjects or others
We hope to learn more about how parents, coaches, and peers influence kids participation in and enjoyment of sport and how they contribute to how kids think about achievement-related situations, feel about themselves, believe in their sport abilities, have fun while playing, and intend to stay involved in sport. We plan to use this information to educate parents, coaches, and other youth sport participants on how they can be more effective in working with young sport participants so children have the best sport experience possible. For your son’s participation, he will be entered into a raffle where two $25 cash prizes will be given away at his school. Drawings will be made immediately following completion of the surveys.

Procedures for Maintaining Confidentiality
Privacy is protected because your child will not provide any identifying information, such as name or student identification number, on the questionnaires, and thus will not be able to be identified specifically as a participant in this project. In addition, when the findings from the study are reported, only group results will be used, so no individual findings will be provided or
shared. Once completed, the questionnaires will be kept in a locked filing cabinet in the UNT Center for Sport Psychology and Performance Excellence office.

**Review for the Protection of Participants**
This research study has been reviewed and approved by the UNT Institutional Review Board (IRB). The UNT IRB can be contacted at (940) 565-3940 regarding the rights of research subjects.

**Research Subject’s Rights**
If you have any questions about the study you may contact:

Dr. Trent Petrie  
Psychology Department  
University of North Texas  
(940) 565-2671  
Trent.Petrie@unt.edu

Your signature below indicates that you have read or have had read to you all of the above and that you confirm all of the following:

- The study has been explained to you and all of your questions have been answered. You have been told the possible benefits and the potential risks and/or discomforts of the study.
- You understand that you do not have to allow your son to take part in this study, and your refusal to allow him to participate or your decision to withdraw him from the study will involve no penalty or loss of rights or benefits. The study personnel may choose to stop your son’s participation at any time.
- You understand why the study is being conducted and how it will be performed.
- You understand your rights as the parent/guardian of a research participant and you voluntarily consent to your child’s participation in this study.
- You have been told you may receive a copy of this form if requested.

 Printed Name of Parent or Guardian               Date

 ___________________________________________

Signature of Parent or Guardian               Date

 ___________________________________________

Signature of Principal Investigator or Designee               Date
Young Athlete Form

We would like your help on a study that we are doing through the Center for Sport Psychology at the University of North Texas.

This study is trying to figure out how the relationships you have with your parents, coaches, and teammates can affect how you feel about yourself, how good an athlete you think you are, how much fun you have when playing sports, and how much you want to keep playing sports.

If you choose to help us with this study, you will be asked some questions about things that your parents, coaches, and teammates do when you are playing sports. For example, you might notice that your parents go to all of your games, or that your coach wants all of your teammates to play, or that your teammates cheer for you while you play. You will also be asked about when you feel like you did a good job playing your sport and how you feel about yourself, your athletic abilities, and how much you enjoy playing sports.

If you choose to help us, we will meet with you during one of your P.E. classes to have you answer our questions. You will not have to take anything home with you. Answering the questions will take about 30 minutes. If you answer the questions, you will be entered into a drawing to win one of two $25.00 cash prizes that will be given away at your school.

If you decide to help with this study, please remember you can stop answering the questions at any time you want.

I will not keep this page with the others and you will not put your name on your answer sheets. This way no one will know whose answers are whose and your privacy will be protected.

If you would like to help with this study, please print and sign your name below.

__________________________________                  __________________
Print your name                                  Sign your name                  Date

______________________________________        __________________
Signature of Principal Investigator or Designee                  Date

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Here are the questions.  
Please be sure to answer every question. Feel free to ask me to explain anything you don’t understand.

In the blank below, I want you to write in your MAIN sport. Your main sport can be any sport that is important to you in some way.

I am going to ask you to write in your main sport at the top of every page. For all of the questions I ask, I want you to keep this sport in mind. For example, if your main sport is baseball, and I ask you if you want to keep playing your main sport, think about wanting to keep playing baseball.

What is your MAIN sport?

_______________________________________________

Now please answer these questions:

| 1. Gender: | _____ Male (1) | _____ Female (2) |
| 2. Age: | __________ |
| 3. Date of Birth: | ______________ |
| 4. Race / Ethnicity: | ____Caucasian/White (1) | ____Asian American (4) |
| | ____African American/Black (2) | ____Pacific Islander (5) |
| | ____Hispanic / Latino (3) | ____Other (6) | ___________________ |
| 5. You are a(n): | __“A” student (1) | __“B” student (2) | __“C” student (3) |
| 6. Grade Level in school: | ______8th (1) | ______9th (2) |
| 7. Next to each person listed below, place a number to indicate how many are in your immediate family (who lives with you). For example, if you have two sisters, then you would put a “2” on that line.
| Mother | ________ | Sister | ________ |
| Father | ________ | Step-Brother | ________ |
| Step-Mother | ________ | Step-Sister | ________ |
| Step-Father | ________ | Grandmother | ________ |
| Brother | ________ | Grandfather | ________ |
| Other | ________ | | |

If your mom and dad do not live together (are separated or divorced), about what percentage of the time do you spend with each of them outside of school? For example, if you live with both parents equally, you would write 50% next to each one.

| ______Mother | ______Father |

8. In what grade did you start playing your MAIN SPORT? | ________________ grade |
9. Compared to other boys your age who play your **MAIN SPORT**, your are:

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Less skilled than most</td>
<td>Average</td>
<td>Less skilled than most</td>
<td>More skilled than most</td>
<td></td>
</tr>
</tbody>
</table>

10. Right now in your **MAIN SPORT**, at what point of the season are you?

<table>
<thead>
<tr>
<th></th>
<th>1st half of competitive season</th>
<th>2nd half of competitive season</th>
<th>Off-season training</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
</tr>
</tbody>
</table>

11. Describe your playing status in your **MAIN SPORT**:

<table>
<thead>
<tr>
<th></th>
<th>Starter (1)</th>
<th>Primary substitute (play 50% or more of the game) (2)</th>
<th>Secondary substitute (play less than 50% of game) (3)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
</tr>
</tbody>
</table>

12. For your **MAIN SPORT**, do you participate on a recreational team? (Teams you do not have to try out to be on, such as organized teams sponsored by the city, YMCA, church leagues, or local club)

<table>
<thead>
<tr>
<th></th>
<th>Yes (1)</th>
<th>No (2)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(1)</td>
<td>(2)</td>
</tr>
</tbody>
</table>

13. For your **MAIN SPORT**, do you participate on a select team? (Teams you do have to try out for, such as club, elite, select, and Olympic development)

<table>
<thead>
<tr>
<th></th>
<th>Yes (1)</th>
<th>No (2)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(1)</td>
<td>(2)</td>
</tr>
</tbody>
</table>

14. For your **MAIN SPORT**, do you participate on a school team? (teams sponsored by a middle school, junior high, or high school)

<table>
<thead>
<tr>
<th></th>
<th>Yes (1)</th>
<th>No (2)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(1)</td>
<td>(2)</td>
</tr>
</tbody>
</table>

15. If you participate on more than one team, what is your highest level of competition when playing your **MAIN SPORT**? (check only one answer)

<table>
<thead>
<tr>
<th></th>
<th>Recreation (1)</th>
<th>Select (2)</th>
<th>School (3)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
</tr>
</tbody>
</table>

16. For your most recent season in your **MAIN SPORT**...

<table>
<thead>
<tr>
<th></th>
<th>You won more games than you lost (1)</th>
<th>You won about the same number of games as you lost (2)</th>
<th>You lost more games than you won (3)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
</tr>
</tbody>
</table>

17. In your most recent season in your **MAIN SPORT**, the coach who has the most influence and power with your main sport team is:

a) A Man (1) A Woman (2)

b) Caucasian/White (1) Pacific Islander (4) I don’t know (6)
   African American/Black (2) Hispanic/Latino (5) Other (7)
   Asian American (3)

c) 20-30 years old (1) 51+ years old (4)
   31-40 years (2) Don’t Know (5)
   41-50 years old (3)
d) For how long have you played for this coach…
- Less than 6 months (1)
- 6 months to 1 year (2)
- 1 year to 2 years (3)
- More than two years (4)

<table>
<thead>
<tr>
<th>18. Circle all the sports that you currently play:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseball</td>
</tr>
<tr>
<td>Basketball</td>
</tr>
<tr>
<td>Cheerleading/Drill Team</td>
</tr>
<tr>
<td>Dancing</td>
</tr>
<tr>
<td>Diving</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>19. Circle all the sports that your mom or other female adult figure in your household used to play (or plays now):</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseball</td>
</tr>
<tr>
<td>Basketball</td>
</tr>
<tr>
<td>Cheerleading/Drill Team</td>
</tr>
<tr>
<td>Dancing</td>
</tr>
<tr>
<td>Diving</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>20. Circle all the sports that your dad or other male adult figure in your household used to play (or plays now):</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseball</td>
</tr>
<tr>
<td>Basketball</td>
</tr>
<tr>
<td>Cheerleading/Drill Team</td>
</tr>
<tr>
<td>Dancing</td>
</tr>
<tr>
<td>Diving</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>21. Circle all the sports that your brothers and/or sisters used to play (or play now):</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseball</td>
</tr>
<tr>
<td>Basketball</td>
</tr>
<tr>
<td>Cheerleading/Drill Team</td>
</tr>
<tr>
<td>Dancing</td>
</tr>
<tr>
<td>Diving</td>
</tr>
</tbody>
</table>

Think about the MAIN sport that you listed on the top of this page as you answer these questions.

<table>
<thead>
<tr>
<th>22. Is it likely that you will drop out of your MAIN sport in the next three years?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at All</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>Question</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
</tr>
<tr>
<td>23. Are you determined to continue your <strong>MAIN</strong> sport at a high level?</td>
</tr>
<tr>
<td>24. Your <strong>MAIN</strong> sport is the sport you are most successful at doing.</td>
</tr>
<tr>
<td>25. Your <strong>MAIN</strong> sport is the sport you most enjoy doing.</td>
</tr>
<tr>
<td>26. Your <strong>MAIN</strong> sport is the sport where you feel best about yourself</td>
</tr>
</tbody>
</table>

Remember, for all of the questions I ask, I want you to think about your **MAIN Sport** that you wrote at the top of the page.
REFERENCES


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concept: Elite athletes and physical education students. *Journal of Educational Psychology, 89*(2), 369-380. doi: 10.1037/0022-0663.89.2.369


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